



GOVERNMENT OF BIHAR



FIRST FIVE-YEAR PLAN

IN

BIHAR

1951-56

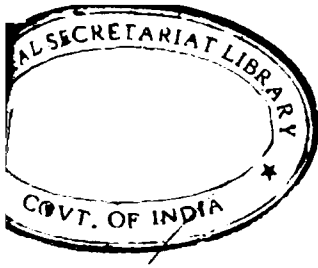


A REVIEW

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**Agenda relating to "First Five-Year Plan in Bihar, 1951—56
—Review".**

	For—	Read—
Page 4, paragraph 2, line 9 ..	contrast	contact
Page 9, Table 1, Column 2—1951-52	1183.3	1365.3
1953-54	911.2	901.2
1955-56	2538.3	2638.3
Page 12, serial no. 9, Power Project— Column 10 ..	964.2	946.2
Total, Column 7 ..	911.2	901.2
Column 9 ..	2538.3	2638.3
Page 67, Total, Column 6 ..	132	128
Page 81, Shahabad, Column 2 ..	27	217
Page 89, paragraph 1, line 2 ..	Civil	Civic
Page 126, Hazaribagh District Road—Jamua-Giridih.	32.0	22.0
Page 172, Total, Column 2 ..	1,695	1 696



PREFACE.

The First Five-Year Plan has been the first attempt at democratic planning. The lee-way to be made up in Bihar was great. Shortages of all kinds—men, material and finance—hampered work. Yet, by the end of the Plan period, the targets set had been fully achieved. This Review attempts to present a factual account of the progress achieved in the different sectors during the Plan period.

B. D. PANDE,

*Development Commissioner,
Bihar.*

PATNA:

4th December 1956

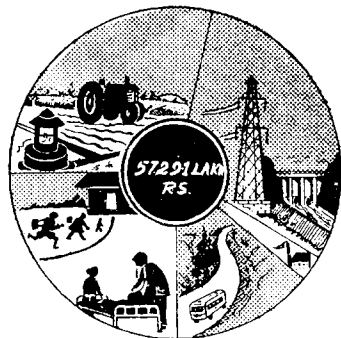
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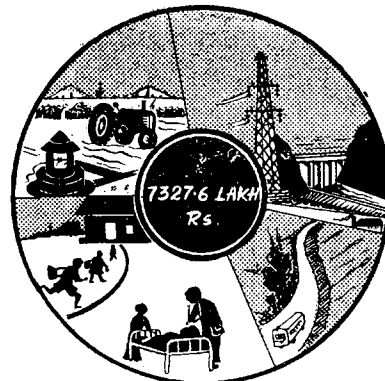
BIHAR FIRST FIVE YEAR PLAN



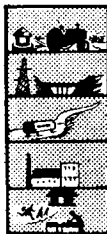
ORIGINAL PLAN



ADJUSTED PLAN



ACHIEVEMENT



AGRICULTURE & RURAL DEV.
 IRRIGATION & POWER PROJECTS.
 TRANSPORT.
 INDUSTRIES.
 SOCIAL SERVICES

(IN LAKHS OF RUPEES.)

SECTORS	ORIGINAL PLAN	ADJUSTED PLAN	ACHIEVEMENT
AGRICULTURE	1677.6	1606.1	1604.2
IRRIGATION & POWER PROJ.	1682.0	2221.0	2240.5
INDUSTRIES	119.2	136.3	103.8
TRANSPORT	800.0	1075.0	1078.1
SOCIAL SERVICES	1450.3	1741.0	2301.0
TOTAL	5729.1	6779.4	7327.6

CHAPTER I

GENERAL APPRAISAL.

The First Five-Year Plan represented Free India's first attempt at national reconstruction of its impoverished economy. With the achievement of independence, the demand for all-round economic regeneration was universally voiced. The First Five-Year Plan was drawn up in response to this national urge. It was by no means an ideal plan as our experience in the field was limited; but it was the first attempt towards a rational and practical assessment of our resources and our capabilities. Democratic planning has some inherent limitations. Planning techniques of such countries as have total planning have no place in a democratic set-up. In our country we have largely to depend upon the process of economic inducement rather than on economic controls. The limitation of our resources sets a further limit to any very ambitious planning.

In the initial phase of planning, it is difficult to present any spectacular record of achievement. The First Five-Year Plan was largely motivated by the desire to initiate a process whereby we could build up a permanent process of planned economic improvement through future Five-Year Plan. The Plan was not merely a compilation of different schemes, but for the first time it set up a pattern of co-ordinated development in all sectors of our economy.

Bihar has had some of its own peculiar problems. The density of its population is one of the highest in India, going up to 1,200 to a square mile in some parts. The greater part of North Bihar, which has the highest population, is subject to alternative ravages of floods and droughts. The hilly area of Chotanagpur has a large backward tribal population, its soils are poor and its communications inadequate. There is great poverty in that region in spite of the fact that one of the world's richest mineral belts lies in this zone.

The economy of Bihar is primarily agricultural. The population dependent on agriculture has actually increased from 78.8 per cent in 1931 to over 86 per cent in 1951, and more than a third of them are farmers, who cultivate lands wholly or mainly unowned or are

cultivating labourers. The table below presents the livelihood pattern of the State based on 1951 Census.

Group.	Livelihood classes.	No. of persons.	Percentage of total population.	All-India percentage.
1	2	3	4	5
Agriculture	(i) Cultivators of land wholly or mainly owned and their dependants.	22,242,486	55.30	46.9
	(ii) Cultivators of land wholly or mainly un-owned and their dependants.	3,326,677	8.27	8.9
	(iii) Cultivating labourers and their dependants.	8,795,202	21.87	12.6
	(iv) Non-cultivating labourers of land, agricultural rent receivers and their dependants.	246,889	0.61	1.5
	TOTAL	34,611,254	86.05	69.9
Non-Agricultural	(v) Production other than cultivation.	1,584,668	3.94	10.6
	(vi) Commerce	1,368,007	3.39	5.9
	(vii) Transport	291,116	0.72	1.6
	(viii) Other services and miscellaneous sources.	2,370,902	5.90	12.0
	TOTAL	5,614,693	13.95	30.1
GRAND TOTAL		40,225,947	100.00	100.00

The standard of farming efficiency is also amongst the lowest in India due to the handicaps that the State suffers in the shape of fragmented holdings, extreme pressure on agricultural land, want of agricultural capital and credit, deficiency in agricultural education, shortage of good quality seeds, manures and inadequate irrigation. The industrial population is as low as 3.94 percent of the total population against the All-India average of 10.6, despite the fact that 43.3 percent of all minerals by weight and over 30 percent by value, raised in the whole of India, comes from Bihar. Bihar's per capita revenue and expenditure are amongst the lowest in India. Social services are also

much below the All-India standard considered in the context of the percentage of literacy, medical facilities and other economic and civic amenities.

The legacy of the previous administrative set-up was also totally inadequate to meet the needs of development on a planned basis. The organisation that was available in the State had been built up solely for maintaining law and order. The developmental agencies, as they existed before, were meant for superficial duties rather than for any purposeful work. Even educational and training facilities for producing technically qualified manpower to operate our developmental schemes were very much wanting. The State was, therefore, faced with shortage of both administrative and technical personnel.

It is in this background that the targets and achievements of the First Five-Year Plan in our State have to be viewed. The First Five-Year Plan for Bihar was a modest plan compared to our needs. The Plan itself was a successor to the post-war reconstruction schemes which were working from before. Due to financial limitations, the total outlay of the schemes was, however, cut down from Rs. 140 crores to Rs. 57.3 crores. The subsequent adjustments, however, improved the size of the Plan to some extent raising it to Rs. 67.79 crores. Even with the readjustments, the Plan gave to Bihar a total outlay Rs. 16.9 per capita as against an average of Rs. 25.5 per capita for all States taken together. It would have been difficult to work even this modest plan for want of technical and administrative personnel. An ambitious scheme of technical and administrative training was, therefore, launched during the First Five-Year Plan. The effect of this is reflected in the achievements of the First Five-Year targets. It is hoped that the State will not be short of technical and administrative personnel in the working of the Second Five-Year Plan except in a few cases when the deficit will be made by the end of the period.

The State's performance in the First Five-Year Plan has exceeded the most optimistic estimates. As against the total revised plan provision of Rs. 67.79 crores, the State could usefully spend a sum of Rs. 73.28 crores having exceeded the plan provision by about Rs. 5.49 crores. In addition to this, several developmental schemes, of which special mention may be made of the National Extension Service and Community Development programme and the bulk of educational expansion, were executed outside the plan provision. Though final figures of such expenditure are not available, the total outlay on new development schemes both within and outside the State Plan is estimated to be nearly Rs. 125 crores. The expenditure in the last year of the Plan amounted to nearly Rs. 27.80 crores as against the

total developmental expenditure of about Rs. 11 crores in 1950-51. This achievement, despite the inherent limitations of inadequate technical and administrative personnel, relatively poor finances of the State and the recurring natural calamities of floods and droughts, instils a new confidence in the State's ability to forge ahead. The excess expenditure is largely accounted for by civil works, which represents a tangible and material addition to our capital assets. The rising tempo of developmental activities made this excess expenditure an imperative necessity, and may be considered as having proportionately eased our transition to the Second Plan. The physical achievements recorded in different developmental sectors have also kept pace with the specified targets, conditioned of course, by the amount of money spent, the organisation available for executing the schemes and the level of development in the base year. While details are discussed in the subsequent chapters, a brief summary of the important work done in the various fields is given in the following paragraphs.

Bihar is predominantly an agricultural State. Agricultural improvement, therefore, received first consideration in the State Plan. The food problem is today much easier on account of permanent improvements effected in the agricultural sector. Agricultural research is now being tested at the field level through the National Extension Service. As an essential prelude to land reforms, Zamindaris have now been completely abolished throughout the State. With the abolition of the Zamindaris, a new step towards the ideal of peasant proprietorship in direct contrast with a welfare State has been taken. Legislation for consolidation of holdings and prevention of fragmentation has also since been enacted.

Very useful work has been done in Animal Husbandry. Training facilities in the Veterinary College have been increased considerably to meet the demand for development in animal husbandry. 72 dispensaries for cattle disease have been opened by the end of the First Five-Year Plan, and the existing veterinary hospitals have been taken up under State control. Upgrading of cattle through bull-rearing farms and artificial insemination centres has made considerable progress. Key village centres are operating in 13 places. Milk unions have been organised at Patna, Bhagalpur and Muzaffarpur. Several poultry hatching centres were started and they have made considerable progress.

Irrigation is one of our main problems of agricultural development, particularly because of the limited land availability and heavy pressure of population. For meeting emergent needs, medium and minor irrigation schemes have been increasingly provided. In suitable areas.

910 tube-wells have been sunk by the Irrigation Department and 116 by the Agriculture Department. Most of these tube-wells have been energised. Considerable progress has also been made in taming the Kosi, the river of sorrow in North Bihar. Voluntary shramdan on a very extensive scale was available for the embankment work undertaken under the Kosi and Gandak embankment projects. This has been a significant advance in the field of voluntary public co-operation in State undertakings.

In the Co-operative sector, 12,268 multipurpose co-operative societies have been organised to meet the demand of rural credit and financial assistance. The credit Agricole depots have been able to push the sale of fertilizers from nearly 5,000 to above 25,000 tons a year. Striking progress has been recorded in the organisation of handloom co-operatives. As against the target of 180 Weavers' Co-operative Societies, the total number of Weavers' Co-operative Societies organised till the end of the First Five-Year Plan has gone up to 575. This rapid progress in the organisation of Weavers' Co-operative Societies and development of handloom industry is partly attributable to the financial assistance made available by Government of India out of the proceeds from additional excise duties imposed on mill made cloth. The marketing organisation of the handloom industry has also made considerable progress, and cloth worth more than Rs. 2 crores was marketed through the Weavers' Co-operatives and sales emporia during the Plan period.

In public works programme, the road plan for Bihar was the largest among all the States of India, amounting to Rs. 10.75 crores, even though we have still far to go to catch up with other States. It is gratifying to note that as against the revised target of 2,257 miles of improved road, the target achieved has been 2,268 miles. This is in addition to the considerable improvements effected in kachcha roads, in which considerable amount of public participation has been forthcoming.

The provision of electricity in Bihar was one of the lowest in India, but, during the First Five-Year Plan, a very large advance in the direction was made. As against 47-MW of electricity produced before the First Five-Year Plan, by the end of the First Five-Year Plan, 208-MW of electricity is being produced. North Bihar has been particularly deficient in electric power. To meet this shortage, 12 diesel pilot generating stations with a capacity of 8-MW have been installed in North Bihar. In South Bihar, the Bokaro Thermal Power Station of the D. V. C., which is one of the largest in Asia, has started

working from 1953. This has provided electric power to the major portion of South Bihar. In North Bihar, thermal generation will remain the only source of power supply till hydro-electric power can be exploited from the Kosi and Gandak projects.

The progress of education has also been considerably accelerated though funds for this purpose were not adequate. The percentage of school going children was 27.3 in 6—11 age group and 10.5 in 11—14 age group in the beginning of the First Five-Year Plan. At the end of the plan period, the percentage is estimated to have improved respectively to 30 and 20 percent. Grants have been given liberally for teaching of science and crafts in the secondary and middle schools. The two Universities of the State have been given large grants for increasing 1,600 additional seats in the I. Sc. and 550 seats in the B. Sc. classes. Steps have been taken to provide increased facilities for teaching in engineering at Patna, Muzaffarpur and Ranchi. Over 2,000 social education centres have been established all over the State during the period of the First Five-Year Plan. Three institutions for advanced oriental studies have been started, namely, the Nalanda Institute at Rajgir for Pali and Budhistic studies, the Mithla Institute for advanced Sanskrit and a post-graduate institute for Arabic studies in Patna. The National Cadet Corps and the Auxiliary Cadet Corps have made considerable progress during the period.

In the public health sector, more than Rs. 10 crores have been spent in the State over the various State and Central schemes. A 250-bed surgical unit, one of the biggest of its kind in Asia, with most modern equipment, has been added to the existing Patna Medical College Hospital. Important improvements have been made in the Darbhanga Medical College both on medical and college side. A very large number of training institutions have been started for training women personnel on medical and nursing work. All subdivisional hospitals have been provincialised and district hospitals expanded and provided with up-to-date equipment. An integrated system of curative and preventive medicine in the rural area has been operating in the flood affected areas in North Bihar, which has achieved significant success in controlling the malaria that used to follow the annual floods in Kosi.

Good work has been done in the public health programme. The death rate from cholera has come down from 1,300 to 34 per million and that for small-pox from 300 to 16 per million. Mass B. C. G. vaccination to protect the younger generation from T. B. has been

taken up extensively, and a large Anti-T. B. centre has been started in Patna with the help of UNO and UNICEF. By the end of the First Five-Year Plan, every town with a population of 25,000 has been provided with pipe water supply the schemes for which have either been completed or are under execution. Over 13,000 tube-wells have been sunk for providing drinking water in the flood affected areas of North Bihar.

Bihar contains the largest population of scheduled tribes in India. The scheduled castes and scheduled tribes and other backward classes constitute over 38 percent of the total population of the State. The improvement of these backward sections has received due importance during the First Five-Year Plan. Adequate assistance has been provided through stipends and scholarship for their educational uplift, and hostels have been built for them. Schemes of grain golas, co-operative societies, drinking water-wells and village roads are some of the items of economic and civic amenities provided for them. Special staff has been provided for looking into their special interests.

One of the major contributions of the First Five-Year Plan has been the scheme of co-ordinated rural development through the National Extension Service and the Community Development programme. The economy of Bihar is primarily rural. During centuries of foreign rule, village life was neglected. The present scheme of National Extension Service and Community Project Development has put a new life to the rural sector, and has evoked considerable enthusiasm and response from the rural masses. The emphasis of the scheme on economic development as well as on cultural and co-operative social life has revitalised the rural economy. The progress of these projects has been most gratifying in Bihar, both in terms of physical targets as well as in the amount of public participation. The National Extension Service has now been adopted as a permanent pattern of administrative structure with an emphasis on co-ordinated development in all spheres. The outlay on these projects was not included in the State Plan, but was financed outside the Plan with central assistance. During the First Five-Year Plan period, 25 Community Development blocks and 77 National Extension Service blocks were functioning in Bihar.

With a view to institutionalising public participation in the various programmes, formation of Gram Panchayats has been encouraged. Already by the end of the First Five-Year Plan, 6,512 Gram Panchayats have been established. These Gram Panchayats have played a very important role in arousing civic consciousness and

in stimulating local efforts in the execution of minor development schemes. The Gram Panchayats have done useful work as an agency for the execution of the Kosi embankment and in other flood protection schemes in North Bihar. These Panchayats are now being increasingly associated with management of village common lands, collection of rent and in various aspects of rural development programmes.

The success of the First Five-Year Plan lies not as much in its achievement of physical or financial targets as in its contribution towards building up a solid base for future advance. An overall assessment of the progress recorded during the First Five-Year Plan indicates that the foundation has been well laid for the future. Considerable degree of public enthusiasm and public participation has been forthcoming in the execution of the various plan schemes. Large advances made in the various developmental sectors and public participation increasingly associated with these programmes give high hopes for the future.

CHAPTER II.

FINANCES OF THE PLAN.

It has been mentioned in the preceding chapter that the original plan provision for Bihar was merely Rs. 57.29 crores. Out of this, the central assistance was fixed at Rs. 15 crores. With subsequent adjustments, which raised the size of the Plan to Rs. 67.79 crores, the amount of central assistance was also increased. The additional assistance on account of schemes accepted under adjustments was fixed at Rs. 5.22 crores. The statement below shows the amount of central assistance available as against total expenditure incurred in the State for the execution of the First Five-Year Plan schemes during the past five years :

TABLE I.
[ALL FIGURES IN LAKHS OF RUPEES.]

Years.	CENTRAL ASSISTANCE.				
	Total Expenditure incurred in the State.	Miscellaneous Development schemes.	Grow More Food.	T. C. M. Tube-wells.	Total.
1	2	3	4	5	6
1951-52 ..	1183.3	..	103.58	..	103.58
1952-53 ..	965.9	75.00	55.50	20.00	150.50
1953-54 ..	911.2	100.00	46.75	26.00	172.75
1954-55 ..	1456.9	950.00	94.05	172.50	1216.55
1955-56 ..	2538.3	289.00	86.72	75.50	451.22
TOTAL ..	7327.6	1414.00	386.60	294.00	2094.60
			* Deduct ..	72.00	*72.00
				222.00	2022.60

*A sum of Rs. 72 lakhs was provided under the central Plan of Ministry of Food and Agriculture, Government of India for expenditure in the State, which did not form a part of the State Plan.

The total central assistance amounted to Rs. 20.226 crores leaving the balance to be met out of the resources of the State. The question of finding Rs. 53.05 crores as the State's share of expenditure from local resources has not proved an easy task, particularly in view of the very low per capita revenue of the State. Some additional assistance was available from the Centre in respect of such welfare schemes as fall within Article 275(1) of the Constitution. Separate figures for these schemes, which are operated outside State plan, are not yet available. The expenditure shown under amelioration of backward classes in Table III of this Chapter is inclusive of these schemes.

The following table, based on figures incorporated in the Reserve Bank's Report on Currency and Finance for the year 1954-55, will give a comparative picture of the financial poverty of Bihar :

TABLE II.

BUDGETARY POSITION OF PART A STATES (ON REVENUE ACCOUNT)

Average annual figures based on actuals of the years 1951-52, 1952-53, 1953-54.

State.	Total Revenue.	Per capita Revenue.	Total expenditure.	Per capita expenditure.	Total non-developmental expenditure.	Per capita non-developmental expenditure.	Total developmental expenditure.	Per capita developmental expenditure.
1	2	3	4	5	6	7	8	9
	Lakhs.	Rs.	Lakhs.	Rs.	Lakhs.	Rs.	Lakhs.	Rs.
Assam	1,285	14.3	1,197	13.3	505	5.7	692	7.7
Bihar	3,422	8.5	3,038	7.6	1,417	3.5	1,621	4
Bombay	6,458	17.9	6,613	18.4	3,266	9.1	3,347	9.4
Madhya Pradesh	2,313	10.9	1,970	9.3	981	4.6	989	4.7
Madras	5,982	10.5	6,484	11.4	2,631	4.6	3,852	6.8
Orissa	1,192	8.2	1,150	7.9	504	3.5	646	4.4
Punjab	1,813	14.4	1,666	13.2	943	7.5	723	5.8
Uttar Pradesh	6,117	9.7	6,020	9.5	3,434	5.4	2,587	4.1
West Bengal	3,747	15.1	3,983	16.1	2,129	8.6	1,855	7.5
TOTAL	32,329	11.6	32,121	11.5	15,810	5.7	16,312	5.9

With a view to meeting its large commitment of plan expenditure, the State has marshalled all its resources and cut down as much of non-developmental expenditure as possible. Despite the fact that the scope of additional taxation is very much limited in Bihar, the State did not hesitate to enlarge its taxation by imposition of estate duty on agricultural property and several new taxes like tax on passenger rates and freights. The irrigation rates were increased by hundred percent and the rates of several other taxes, duties and fees were raised to the maximum extent possible.

Apart from the relatively underdeveloped economy of this State, the financial poverty of Bihar has largely been due to the inelastic system of land revenue that prevailed in this State due to permanent settlement. The permanent settlement has now been liquidated which would naturally increase the revenue receipts from lands. But, for the present, in view of the heavy burden of compensation, the scope for extra yield on this account is very much limited. Revenue receipts have, however, considerably increased in Bihar due to additional measures of taxation and tightening of tax administration. This would be evident from the fact that the per capita revenue, which stood at Rs. 2.5 as the average of 10 years from 1937-38 to 1946-47, has increased to Rs. 8.5, which is the average of the three years ending 1953-54. The Planning Commission had, in the case of Bihar, estimated an additional revenue from taxation during the First Five-Year Plan period as Rs. 3.6 crores which amounts to approximately Rs. 61.2 lakhs a year. As against this, the State Government effected an improvement in revenue to the extent of about Rs. 101 lakhs a year.

With the existing financial poverty of Bihar as it is, the State has been beset with recurring natural calamities in the shape of floods and droughts, which have claimed a considerable portion of the State's resources. The flood and droughts in our State have almost become a permanent liability on the State's limited resources. The magnitude of this liability will be evident from the fact that as against about Rs. 53 crores, which the State had to raise for financing the Five-Year Plan Schemes, the State's share of expenditure on scarcity relief has amounted to more than Rs. 22 crores during these years. In spite of this financial handicap, Bihar has gone forward on its road to planned development.

The statement below gives an annual account of the progress of expenditure in the different developmental sectors against the original and revised plan provisions. The excess or saving under the different heads has also been shown separately :

TABLE III.

FINANCIAL REVIEW OF PROGRESS IN THE FIRST FIVE-YEAR PLAN FROM 1ST APRIL 1951 TO 1ST MARCH 1956.

[IN LAKHS OF RUPEES.]

Serial no.	Sub-head.	Original Plan provision.	Plan provision after adjust-ment.	ACTUAL EXPENDITURE.					Total up to 31st March 1956.	Excess (+) or saving (-) over Plan provision.
				1951-52.	1952-53.	1953-54.	1954-55.	1955-56.		
1	2	3	4	5	6	7	8	9	10	11
1	Agriculture	12,84.3	11,80.9	3,24.1	1,43.7	1,27.1	2,24.0	3,86.2	12,05.1	+24.2
2	Veterinary and Animal Husbandry.	92.5	1,22.4	12.9	11.6	12.9	21.9	40.1	99.4(†)	-23.0
3	Dairying and Milk Supply ..	1.5	5.5	0.6	0.3	0.3	2.6	1.8	5.6(a)†	+0.1
4	Forest	1,25.0	1,25.0	22.3	15.0	19.8	26.5	40.6	1,24.2	-0.8
5	Co-operation	39.0	39.0	5.4	6.7	7.0	8.0	12.4	39.5	+0.5
6	Fisheries	10.6	8.6	1.4	1.3	1.4	1.5	1.7	7.3	-1.3
7	Rural Development	1,24.7	1,24.7	12.6	17.3	21.7	27.7	43.8	1,23.1	-1.6
8	Irrigation Projects.. ..	9,73.3	12,65.4	1,82.9	1,48.1	1,15.6	2,90.9	5,56.8	12,94.3	+28.9
9	Power Project	7,08.7	9,55.6	76.1	1,49.9	1,44.7	1,65.1	4,10.4	9,64.2	-9.4
10	Cottage Industries	59.2	50.0	4.9	5.6	8.6	9.0	17.4	45.5	-4.5
11	Other Industries	60.0	86.3	2.0	8.1	5.5	27.3	15.4	58.3	-28.0
12	Roads	8,00.0	10,75.0	2,02.1	2,02.4	1,04.4	1,85.2	3,84.0	10,78.1	+3.1
13	Education	5,70.4	6,04.4	1,30.4	1,00.6	1,25.9	1,84.6	2,21.9	7,63.4	+1,59.0
14	Medical	4,03.9	5,24.9	1,10.1	53.5	53.6	77.6	2,06.1	5,00.9	-24.0
15	Public Health	1,96.0	3,47.0	40.0	45.9	80.4	1,13.6	1,84.5	4,64.4	+1,17.4
16	Housing	1,00.0	1,00.0	20.0	20.0	28.0	20.1	24.5	1,12.6	+12.6
17	Labour and Labour Welfare ..	20.0	23.3	0.6	0.7	3.4	7.1	8.2	20.0	-3.3
18	Amelioration of Backward Classes	1,60.0	1,41.4	34.9	35.2	40.9	64.2	82.5	2,57.7†	+1,16.3
19	Civil Works .. ..	..	..	1,82.0*	..	..	..	..	1,82.0	+1,82.0
TOTAL		57,29.1	67,79.4	13,65.3	9,65.9	9,11.2	14,56.9	25,38.3	73,27.6	+5,48.2

*Expenditure over civil works in 1951-52 not divided in sub-heads.

(†) Figures do not include expenditure over buildings.

†Include expenditure over the schemes receiving assistance from Government of India under Article 275(1) of the Constitution outside State Plan.

A reference to Table III will show that the progress of expenditure during the first three years of the Plan was relatively on the low side. With the increasing tempo of developmental work and improved administrative and technical organisation, expenditure in different sectors has progressively increased, with the result that the total expenditure has exceeded the Plan provision by Rs. 5.48 crores [subject, of course to the adjustments for welfare schemes receiving central assistance under Article 275(1) of the Constitution]. The shortfalls in certain fields have been more compensated than by increased expenditure in others. Such shortfalls and excesses are incidental in large scale planning where it is difficult to postulate an altogether rigid schedule in view of the various uncertainties involved.

CHAPTER III.

STRUCTURE OF CO-ORDINATING MACHINERY.








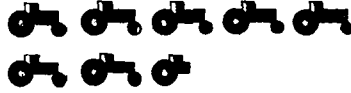


The Five-Year Plan is intended to provide a pattern of co-ordinated development in all sectors of State's economy. Accordingly, it has been found necessary to set up a proper organisation for co-ordination work at the headquarters as well as the field level. The Development Commissioner, as the principal Secretary to Government and principal head of Department is entrusted with the responsibility of supervising the progress of the Five-Year Plan schemes. He co-ordinates the work in different sectors and periodically reviews the work done with a view to easing any procedural or organisational difficulty that may hamper the progress of work. Each of the Development Departments, which formerly functioned in a limited sphere and was engaged in mostly research work or in regulatory and directive activities, has had to step in the field and achieve results for all-round development. The organisation has now to project its activities in the rural side, which was long neglected, and, therefore, its expansion has been inevitable. The National Extension Service and Community Project provide an invaluable agency through which the Departments can increase their contacts with rural life, and subject matter specialists are provided for all aspects of rural development. The expansion at the field level has to be supplemented by adequate supervising staff. Each of the Departments concerned with developmental schemes has expanded during the plan period, but it has not got yet its full complement of technicians. In order to meet the shortage of technical personnel, intensive training programme in various categories has been launched.





In addition to the departmental expansion and re-organisation provision has been made for effective co-ordination through Committees at different levels. At the cabinet level, there is a State Development Committee, which functions as a Sub-committee of the cabinet, with the Development Commissioner as the Secretary of the Committee. This Committee is presided over by the Chief Minister and is composed of all members of the Council of Ministers. At the Secretariat level, there is a State Advisory Board. The State Advisory Board is composed of all the Secretaries and Heads of Departments concerned with the Five-Year Plan and the Chief Minister himself presides over the meetings. The Board reviews regularly the progress made in the different sectors and lays down plan for co-ordinated work. At the district level, there is a District Development Committee in each district, consisting of officials and non-officials to secure co-ordination

of various developmental activities undertaken in the district. The Committee is intended to mobilise local initiative and resources in the execution of local development projects. The Committee is presided over by the Collector and it has, amongst its members, principal district officers of the various development departments in the district. As non-official members, all members of Parliament and all members of the State Legislature in the district, Chairman of District Board, members of active social service organisations are represented in the Committee. All Subdivisional Officers in the district are also members of these District Committees.

There are also Block and Project Advisory Committees consisting of officials concerned with the development works at the project and block level and non-officials. All members of the State Legislature and members of Parliament of the Block and Project area are represented. These Committees have also, as their members, the leading agriculturists of the area, members of social service organisations, Mukhias of Gram Panchayats by rotation and representatives of local Boards and co-operatives. At the village level, the Gram Panchayats, wherever they have been formed, and members of the Co-operative Societies are always consulted in respect of local schemes. Every attempt has been made to ensure active public participation in the execution of the Plan schemes. Ample opportunities have been provided through local Committees for local initiative to influence the planning and execution of development schemes pertaining to their areas.

AGRICULTURAL DEVELOPMENT

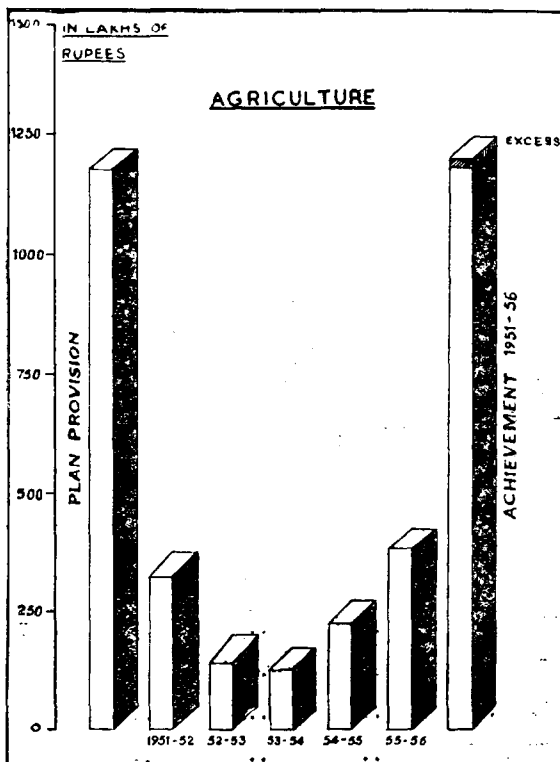
	POSITION	PRE-PLAN	PROGRESS IN PLAN-PERIOD
FOODGRAIN <i>Produced</i> (PER ANNUM)		44	 64
FERTILIZER <i>Distributed</i> (PER ANNUM)	 PHOSPHATIC FERTILIZER	5419	 8,558
	 AMMONIUM SULPHATE	13,695	 25,821
WASTELAND <i>Reclaimed.</i>		36,474	 230,745
TUBEWELL <i>Installed.</i>		10	 1026

 = 5,000 TONS  = 30,000 ACRES
 = 10 LAKHS TONS  = 100

CHAPTER IV.

AGRICULTURE.

Increased food production is the essential pre-requisite for raising the standard of living in a country, where the majority of its population are underfed. The First Five-Year Plan, accordingly, gave the highest priority to schemes of agricultural development. This has particular significance for Bihar. Its economy is predominantly agricultural and supports more than 86 per cent of its population. Relatively a larger share of the plan provision, approximately 17.6 per cent of the total State Plan, was, therefore, available for agricultural development in the State. There were 50 schemes in the agriculture sector, and 7 schemes for fishery development with a total provision of Rs. 1189.5 lakhs. The activities of the Agriculture Department which were formerly limited to some research and a few demonstrations were extensively enlarged to cover wider field operations and reach the cultivators in their farms.



The statement below gives the annual progress of expenditure in Agriculture :

Year				Total expenditure including fishery.
				Rs.
1951-52	...	...	...	325.482
1952-53	...	...	...	145.121
1953-54	...	...	...	128.55
1954-55	...	...	...	225.515
1955-56	...	...	...	387.845
Total				1212.513

The total expenditure exceeded the plan provision by about Rs. 22.9 lakhs, which was due to increased level of development reached in certain spheres, the details of which are discussed in later paragraphs.

In order to cope up with the increased work and activities of the department, considerable expansion in the strength of staff was made during the plan period. The statement below gives a comparative picture of the staff position :

Posts.	Numerical strength of staff.	
	In 1950-51.	In 1955-56 (as on 1st July 1955).
1. Outside the cadre	7	13
2. Class I	16	49
3. Class II	65	167
4. Class II (Junior)	65	150
5. Superior non-gazetted	576	1,278

PRODUCTION TARGETS AND ACHIEVEMENTS.

The following figures show the physical targets and achievements during the plan period in respect of production of foodgrains and other crops :

Commodity.	Unit.	1949-50 Base year production.	1950-51 produc- tion.	Target of additional production, 1951-56.	1955-56 estimated production.
1	2	3	4	5	6
Cereals and pulses	Lakh tons ..	57.12	43.72	7.22	64.34*
Jute	.. Lakh bales	4.33	4.56	3.90	8.70
Oilseeds	.. Lakh tons ..	0.98	0.95	N.A.	0.77
Sugarcane	.. ..	N.A.	N.A.	20 tons per acre.	18.7 tons per acre.
Tobacco	.. 1,000 tons ..	12	11	N.A.	19.40
Lac	.. Lakh maunds	N.A.	N.A.	N.A.	6.73

N. A.—Not available.

*The figures of actual production are not yet available.

The estimated additional production due to the execution of the various Grow More Food Schemes is given in the table below :

ADDITIONAL PRODUCTION DUE TO VARIOUS GROW MORE FOOD SCHEMES.

Schemes.	Number completed 1951-56.	Area benefited.	Estimated additional production.
		(Acres.)	(Tons.)
Rahat Pumps	3,564	17,820	3,564
Tube-wells	116	11,600	2,320
Surface percolation wells	16,459	98,754	16,459
Medium Irrigation Schemes	408	8,16,000	1,49,328
Lift Engines and Pumps	2,348	1,17,400	23,480
Open Boring	7,082	35,410	7,082
Minor Ahars and Pynes (including achievements of Agriculture and Revenue Departments).	29,546	5,47,000	1,00,375
Ammonium Sulphate	25,821	3,94,334	51,642
	Tons (Annual consumption).		
Phosphatic Fertilisers	8,558	2,30,966	8,558
	(Annual con- sumption).		
Town Refuse compost	79,233	79,233	2,935
	(Annual con- sumption).		

The financial provision and expenditure, and also the physical achievement in relation to targets, in respect of each scheme are given in Appendix II. Column 7 of the statement indicates the provision made in the original plan and column 8 shows the provision as it stood after the adjustment. Column 16 gives the total expenditure up to the 31st March, 1956. Columns 19, 20 and 21 give the target and achievement in those schemes where physical targets were laid down. Some important developments in the agriculture sector are discussed below :

ADMINISTRATION AND EXTENSION.

There were 3 schemes under this group with a provision of Rs. 108.16 lakhs for the strengthening of administration and specialist staff at the various levels. The total expenditure during plan period amounted to Rs. 109.12 lakhs. The set up of the Agriculture Department before the First Five-Year Plan was totally inadequate to meet the increased demand for agricultural development. Accordingly, it was considered necessary to provide adequate staff both at the Headquarters and field levels for extension as well as for service functions. At the Headquarters, in addition to the post of a Director, Extension Services, which was created as a result of greater emphasis on G. M. F. activities, a post of Director of Agricultural Education was created for expanding agricultural training. An Agricultural Information Officer at the Headquarters and an Agricultural Publicity Officer in each of the four ranges were appointed for wider dissemination of agricultural news and service. At the district level subject matter specialists in agronomy, chemistry and horticulture, and a mechanic were appointed to study the local problems and pass them on to the Research Officers.

For intensive development of medium irrigation schemes, an unit consisting of an Assistant Agricultural Engineer with complementary staff was appointed for Patna, Bhagalpur and Chotanagpur Divisions. This was in addition to the normal agricultural engineering staff maintained for minor irrigation works. The Revenue Department maintained its staff for executing minor irrigation programme and other local development works. An Assistant Engineer in each district and one Overseer for each of the Subdivisions with draftsmen were already functioning. Two additional posts of Assistant Engineers were created during 1955-56 for the districts of Saharsa and Dhanbad.

EDUCATION AND TRAINING.

There were 7 schemes under this group, 4 of which were sanctioned as adjustments to the original schemes. During the plan period, considerable progress was made in agricultural education. Formerly, there was only one Agricultural College throughout the State at Sabour

imparting education in agriculture with only 35 admissions a year. The scheme for the expansion of the College was sanctioned in June, 1952, which increased the annual admissions from 35 to 70. The number of agricultural graduates who passed out of the College from 1952 to 1955 was 177 in all. A course for M. Sc. (Agri.) under the Bihar University was introduced in the College from February, 1955. This is a two years' course and provides post-graduate training in Agronomy, Horticulture, Plant Pathology, Entomology and Agricultural Extension. 25 students were admitted in the first year. On account of the introduction of the M. Sc. (Agri.) courses, the teaching staff of the College has been further strengthened.

During 1954-55 a Statistical Research Section was established at Sabour to analyse the research data collected by the Research Specialists of the State and to interpret results. The statistician was also employed in part time teaching job in the College.

To meet the continued and likely shortage of Agricultural Graduates in the State for the Second Five-Year Plan, another Agricultural College was started at Ranchi in July, 1955, with provision for admission of 80 students a year.

For meeting the dearth of superior qualified technical personnel a scheme was taken up for deputing officers for higher training abroad. 23 officers were deputed abroad and returned after training in various branches of agricultural science. These Officers are being utilised in suitable capacities.

For horticultural development, a Mali training scheme, which had completed its term in 1951-52, was revived during the plan period in order to meet the increased demand of Malis to be posted at N. E. S. blocks. 280 Malis were trained under this scheme and posted at different centres.

In August, 1953, four Basic Agricultural Schools were set up in the districts of Gaya, Saran (Sepaya), Ranchi and Darbhanga (Pusa) with the assistance of the Government of India for the purpose of giving training in Agriculture to the Village Level Workers to be employed in N. E. S. Blocks and Community Project areas. A fifth school was started in Dumka in October, 1954. It was, subsequently, decided to open 12 more schools so that each district may have one such school. The object was that these schools, besides training Village Level Workers, should provide opportunity to farmers' sons to gain knowledge of scientific agriculture. Each student is given a stipend of Rs. 20 per month during the course of training for one year and selected students

are sent for further training in the Extension Training Centres for appointment as Village Level Workers. Four Extension Training Centres were established during the plan period, out of which three were set up in collaboration with the Ford Foundation and one by way of adjustment to the plan schemes.

A scheme for refresher course and inservice training was also included for training in extension work to the officers serving in the department, so that each officer, by turn once in two or three years, received training for a month. The Village Level Workers were also trained by the subject matter specialists attached to the Divisional Headquarters during the course of the monthly meetings at the Block headquarters. This scheme enables these officers to keep in touch with the research work of the department as well as the latest developments in agricultural science and in extension technique.

The total expenditure under education and training programmes was Rs. 48.124 lakhs against a provision of Rs. 65.65 lakhs. The saving was due to the difficulty experienced in recruiting qualified personnel for filling up newly created posts in time.

AGRICULTURAL RESEARCH.

A number of schemes for expansion of agricultural research in varied fields were taken up under the Agricultural Plan. A brief review of the activities under this head is given below :

(1) *Mycological section.*—A Mycological Section was started for investigating the disease problems of crops and for evolving suitable control measures for the disease. The section has done important work in many problems. Some of them are described below :

Dakhina disease of paddy.—The cause of this important disease has been established, and it has been found that the disease can be cured by draining the water from the fields and, if that is not practicable, by applying ammonium sulphate to the crop at the rate of 20—30 seers per acre.

Late Blight of potato.—The section has successfully demonstrated the control of this disease by spraying the crop with a fungicide. Many growers have now started spraying their own crops and it is conservatively estimated that annual increase of about one lakh maunds in the yield of potato results from the control measures.

Die back of chilli.—The section has also demonstrated the successful control of this disease in North Bihar where the incidence is very serious. Two sprayings may reduce the incidence of the disease by 70 to 100 per cent.

Root rot and wilt of pan.—The section has also demonstrated the successful control of this serious disease in Hajipur, Bhagalpur and other areas. Drenching the soil with half strength Bordeaux mixture has been found to be quite effective in controlling the disease.

Powdery Mildew of peas.—This disease is serious everywhere. Two sprayings of the crop with a copper fungicide have been found to reduce the loss very markedly.

Tikka Disease of Groundnut.—The disease is often very serious. Two sprayings of the crop with a copper fungicide have been found to increase the yield of the crop to over 25 per cent.

Work on several other diseases such as wilt of rahar, tomato, gram, and maize; mosaic of papaya, bhindi and kalai; smut and leafstripe of barley is in progress, and much information about these diseases has already been obtained.

(2) *Manurial table scheme.*—This scheme was originally started in April, 1948, and was included in the First Five-Year Plan. Under this scheme, experiments were carried out not only on manures and fertilisers but on varieties, rotations of crops on cultivators' fields, to find out manurial doses of different crops on different soils. About 30,000 experiments on cultivators' fields have so far been conducted by the end of the first plan. In 1954, a soil survey scheme was included by way of adjustment of the first plan to carry out soil survey and to prepare a Soil Map of the State of Bihar. The purpose was to study the constituents of the various types of soils with a view to determining the best land use.

(3) *Sugarcane research.*—The schemes of sugarcane research included the following :—

- (i) Mycological scheme.
- (ii) Entomological scheme.
- (iii) Sugarcane Research staff under Sugarcane Specialist.
- (iv) Scheme for intensification of Sugarcane Research on development side.

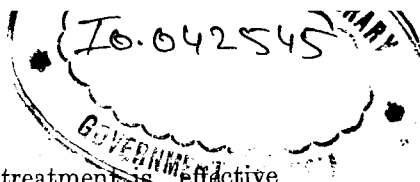
The main objective is to step up the tonnage and quality of sugarcane and rationalise cane agriculture by an adjustment the system of cropping practised in Bihar. Research work bearing on different aspects of the crop is carried out in the different specialised sections. The salient features of results achieved are stated below :

Varietal.—A number of high tonnage sugar varieties have been released, those recommended for general cultivation being Co.'s 313, 419, 453, 513 and B.O.'s 3, 10, 11, 17, 21, 22, 24 for North Bihar and Co.'s 313, 419, 453, 513, 622, Co. K 32, B. O.'s 10, 11, 14, 17, 24 for South Bihar. Besides, the varieties B. O.'s 28, 29, 30, 31, 32, 33, 34 and Co.'s 617, 619 are in the co-ordinated testing stage. Of these, B. O. 24 has shown itself admirably suited to flood conditions, B. O.'s 3, 10, 14, 17 having proved outstanding not only with regard to acreyield and quality but from the standpoint of resistance to red-rot, floods, water-logging and drought conditions as well. The release of the early variety Co. 622 in South Bihar has enabled commencement of the crushing season by at least 3 weeks.

Manurial.—Consequent on soil improvement due to intensive cropping under the Grow More Food Campaign, the manurial schedule for sugarcane had to be revised. The schedule worked out for North Bihar is one of 60 lbs. N. 75 lbs. P_2O_5 per acre, that for South Bihar being 80—100 lbs. N. 60 lbs. P_2O_5 per acre (over a basal dressing of green manure in both cases). Notwithstanding the fact that sugarcane is a heavy feeder, manuring leaves a residual effect of 9—12 per cent from which the subsequent crop derives benefit. Manuring with sulphitation presumed (applied to the soil in hot weather) has been recommended and the practice is becoming universal in North Bihar. It affords average increase in the acreyield to the extent of 18 per cent in cane, 10 per cent in paddy and 12 per cent in wheat besides leaving a significant residual effect in the soil. Incorporation of trash and legumes by ploughing-under during hot weather produces increases in cane yield to the extent of 3 tons per acre. Recent manurial experiments on cultivator's fields dispersed widely over the State have brought out responses of an order not hitherto supposed possible on the basis of farm experiments. They have also indicated phosphate responses of a high order and revealed pockets where potash manuring proves profitable.

Cutting down sugar losses between harvest and milling of cane.—To obviate these losses, methods have been devised in respect of rail cane as well as cart cane, which afford higher sugar recoveries to the extent of 0.5 unit or more. In the former case, the method consists of mist spraying with 2.20 gallons of water applied in 3 or 4 stages during loading of cane in wagons. The method recommended for carts consists in the provision of a moistened trash-blanket over loaded cane to prevent loss of weight due to dryage.

Use of 2 M—4—D to raise sugar content of standing cane crop.—Foliar spraying with 50 p. p. m. solution of 2, 4—D (sodium salt) at 69 gallons per acre had been found to increase sugar content of



standing crop by 0.5 unit on an average. The treatment is effective when applied in the months of November, December, January and February and higher sugar contents continue to be recorded even after a period of 95 days. Cost per acre works out to Rs. 3-6-0 (Rs. 3 as cost of aerial spraying and As. 0-6-0 towards chemical used), against profits amounting to over Rs. 70 per acre. Recent preliminary experiments on soil application of 2, 4—D (amine salt) in two doses of 3 lbs. per acre (at the time of interculture and earthing-up) have indicated improvements in sugar content of a much higher order (about 3 units). Further trials on soil application of 2, 4—D are in progress.

Use of growth inhibitors to maintain high recoveries in late season.—Foliar spray in late season with 100 p. p. m. solution of the growth inhibitors meleic hydrazide and Terpeneol affords higher sugar recoveries to the extent of over 0.5 unit. Costs involved amount to Rs. 6-6-0 and Rs. 3-10-6 per acre respectively for the two chemicals (including chemicals and spraying charges), against a profit of over Rs. 70 per acre.

Sugarcane pests.—Pests surveys have revealed some hitherto unrecorded borers in the State, viz., *Chilo tumidicostalis* in Purnea, *Hissetia steniella* in Muzaffarpur, *Phragmatoecia purpurens* in parts of Saran and Champaran districts and *Diatrace auricilia* recorded in stray instances. Chief enemies of the industry were the top and stem borers, the former affecting yield and the latter causing deterioration in sugar content of the crop. The surveys have also brought into bold relief the important role of wild hosts in the continuity and carry over of pest activity.

Gur.—Various improvements have been worked out in respect of the different aspects of the Gur industry, viz., (i) evolution of a cheap and effective method of juice clarification involving use of water extract of castorseeds, groundnuts or ready made soyabean tablets, which affords superior quality product even from inherently poor gur varieties as also from various categories of low grade material.

(ii) An improved juice boiling furnace which cuts down fuel consumption by 60 per cent and raises boiling rate by 100 per cent over the cultivators' furnace.

(4) *Entomological section.*—Large scale field trials conducted during this period. 1951-56, have evolved suitable recommendations for the control of pests on mango tree, on banana plantations, on paddy crop and on the winter crops (rabi) and vegetables, which are effective and cheap within the easy reach of common cultivators.

Forecast warnings were issued from time to time by the Section about the impending outbreak of some crop pests. These were based on studies correlated with the meteorological factors and the secondary hostplants of the pests.

The menace of the paddy Gall-fly pests is an all India problem but how this pest tides over the dry summer and winter seasons had remained a baffling problem to the Indian Entomologists since 1920. Its attack was serious in Madras, Bombay, Madhya Pradesh, Bengal and Orissa States as also in this State. This section was the pioneer in finding out and establishing the secondary host-plants of this pest for the first time in India. Five such wild plants have been established as the medium for carry over of the pest during the off season.

(5) *Horticulture Section—(a) Vegetable research sub-section.*— Selection trials on different vegetables were made. The results are mentioned below in brief :—

- (i) Bottle gourd—Lv54—10, Lv54—7 and Lv51—2 gave good results in yield.
- (ii) Spongegourd—LA 52—1 and 50—11 gave the highest yield.
- (iii) Ridgegourd—La51—1, satputia, 52—2 and LA52—1 were the highest yielder in different years.
- (iv) Pumpkin—54—3 and CM53—1 gave very good yield.
- (v) Lady's finger—About 25 strains showed good result in which LF 49—9, 49—4 and LF54—11 were the highest yielder.
- (vi) Chillies—The following were found suitable : Long thin red, Medium thick red, Local dwarf, Bull nose, Elephant truck and Hy—1.
- (vii) Tomato—8 strains were found suitable Le52—5 and Ec—598 (late variety) gave the highest yield.
- (viii) Brinjal—RT4, RT8 and RT9 were found very promising but Muktakeshi (Sabour selection) was the highest yielder.

Progeny row trials on the following gave the undermentioned results :—

- (i) Lady's finger—Seven progenies gave good result.
- (ii) Brinjal—Sm 50—4, Sm 15, St2 and Sm 49—1 gave good yield.
- (iii) Cowpea—Iron cowpea (california), Hy1, Hy2 and Hy3 gave good yield.

Manurial trials were also conducted in respect of the following :

Cauliflower:—	N: P: K = 80: 80: 80 lbs.	per acre are the suitable dose.
Cabbage :—	N: P: K = 120: 60: 60 lbs.	Ditto.
Tomato :—	N: P: K = 80: 100: 80 lbs.	Ditto.
Chillies :—	N: K = 80: 40 lbs.	Ditto.
Onion :—	N: P: K = 80: 80; 100 lbs.	Ditto.

Spacing trials on tomato and chillies were done.

Tomato—4' between row to row and 2' between plant to plant gave good result.

Chillies—Two plants in between two plants at a distance of 6' gave good result.

Miscellaneous trials.—(i) Acclimatization trial on different vegetables as turnip and carrot was done but the result was not of much significance.

(ii) Nutritional trial on Lady's finger was done to find out the control of chlorosis and it was seen that iron had shown best response when sprayed.

(iii) On the experiment selection of Alternaria free onion seeds, red type was found to be completely free from disease.

(iv) Spraying trial on Lady's finger was made but no conclusion has yet been made.

(v) Transplantation-cum-irrigational trial on bottlegourd, sponge-gourd, bittergourd and pumpkin was also conducted.

(b) *Fruit and vegetable preservation sub-section.*—The following works were completed with success and suitable methods have been evolved in the Fruit Preservation Laboratory :—

- (i) Canning of Mangoes, litchis and jackfruit.
- (ii) Squashes from mango, kagzi lime, orange, bel, jamun, litchi, jackfruit, watermelon and pine-apples.
- (iii) Juices from mango, litchi, orange, tomato and bel.
- (iv) Jams from mango, temary, orange, papaya and jackfruit.
- (v) Jellies from guava, mango, roselle, orange and tomato.
- (vi) Marmalade from orange.
- (vii) Preserves and candies from pettel, mango, amla, ginger, peels of orange and k. lime.
- (viii) Hot and sweet chutneys from mango, tomato, and mixed fruits.
- (ix) Tomato products of ketchup, juice, and canned.
- (x) Vinegar from jamun juice, sugarcane juice, toddy of palm juice and date palm and waste products of fruit preservation Laboratory.
- (xi) Preservation of fresh mangoes and litchi at low temperature.

- (xii) Utilisation of tapioca tubers.
- (xiii) Dehydration of litchi mango, jackfruit and all kinds of vegetables.
- (xiv) Pickles of kagzi lime, mango, karondo and pickles from mixed fruits and vegetables.
- (xv) Utilisation of specific organism viz. *Aspergillus* and *Gleusporium* spp. in liberation of vitamin 'C' and pectin from sugary substances.

(c) *Banana Research Scheme*.—Research farm of 10.02 acres has been established at Hajipur. Manurial trial on banana was done and it is being continued. About 50 varieties have been collected.

(6) *Botanical Section*.—Botanical section was expanded during the First Five-Year Plan period into four sub-sections as it was considered necessary to devote concentrated attention on the improvement of various crop groups which was not possible under a small set-up. The Sub-sections which came into being were (1) Oilseeds, (2) Rice, (3) maize and Millet and (4) Cereals. In order that the breeding of a crop could be carried on in the region in which it was of importance, eight sub-sections were provided at Monghyr, Patna and Bikramganj in South Bihar, Purnea, Pusa and Sepaya in North Bihar and Kanke in Chotanagpur with Sabour as Central Station. The Sub-sections were located in the farms at each of the places mentioned above. Each of the Sub-sections has a moderate sized laboratory in the central station and for each of the sub-section there is also a small laboratory. An area of 120 acres at the Central Station at Sabour has been acquired for the purpose of crop improvement work.

Physical achievements of each of the sub-sections are given below :—

Oilseed Sub-section.—The work on the oilseed crops of the State viz. Castor, Til, Linseed and Mustard was started together with the introduction of groundnuts. Collections of material both from the cultivators' plots either by actual visits to the field or through indents to various Deputy Directors of Agriculture and the Block Development Officers were made for the oilseed crops mentioned above. Collections of promising types of the various oilseeds from the different States of the Union were also made with a view to testing their suitability. As a result of testing both of the collection and introductions, economical types have become available in each of the oilseed crops which require testings on a larger scale before being recommended for general cultivation. Crossing programme in linseed, mustards and castor has been taken up with a view to combining economical characters in a single type and these crops are in the early stages.

Cultivation of groundnut has caught on with the cultivators, and in North Bihar in the sandy tracts of Purnea and in Santhal Parganas the cultivation has spread considerably. This necessitated working out of the cultivation practices for a few of the oilseed crops such as castor, til and groundnuts. Agronomical investigations were, therefore, taken up and it has been found that 80 lbs. of N. per acre for castor is the maximum dose for high yield of castor beans.

Rice Sub-section.—Since the crop occupies 60 per cent of the cultivated area, the need for more varieties better than local types was greatly felt and comprehensive programme of testing of the varieties was undertaken. This programme has continued for a period of three years and the examination of the data collected will point to economical varieties available. The evaluation of factors responsible for greater yield in the Japanese method of paddy cultivation was also undertaken simultaneously. The varieties that had been recommended already for general cultivation were multiplied and their seeds supplied to agencies engaged in the multiplication of seeds for distribution in the N. E. S. blocks and Community Projects areas. Investigations in manurial and other agronomical practices in paddy cultivation were started and the studies are well advanced to evaluate the most economical practices and manurial requirements for recommended paddy varieties.



Improved cultivation of paddy, Pusa.

A programme of evolving paddy varieties responsive to heavy manuring like Japonica varieties has been undertaken for the State in collaboration with the Central Rice Research Institute, Cuttack. Summer paddies in cultivation in the State have received special attention and efforts are being made to discover new paddies that can be used as summer crops.

Maize and Millet Sub-section.—Work on the production of hybrid maize and evolution of economic strains of millets, which are of importance to the State as Jowar, Maruwa, Kodon and Keoni, was started. In the sphere of the production of hybrid maize the local collections have been increased to several generations and the best open pollinated varieties of the State as Jaunpur, Kalimpong, Amnaur and Makwa etc., maintained. The collection of Jowar, Maruwa, Kodon and Keoni made from both within and outside the State have been subjected to a gradual sieving process to find out the economic types. Concurrently, efforts are being made to evolve varieties resistant to leaf spot and grain smut of jowar. Agronomical studies in Jowar and Maruwa have been undertaken with a view to evaluating suitable practices both for grain and fodder.

Cereals Sub-section.—To demarcate the areas suited for the various pulse types evolved hitherto by the section, a comprehensive testing programme, which has now run to a period of three years, was undertaken. The examination of the data will point to the types that can be recommended for general cultivation in the different areas. Concurrently, collections of pulses on a large scale from the different agricultural tracts of the State were made both by actual visits to the cultivators' plots and also by making indents on various Deputy Director of Agriculture and Block Development Officers and the material thus collected has been subjected to testing process to evolve economical types suited to the edaphic and climatic conditions of the various tracts.

Multiplication of those strains of various pulses that show promise has been taken up. Study of disease resistance, viz., wilt of rahar has been taken up and strains showing appreciable degree of wilt resistance have become available and await further testing.

Wheat.—Work on wheat, barley and oats was also taken up. The recommended variety of wheat in the State is NP52, which suffers from threshing difficulty, and to overcome this shortcoming a few of the strains have been evolved that are free from this difficulty and are on par with the NP52 in yielding capacity and degree of disease resistance. These strains are being tested in varietal trials and will be very soon available for large scale cultivation. Steps have been taken to evolve

rust resistant varieties and a beginning has been made with the adaptable material of the State which has been collected and is under process of testing. A few of the established strains viz., BP319 and others have been crossed with the disease resistant types of Indian origin, and back cross technique is being employed to transfer the disease resistant attributes of NP wheats to the Bihar wheats. Multiplication programme of the varieties evolved in wheat up till now in the State and the wheat varieties from outside the State found suitable to the conditions of the State viz., NP710, 790 etc., has been undertaken to supply these wheats in the Community Project areas.

Barley.—Similarly BB22 barley variety recommended for both North and South Bihar is being maintained and the nucleus seed multiplied for supply to Community Project areas. This variety has spread to a considerable extent in North Bihar. A programme to evolve strong strawed barley that will resist lodging has been undertaken and suitable crosses have been made. Collection of material from the various tracts in the State has been made to work out the discriminant function in barley and side by side to evolve a variety better than BR—22.

Green Manure Crop.—A scheme for green manures for paddy and wheat is in operation and efforts are being made to explore the possibility of wild legumes being used as green manures. Wild legumes, since Sunhemp and Dhaincha do not actually fit in the rotations, are being adopted for paddy and wheat in the State. Akand (*Calotropis procera*) has been found to be a good green manure. It cannot only be quickly incorporated in the soil but on account of its wild nature does not require to be cultivated but only collected from ruins etc., where it grows abundantly in the State. The cultivation of this plant is associated with further advantage that it is not grazed by cattle.

Tuber.—The tuber scheme under operation for some time has resulted in the introduction of Ranger and B4009 sweet potatoes in the State. These sweet potatoes are not only better yielders as compared to local varieties but also associated with Carotene quality not found in the local sweet potatoes. A heavy yielding cross of Ranger and local has been evolved—C4—and this variety outyields both its parents. Work on the improvement of Alti, Haldi, Misrikand etc., is in progress and it is expected that economic strains will be available before long.

Cotton.—An attempt to grow cotton in the State has indicated towards cultivation of early hirsutums. 216—F., which is being tried, can be successfully grown if sown in May when it yields to the extent of 12 maunds per acre of seed cotton. Barring the production of weak

and irregular lint one of the qualities of 216F was impaired by its cultivation in Bihar and steps are being taken to improve it.

Agronomical Research.—The scheme which was started in 1954 was an adjustment of the First Plan to carry on investigation on agronomical aspects of the principal crops of the State in different regions and work out different economic crop production technique in relation to the maintenance of fertility.

Pulse Research.—A pulse research sub-section was created in January, 1955 to evolve new varieties of pulse in the State.

Research Staff at District Farms.—Research staff on 13 district agricultural farms were sanctioned for multiplication of improved seeds at these farms. A Junior Research Assistant with two fieldmen were sanctioned for each of the farms.

Regional Agricultural Research Institutes.—Four Regional Agricultural Research Institutes were established at each of the four ranges of the department, namely, Patna, Pusa, Sabour and Kanke for co-ordination of research activities in the various fields on regional basis for problems connected with local conditions.

Schemes for expansion of agricultural chemistry, irrigation research and agricultural implements were also included in the First Five-Year Plan. The Agricultural Chemistry Section is concerned with analysis of soil and testing of chemical fertilisers to suit different soil conditions. Two Irrigation Research Stations were set up at Murliganj and Bikramganj to find out the water requirement of the crop. The research on agricultural implements was taken up to conduct tests to determine the suitability and efficiency of indigenous implements in use in Bihar with reference to the local conditions and to effect improvement in their design.

The total expenditure under agricultural research was Rs. 75.77 lakhs against a provision of Rs. 86.16 lakhs. The shortfall was due to the slow progress in the construction of buildings for want of materials and lack of suitably qualified personnel.

Land development.

A separate directorate of Waste Land Reclamation has been functioning in Bihar. The supervisory staff at the Headquarters

consists of a Director, One Deputy Director, one Agricultural Engineering Adviser and one tractor Engineer along with subordinate staff.

Reclamation of waste land by manual labour.—The target set in the Bihar First Five-Year Plan for reclamation under the scheme was 1,80,000 acres. In course of five years of the plan period, a total area of 1,60,595 acres of waste lands has been reclaimed by manual labour with advances of Land Improvement Loans to the tenants. During this period, a further area of 62,939 acres was reclaimed by manual labour at the initiative of the local officers, without assistance of loans. For giving loans to the agriculturists and for supervising reclamation of land, a small staff, consisting of a Waste Land Officer, one assistant and 4 amins is posted in those districts, where there is scope for reclamation of waste lands.

Purchase and maintenance of tractors for the State Tractor Organisation.—The target set in Bihar First Five-Year Plan for reclamation of waste lands by State tractors is 45,000 acres. In course of the five years of the plan period, it has been possible to reclaim only 7,211 acres under this scheme. The causes, responsible for poor progress under the scheme, have since been gone into in detail and the State Tractor Organisation is being reorganised.

About two thirds of the cultivable waste lands of the State lie in the plateau regions. To enable reclamation of waste lands, being carried out by it in the plateau regions of the State, the State Tractor Organisation will be required to be provided with sturdier tractors and special type of equipments. It has now been decided to utilise the State tractors along with the team of the Central Tractor Organisation, for reclaiming waste lands in the plateau regions. Necessary survey of the blocks is in progress and it is hoped better progress will be achieved during the Second Five-Year Plan period.

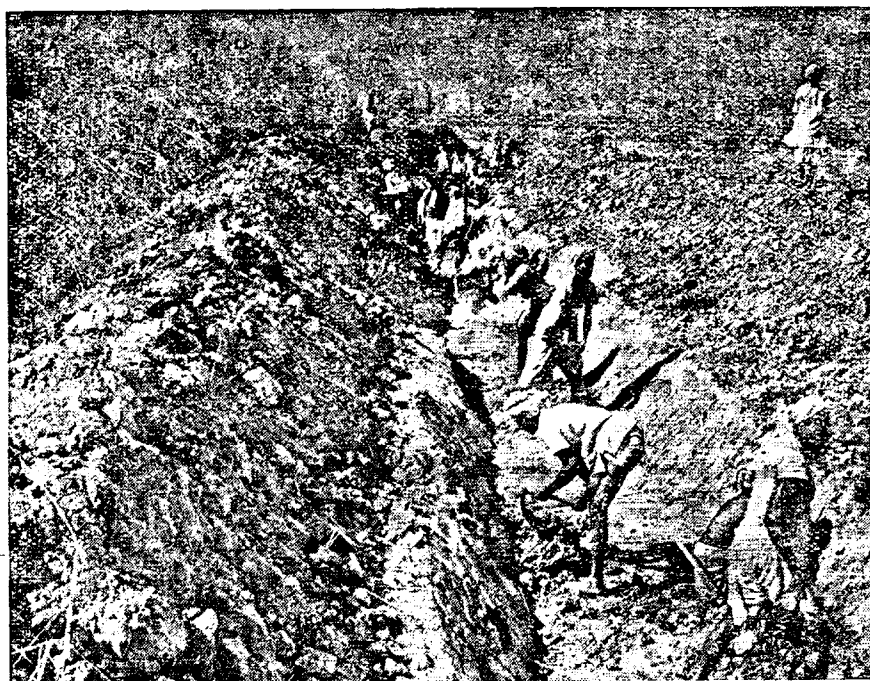
The total expenditure under land development was Rs. 24.54 lakhs against a provision of Rs. 24.42 lakhs.

Minor Irrigation.

In view of the considerable potentiality of minor irrigation schemes in Bihar, a number of schemes were started during the plan period. The schemes included installation of rahat pumps, tube-wells and open borings and sinking of surface percolation wells. In addition to these, several medium irrigation schemes and minor ahars, pynes and bundhs were taken up all over the State. The table below gives the achievements of the various Minor Irrigation schemes districtwise :

**DISTRICTWISE ACHIEVEMENT OF MINOR IRRIGATION SCHEMES DURING
THE FIRST FIVE-YEAR PLAN PERIOD.**

Districts.	Rahat pumps.	Tube-wells.	Surface percolation wells.	Medium irrigation schemes.	Pumping scts.	Open Borings.	Minor Ahars pynes and Bandhs (Agr. and Revenue Department)
1	2	3	4	5	6	7	8
1. Patna ..	1,403	45	3,068	41	334	2,027	2,730
2. Gaya ..	875	1	2,565	86	316	1,342	2,727
3. Shahabad ..	683	26	1,648	30	240	1,211	2,140
4. Saran ..	94	7	1,877	24	93	930	989
5. Champaran ..	23	13	303	12	140	44	781
6. Muzaffarpur ..	68	6	1,221	28	186	267	1,021
7. Darbhanga ..	34	1	247	25	194	77	1,468
8. Bhagalpur ..	76	6	637	25	154	383	1,629
9. Monghyr ..	81	5	1,605	31	205	453	2,357
10. Purnea ..	13	3	117	9	98	47	611
11. Saharsa ..	1	1	56	..	21	20	741
12. Santhal Parganas	29	..	406	15	80	137	4,907
13. Ranchi ..	59	..	687	26	30	21	1,275
14. Hazaribagh ..	55	2	533	18	68	5	1,608
15. Palamau ..	31	..	496	14	67	102	1,885
16. Manbhum ..	27	..	799	12	47	8	1,492
17. Singhbhum ..	12	..	194	12	75	8	1,185
TOTAL	3,564	116	16,459	408	2,348	7,082	29,546



A pynne being dug in Bihar Shariff.

There were 7 schemes included in the First Five-Year Plan under minor irrigation with a total provision of Rs. 691.25 lakhs, against which the expenditure amounted to Rs. 735.17 lakhs. There was some set back in the progress of these irrigation schemes caused by a reduction in the rate of subsidy from 50 per cent to 25 per cent in 1952-53 and 1953-54 and by the concentration of such works in intensive cultivation blocks. The tempo of progress was, however, revived with the restoration of 50 per cent subsidy on works executed all over the State in 1954-55. The schemes proved very popular and considerable progress was therefore, recorded.

Manures and Fertilisers.

Under this head, there were 4 schemes operating for distribution of manures and fertilisers. The physical achievements during the plan period are given below :—

Manures and fertilisers.	Annual consumption at the end of the First Five-Year Plan (in tons).
1. Rural Compost	10,33,000
2. Phosphatic Fertilisers and Bonemeal	8,588
3. Ammonium Sulphate	25,821
4. Town Refuse Compost	79,233
5. Green Manuring Seeds	58*

The achievement under this head was not quite up to the physical targets originally set in view of the reduction in subsidy from 50 per cent to 25 per cent and lower financial provisions for these schemes after adjustments. The expenditure, however, registered an increase over the revised plan provision. The total expenditure was Rs. 29.52 lakhs against the revised provision of Rs. 26.91 lakhs.

Seed Schemes.

There were two schemes under this head, namely, Paddy Seed Multiplication Scheme and Distribution of Disease Free Potato Seeds. The Scheme of Paddy Seed Multiplication scheme was abandoned on the advice of Government of India in the second year of the plan period. In respect of the scheme under Distribution of Disease Free Potato Seeds, 6,640 maunds of potato seeds were distributed to the cultivators. The total expenditure during the Plan period amounted to Rs. 5.32 lakhs against the Plan provision of Rs. 5.23 lakhs.

*continued only for one year.

Other Schemes.

(1) *Fruit production.*—This scheme contemplated development of horticulture in Bihar. The statement below gives a brief summary of the work done under this head :

Nature of work.	Unit.	Achievement.
1. Orchard improved	Acres	7,842
2. New orchards planted	,,	4,652
3. Area brought under quick growing fruits	,,	5,298
4. Fruit p'ants distributed	Number	1,79,593
5. Fruit seedlings raised and distributed	,,	2,50,000
6. Vegetable seeds distributed	Lb.	25,972

(2) *Sugarcane Development.*—The objective was to achieve the target production of 20 tons of cane per acre, 12 per cent sugar recovery and 120 days crush as against the average yield of 14 tons, 10.5 per cent sugar recovery and 80 days crush respectively. Work on sugarcane development may be summarised under the following heads :—

(a) Varietal.

(b) Manure distribution.

(c) Cultural.

(d) Irrigational.

(a) *Varietal.*—B. O. 11 continued to be outstanding high tonnage, high sugar variety. It had, however, suffered, heavily from red-rot in Bettiah subdivision (Champan) where it had been replaced to a considerable extent by B. O. 3 and B. O. 10 both these having proved exceptionally resistant in heavily infected surroundings. Co. 453 had also shown red-rot infection in many areas and was, likewise, being replaced rapidly by B. P. 3 and B. O. 10. B. O. 24 continued to do very well in low-lying areas.

(b) *Seed Nurseries and Seed distribution.*—The position in regard to seed nurseries and seed supplies and advances is shown in the table below :—

Particulars.	Years.				
	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
1	2	3	4	5	6
(a) Central seed nursery	18,347	17,422	11,748	17,600	14,000
(b) Registered growers ..	4,36,000	4,54,000	..	..	9,36,780
(c) Number of village seed nursery.	3,53,000	1,36,800	9,86,600	9,80,000	23,07,000
Seed men ..	419	1,311	2,246	2,450	2,306
Seed advance (lakh mds.).	16.05	19.69	14.50	12.42	23.07

(c) *Manures distribution.*—The table below shows the distribution of manures and fertilisers during the last five years :—

Manure and fertiliser distributed.	Years.					
	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.	
1	2	3	4	5	6	
Ammo. Sulph. (tons.)	218	2,077	3,500	3,220	5,770
Ammo. Nitrate (tons.)	3,185	..	..	..	..
Ammophos (tons.)
Superphosphate (tons.)..	..	1,000	3,181	4,300	4,215	6,470
Oil cakes (lakh mds.)	3.17	3.25	4.50	3.54	3.89
Green manuring seeds (thousand maunds.)	..	12.67	15.19	14.00	12.00	10.00
Compost (thousand tons)	..	85.27	106.00	124.00	166.38	136.00
Factory press mud (Sulphitation) (thousand tons).	10.80	14.00	18.00

Almost all the sugar factories financed purchase of fertilisers and manure by advancing loans. The position regarding manure advances by sugar factories and unions is given below :—

Year.	Advance made by factories (lakh rupees).	By unions (lakh rupees)
1950-51	14.650	—
1951-52	23.860	—
1952-53	14.860	4.000
1953-54	12.430	3.400
1954-55	23.846	4.000

(c) *Cultural*.—The State Government had distributed 2,456 sets of improved implements suited to the conditions, in Bihar in the factory reserved areas in 1939. The constant demonstration has created large demand, each constituency village and each canegrowers' co-operative society possessing at least one or two sets.

An inventory made of implements in use at the end of 1954-55 disclosed that roughly 6,000 sets were owned by the canegrowers. Besides increasing resort was being had to mechanical cultivation particularly for stubble ploughing during hot weather and sub-oiling after the cessation of the monsoon. There were in all 547 tractors working in the sugar factory areas, 168 owned by factory farms and 379 by growers (including members of canegrowers' co-operative societies).

(d) *Irrigational*.—The 300 Government tube-wells completed in North Bihar during the previous year had all been energised and come into operation. The full offtake of water had not, however, commenced as pucca channels were yet under construction.

As a result of working of the Five-Year Sugarcane Development Schemes, the average acre-yield cropped in the State is 18.4 tons as against the target of 20 tons. The yearly position regarding yield is given in the table below :—

Average yield per acres of sugarcane in development zones in Bihar in tons

Basic at the initiation of the scheme 1948-49.	1950-51.	1951-52.	1952-53.	1953-54.	1954-55.
14	16.1	16.1	18.4	15.7*	18.4

*The drop in acre yield resulted from widespread floods in the white sugar belt.

(3) *Establishment of experimental farms*.—Experimental farms were established at Dumka, Hazaribagh, Motihari and Saharsa to test the suitability of the new variety of plants, evolved by the Research Sections, to local conditions.

(4) *Motor Truck Scheme.*—The Motor Trucks were provided for the quick transport of seeds, manures, implements, pipes etc., required in connection with Grow More Food Campaign. Later on in 1954 the Trucks which were purchased in 1945 had become unserviceable, and, therefore, their replacement was sanctioned. Jeeps were also provided at the District Headquarters for quick transport of essential supplies and inspection in the interior during 1955-56.

(5) *Plant protection scheme.*—Before 1950 the work of the Plant Protection section was being conducted by the Research Sections of Entomology and Plant Pathology on a trial basis. To meet the growing demands for plant Protection, a separate unit for Plant Protection work was started in the middle of 1950 to fight the pests and disease menace of crops and also to educate the masses on the problems of crop protection. Against the total plan provision of Rs. 32.97 lakhs a sum of Rs. 32.36 lakhs was spent.

The details of the physical targets achieved and benefits accrued over a period of five years from 1951-52 to 1955-56 are as follows :—

Details of physical targets achieved.

Particulars.	Unit.	Achievement.
1. Total crop acreage controlled ...	Acre	41,28,464
2. Total fruit trees treated against pests and diseases.	Number	1,25,617
3. Paddy seed treated against leaf spot diseases	Md.	12,380
4. Stored grains	Do.	1,87,792
5. Potato seeds stored against potato tubermoth	Do.	84,989
6. Betel vine baries treated against foot and stem-rot.	Number	95
7. Rodent control (poles treated)	Ditto	1,41,609

The statement below shows the annual recoveries made from the cultivators on account of supply in insecticides, etc :—

				Rs. a. p.	
1951-52	...	...	...	12,500	0 0
1952-53	...	...	...	56,500	0 0
1953-54	...	...	...	75,071	12 6
1954-55	...	...	...	1,19,216	15 3
1955-56	...	...	...	2,70,000	0 0
				<hr/>	
		Total	...	5,33,288	11 9
				<hr/>	

The annual receipt of the scheme in 1950-51 was only Rs. 11,500.

Besides saving the crops from the attack of the pests and diseases, the scheme offered a good opportunity to make the cultivators conscious of the ravages by the insects and diseases to their crops. They were educated in the aspects and methods of plant protection. Due to the working of the scheme, the cultivators today have become plant protection minded. Their demands for aid in this direction have ever been on the increase as would be seen from the statement in the next page, which shows the continuous increase in the annual financial and physical targets achieved in different years of the First Five-Year Plan :—

STATEMENT SHOWING THE DETAILS OF THE PHYSICAL TARGETS ACHIEVED DURING THE FIRST FIVE-YEAR PLAN
(1951-52 TO 1955-56) (PLANT PROTECTION SCHEME, BIHAR).

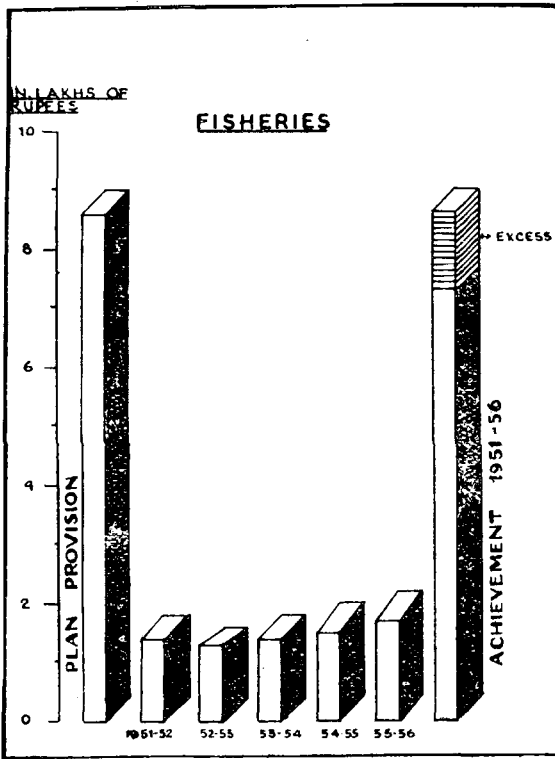
Crops.	Pests and diseases.	Physical achievements in acres or otherwise.	Contemplated target.	Estimated increase in production.	Remarks.
1	2	3	4	5	6
Wheat, Barley, Oil, Oilseed, Pulses and Onion.	Leaf hopper, Cutworms, hairy catterpillars, Aphids and Thrips.	10,091.53 acres	10,000 acres	2,26,353.25 mds.	
Paddy	Caseworm, Gundhi bug hoppers and borers.	9.374 acres	5,000 acres	46,870 mds.	
Maize and Millets	Stem borers, leaf rooler and grass hoppers.	456.83 "	500 "	2,280 "	
Chillies	Dio-black	488.9 "	2,500 "	4,889 "	
Potato	Blight	4,642.1 "	2,500 "	10,00,000 "	
Sugarcane	Termites, Pyrilla borders	16,183.55 "	..	40,45,250 "	
Mango Orchards	Termites	10 "	..	..
Litchi Orchards	Ditto	20.75 "	..	..
Banana	Beetles	112.35 "	..	..
Rose	Termites	15.5 "	..	..
Weeds .. .. .	.. .. .	8.543 "	..	..
Fruit trees (other than mango) ..	Stem borer mites and lemon, butterfly.	4.125 "	5,00,000 trees	4,125 trees.	
Mango	Mango hoppers	1,21,100 "	5,00,000 "	..	
Ornamental trees	Stem borers, termites, etc.	806 "	..	..
Paddy seed treat	Leaf spot disease	12,380 mds.	..	1,25,000 mds.	
Stored grains	Weevils and moths	1,87,792 "	25,000 mds.	1,00,000 "	
Seed potato	Potato moth	84,989 "	..	60,498 "	
Betal vine	Foot and stem-rot	94 baries	..	94 baries.	
Miscellaneous	Rodents	14,160 holes	..	..
		fumigated.			

(6) *Jute seeds multiplication farm.*—A Jute Seeds multiplication farm was set up at Pipra in Champaran district for production and distribution of improved nucleus jute seeds. This farm was set up towards the end of the First Five-Year Plan period. It fulfils a long felt want of development of jute cultivation in Bihar, where there is large acreage under jute.






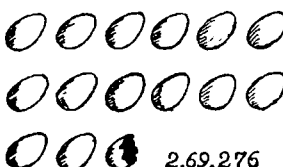



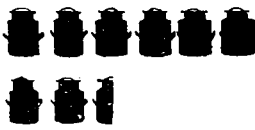
(7) *Agricultural development in N. E. S. Blocks.*—As the N. E. S. budget had no provision for agricultural programme, provisions were made towards the end of the Plan period for the execution of various schemes of agricultural development in the Community Development and N. E. S. Blocks. Provisions were made for demonstration of improved agricultural technique in N. E. S. blocks and also for establishing demonstration farms at the Headquarters of the N. E. S. blocks. The total amount spent on this head in the plan period was Rs. 78.62 lakhs.





Fishery.

There is considerable potentiality of inland fisheries in Bihar. But due to lack of funds, only a modest plan of development was included in the First Five-Year Plan. There were 7 schemes under this head with a provision of Rs. 8.59 lakhs. These schemes were intended to reorganise the headquarters staff and help in fishery research and development. Considerable progress was recorded in the distribution of fish fry to the cultivators, and 229 lakhs of fish fry were distributed. A number of Khasmahal tanks were taken up and were green manured for development of fishery. A training programme was also launched for producing qualified staff for development under this head. The total expenditure incurred in fishery development during the Plan period amounted to Rs. 7.38 lakhs.



VETERINARY & ANIMAL HUSBANDRY

PRE-PLAN POSITION		PROGRESS IN PLAN PERIOD
 168	 DISINFECTORIES	 240
 28,923	 POULTRY	 2,69,276
NIL	 MILK	 3
NIL	 MILK PRODUCTION	 26,823

 = 20 BARN BARRIES.	 = 1 MILK UNION.
 = 20,000 EGGS.	 = 3,000 MBS. <small>THE OGDEN CO-OPERATIVE MILK UNION.</small>

CHAPTER V.

ANIMAL HUSBANDRY AND DAIRY.

Indian agriculture is mainly dependent on bullock power. In 1950-51, the net value of livestock products alone amounted to eleven per cent of the income from agriculture. Cattle, therefore, occupy an important place in its economic structure and looking after cattle population really means looking after agriculture. The number of cattle in Bihar according to 1951 census was as follows:—

1. Total cattle population	...	...	1,52,97,476
2. Total buffalo population	...	...	33,15,875
			<hr/>
Total bovine population	...	...	1,86,13,351
			<hr/>

The State had thus about nine per cent of the 198.44 million total bovine population in the country. The total human population of the State was 40,218,916 or speaking in round numbers there were about two crores of bovine for four crore human beings, which means one cattle for two human beings. Numerically, the cattle position appears to be very favourable but the majority of millions of cattle in the State of Bihar are either unproductive or inferior both for drought and milk purposes. Milk animals number as much as 56 lakhs in this State, with an average annual milk production of 7.5 maunds per cow and 20 maunds per buffalo, whereas in the Western countries the cow produces on the average, 50 maunds and in the Punjab about 30 maunds. Further, there is such an extreme shortage of cattle feed in the State that the majority of animals are kept on sub-maintenance ration. The aim of the State First Plan was, therefore, to make a beginning for better breeding, better feeding and better management of the numerically larger and uneconomic cattle population.

During the First Five-Year Plan period, 26 schemes were designed and implemented for improvement of livestock in Bihar. The total provision for Animal Husbandry including veterinary relief, dairying and milk supply, was originally Rs. 94.07 lakhs. After readjustment in 1954, the provision was increased to Rs. 127.91 lakhs. The total expenditure was Rs. 104.98 lakhs which works out to 111.6 per cent of the original provision and 82.1 per cent of the revised provision. The shortfall of the total expenditure as

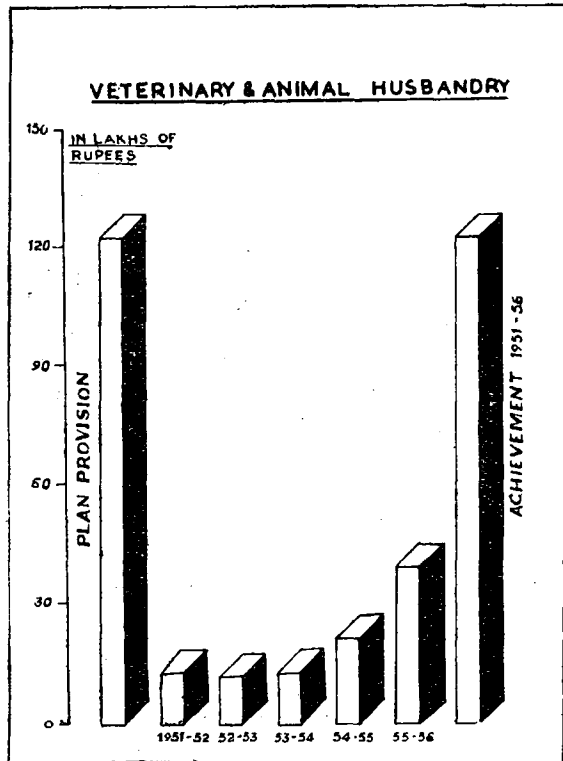
against the revised plan provision was mainly due to lack of technical personnel. Actually, the greatest obstacle to the schemes of development in the animal husbandry sector has been the acute scarcity of trained veterinarians. The schemes are broadly classified under the following groups for the purpose of this Review :—

1. Cattle Breeding.
2. Goshala development.
3. Poultry development.
4. Sheep and wool.
5. Veterinary services.
6. Veterinary education and research.
7. Dairy Development and Milk Supply.

The details of the schemes and the progress made thereunder are given below :—

CATTLE BREEDING.

The whole State was divided into four sectors for improvement of livestock. The first comprised of areas on either banks of the river



Ganga, namely the districts of Shahabad, Saran, Bhagalpur, Monghyr and southern parts of the district of Darbhanga and Muzaffarpur. In this sector, the Haryana breed was introduced. The second sector comprised of Patna and a part of Gaya district. In this sector, Tharparkar proved popular. The third sector comprised of Purnea, Champaran, the northern part of the districts of Muzaffarpur, Bhagalpur and Monghyr. In this area, attempts were made to develop Bachchaur breed. The fourth sector comprised of the whole tracts of Chota Nagpur and Santhal Parganas. In this sector the Shahabadi breed was found to be useful.

Cattle farms.—With a view to raising improved bulls, three cattle farms were established. The Pusa Farm was established with a view to improving the Bachchaur Cattle of North Bihar which are known for their drought capacity. The farm reared 766 heads of cattle as against the target of 500 for the plan period. Of the programmed outlay of Rs. 9.62 lakhs under the scheme, Rs. 7.61 lakhs were actually spent. The farm at Dumraon was started with the object of acclimatising the famous Haryana cattle in this State. The farm reared 570 heads of cattle as against the target of 500 for the plan period. Against a provision of Rs. 17.12 lakhs under this scheme Rs. 12.37 lakhs were spent up to the end of the plan. The establishment of a bull rearing farm at Gauriakarma in the district of Hazaribagh was sanctioned towards the end of the plan for rearing 100 bull calves of improved type. Land measuring 1780 acres was purchased from the D. V. C. and laying of the farm was started. A sum of Rs. 6.68 lakhs was spent against the provision of Rs. 8.80 lakhs for this scheme during the plan period.

Bull distribution and Key-Village schemes.—For upgrading village cattle with Tharparkar bulls 118 bulls were distributed against the physical target of 130 bulls of this type. A sum of Rs. 2.65 lakhs was spent against the financial target of Rs. 2.72 lakhs for this scheme during the plan period. Under the scheme for maintenance of 400 bulls in key villages, which aims at improving the drought and milk capacity of rural cattle found in the Gangetic regions of the State, 622 bulls of improved type were actually distributed at a total cost of Rs. 8.94 lakhs as against the financial target of Rs. 8.82 lakhs. In the latter half of the plan period, the intensive development of cattle in selected areas was introduced in this State under the All-India Key Village Scheme. As against the physical target of 12 centres, 13 centres were started, out of which 3 were located in private goshalas, 3 in Government institutions, 6 in Community Project Areas and 1 in a milk union area. Out of the programmed expenditure of Rs. 6.02 lakhs under this scheme Rs. 5.20 lakhs were spent.

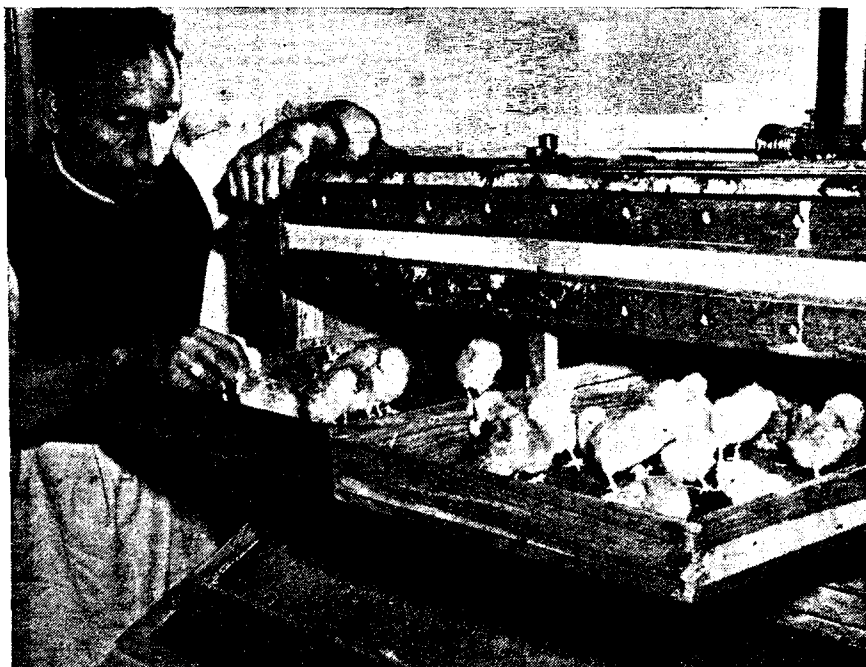
Artificial Insemination.—It has been estimated that the State requires about 13,000 improved bulls for upgrading work. The number of bulls at stud is estimated at 800 only. The only way of overcoming the shortage of breeding bulls in upgrading the stock is by utilization of the technique of artificial insemination for accelerating progress and reducing the requirements of bulls. 52 Artificial Insemination Centres and 140 sub-centres were functioning at the end of the plan period where 28,000 cows were inseminated. A sum of Rs. 11.16 lakhs was spent against the provision of Rs. 12.07 lakhs.

Goshala Development.—There are about 130 goshalas in the State which owe their existence to the generosity of philanthropic people for housing old and decrepit cattle. With a view to improving breed of cattle and milk production, it was considered necessary that the Goshalas of this State should be organised on proper lines. A Goshala Development Officer was appointed to give technical advice on feeding, breeding, management and clean method of milk production and disposal. The Goshalas were also advised to send their uneconomic cattle to Government Gosadans in forest areas where they were kept segregated till their natural deaths. For upgrading the cattle of goshalas, 201 improved bulls were distributed against the target of 190 bulls. As against the programmed expenditure of Rs. 1.22 lakhs, a sum of Rs. 1.01 lakh was spent on this scheme during the plan period.

With the help of Government, the State Goshala and Pinjrapole Federation also started a model goshala on Wardha lines, at Sadaquat Ashram, Patna, with a view to breeding indigenous Shahabadi cattle. They reared 142 heads of cattle only as against the physical target of 300 cattle. A sum of Rs. 1.55 lakhs only could be spent against the financial target of Rs. 2.12 lakhs.

Poultry Development.—Bihar possesses about 39.4 lakhs of laying birds but the ordinary village hen is generally undersized and lays only about 40 to 50 under-sized eggs in a year. Thus the annual output of eggs has been estimated to be 15,760 lakhs, i.e. 2.3 eggs per capita per year. If the vegetarian section of the population is taken at 50 per cent, the consumption of eggs per capita per year comes to 4.6 eggs only. This is a very low figure and the objective should be to produce at least 155 eggs a year per capita for 50 per cent of the population. This means increased egg production by at least 25 times which is a gigantic task and needs pursuing for a considerable number of years to come. Lack of good foundation stock and knowledge of poultry management are two of the main reasons for the backward state of the poultry industry in the State. In order to encourage people to maintain improved poultry for better egg production

a Central Poultry Farm was started at Patna, where large scale production of eggs and young birds was undertaken. Seven poultry development centres were also opened at Purnea, Bokaro, Simultala, Khunti, Chaibassa, Dumka and Purulia. Besides, seven centres for hatching eggs were also opened at Saraikella, Dumri, Maheshpur, Chakai, Kharsawan, Borio and Manbazar. Against the physical target of 1 lakh eggs, 2,69,276 eggs were produced. An amount of Rs. 4.75 lakhs was spent up to the end of the plan against the financial target of Rs. 5.48 lakhs. The scheme has been very popular.



Poultry farming in Shikarpur.

Sheep and Wool.—According to the 1951 census, there were about 10,49,589 sheep and 59,41,259 goats in Bihar. A combined sheep and goat breeding farm was run at Gaya for evolving fine fleeced woolly strains of sheep by selective breeding and cross breeding with Bikaneri breed. The breeding performances were not completed for analytical studies. The result of shearing done twice a year, once in September and once in March has shown the production of an average of 4 lbs. of wool in Bikaneri sheep, 1 lb. in Bikaneri lamb, 1 lb. in deshi sheep and $1\frac{1}{2}$ lb. in cross-sheep. Against the physical target of 300 sheep and 200 goats, the farm reared 478 and 219 respectively. Against the provision of Rs. 2.39 lakhs, a sum of Rs. 1.90 lakh only was spent on this scheme during the plan period.

With a view to educating the local shepherds in the value of grading of wool and use of improved scissors for better shearing of wool, four centres were started at Dehri, Kudra, Chaibassa and Dumka. As against the target of 1,50,000 sheep shorn by improved methods, 2,77,075 sheep were actually shorn. A sum of Rs. 0.59 lakh was spent, against the financial target of Rs. 0.70 lakh, on this scheme during the plan period.

Veterinary Services.—The benefits of improved breeds and better feeding are often negated by the cattle falling a prey to epidemics. Besides causing a large number of deaths, contagious and other diseases reduce the vitality and the working efficiency of the animals considerably. The problem of cattle disease is, therefore, a serious one. The Royal Commission on Agriculture recommended as far back as 1928 that there should be one Veterinary dispensary for every 25,000 head of cattle. In Bihar at the beginning of the Plan there was one veterinary dispensary for 1.10 lakhs of cattle in 416 sq. miles. At the end of the plan the proportion stood at 1 hospital for nearly 0.79 lakh cattle in 291 sq. miles. Before the introduction of the First Five-Year Plan, the veterinary hospitals and dispensaries in this State were established at the initiative of the local bodies with some assistance from the State Government. Due to their limited resources the local bodies could not take full advantage of the assistance offered by the State Government. In order to cater for adequate



Cattle being inoculated in a rural centre.

medical aid to the livestock of the villages during the plan period, the scheme for expansion of veterinary service was sanctioned with a physical target of 95 class I Veterinary dispensaries. Only 72 dispensaries could, however, be opened due to shortage of Veterinary Assistant Surgeons all over the country. A sum of Rs. 11.65 lakhs was actually spent against the programmed expenditure of Rs. 15.22 lakhs for this scheme during the plan period.

Provincialisation of district hospitals.—With a view to equipping the veterinary hospitals at the District Headquarters with modern apparatus and instruments, a scheme for provincialisation of three district hospitals was sanctioned towards the end of the plan period. A sum of Rs. 1.25 lakh was actually spent against the programmed expenditure of Rs. 2.26 lakhs for this scheme during the plan period.

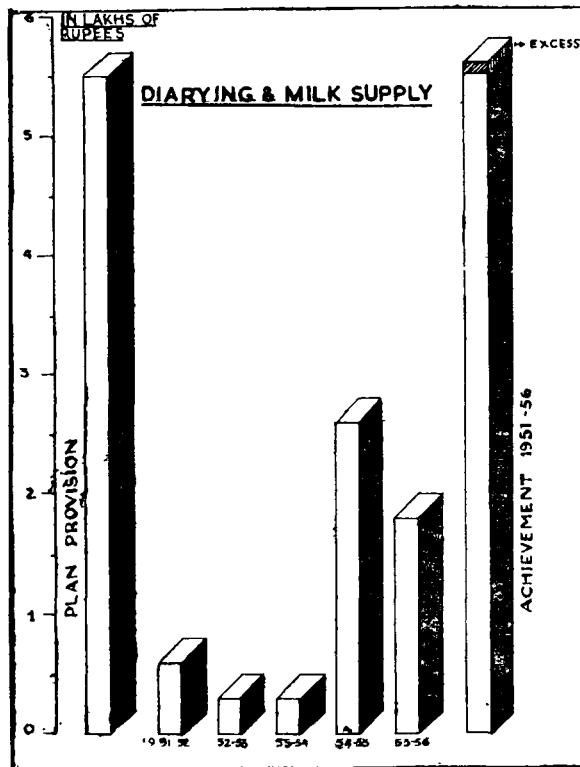
Veterinary Education and Research.—One of the factors, which have stood in the way of development of the cattle wealth of the State is the want of adequate number of trained personnel. To remove this want, the Veterinary College of Patna was started in 1930. But it was admitting only 40 students per year to a diploma course. With the sanction of 95 more veterinary dispensaries in the State and the creation of 102 posts of Animal Husbandry Supervisors in N. E. S. Blocks as well as other posts requiring veterinarians, the demand for additional veterinary graduates became pressing. Consequently the expansion of the Bihar Veterinary College at Patna was sanctioned in 1954, with a physical target of 150 graduates. During the plan period, however, only 88 Veterinary graduates came out successful, and they were all employed in the vacant posts. A sum of Rs. 5.66 lakhs was actually spent against the provision of Rs. 7.37 lakhs.

A short course of one year's duration for training of Stock Supervisors was introduced at Bhagalpur to provide personnel for rendering first aid to animals in rural areas for such time as adequate number of qualified veterinarians became available. Against the physical target of 100 Stock Supervisors during the plan period, 93 came out successful, who were all employed in suitable posts. A sum of Rs. 1.28 lakh was spent against the programmed expenditure of Rs. 1.39 lakh for this scheme during the plan period.

In addition, a short course of intensive practical training in elementary animal husbandry subjects, extending over a period of 12 months was sanctioned for the First Plan period, which was started at Darbhanga. Against the physical target of 441 trainees, 437 stockmen came out successful during the plan period. A sum of Rs. 2.05 lakhs was actually spent against the programmed expenditure of Rs. 2.11 lakhs for this scheme during the plan period.

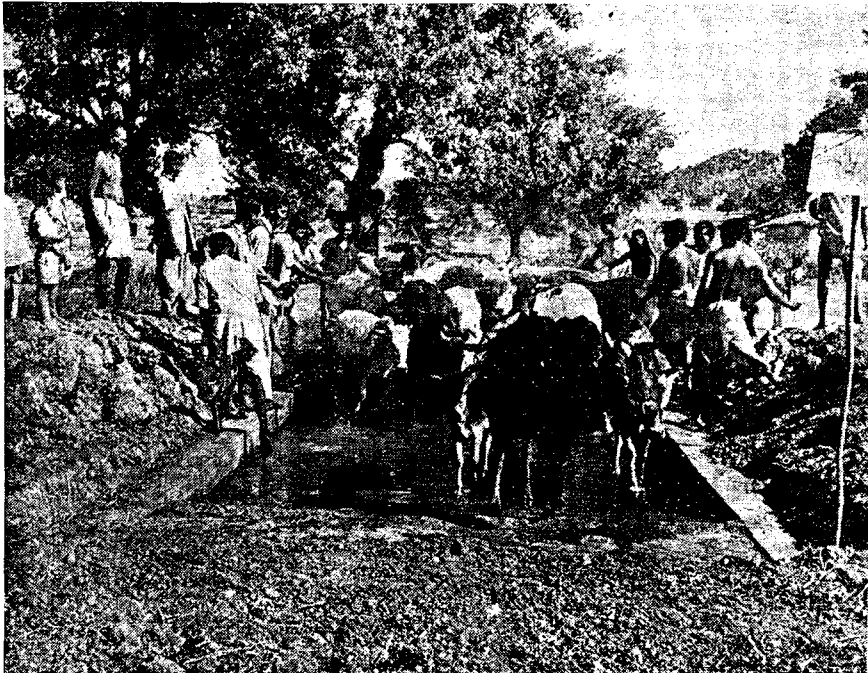
In order to provide better facilities for investigation and research work, a scheme for establishment of a Livestock Research Station with seven sections was sanctioned at an estimated cost of Rs. 5.52 lakhs during the plan period. Due to acute scarcity of trained personnel only two sections could be started towards the close of the plan period and the actual expenditure amounted to Rs. 1.11 lakh on this scheme.

Dairy Development and milk supply.—The total requirement of milk at the rate of at least 8 oz. per head per day comes to 182.5 lbs. a year and for the total human population of 40,218,916 in this State, the requirement will be 89,511, 612 maunds. The total amount produced at present calculated at the rate of 7.5 maunds per cow per year and 20 maunds per buffalo per year is 59,300,260 maunds. Consequently the annual deficit of milk amounts to 40,211,352 maunds. Whatever milk is produced is generally kept and sold in unhygienic conditions. A Dairy Development Section was, therefore, started with the object of surveying large milk producing and consuming areas, formulation of schemes on co-operative milk and its products, study of chemical and bacteriological standards, and for arousing interest in improved dairy practices. Besides rendering supervisory and advisory services, the



Dairy Development Section prepared a number of Co-operative Milk Union Schemes out of which three were actually started during the plan period. A sum of Rs. 1.47 lakh was actually spent against the programmed expenditure of Rs. 1.27 lakh on this scheme for the plan period.

Co-operative Milk Unions.—In this State, milk is a bye-product of agricultural operation and unless milk is made to fetch remunerative return to the farmer, he will not pay attention to proper feeding and management of his cattle with a view to producing more milk. In other cases, whatever milk a farmer produces, he retains it for his own consumption or uneconomic disposal like production of ghee and other products. This leads to severe difficulty in the flow of milk from rural to urban areas. On the other hand, the milk supply position in urban areas is unsatisfactory both in quantity and quality due to high cost of production. In order to meet these difficulties at both fronts, viz., rural and urban, a scheme for establishment of 4 co-operative milk unions in four selected towns was planned as a trial measure. Against the physical target of four co-operative milk unions, only 3 could be started at Patna, Muzaffarpur and Bhagalpur. The cost of technical staff only is borne by Government and the unions are given recoverable loans to stand on their own legs. Against the programmed expenditure of Rs. 4.00 lakhs, a sum of Rs. 3.80 lakhs was actually spent on this scheme during the plan period.

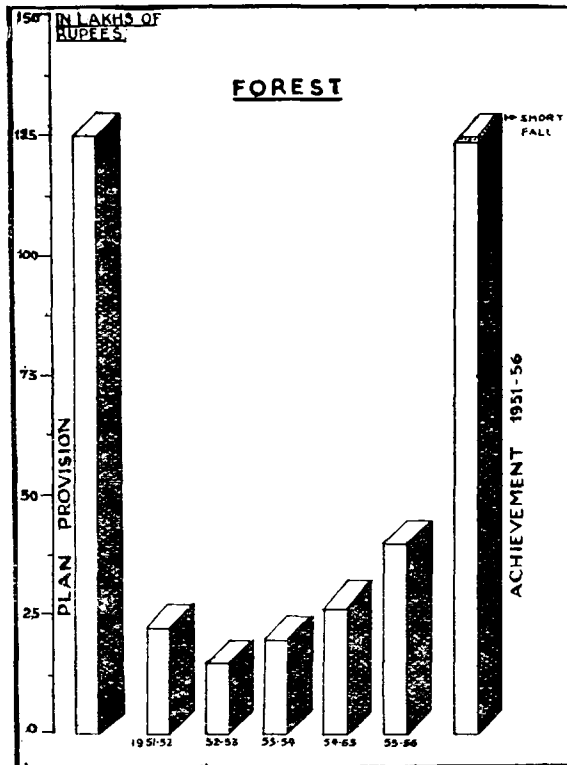


Foot and Mouth trough.

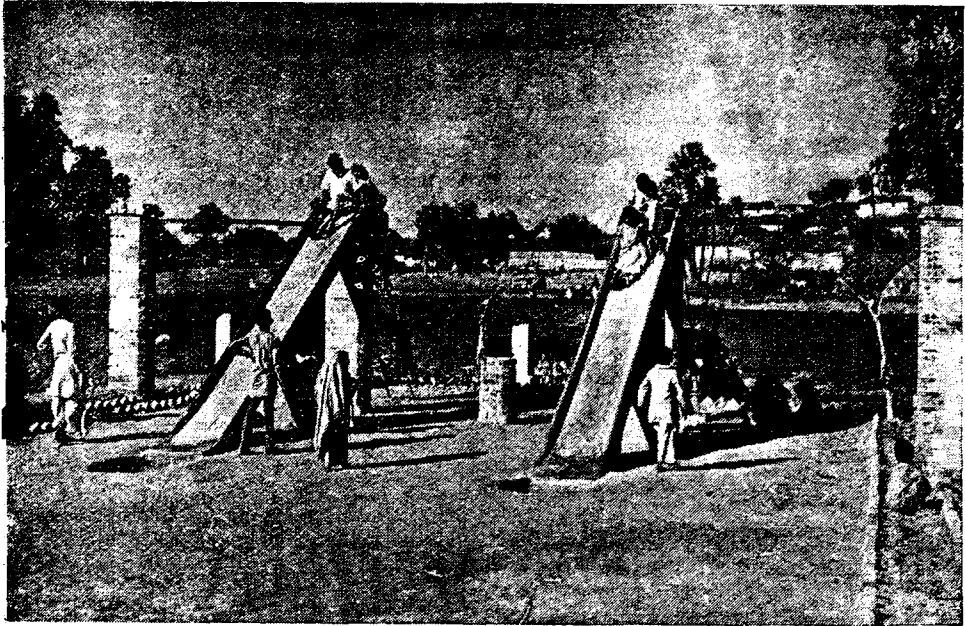
CHAPTER VI.

FORESTS.

Forests occupy an important place in the land use pattern, not merely because of the timber and other products produced, but also on account of the influence they exercise in the conservation of soil. Bihar is rather unhappily placed with regard to its forest resources. The major portion of the forest area was formerly under private ownership. In spite of the enabling clause under section 38 of the Indian Forests Act, it was not possible to persuade the private owners to apply for the management of their forests by Government to any appreciable extent. Up to 1946, only 367 sq. miles of private forests could be brought under Government management through the process of persuasion. The progress under this programme was so slow, and over-exploitation of the forest products during the war years and afterwards was so fast that Government had to take more effective measures to save the State from almost complete extinction of its forest wealth. The Bihar Private Forests Act, 1946, was accordingly enacted. The total forest



area under Government control in 1956 was 2,222 sq. miles, but by 1951, in pursuance of the Bihar Forests Act, the area under Government control increased to 13,652 sq. miles comprising of 1,456 sq. miles of reserved forests, 820 sq. miles of protected forests, 11,309 sq. miles of undemarcated private protected forests and 67 sq. miles of unclassified forests. The area of undemarcated private forests was based on settlement figures of areas recorded as jungle. Closure inspection, however, showed that some of the areas so classified had no forests worth the name, and it was more profitable to utilise their lands for general cultivation purposes. Consequent release of such lands for agriculture is estimated to have reduced the area to 11,000 sq. miles, though according to the national forest policy enunciated by Government of India, the State's target should be nearly 27,000 sq. miles. This shows the imperative necessity of afforestation measures being undertaken in the State.



Children's playground in a rural centre.

There was a total allocation of Rs. 125 lakhs in the First Five-Year Plan for forest development in this State. Three schemes were taken up and these, with the financial allotments, are indicated below :—

Schemes.	Plan provision.
Management of private forests, etc.	Rs. 108.18 lakhs.
Education and Training ...	Rs. 14.80 lakhs.
Forest Research ...	Rs. 2.02 lakhs.

Though some minor adjustments had to be made, which will be explained hereafter, the financial target was almost completely achieved and there was a saving of Rs. 0.70 lakh only. There was no short fall in the physical targets either, as will be clear from the detailed review of the different schemes. There has been no major departure from the original plan. Some saving, however, was effected under the scheme relating to Education and Training—and this was utilised in the other two schemes. In the individual schemes also some minor changes were made as was considered desirable in the light of experience gained. Whereas the soil Conservation Division and the Santal Parganas Division (II) could not be started, a new Latehar Division in the District of Palamau was created and a National Park was also set up in the District of Hazaribagh. The stage of development in each scheme before the introduction of the First Five-Year Plan, that is to say, in the year 1950-51, and the stage reached at the end of 1955-56 is indicated below as part of the detailed review of the different schemes.

Management of Private Forests.—The management of private forests taken over under State control under the Bihar Private Forests Act, 1946 constituted the most important aspect of forest development during the Plan period. Expanded afforestation was its primary objective along with regulated exploitation of the forest products. A major slice of the First Five-Year Plan allotment under forestry was, therefore, available for this scheme. As against the provision of Rs. 108 lakhs, the total expenditure was 109.65 lakhs.

By 1950-51 the demarcation of the private protected forests had been completed, they have also roughly and provisionally been divided into divisions, ranges, beats, and sub-beats; and a provisional scheme of fellings, to meet the requirements of the people, brought into force. The problems that confronted the Forest Department at the beginning of the First Five-Year Plan were the following :—

- (i) Consolidation and intensification of the management of the private forests.
- (ii) Training of the requisite personnel.
- (iii) Housing accommodation for the staff.
- (iv) Opening up of forests by developing communications.

Under the First Five-Year Plan, the scheme for the management of the private forests attempted to create more forest divisions, the

object being to bring down the average area of a division to about 500 sq. miles. It contemplated compilation of regular working plans for the private forests and by implementing the programme of afforestation to increase the total forest area of this State, with a view to achieving the minimum of 20 per cent of total land area in due course.

At the commencement of the First Five-Year Plan, the following circles and divisions were functioning :—

Circles—

- (i) The Bihar Forest Circle.
- (ii) The Damodar Development Circle.

Divisions—

- (i) Palamau.
- (ii) Hazaribagh.
- (iii) Giridih.
- (iv) Ranchi.
- (v) Manbhum.
- (vi) Santhal Parganas.
- (vii) Monghyr.
- (viii) Saranda.
- (ix) Kolhan.
- (x) Porahat.
- (xi) Chaibassa.
- (xii) Dhalbhum.
- (xiii) Research.
- (xiv) Working Plans.
- (xv) North Bihar.

The following circles and Divisions were created during the First Five-Year Plan :—

1951-52—

- (i) Afforestation Division, Hazaribagh.
- (ii) Working Plans Division, Northern Circle.

1952-53—

- (i) Garhwa Division.
- (ii) Gumla Division.
- (iii) Chatra Division.
- (iv) Deoghar Division.
- (v) Gaya Division.
- (vi) Circle of Chief Conservator of Forests.

1953-54—

- (i) North Bihar Afforestation Division.
- (ii) Latehar Division.
- (iii) Shahabad Division.

Thus at the end of the First Five-Year Plan, there were three forest circles and 25 forest divisions in place of two circles and 15 divisions at the beginning of the Plan. The development circle and the Soil-Conservation, Monghyr (II), and Santal Parganas (II) Divisions, though included in the First Five-Year Plan, were not created because the divisions were not considered necessary in the light of experience gained. Latehar and the Shahabad Divisions were created in the year 1954-55.

The Plan targets, however, were successfully achieved. Felling Schemes have been prepared for all the forests. The working Plans for most of the forests are compiled and for the others are nearing completion. A modest but firm beginning has been made in the afforestation programme. The Afforestation Division, Hazaribagh, which operated South of the Ganga, afforested about 5,500 acres of waste lands. This division also undertook and completed the preliminary, but a fairly detailed, survey of lands suitable for afforestation. The North Bihar Afforestation Division was created for afforesting waste lands in North Bihar, planting up roadside and railway embankments and for inducing the people to raise small-scale farm forests. During the plan period, this Division carried out an extensive survey of lands suitable for afforestation. About 500 acres of waste land have also been afforested. This division has also planted up some 35 miles of the Kosi embankment.

In order to create interest of the general public in Wild-Life and also to encourage tourism, a game sanctuary covering an area of 150 sq. miles has been created with a view to upgrading it later into a National Park. For the benefit of the game, small reservoirs were constructed. Roads and Rest House have also been put up to make the Park accessible to the visitors.

The importance of the use of secondary timbers after suitable treatment also received attention. An Ascu treating plant has been installed at Latehar. Poles treated in this plant have been supplied to Postal, Electrical and other Government Departments. To facilitate proper inspections and tours in the interior, twenty jeeps with trailers have been purchased and supplied to the Divisional Forest Officers.

The original allocation of Rs. 108.65 lakhs available for the scheme on management of private forests, was not only profitably utilised, but some saving under the scheme on Education and Training was also diverted to ensure profitable utilisation of the total allotments.

It is difficult to state quantitatively the benefits accruing from the management of the private forests during the last Plan. It may, however, be kept in mind that when we took over these forests most of them were in an unproductive stage and were yielding almost nothing. Even the ground covered at many places had been badly effected giving rise to sheet and gully erosion. A term of five years is a short period for results to be achieved in Forestry, but having brought these private forests, ill-managed in the past, on a sound footing of systematic and scientific management, and having made a firm beginning with the afforestation programme, we can be sure that these forests will be rehabilitated, and in about 10 to 20 years will be able to supply entirely the State's demands of timber, fuel, and fodder, besides ensuring increasing revenue from commercial exploitation.

Education and Training.—The allocation under this scheme was Rs. 14.80 lakhs. Even before the introduction of the First Five-Year Plan the requirements of trained personnel for the department had been foreseen. A Forester's Training School at Chaibassa was started in the year 1949. At this school, 20 Foresters were trained annually. Similarly 2 Forest Guards' Training Schools at Betla in Palamau and Mahilong in Ranchi had already been started. During the First Five-Year Plan 2 more Forest Guards' Training Schools were opened. Thus at the 4 Forest Guards' Training Schools, 200 Forest Guards were trained annually in two six-monthly batches of 20 each (the batch at Mahilong was of 40 each). Facilities for the training of Foresters in the Foresters' Training Schools at Champua in Orissa and Shivpuri in Gwalior were also availed of. Gazetted Officers and Forest Rangers continued to be trained at the Indian Forest College

and the Northern Forest Rangers College, Dehra Dun. The following table shows the number of staff in the different grades trained each year of the Plan :—

Year.	Gazetted Officers	Forest Rangers.	Foresters.	Forest Guards.
1951-52	3	8	30	180
1952-53	3	8	30	200
1953-54	2	4	30	200
1954-55	2	4	30	200
1955-56	4	6	30	200
Total ..	14	30	150	980

The expenditure under this scheme during the Plan period amounted to Rs. 11.39 lakhs. The saving of Rs. 3.41 lakhs, however, was profitably utilised over the two other schemes of the Forest Department as a measure of readjustment. Though the position of the trained personnel is not yet entirely satisfactory, we have reached a stage when we have got trained Gazetted Officers for Divisional charges, trained Forest Rangers and Foresters for ranges and important beats.

Research.—The allocation under this scheme was Rs. 2.02 lakhs. Before the introduction of the First Five-Year Plan the programme of forest research had, for a long time, been relegated to the background. The work under research consisted only of the maintenance and measurement of the sample plots. No experimental plots were laid out and maintained. During 1950-51 the Research Division was separated from the Working Plans Division and in September, 1953, a Triennial Research Programme for the State was drawn, based on the recommendations of the VIII Silvicultural Conference, held at Dehra Dun in 1951. It has been fully implemented in the field as would appear from the yearly progressive statement given below.

Some important results on the problems facing the Forest Department are also indicated in the following paragraphs :—

Particulars.	1951-52	1952-53	1953-54	1954-55	1955-56
Sample plots ...	74	74	74	73	73
Tree Increment plots	4	4	7	7	8
Linear Increment plots	Nil	Nil	1	2	4
Experimental plots ..	Nil	Nil	28	43	47

Silvicultural Research.—The problem of *Sal* regeneration is being tackled on the lines as outlined in the recommendations of the *Sal* Symposium Committee appointed by the Government of India. Compaction of the top-soil is indicated to be contended against for securing recruitment. Moisture and root competition at the peak of the growing season are indicated to be the limiting factors responsible for the dying back of the whippy *sal* seedlings. Several experiments are under progress to overcome the problems of recruitment as well as establishment stages.

Coppice regeneration of *Sal* is at its best if the fellings are executed on the eve of the growing season so as to secure the highest survival and the best height growth. The fellings carried out in June and September result in the least height growth while the fellings carried out in December and March result in the maximum height growth. Stump mortality is highest in June fellings (25 per cent) and least for March fellings (2.7 per cent).

Stump mortality of *Khair* is more under the shade (50 per cent) than what it is under the open (30 per cent). The number of shoots per stool is more in shade but the height growth is very poor and the *Khair* coppice regeneration has a bushy appearance. It seems the miscellaneous uneconomic species casting shade should be removed as a cultural operation to encourage good growth of *Khair*.

The stump mortality of *Karam* is 50 per cent in the diameter class 16" and upwards. The stump mortality of *Salai* is 30 per cent in the diameter class 16" and upwards. Natural regeneration of most of these species is not adequate enough to compensate the stump and drought mortality and it is safer to work these species under the selection coppice system by fixing a lower exploitable diameter.

All India Bamboo experiments are under progress to find out the best felling intensity and felling cycle of the Bamboos so as to step up production.

The soil working experiments indicate that ploughing and broadcast sowing of seeds do better than sowing on contour-trenched berms in afforesting flat areas having sandy loam soils.

The nursery experiments indicate that *Acrocarpus fraxinifolius* is the best afforestation species, attaining a height of over 10 ft. in two growing seasons. As regards its strength properties, it can be used as Electrical Transmission posts. *Bauhinia variegata* (an excellent fodder tree) attains a height of 4 ft. in one season.

March sowings of *Trevis nudiflora*, *Swietenia mahagoni* and *Poinciana regia* do better than monsoon sowings which are likely to fail completely.

Ailanthus excelsa needs raised beds in the nursery as it cannot stand water-logging at the collar region in the sunken beds.

Stump planting of *Ailanthus excelsa*, *Cassia siamea*, *Melia azederach*, *Dalbergia sisoo* and *Acacia monoliformis* do better while entire transplants of *Salmalia malabarica* and *Albizia lebbek* do better.

Experiments have indicated that the cost of early burning comes to Re. 0-2-0 per acre (and not Rs. 2 per acre as suggested by Dr. Gorrie)

Statistical Research.—The first Linear Increment Plot of Bihar was laid out in 1953. This is the most important step in the management of forests under the Selection System. The specific management problems of *Sal* forests under Selection working are:—With what speed the regeneration of *Sal* is keeping pace with the fellings? What is the rate of mortality in the various girth classes? What is the rate of passage of trees from one girth class to the next higher one? What is the present structure of the forests as regards their composition and size-class distributed and what should be the optimum? The Linear Increment plots can only give the answer to all these points.

Data from about 1,500 trees of 10 species were collected and sent to Dehra Dun for compilation of Volume Tables. Data of depth of water in wells were maintained and compiled to keep a watch on the probable lowering of the Water-Table.

Utilisation Research.—Collection of 31 wood and herbarium specimens were sent to Dehra Dun for preparing a key for wood identifications.

A survey of cultivation of *Rauwolfia serpentina* has been completed and it should be possible to underplant it under *Seemal* in Singhbhum at the rate of 400 acres per annum which is expected to fetch a revenue of Rs. 10 lakhs per annum.

An Ascu Treating Plant was set up in 1953, which is the first enterprise of its kind in wood preservation by any State Forest Department under the Indian Union.

Two Air-seasoning sheds have been completed at Neterhat and Latehar and the preliminary survey has been completed for installing a Kiln seasoning plant at Tatanagar.

Forest Publicity.—A total running length of 2,000 ft. of 16 mm film has been prepared showing the various activities of the Forest Department.

The Forest Department stall at the IVth World Forestry Conference held at Dehra Dun earned a certificate of merit in 1954. In 1955, the Forest Department participated in the Industrial and Agricultural Exhibition held at Patna. A Forest Museum is maintained at Ranchi.

Timber Supply.—All the timber requirements of Community Projects, Kosi Project, Telegraph and Electrical Departments were met by the Research Division since 1954, pending the creation of a separate Utilisation Division.

Lac Cultivation.—Schemes of lac cultivation, on experimental basis were in operation in collaboration with the Indian Lac Research Institute, Namkum. The schemes of Kundri and Oreya in Palamau proved profitable and are being continued in the Second Five-Year Plan.

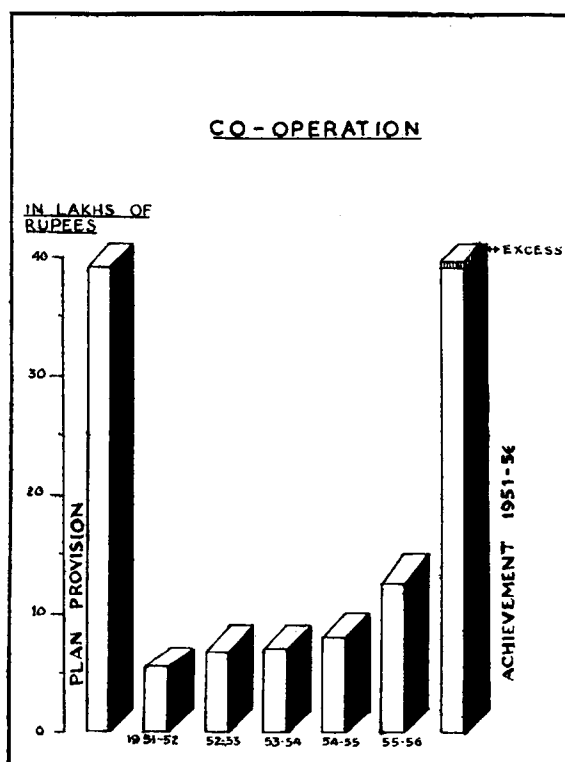
The total expenditure over the Forest Research Scheme under the First Five-Year Plan period was Rs. 3.16 lakhs.

The excess expenditure of Rs. 1.14 lakhs was incurred under this scheme out of the savings of scheme on Education and Training. This additional amount was utilised for forest publicity to popularise the activities of the department and for the purchase of necessary equipments and books and the entertainment of extra staff required for efficiently carrying out the research programme.

CHAPTER VII.

CO-OPERATION.

Co-operation has been recognised as an important agency of development particularly under conditions of relatively underdeveloped economy and limited resources as in our country. It is not merely an agency for development, but also an effective instrument of social change. It is through this medium that the under-privileged sector of the population can have their due share in the control and direction of economic activities. Co-operation is not merely an instrument of action, but also a way of life. Unfortunately, in Bihar, as in other parts of the country, co-operation has not yet taken root in the life of the people; and co-operative enterprise has largely remained confined to provision of limited credit facilities through ill managed and inadequately financed credit societies. The First Five-Year Plan made an attempt, though, of course, on a modest scale, in enlarging the scope and contents of co-operative enterprise in this State. There were seven schemes included in the State Plan under this head, with a total provision of Rs. 39 lakhs. Of these, two schemes relating to organisation of vegetable growers' co-operative societies and village welfare were merged with the general



scheme of forming whole village multi-purpose co-operative societies. The paragraphs below present a brief account of the work done during the Plan period.

Co-operative Training.—One of the greatest handicaps in the expansion of co-operative enterprise has been the lack of staff trained in co-operative principles. With a view to meeting this shortcoming, a scheme of training with an initial provision of Rs. 4.01 lakhs was included in the State Plan. The Central Co-operative Training Institute run by the State Government provided training facilities to the subordinate personnel of the Co-operative Department. The Institute had two sections—(i) Stationery section, and (ii) Peripatetic section. In the Stationery section, training was imparted to the personnel of the Co-operative Department and Co-operative Institutions. There was provision of 40 candidates in each of the two sessions, of six months duration, in a year. Stipendiaries appointed for training as Local Auditors and Supervisors were given stipend at the rate of Rs. 40 each per month and a travelling allowance of Rs. 20 per month during the two months of practical training.

Peripatetic section had been started with a view to training members and office bearers of Cane Growers' Co-operative Societies in the elementary principles and practice of co-operation and book keeping in a short course of about two months' duration for each group.

Subsequently, with a view to meeting the increased demand for trained personnel to man Community Project and N. E. S. blocks, Government of India, in the Ministry of Food and Agriculture, and the Reserve Bank of India constituted a Central Committee for co-operative training, which took the responsibility for the training of senior officers like Assistant Registrars and other intermediate personnel like inspectors. The responsibility for training of the subordinate personnel was, however, left with the State Government, but according to the scheme of the Central Committee, Central assistance was available to the extent of half the cost on certain items of expenditure. The State Government deputed 4 Assistant Registrars every six months for training to the Co-operative Training College, Poona and 50 inspectors to the Reserve Bank's Regional Training Centres at Ranchi, Poona and Madras. 80 Block Level Co-operative Officers were also deputed every year for training at the Reserve Bank's Training Centre at Gopalpur-on-sea in Orissa. The Central Co-operative Institute was reorganised in 1955 with a view to training 80 candidates in each session by working on a double shift system.

Though the original provision under this scheme was only Rs. 4.01 lakhs, the total expenditure during the Plan period stood at Rs. 6.50

lakhs. This was largely accounted for by the fact that a sum of Rs. 2 lakhs was required for acquisition of land at Ranchi, on which stood the military buildings, transferred to the State Government and allotted to the Co-operative Department for locating the Central Co-operative Training Institute at Ranchi. As against the physical target to train 1,500 persons during the Plan period, the number of persons actually trained up to March, 1956, was 2,164.

While the number of persons trained increased, there was no material change in the strength of the administrative staff at all levels employed in the Co-operative Department during the Plan period 1951—56.

Credit Agricole.—One of the main objectives of the rural Co-operative Societies is to provide credit facilities in the form of seeds and manures to the needy cultivators. The scheme of credit agricole included in the First Five-Year Plan was inspired by this objective. The primary necessity was to build godowns for the storage of seeds and manures. A provision of Rs. 12.86 lakhs was available for constructing godowns at the district and Subdivisional headquarters. The work of construction was entrusted to the Public Works Department. By the end of the Plan period, 23 such godowns (out of a target of 24) were completed and the total expenditure incurred was Rs. 12.22 lakhs. The credit agricole depots served as an essential channel of providing short term credit to the agriculturists. Loans were advanced by the Government of India to the State Government for distribution of fertilisers on credit. The State Co-operative Bank, as an agent of the State Government, has been distributing chemical fertilisers to the agriculturists through the primary co-operations, both in cash and credit. This activity has been intensified since 1953. During the Plan period, chemical fertilisers valued approximately at Rs. 4.10 crores were distributed to the agriculturists in the State.

Co-operative Farming.—A beginning was made on this important subject in a few pilot projects in the State. Necessarily these were started on an experimental basis. In view of the fact that large scale cultivation of cane necessarily needs joint efforts, the cane growing belt was considered to be the most suitable field for experiments on co-operative farming. The physical target for organisation of co-operative farming societies during the Plan period was kept at ten societies, only which was achieved. The statement below shows the districtwise distribution of such farms and other particulars. The total expenditure incurred on the scheme was 0.44 lakh.

STATEMENT SHOWING THE DISTRICTWISE DISTRIBUTION OF
CO-OPERATIVE FARMS.

Serial no.	Name of Farm.	District.	Year of start.	Acreage at start.	Number of members at start.
1	2	3	4	5	6
1	Rampur ..	Shahabad ..	1948 ..	639.53	15
2	Bihata Khas ..	Patna ..	1951 ..	59.91	17
3	Churiharwa ..	Champaran ..	1946 ..	101.93	10
4	Pandauldih ..	Darbhangha ..	1949 ..	10.00	10
5	Bhore Jairam ..	Ditto ..	1949 ..	16.59	10
6	Narha ..	Muzaffarpur ..	1949 ..	17.19	18
7	Sasaula Gote ..	Ditto ..	1952 ..	25.69	6
8	Bishunpur Kamlep ..	Ditto ..	1952 ..	34.41	19
9	Sahtha ..	Ditto ..	1956 ..	31.25	13
10	Jagdishpur ..	Saran ..	1956 ..	21.87	10
		Total ..	..	958.37	132

The average yield of the crops before the introduction of the Co-operative Farming and at present is as below :—

Particulars of crop.	Before the introduction of Co-operative Farming.	At present,
	(Yield in maunds per acre.)	
1. Sugarcane ..	180	400
2. Paddy ..	7	15
3. Rabi ..	6	14

The beginnings have been modest.

Multipurpose Co-operative Societies.—The Multipurpose Co-operative Society is the most highly integrated form of co-operative organisation for development of rural economy. Besides the supply of credit to members at cheap rate, the objects of Multipurpose Co-operative Societies are to work as purchase and sale agencies, to take up the supply of seeds and manures, supply of consumers' goods, promotion of sanitation, adult education, development of village industries

animal husbandry and village communications. With this object in view, the establishment of whole village multi-purpose Co-operative Societies formed an essential part of the scheme for organisation of rural development centres in the First Five-Year Plan. The physical target was to organise 7,400 multi-purpose Co-operative Societies during the Plan period, against which 9,289 such societies were established in addition to the 2,979 Credit Societies converted into multi-purpose Co-operative Societies. The organisation of these societies was at first taken up on intensive scale in a few selected thanas, viz., Purnea Sadar, Pusa (Darbhanga), Paru (Muzaffarpur), Dhaka (Champanan), Aurangabad (Gaya), Hissua (Gaya), Rajouli (Gaya), Bagodar (Hazaribagh), Bhorey (Saran), Monghyr Sadar, Suraj Garha and Lukhisarai (Monghyr).

The statement below indicates the nature and extent of the organisation and development work carried out by the societies in the intensive areas during 1951-52 and 1952-53 in addition to financing the members :—

Particulars.	Achievement.
1. Number of night school run ...	288
2. Number of pupils taught	38,624
3. Number of primary and basic schools ...	495
4. Number of pupils taught ...	23,941
5. Number of compost and manure pits dug	21,012
6. Number of wells dug ...	2,446
7. Number of Charkhas run ...	2,306
8. Number of handlooms ...	1,392
9. Number of Wardha ghanis ...	40
10. Number of disputes settled ...	452
11. Length of village lanes cleaned ...	58,263 yards.
12. Length of new bundhs and Ahars repaired and constructed ...	1,12,195 yards.

Later on, these societies were organised on a large scale in the Community Project areas and N. E. S. blocks, where they helped to a great extent in improving the economic condition of the members. The total number of multi-purpose Co-operative Societies stood at 12,268 on 31st March 1956 against 4,717 on 30th June 1951.

The short term and medium credit supplied to the members through multi-purpose Co-operative Societies during the Plan period was about Rs. 200 lakhs. This credit was supplied mainly by the State Co-operative Bank and partly by the Central Co-operative Banks and the societies out of their own resources. Besides, about 93,000 tons of ammonium sulphate were distributed through these societies in addition to the distribution of superphosphate and bonemeals under the Grow More scheme of the Agriculture Department.

The multi-purpose Co-operative Societies also took up stores business and dealt in consumers goods and also marketed the produce of their members. During the Plan period, goods worth about Rs. 300 lakhs were sold by these societies.

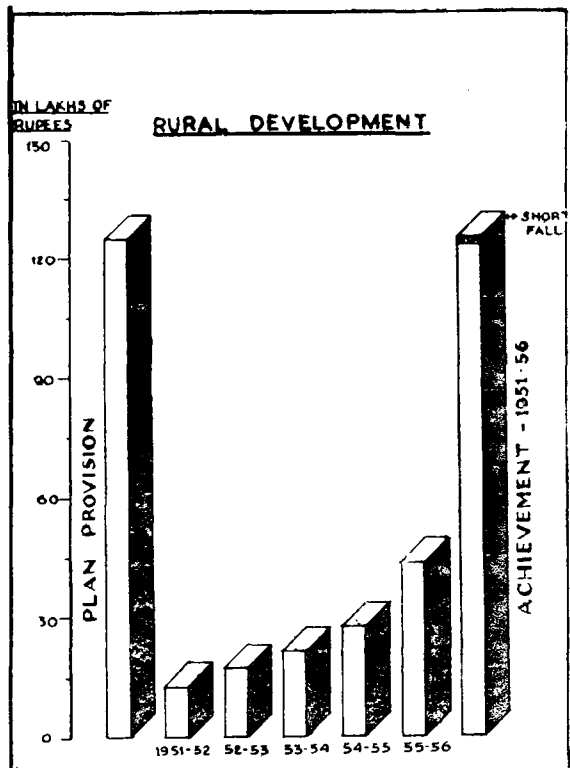
Development of Handloom Industries.—The scheme included in the Plan aimed at organising Weavers' Co-operative Societies for supplying yarn to the members and marketing their finished goods. The physical target was to establish 180 Weavers' Co-operative Societies during the Plan period. Due to the useful service done by these Societies and also because of the financial help made available to the weavers by the Central Government out of the cess fund, large number of weavers came into co-operative fold, and there was rapid progress in the organisation of Weavers' Co-operative Societies. The total number of societies organised during the Plan period came up to 575 with membership of about 85,000 weavers. The Bihar State Handloom Co-operative Union, which is at present the apex marketing agency for handloom production in this State and various sales emporia opened throughout the State provided adequate facilities for marketing the finished products of the Weavers' Co-operative Societies. During the First Five-Year Plan period, handloom cloth worth over Rs. 200 lakhs was marketed through these Weavers' Co-operative Societies and the sales emporia.

CHAPTER VIII.

GRAM PANCHAYAT.

The Village Panchayats have formed an integral part of national life from time immemorial in India. A self-sufficient village, as the basic economic unit, had existed for centuries in India and, except for some minor modifications, had survived till the advent of the British Rule. The East India Company, with a view to increasing its income, as also for a variety of factors, introduced the permanent Settlement and created an institution of intermediaries between themselves and the people. The Industrial Revolution, coming in its wake, led to the decay of village industries, which in its turn, led to the disintegration of the village communities.

The Royal Commission on Decentralisation recommended reviving the village institutions, but it was not until Independence that concrete steps were taken in this direction. The Bihar Panchayat Raj Act was enacted in 1947. The implementation of the Scheme began in 1949, but the work was further accelerated on the commencement of the First Five-Year Plan.



In the First Five-Year Plan, a sum of Rs. 124.65 lakhs was sanctioned for the implementation of the Bihar Panchayat Raj Scheme under rural development.

Before the First Five-Year Plan, the total number of Gram Panchayats established was 1,424. A physical target of 1,300 was fixed for the establishment of new Gram Panchayats every year during the Plan period. The first three years of the Plan period were years of distress and hardships due to failure of Monsoons for successive years. Near famine conditions were created in large parts of the State. Simultaneously, other parts of the State suffered from heavy floods. The need for an agency which could organise relief and succour on an extensive scale was keenly felt. It was, therefore, decided to organise a network of unofficial Panchayats all over the State, which could be entrusted with the relief measures. At the end of the First Five-Year Plan, the physical target was fully reached and 6,512 Gram Panchayats were established. In addition 2,187 unofficial Panchayats were also established. The official and unofficial Panchayats taken together totalled 8,699 consisting of 60,141 villages with a population of 31,00,581. The districtwise distribution of the official Panchayats set up during the Plan period is shown below :—

District.	No. of Gram Panchayats.
Patna	420
Gaya	325
Shahabad	304
Saran	351
Champaran	444
Muzaffarpur	428
Darbhanga	714
Bhagalpur	325
Monghyr	523
Purnea	276
Santhal Parganas	558
Saharsa	229
Ranchi	408
Palamau	96
Hazaribagh	367
Singhbhum	303
Manbhum	330
Dhanbad	111
	<hr/>
Total	6,512
	<hr/>

The State Government follow a cautious policy in the formation of Gram Panchayats. In the initial stage, an unofficial Panchayat is established and the villagers are advised to execute certain items of constructive nature. When the villagers show progress in the constructive field, the village is formally notified and an election is held in the regular manner. By experience, it has been noticed that during the period the Gram Panchayat runs on an unofficial basis the villagers develop a spirit of co-operation and mutual good will, which is reflected in a very large number of Gram Panchayat elections being held without a contest. During the period under review elections were held in 5,513 Gram Panchayats, out of which 3,668, nearly 66 per cent of the total were without a contest.

Training of Personnel.

Every Gram Panchayat is provided with a Gramsewak. The Gramsewak occupies a key position. On his efficiency depends the efficiency of the Gram Panchayat. He assists the executive committee in preparing the budget and programme of work. He acts as the clerk of Panchayat Court and is also the Executive Officer of the Panchayat. In order that the Gramsewak may discharge his multifarious duties efficiently, a course of training is arranged. Previously, the Gramsewak used to be trained for a period of 6 weeks only. The period was subsequently raised to 3 months.

In order to make the Training Scheme comprehensive, it was decided to strengthen the teaching staff. Accordingly, two more posts of teachers—one for teaching Law and the other for teaching Land Reforms were created. Similarly, to provide better training in Agriculture and Animal Husbandry, it was decided to create additional posts of Agriculturist, Farm Sardar and Stockman.

Each trainee is sanctioned a stipend of Rs. 40 per month during the period of training. The trainees are also given practical training in vaccination, inoculation and to pass a course conducted by the St. John Ambulance Brigade. They are also being given practical training in agricultural methods and practices, improvement of livestock, selection and preservation of seeds, improvement of sanitation, etc.

Village Volunteer Force.

In order that the Gram Panchayat may be a self-contained unit of administration, every Gram Panchayat is required to organise a Village Volunteer Force consisting of all able bodied males between the ages of 18 and 30 years. A chief officer is appointed by the Panchayat to command the Force. The Force is employed on watch and ward duties and for the prevention of crime. They are also trained in social

reconstruction work and the members render manual labour in the execution of minor development schemes in their respective Panchayats.

The Chief Officer of the V. Force is trained for 8 weeks in physical exercises and drills. He is also given training in games, which he can popularise in rural areas. During the period under review 5,284 Chief Officers were trained.

Functions of Gram Panchayats.

In the First Five-Year Plan, the Planning Commission had recommended that the Panchayats should become the agency for village planning, land reforms and for land management at the village level. Besides, the Village Panchayats were to function as units of self-government. Their activities were to be varied and to cover different aspects of national life. The Gram Panchayat in Bihar is being developed on these lines and is intended to be the basic unit of administration, providing the vital link in the rural areas. Some of the important functions discharged by the Gram Panchayats are mentioned below :

Municipal functions.—Sanitation and Conservancy, supply of clean drinking water, control and prevention of epidemics are some of the compulsory duties of Gram Panchayats. The trained Gramsewaks were employed on disinfection of wells and other sources of water-supply. Borehole latrines, trench latrines, soakage-pits and drains were constructed in the jurisdiction of Gram Panchayats to improve sanitation. The work done by the Gram Panchayats in this sphere is given in the table below :

Bore hole latrines.	Trench latrines.	Soakage pits.	Wells and tanks disinfected.	Persons vaccinated.	Cattle vaccinated.
69,183	1,06,164	1,22,506	16,15,721	48,14,679	4,74,009

Medical relief and first aid.—Medical relief and first-aid is also one of the compulsory duties of Gram Panchayats. In order to enable the Gram Panchayats to control epidemics, 6,328 medicine chests were supplied to them. The Gram Panchayats also undertook distribution of powder-milk and multi-vitamin tablets, and organised relief and succour in the flood affected areas. They undertook distribution of foodgrains in scarcity areas on an extensive scale. During the period under review, 22 Blind Relief camps were run under the aegis of Gram Panchayats in this State.

Leprosy is taking a heavy toll particularly in the district of Manbhum. In order to check infection, it was decided to try a new method of prevention, called " Night Segregation Method ", by which the villagers construct segregation huts for accommodating the patients suffering from leprosy. The patients stay during the night in the huts and remain segregated from their families but are allowed to work on their farms during the day time. This prevents them from turning into professional beggars and satisfies their psychological desire of remaining near their family. A Leprosy Centre was opened in the district of Manbhum with 3 sub-centres and was run with great success with the co-operation of the people.

Economic functions.—Lack of communications and market facilities is one of the factors retarding the growth of rural areas. The Gram Panchayats took up opening of communications on an extensive scale throughout the State by constructing village roads to connect important District Board and P. W. D. roads. They also undertook construction of small culverts and bridges. The statement below shows the work done by Gram Panchayats for improvement of communication in villages :—

New roads constructed.	Roads repaired.	New bridges and culverts constructed.	Old bridges and culverts repaired.
Miles.	Miles.		
4,362	4,496	2,540	4,006

The Plan commenced with an overall shortage of foodgrains. Increase in production was, therefore, given top priority. The Gram Panchayats popularised compost making, use of fertilizers, quality seeds, etc.

Agriculture in India is a proverbial gamble in Monsoons. With a view to ensure assured irrigation facilities, the Gram Panchayats undertook repair and construction of minor irrigation works on an extensive scale. The Revenue Department of the State Government also decided to entrust the construction of minor irrigation works to Village Panchayats. The Panchayats discharged their responsibility in a satisfactory manner.

A new lead in public co-operation was given by entrusting the construction of Flood Protection embankments in the districts of Muzaffarpur, Darbhanga, Monghyr and Saran to Gram Panchayats. 187 miles of Flood Protection embankments were constructed through the agency of Gram Panchayats. 48 miles of Kosi embankments were also constructed through the agency of Gram Panchayats. The novel feature of the scheme was that in the process of construction of the embankments, the Gram Panchayats developed not merely power of organisation, self-confidence but could make a small profit also, which was credited to the Gram Panchayat fund. Professional contractors were not utilised on these constructions.

The State Government have decided to associate the Gram Panchayats with the implementation of their Land Reforms policy. As a step towards the fulfilment of that objective, collection of land revenue was entrusted to 237 Gram Panchayats. The Gram Panchayats showed satisfactory progress in this work and were able to collect a high percentage of the demand without adopting any coercive method.

The State Government have also decided that the good offices of the Gram Panchayats will be utilised in improving the relations between the tillers of the soil and the intermediaries generally, and in improving the relations between the Under-Raiyats and Raiyats particularly. The Gram Panchayats will be also associated with the consolidation of holdings and other Land Reforms measures.

With a view to make cheap credit available to the cultivators in kind at the time of sowing, Government have sanctioned a Scheme for the opening of grain golas (banks). Government decided to run 102 grain golas through the agency of Gram Panchayats, as it was found that the management of grain golas by the Gram Panchayats was cheaper and it gave far more facilities to the borrowers in the matter of availability of the loan in time and easy realisation. The Gram Panchayats managed this work with success and there was large demand for opening of more grain golas all over the State particularly in the backward areas.

In order that the First Five-Year Plan created interest on the part of as wide a section of the community as possible the Local Works Programme was sanctioned. The schemes which were formulated with local initiative and resources were to be selected for execution under the Programme. In most of the districts, the Gram Panchayats were able to take advantage of the scheme as will appear from the statement at the end of this chapter.

The revival of rural industries, with a view to removing unemployment, is one of the important programmes of work for the Village Panchayats. With the efforts of the Gram Panchayats, several rural industries have been revived. The Gram Panchayats have lent assistance in reorganising the carpet-making industry, embroidery work, use of improved-Ghanis, pottery making, etc.

Village Judiciary.—Reconciliation of disputes, which when neglected, assume the form of a family feud and ultimately turn into a Vendeta leading to ruin of families involved in the dispute, is one of the main functions of the village judiciary. The good neighbour tries to intervene in the dispute and use his good influence in bringing about reconciliation to ensure harmony in the village and progress in the execution of development schemes. 5,513 Gram Kutcherries functioned in the State and were able to dispose of 1,51,676 criminal cases and 94,532 civil cases amicably.

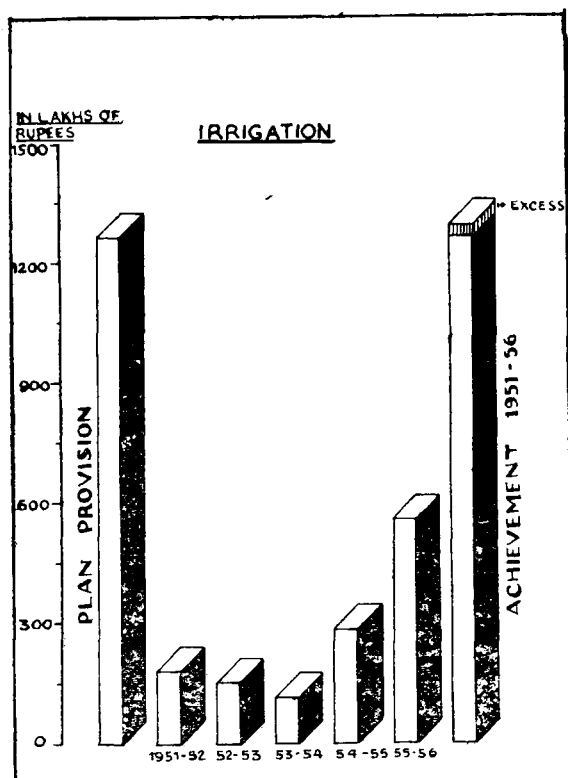
STATEMENT OF WORKS DONE BY GRAM PANCHAYATS UNDER LOCAL WORKS
BY GOVERNMENT

Serial no.	District.	Construction of Panchayat ghar.	Construction and repair of school buildings.	Construction and repairs of wells.	Construction and repairs of roads.	Construction and repairs of culverts.	Construction of bore-hole and trench latrines.	Construction and repairs of drains.
1	2	3	4	5	6	7	8	9
1	Patna ..	32	176	523	21	7	31	50
2	Gaya ..	2	24	56	9	2	..	14
3	Shahabad ..	17	16	49	19	..	200	24
4	Saran ..	110	64	126	1	12	..	..
5	Champaran..	79	43	844	16	33	..	..
6	Darbhanga ..	42	18	13	3	..	..	..
7	Muzaffarpur	45	37	100	12	5	..	..
8	Bhagalpur ..	9	29	135	7	..	15	1
9	Monghyr ..	7	26	33	66	3	..	1
10	Saharsa ..	13	6	283	1	..	..	..
11	Purnea ..	45	5	294	82	2	..	..
12	Santhal Parganas.	26	32	83	43	3	11	..
13	Ranchi ..	34	156	570	48	7	..	..
14	Hazaribagh..	6	16	10	1	..	..	..
15	Palamau ..	42	33	110	15	2	..	..
16	Singhbhum	25	30	77	29	..	..	..
17	Manbhum ..	128	15	38	15	1	..	..
18	Dhanbad ..	27	8	26	..	..	..	..

CHAPTER IX.

IRRIGATION.

Irrigation is the most pressing problem of agricultural development in our State, particularly in view of its predominant agricultural economy. The total area of Bihar is 450 lakh acres, out of which the net area cultivated is nearly 222 lakh acres. The area under assured irrigation before the inception of the First Five-Year Plan was approximately 8 lakh acres, which works out to approximately 3.4 per cent of the total cropped area as compared to 6.8 per cent for all Part A States and the All-India average of 5.3 per cent. Irrigation through canals before the inception of the Plan was being provided through the Sone, Tribeni, Dhaka and Teur canals.

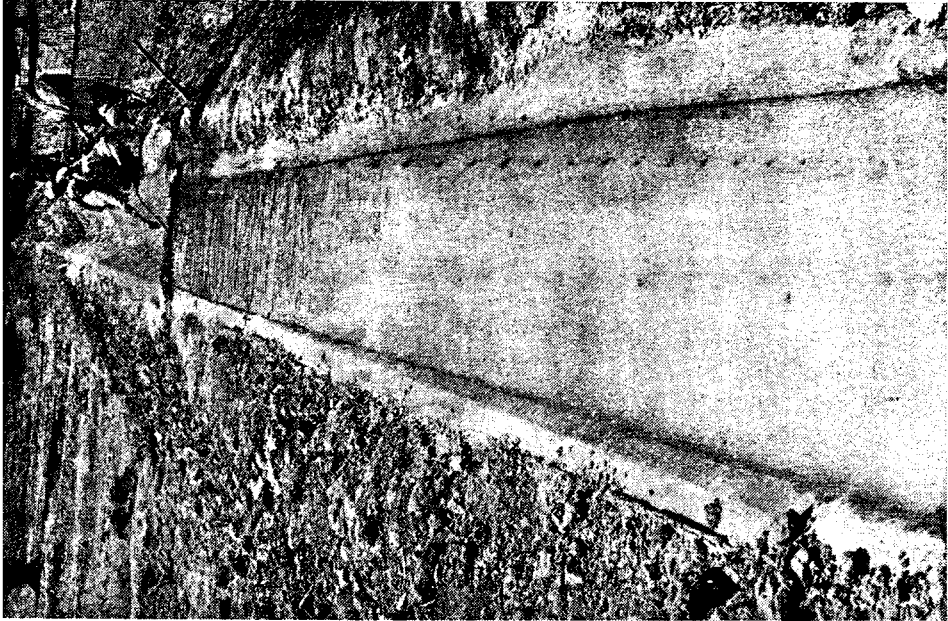


Originally, a provision of Rs. 973.3 lakhs was made for the ten schemes included in the Irrigation sector of the State Plan. But, in view of the experience gained in the working of the schemes, certain adjustments to the Plan schemes were sanctioned, including a fresh allotment of Rs. 350 lakhs under the programme for permanent improvement of scarcity areas, which was sanctioned by the Planning

Commission towards the end of 1953. This raised the irrigation Plan to Rs. 1265.44 lakhs. The total expenditure during the Plan period has, however, exceeded the Plan provision by Rs. 28.89 lakhs. In addition to the schemes included in the State Plan, there were certain irrigation schemes, which were executed outside the State Plan, of which the total expenditure amounted to Rs. 209.26 lakhs. These schemes related to the special minor irrigation programme, 350 tube-wells constructed under T. C. M. programme, Mayurakshi Left bank canal and irrigation works in the Community Project areas.

Physical Targets.

According to the original Plan, 6.02 lakh acres of additional lands were expected to be brought under irrigation and 6.39 lakh acres under flood protection and reclamation. Against this, means of irrigation have been provided over an additional area of 5.60 lakh acres, besides about 1.03 lakh acres brought under irrigation by schemes outside the Plan. The additional area reclaimed and protected from floods comes to 11.15 lakh acres.



Pucca canal channel under construction in a village of Sasaram.

The development of irrigation from tube-wells and Emergency River Pumping schemes has been rather low in comparison with earlier expectations. This is partly due to the irrigation schemes being in the earlier stages of development, and partly because of favourable rainfall. On the other hand due to devastation caused by repeated and heavy

floods, demand for more and more flood control measures poured in and, as a result, the activities of the department had to be accelerated on flood control schemes. The achievement on reclamation and flood protection work has been nearly twice the original target that is 11.15 lakh acres against the target of 6.39 lakh acres.

Additional Food Production.

The original Plan envisaged additional yield of 1.2 lakh tons per year from new irrigation schemes (at the rate of 1/5 ton per acre) and 0.91 lakh ton per year from reclamation and protection schemes (at the rate of 1/7th ton per acre), which comes to a total of 2.11 lakh tons. Against this target of 2.11 lakh tons, actual achievement is calculated to be 2.12 lakh tons as noted below, in spite of the fact that out of the total area of 5.60 lakh acres, which has been assured of irrigation, only 2.62 lakh acres actually derived the benefits.

From Irrigation schemes	...	...	0.52 lakh ton.
From flood protection and reclamation schemes.			1.60 lakh tons.
			<hr/>
	Total	...	2.12 lakh tons.
			<hr/>

The figure shows that on the overall basis the target has been exceeded.

A brief review of irrigational development during the Plan period is given in the following paragraphs :

TUBE-WELLS.

With a view to large scale utilisation of sub-soil water for irrigation purposes, the following four schemes were originally included in the State Plan for sinking tube-wells in this State :

Name of Schemes.			Provision (in lakh rupees).
300 tube-wells in North Bihar	...	...	132.10
Tube-wells in South Bihar	...	...	140.02
Further 300 tube-wells in sugar factory areas	...	...	161.00
Further 200 tube-wells in South Bihar	...	...	98.00

Of these four schemes, the schemes relating to 300 tube-wells in Sugar factory areas and 200 tube-wells in South Bihar were dropped. It was decided to watch the results of development of irrigation in the first group of tube-wells sunk in North Bihar before embarking upon additional expansion. An additional programme of 350 tube-wells was, however, taken up with a provision of Rs. 195.52 lakhs, in lieu of the

two original schemes (nos. 87 and 88) namely, tube-wells in Sugar factory areas and Sakri (upper valley) irrigation scheme. The statement below shows the districtwise distribution of these tube-wells together with commanded area and area brought under irrigation during the Plan period. In Patna district, 5 river pumps were also provided under the scheme relating to setting up of tube-wells in South Bihar. The area commanded and irrigated through these pumps has also been included in the statement below :—

Name of Districts.	Number of tube-wells sunk.	Physical benefit in acres :	
		Area brought under command.	Area which actually utilised irrigation during plan period.
1	2	3	4
Patna	231	50,000	11,000
Shahabad	27	22,900	4,000
Monghyr	66	17,750	1,000
Saran	97	35,000	2,000
Champaran	106	40,000	5,000
Muzaffarpur	101	28,000	2,000
Darbhangha	95	29,500	4,000
Total	913*	2,23,150	29,000

*3 tube-wells failed.

Drainage of Chauris, etc.

This scheme comprised of construction of a number of small irrigation, drainage and flood protection works scattered all over the State. Originally, an expenditure of Rs. 118.5 lakhs over this scheme was provided for the First Five-Year Plan. In view of growing demand from the public for such schemes and quick results obtaining therefrom, the provision was raised to Rs. 331.56 lakhs. Against this, the actual expenditure has been 324.21 lakhs. 1,18,140 acres of land have been brought under irrigation and 5,64,528 acres of land have been reclaimed or protected from the ravages of floods. Some of these schemes are still under construction and have continued over to the Second Five-Year Plan. The statement in the next page shows the districtwise distribution of these schemes together with their physical benefits :

Benefits :

Name of districts.	Number of schemes.			Area which utilised irrigation.	
	Irrigation.	Drainage.	Embankment and river training.	Area irrigated.	Area reclaimed or protected.
1	2	3	4	5	6
1. Patna	4	2	..	Acres. 26,938	Acres. 12,000
2. Gaya	6	..	2	9,500	1,000
3. Monghyr (South)	4	..	..	27,300	..
4. Bhagalpur	2	..	2	5,500	5,800
5. Shahabad	2	3	..	16,000	3,000
6. Santhal Parganas .. ..	..	1	2	..	14,000
7.. Saran	1	3	3	10,902	1,10,580
8. Muzaffarpur	5	9	7	2,000	1,94,819
9. Darbhanga	1	12	1	20,000	53,670
10. Monghyr (North) .. ..	..	1	6	..	1,10,819
11. Champaran .. ..	..	5	..	..	17,240
12. Bhagalpur (North) .. ..	..	..	1	..	3,600
13. Purnea .. ..	..	..	1	..	38,000
Total	25	36	25	1,18,140	5,64,528

A few important schemes under this programme are mentioned below :

North Bihar.

Improvement of Baya Nala (Muzaffarpur).—This scheme for drainage of water of river Baya, which was choked up due to the silting of its bed, was taken up before the inception of the First Five-Year Plan. During the rains, low-lying areas used to be submerged due to overflow of river Baya. The elevated bed was excavated. The work was completed and benefits have started accruing to 14,874 acres of land. An expenditure of Rs. 6.68 lakhs has been incurred during the First Five-Year Plan period. On full development, the scheme would assure irrigation to 87,040 acres.

Remodelling and strengthening of Bandhs in Saran.—This scheme is for raising and strengthening 12 numbers of Bandhs in Saran district to stand heavy flood. Sluices and Hume pipe outlets have been provided at suitable places. The work has been practically completed and an expenditure of Rs. 15 lakhs has been incurred during the Plan period. An area of 60,160 acres is likely to be benefited on full development.

Gupta-Lakhminia Embankment (Monghyr).—The 12 miles long Gupta-Lakhminia Embankment runs along the left bank of Ganga. It gives protection to an area of about 14,000 acres bounded on the west by Gupta-Ring Bundh, on the north by the Begusarai-Lakhminia District Board Road and on the east by the Sonepur-Ballia Road. Six sluices have been provided in this embankment. The scheme has been completed and benefits are already accruing from it. An expenditure of Rs. 2.56 lakhs has been incurred during 1951—56.

Gogri-Narainpur Embankment (Monghyr and Bhagalpur).—Nearly 27 miles long embankment lies on the left bank of the Ganga and Burhi Gandak. It starts from the village Gogri in continuation of the old Gogri embankment and terminates in the Railway embankment just east of Narainpur Railway Station. It protects the area surrounded by the Railway embankment on the north and the embankment itself on the other side.

It has been practically completed and benefits are accruing to 27,000 acres of land at present. An expenditure of Rs. 15.23 has been incurred over it during 1951—56.

Kabar Lake and Nagri Jheel (Monghyr).—The water spread areas of Nagri Jheel and Kabar Lake in the month of October are 4 square miles and 25 square miles respectively. The former one drains into Kabar which after taking discharge of 4 small lakes lying on both sides of the drainage channels finally drains into Burhi Gandak at Bagras where a sluice has been provided.

The scheme has been practically completed and has begun benefiting 17,619 acres of land and an expenditure of Rs. 10.32 lakhs has been incurred over it during 1951—56.

Karahagola-Bhawanipur-Azampur-Shanker Embankments.—The 16 miles long embankment runs along the left bank of the river Ganga and the right bank of Kari Kosi. The area protected from the Embankment is surrounded by the N. E. Railway embankment on the west and by the embankment itself on the other three sides. Some sluices have been provided in it.

The work has been almost completed and full benefits are now accruing from it. An expenditure of Rs. 17.82 lakhs has been incurred over it during 1951—56, providing protection to nearly 38,000 acres.

South Bihar.

(1) *Gidheshwari Pyne Scheme (Monghyr)*.—This scheme was taken up in August, 1951 at an estimated cost of Rs. 15.58 lakhs and an area of 17,000 acres of paddy lands was expected to be irrigated. A sum of Rs. 13.70 lakhs has been spent over this scheme during 1951—56 and irrigation has been provided at present to an area of 15,000 acres.

(2) *Semariya Gurgawan Embankment (Santhal Parganas)*.—This scheme was taken up in May, 1951 at an estimated cost of Rs. 13.49 lakhs, and it envisaged construction of embankment on both banks of river Guma for protecting 13,440 acres of land from ravages of floods. An expenditure of Rs. 12.92 lakhs has been incurred on this scheme during 1951—56. The scheme is almost complete and benefits are now likely to accrue from 1956.

(3) *Botane Irrigation Scheme (Gaya)*.—Work on the scheme, costing Rs. 18.05 lakhs, has been started in 1954. Irrigation facilities to 16,000 acres of land are expected. The irrigable area lies between rivers Botane and Adri. An amount of Rs. 7.87 lakhs has so far been spent. The scheme is spilling over to the Second Five-Year Plan.

(4) *Upper Morhar Irrigation Scheme (Gaya)*.—Work on the scheme has been started in 1955. The estimated cost of this scheme is Rs. 56.13 lakhs and it is expected to irrigate 32,000 acres of land in Sherghaty (Gaya District). The main canal will run across the Sherghaty-Imamganj road and after meeting the old Koili Nala will cross the Grand Trunk Road near village Rajabigha. The length of the canal will be about 13 miles and Rs. 17.52 lakhs have so far been spent. This scheme is spilling over to the Second Five-Year Plan.

(5) *Lilajan Irrigation Scheme (Gaya)*.—Work on this scheme has been started in 1955, at an estimated cost of Rs. 64.99 lakhs and an area of about 53,500 acres is expected to be irrigated through a network of canals, the length of which shall be about 52 miles. Rs. 21.76 lakhs have so far been spent. This is spilling over to the Second Five-Year Plan.

(6) *Durgawati Irrigation Scheme (Shahabad)*.—This scheme was taken up in 1954 at an estimated cost of Rs. 28 lakhs. It is expected to provide irrigation to 22,000 acres of Kharif crop and 4,000 acres of Rabi lands in Kudra police-station of Shahabad District. The irrigation will be on the right bank only—the left bank not commandable, being

on higher level. An expenditure of Rs. 16.44 lakhs has so far been incurred. The scheme is spilling over to the Second Five-Year Plan.

(7) *Kaurihari Irrigation Scheme (Monghyr)*.—This scheme was taken up in the year 1955 at an estimated cost of Rs. 46.79 lakhs and is expected to irrigate 22,800 acres on the left bank. The expenditure upto 1955—56 is Rs. 16.21 lakhs. No benefit has yet accrued as the work is not yet completed. This scheme will be spilling over to the Second Five-Year Plan.

(8) *Kharagpur Lake Scheme (Monghyr)*.—The scheme for remodelling of existing system of Kharagpur lake has been started during 1954-55 at an estimated cost of Rs. 17.58 lakhs. The storage capacity will be doubled after the structure is remodelled and the canal re-sectioned and re-graded. The expenditure upto 1955—56 is Rs. 7.0 lakhs and this will spill over to the Second Five-Year Plan.

(9) *Sundar Irrigation Scheme (Santal Parganas)*.—This scheme was sanctioned at an estimated cost of Rs. 14.66 lakhs and work started on it during 1955-56. Due to certain unavoidable reasons, the work under this scheme had to be stopped.

(10) *Lower Kiul Valley Scheme (Monghyr)*.—The Lower Kiul Valley Scheme which was originally scheduled for the Second Five-Year Plan has been taken up during 1955-56 as there was keen demand for it. The estimated cost is Rs. 68.0 lakhs and expenditure of Rs. 14.66 lakhs has been incurred on it during the First Five-Year Plan. After the scheme is completed an area of 64,000 acres is likely to be brought under irrigation.

(11) *Kohira Reservoir Project*.—The scheme is spilling over to the Second Five-Year Plan. In order to meet keen demand from the public and also to utilise the resources of First Five-Year Plan, it was taken up towards the close of the years 1955-56.

The estimated cost of the scheme is Rs. 56.84 lakhs and benefit to 14,000 acres of land is anticipated. An expenditure of Rs. 1.65 lakhs has been incurred over it in 1955-56.

(12) *Nagi Reservoir Scheme*.—This scheme was taken up towards the end of the First Five-Year Plan at an estimated cost of Rs. 29.51 lakhs to give benefit to 61,000 acres of land in Monghyr district. An expenditure of Rs. 2.8 lakhs has been incurred during the First Plan period. The scheme will spill over to the Second Five-Year Plan.

Sakri Lower Valley Scheme.

The scheme was taken up in 1947 at an estimated cost of Rs. 16.37 lakhs. In course of construction, however, its cost was revised to

Rs. 33.81 lakhs. The canal runs 12 miles through several falls and crossings. A number of distributaries, whose total length is about 25 miles, take off from it. They irrigate 13,000 acres of land in Patna district, 17,000 acres in Gaya district and 20,000 acres in Monghyr district.

Originally an expenditure of Rs. 9.57 lakhs had been planned for 1951—56 over this scheme. This was subsequently raised to Rs. 18.94 lakhs. Against this Rs. 18.74 lakhs were spent. The target for irrigation from the scheme at the end of the Plan period was 15,000 acres only. This scheme has, however, been completed, and irrigation is being effected in an area of 50,000 acres.

Tribeni Canal Expansion.

This scheme for extension and remodelling of the main Tribeni Canal and its existing distributaries and for construction of six more distributaries was taken up in 1950. The scheme has been completed during the First Five-Year Plan period and full benefits are accruing from it now. A sum of Rs. 27.51 lakhs has been spent over it during 1951—56 against the revised provision of Rs. 29.00 lakhs, assuring irrigation to 28,000 acres in Champaran.

Emergency River Pumping Scheme.

This scheme comprised of installation of Emergency River Pumps in drought affected areas for Kharif irrigation. Irrigation Department has a battery of 250 Emergency River Pumping sets spread over the State. These are commissioned as and when required during the droughts. Some of them are now permanently fixed at places where there has been continuous demand. The statement below shows the rough distribution of the sets :—

District.	Number of river pumps.
Patna	66
Shahabad	45
Ranchi	7
Bhagalpur	5
Gaya	12
Darbhanga	48
Saran	25
Muzaffarpur	15
Champaran	24
Transferred to Kosi Project	3
Total	250

The original provision of Rs. 93.20 lakhs in the Plan was revised to Rs. 29.47 lakhs. The total expenditure incurred over these pumps during 1951—56, however, amounted to Rs. 30.07 lakhs. 11,000 acres of land have been brought under irrigation so far against the potential area of 51,000 to be covered by these sets.

Irrigation Dams and Weirs.

This scheme comprises of construction of sixteen small irrigation schemes in the district of Santhal Parganas and in Chotanagpur Plateau. The statement below shows the progress under this head :

IRRIGATION, DAMS AND WEIRS IN HILLY DISTRICTS.

NATURE OF SCHEME.

Name of district.	Irrigation scheme.	Area commanded.	Area which utilised irrigation.
1	2	3	4
Gaya	3	13,500	4,800
Palamau	3	6,000	5,000
Hazaribagh	3	6,200	3,800
Ranchi	1	2,000	800
Singhbhum	3	7,000	5,000
Manbhum	2	1,600	1,600
Santhal Parganas	1	2,040	2,000
Total	16	38,340	23,000

Permanent Improvement of Scarcity Areas.

Towards the end of 1953, a loan of Rs. 3.5 crores was offered by the Planning Commission for permanent improvement of scarcity areas in this State. A programme consisting of Flood Control, Irrigation and Drainage Schemes was drawn up for utilising this amount during the later three years of the First Five-Year Plan, that is, during 1953—56. The actual expenditure amounted to Rs. 341.42 lakhs. The

statement below shows the particulars of the work done during the Plan period :

PERMANENT IMPROVEMENT OF SCARCITY AREAS.

NATURE AND NUMBER OF SCHEMES.

Name of district.	Irrigation.	Drainage.	Embankment. or	Area reclaimed or protected from floods.
1	2	3	4	5
Champaran	1	3	1	6,000
Darbhanga	1	4	12	1,78,480
Saran .. ..	..	3	6	61,250
Muzaffarpur .. ..	..	9	7	2,29,720
Monghyr (North) .. ..	..	4	7	1,23,650
Purnea .. ..	..	1	..	..
Bhagalpur (North) .. ..	..	..	1	..
Total	2	24	34	5,99,100

CHAPTER X.

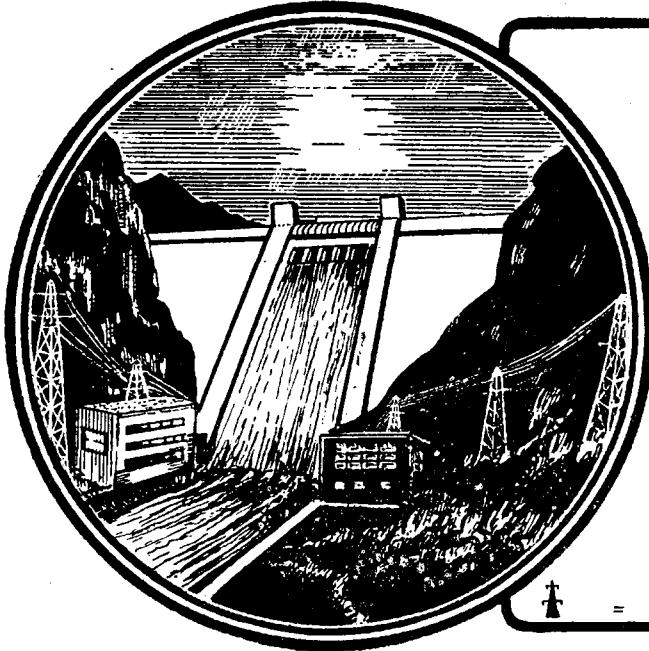
POWER.

The consumption of electricity is an important index not merely of industrial development in a country but also of its civil amenities. Before the First Five-Year Plan only about 18 licensees were operating in the State serving a few towns. The per capita consumption of electrical energy was as low as 3 units in the year 1951 as against the All-India average of 13.25 units. The activities of Government were mostly limited to the electrification of Government buildings and Administration of Indian Electricity Act for which a small organisation was available.

In the initial years of First Five-Year Plan, much of the time was spent in setting up a proper organisation for the Electricity Department. By 1954, the Department had one Inspectorate Circle for administration of the Electricity Act and one technical circle at headquarters at Patna. Three field circles for execution were also set up. A separate stores and accounting organisation was formed. The Department is now fairly well equipped for handling large scale expansion of power projects to meet the large leeway in electric generation. The First Five-Year Plan included 12 schemes with a provision of Rs. 709.72 lakhs. Subsequent adjustments increased the scope of the programme with a revised provision of Rs. 955.63 lakhs. At the end of the Plan period, the expenditure incurred by the State Government on its various power Schemes is of the order of Rs. 946.2 lakhs excluding the T. C. A. Programme, the total provision of which was Rs. 137.41 lakhs. There was a small short fall of Rs. 9.4 lakhs due to delay in obtaining materials and equipments from abroad.

The overall development, achieved during the First Plan, consists of erection of 15 pilot diesel generating stations, 12 of which are in North Bihar, aggregating about 8 M. W. capacity. 10 such stations have already been commissioned and erection of another 5 is in progress. The State Government is availing power from D. V. C. at 6 different sub-stations and have already built an extensive distribution system for transmitting this power to various industrial and rural areas of Chota Nagpur and South Bihar. Power is also available from a few private licensees to distribute in these areas. The total mileages of High Tension and Low Tension lines constructed in the whole of Bihar were 2,728 miles and 802 miles respectively during the Plan period. The total number of new consumers connected is 30,760. 793 tube-wells and 420 surface wells have been energised. The number of towns and villages energised is 361. As against the

IRRIGATION & POWER



PRE-PLAN POSITION

PROGRESS DURING PLAN PERIOD




47 MW.


208 MW.



8,00,000 ACRS.

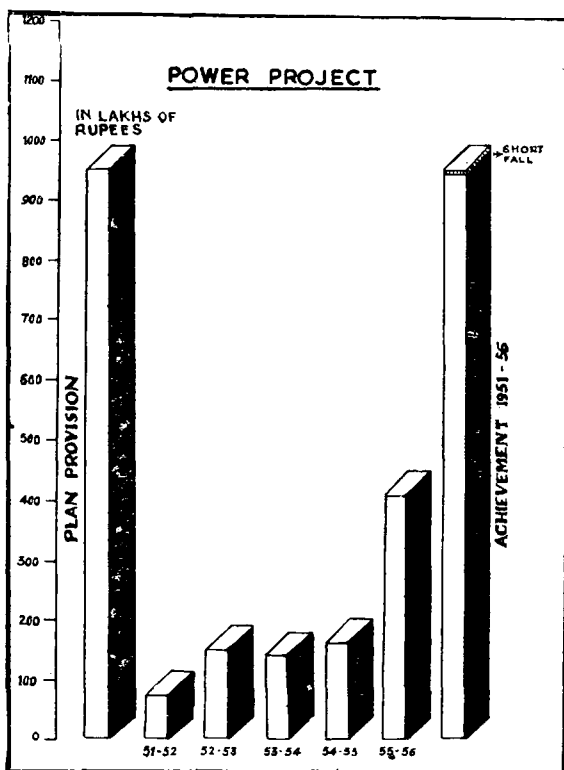
14,63,000 ACRS

 = 40 MW.

*  = 2 LAKH ACRES BY TUBE WELLS & CONT. CANALS

total generation of 47 M.W. in 1951, the State was producing 208 M.W. in 1956. The per capita consumption has increased to 4.2 units, i.e., an increase of the order of nearly 40% as compared to 1951, even though it is still very much lower than the All-India average.

The State Government availed themselves of the aid under the U. S. Technical Co-operation Programme, to the extent of Rs. 137.41 lakhs for the execution of the tube-well scheme. This covered 385 tube-wells distributed both in South Bihar and North Bihar, of which 150 are in North Bihar and the rest in South Bihar. In all, therefore, in the First Five-Year Plan period, the expenditure on power development was Rs. 11 crores. The statement below shows the physical progress achieved in this sector :—



Physical achievements of the Power Schemes.

Particulars.	Unit.	Achievement during Plan.
High Tension Lines ..	Miles ..	2,728
Low Tension Lines ..	Miles ..	802
Sub-stations ..	Numbers ..	1,407

Particulars.	Unit.	Achievement during Plan
Consumers ..	.. Number	30,760
Generating Stations constructed ..	.. „	15
Total Installed Capacity ..	.. K. W. ..	8,232
Coalmines electrified ..	.. Number ..	129
Mica mines electrified ..	.. „	53
Railway Stations electrified ..	.. „	39
Tube-wells electrified ..	.. „	793
Surface wells electrified ..	.. „	430
Towns electrified ..	.. „	46
Villages electrified ..	.. „	313

A brief review of the progress under different schemes is given in the following paragraphs :—

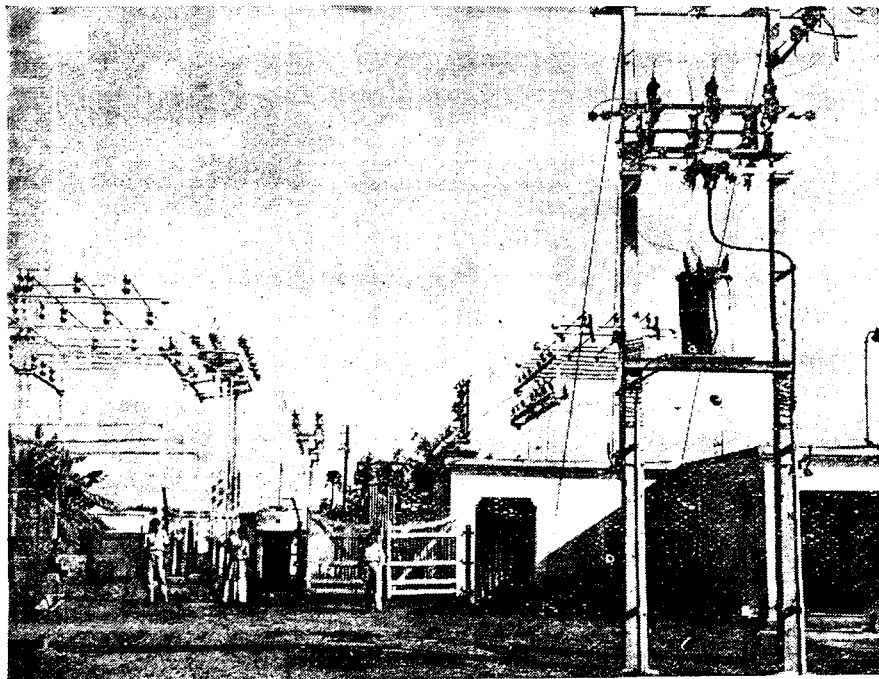
P. B. B. E. B. Scheme.

The Patna-Bakhtiarpur-Bihar-Ekangarsarai-Barbigha Scheme envisaged erection of transmission lines in Patna Bihta, Barun, Ekangarsarai and Biharshariff areas, and was originally sanctioned as an irrigation project. The execution was started by the Irrigation Department and the scheme provided for supply of power to tube-wells and the river pumps only. With the formation of the Electricity Department, the scheme was expanded to cover electrification of villages and towns also as an integrated plan.

At present, power is taken from the Patna Electric Supply Co. and the D. V. C. for transmission to 40 to 50 miles east and west of Patna by 33 KV lines. Step down stations have been erected at different places namely Fatwa, Barh, Mokameh, Bukhtiarpur, Biharshariff in the east, Bihta and Piro on the west from where extensive 11 KV distribution lines have been built for supply of power to work the tube-wells and electrify towns and villages *en route*.

The townships of Fatwa, Bukhtiarpur, Barh, Mokameh, Biharshariff, Maner, and a number of villages enroute have been electrified. Bulk supply has been given to Arrah Electric Supply Co. and power is given to Ganga Bridge Construction Project at Mokameh.

About 639 miles of High Tension Lines and 202 miles of Low Tension lines have been constructed; and 2,837 consumers are getting benefit of electricity. The total expenditure incurred on the scheme amounted to Rs. 72.75 lakhs.



An electricity distributing sub-station in Bihar.

Dehri Sasaram Lift Irrigation and Electrification Scheme.

This scheme was originally sanctioned earlier on a very limited scale but was subsequently enlarged in 1949. Under this scheme, power in bulk was taken from the Power House of Rohtas Industries, Ltd., at Dalmianagar and transmitted to the adjoining areas. The townships of Dehri-one-Sone, Sasaram, Barun and Aurangabad and a number of villages were electrified. Besides the State tube-wells a number of private tube-wells, various medium scale industries and about 2,605 domestic consumers are now served in this area. About 138 miles of High Tension and 43 miles of Low Tension lines were constructed during the Plan period. The total expenditure on this scheme amounted to Rs. 40.28 lakhs.

Gaya Electric Supply Scheme.

A private supply company had been operating in Gaya since 1930. It could not, however, cope with additional load; and supply also was

very unsatisfactory. The undertaking was, therefore, taken over by the Government in October, 1949 and steps were taken to augment its generating capacity by addition of 3 diesel generating sets and by taking over on lease under Government management the power house of the local cotton mills. Since April, 1955 power in bulk is also availed from D. V. C. power station at Tilaiya *via* Nawadah.

The whole system now consists of about 87 miles of High Tension lines and 89 miles of Low Tension lines and the number of consumers have increased to over 6,283 at the end of the First Five-Year Plan. Electric supply to the adjoining villages has also been extended.

A scheme for providing electrically operated small pumping sets on hire-purchase basis to encourage irrigation of vegetable crops has been introduced. Pumping sets of 3 H. P. to 5 H. P. are supplied without any initial charge, but their cost is recovered in easy instalments with the monthly energy bill. Lines are extended up to pump terminals at Government cost, wherever such extension is economically justified. This scheme has proved very popular, and a large number of agriculturists have taken advantage of it. The total expenditure during the Plan period amounted to Rs. 82.49 lakhs.

Hazaribagh Electric Supply Scheme.

Hazaribagh town was being electrified by a private licensee in 1948-49; but as the progress was very slow and the method of development inadequate for the area, the license was cancelled and the assets of the company were taken over by Government. A transmission line was built from Tilaiya Dam site to Hazaribagh—a distance of about 30 miles—and supply started. The *en route* village of Barhi was electrified. The system now consists of 50 miles of High Tension lines and 37 miles of Low Tension lines giving supply to 2,068 consumers. Extensions have been made to the adjoining areas and several villages have been electrified. Supply has also been given to the pumps at Charwa reservoirs which feed the water works of Hazaribagh town. The expenditure on this scheme amounted to Rs. 21.15 lakhs.

Kodarma and Mica mines Electrification Scheme.

The supply in this area started in 1950, and since then steady development has taken place. In the beginning, power was supplied by the diesel construction power house at Tilaiya. Subsequently, the area was connected to the Tilaiya Hydel Station in February, 1953. Power has been extended to 53 mica mines in the area. There are at present 130 miles of High Tension, 20 miles of Low Tension lines and

about 1,600 service connections in beneficial use under the scheme. The total expenditure on this scheme amounted to Rs. 46.01 lakhs.

Coal mines area Electrification Scheme.

The main transmission lines and power stations of Damodar Valley Corporation are located in the heart of Coal mines area. Accordingly, supply is being availed at 33 KV from Damodar Valley Corporation grid at various places in the area; and an extensive system of transmission and distribution lines has been laid for supplying power to about 129 collieries, and a large number of industries, as well as many towns and villages. 33 KV lines have been extended from Dighwadih to Anara and Purulia, where bulk supply is given to Purulia licensee. Similarly transmission lines have been built up to Mahuda. About 451 miles of High Tension and 106 miles of Low Tension lines have been constructed during the Plan period, serving about 3,190 consumers. The expenditure on the scheme amounted to Rs. 161.36 lakhs.

Taking over of Derelict supply undertakings.

Under this scheme, it was proposed to take over the inefficiently run licensee undertakings in the State, viz., Chapra, Sahebganj, Motihari, which was completed during the Plan period. The towns of Begusarai and Netarhat were also electrified under this scheme. The total expenditure during the Plan period amounted to Rs. 10.53 lakhs.

Giridih Electric Supply Scheme.

The Giridih Electric Supply Co., was taken over by the Government in 1950 and the supply conditions were stabilised by extending supply to the town from the Railway Colliery Power House at Beniadih. The distribution lines were suitably remodelled and additional consumers connected. The number of consumers has gone up from 625 at the time of taking over to 2,029 after the plan period. The total mileages of High Tension and Low Tension lines laid during the First Five-Year Plan are 11 and 32 miles respectively. The total cost incurred on this scheme during the Plan period amounted to Rs. 16.27 lakhs.

Giridih, Madhupur, Jasidih Electric Supply Scheme.

The Deoghar Electric Supply was also in a precarious condition, partly due to litigation among proprietors, and partly due to deteriorated condition of their Power House. The only way of stabilising supply and developing the area was to give bulk power, for which a 33 KV line, 40 miles long, was built from Giridih to Deoghar *via* Madhupur

and Jasidih. The town of Madhupur was electrified in August, 1953, and the supply to Jasidih was switched on a week later, and bulk supply was given to Deoghar in October, 1953. As the licensee at Deoghar was not in a position to distribute the power efficiently and develop the area, the management was taken over by Government. At present, power is availed from Beniadih Railway Power House. Subsequently, it will be changed over to D. V. C. supply. 68 miles of High Tension and 68 miles of Low Tension lines have been erected and supply was extended to 2,859 consumers. The total cost on this scheme amounted to Rs. 33.23 lakhs.

North Bihar Tube-wells and Electrification scheme.

In 1950, Government of India sponsored a scheme of sinking 2,000 tube-wells in Pepsu, Punjab, U. P. and Bihar. The Bihar Government availed of this opportunity to sink 300 tube-wells in North Bihar, for the working of which six diesel power generating stations at Bettiah, Chakia, Samastipur, Mirganj, Hazipur and Sakri have been installed. These were progressively commissioned from 1952 to February 1955. Advantage was taken of this to combine tube-well electrification with town and village electrifications, so that an all-round development could take place in the whole area. 245 tube-wells out of 300 have been already energised by the end of First Five-Year Plan; and all nearby towns and villages have been given electric supply. 808 miles of High Tension lines, 76 miles of Low Tension lines and 422 sub-stations were completed. This has met a long felt want of this area, and will go far in affording facilities for its all-round development. The total expenditure is Rs. 195.85 lakhs on this scheme.

Buxar Tube-well Electrification scheme.

A scheme for providing power in the northern fringe of Shahabad district has also been executed. Prior to the installation of this power house at Buxar, the supply to the local Central Jail for lighting and meeting the power requirements of the Jail Weaving Mill was made by installing portable generating sets. The supply was later connected to the main power house as soon as it was commissioned, and portable sets were removed for use elsewhere. The town of Buxar and a number of tube-wells in this area have been electrified, with a provision of 706 KW diesel generating station at Buxar. The nearby town of Dumraon has also been electrified, and lines have been extended up to Arrah covering a distance of 35 miles. About 157 miles of High Tension lines and 20 miles of Low Tension lines have been laid. Additional 100 tube-wells, under the T. C. M. Programme, have been already supplied power by building 150 miles of High Tension

distribution lines. Many villages, enroute, have been electrified. Eventually this area will be fed by a 33 KV line from Barun where D. V. C. power is expected to be available soon and there will be abundant power available for all likely development. About 83 miles of High Tension lines and 28 miles of Low Tension lines have been constructed, serving 972 consumers during First Five-Year Plan. The total expenditure on this scheme amounted to Rs. 18.72 lakhs.

Adjustment Schemes.

A few schemes, mentioned below, were sanctioned as adjustments to the original Plan in 1954. Since not much time was available for completion of these schemes, a few of them have had to be carried over to the Second Five Year Plan.

Electrification of the towns of Katihar, Purnea and enroute villages.—Under this scheme, it was proposed to instal a Diesel Power House with a capacity of 650 KW at Katihar. The towns of Katihar and Purnea and the villages enroute are to be electrified. Erection of the Power House was started, and is well in progress. A sum of Rs. 7.21 lakhs was spent during the Plan period over the construction of building and purchase of the requisite machinery and equipment.

Electrification of the town of Kishanganj and neighbouring area.—It was proposed to instal a Diesel Station at Kishanganj of the capacity of 300 KW and extend electric supply to surrounding areas. The work is in progress. A sum of Rs. 3.96 lakhs was spent during the Plan period over building and purchase of machinery and equipment.

Electrification of the towns of Saharsa, Madhepura and enroute villages.—A Diesel Power House of 300 KW is to be installed under this scheme. It is expected to be completed soon. A sum of Rs. 4.2 lakhs was spent on this scheme during the Plan period.

Loan to the licensee at Muzaffarpur.—The licensee at Muzaffarpur has been given a loan of Rs. 10 lakhs for the development of the area. Additional generating sets were installed in the Power House to stabilise the condition of supply, and distribution lines were extended in the town to cater to more consumers.

Electrification of Bairgania, the towns of Sitamarhi, Razaul and enroute villages.—A diesel generating station of 900 KW capacity is to be installed at Bairgania and the work is well in progress. A sum of Rs. 14.08 lakhs was utilised during the Plan period over equipments, machinery and building.

Utilisation of D. V. C. power in Dehri, Aurangabad and Bhabua areas.—This scheme is to provide for distribution of power in Shahabad and part of Gaya district. Power is availed at present from Rohtas

Industries at Dalmianagar, but D. V. C. power will be utilised soon when 132 K. V. supply comes to Barun. 11 KV lines from Sasaram to Bhabua, and Dehri to Aurangabad have already been constructed. The total miles of High Tension and Low Tension lines constructed are 64.5 and 17 respectively serving 486 consumers. The total expenditure on this scheme amounted to Rs. 45.24 lakhs.

Utilisation of D. V. C. power in Gaya-Patna Area.—This scheme is to provide power to Patna and part of Gaya District. Power is availed at present from Patna Electric Supply Co. at Patna and D. V. C. sources at Gaya. In future power will be availed from D. V. C. 132 Grid sub-stations at Gaya and Patna, which are expected to be set up soon. 33 K. V. lines from Barh to Mokameh, Nawadah to Kiul and Nawadah to Gaya have already been constructed. Many villages enroute have been electrified including Nawadah, Rajgir, Wazirganj, etc., 278 and 121 miles of High Tension and Low Tension lines respectively have been constructed serving 4,100 consumers. The total expenditure on this scheme during the Plan period amounted to Rs. 76.23 lakhs.

Coalmines Area Electrification.—33 KV lines from D. V. C. Grid Sub-station at Ramgarh to Khelari is nearing completion. A sum of Rs. 17.67 lakhs was spent on this scheme. This would help in further development of this area.

Electrification of Sini, Chakradharpur and Rural Areas of Singhbhum District.—This scheme provides for extending double circuit 33 KV Transmission lines from D. V. C. sub-station at Jamshedpur up to Gua and supply of power to the mines and towns enroute. Single Circuit line (33 K. V.) up to Gua is almost complete. 11 K. V. line from Chaibassa to Chakradharpur is also completed. Other towns like Sini, Kandra, Saraikela, etc., are also to be electrified. 103 miles of High Tension and 10 miles of Low Tension lines have already been constructed. The total expenditure on this scheme amounted to Rs. 50.57 lakhs.

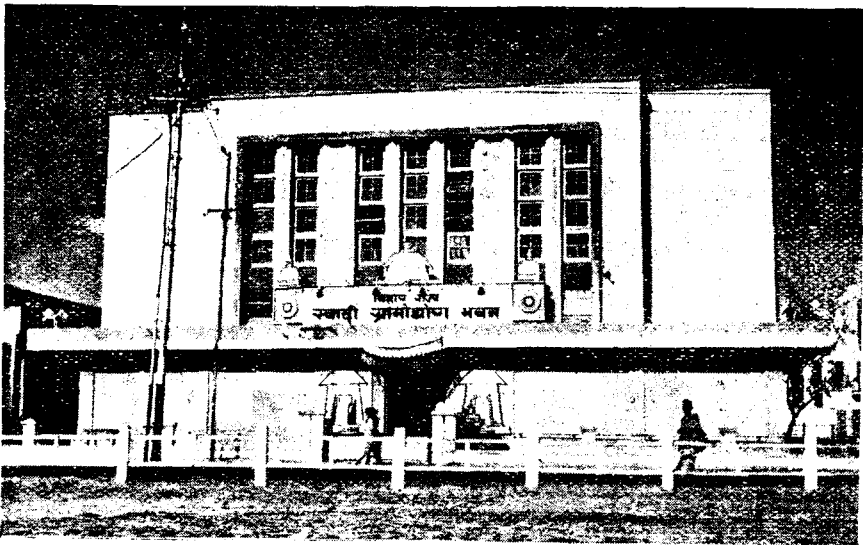
Electrification of Dumka Town and enroute villages.—Under this scheme Dumka town is already electrified taking power from Masanjore Dam construction Power House. It will be finally connected to the Hydrel Station at Masanjore Dam when it comes up. 20 miles of High Tension lines have already been constructed. A sum of Rs. 6.65 lakhs was spent during the Plan period.

Extension of power from Maithon to Bhagalpur etc.—Under this scheme 132 KV line will be extended from Maithon to Jamalpur, Bhagalpur, Monghyr. etc. The construction of 132 KV line will be taken up in the Second Plan period.

CHAPTER XI.

INDUSTRIES.

Bihar's industrial backwardness is that of poverty amidst plenty. The State contains the richest and the largest mineral tracts in the country and other important raw materials, besides having considerable potentiality of electrical power and large man power resources. Despite all this, the State remains primarily an agricultural State, with only 3.9 per cent of the population deriving its principal livelihood from industries. Bihar produces 43.3 per cent of minerals by weight and 30.6 per cent by value raised in the whole of India. Even then, the pace of industrial development has not considerably improved in the years following the war, inspite of the boom created in the manufacturing industries. The fixed capital, invested in mines and factories, rose only up by Rs. 7.1 crores during 1946-50, and although approximately, Rs. 21.3 crores were invested in working capital in Bihar's industries in the same period, the number of persons employed in registered factories rose only from 93,500 to 1,11,000 approximately. Again between 1950-52, the total productive capital was further increased by Rs. 25.9 crores, but the number of persons employed remained at 1,10,991 only.

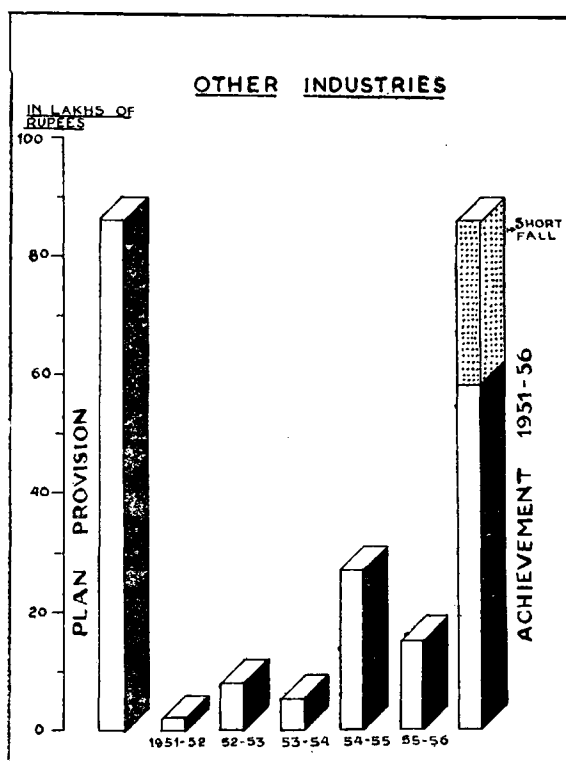


Bihar Rajya Khadi Gramudyog Bhawan, Patna.

With the resources available for the State Plan, it was not possible to undertake any large scale industrial development in the State. During the First Five-Year Plan period, except for the Sindri Fertiliser

Factory, no large scale industry was established in the State. In the field of small scale and cottage industries, only pilot schemes were attempted, which were mainly schemes of assistance to the handloom industries.

The industrial schemes for the State Plan were divided under two sectors, namely (i) Cottage Industries and (ii) Other Industries. For Cottage Industries, there were originally 15 schemes included in the Plan. Subsequently 6 more schemes were included for development under this head. Of these schemes, one scheme originally included in the Plan, namely, purchase of Japanese Machinery and the other scheme relating to Spun Silk Mill, included later by way of adjustment,



were not implemented. The scheme for purchase of Japanese Machinery was drawn up with a view to experimenting upon and demonstrating the use of small Japanese machines for decentralised production. The experiments on use of Japanese machinery were made in some centres of the country, and the results of the experiments were not very encouraging. It was, therefore, decided not to proceed with the bulk purchase of Japanese machines by Government. The scheme relating to Spun Silk Mill could not be taken up within the Plan period because

the approval of the Central Government for proceeding with the scheme could not be obtained. It was, subsequently, decided that before this scheme could be taken up, further investigations were necessary.

The overall Plan provision for schemes under Cottage Industries amounted to Rs. 50.03 lakhs. The actual expenditure was Rs. 45.35 lakhs, which represented nearly 91 per cent of the financial target. One of the greatest handicaps, which has obstructed development in this sector, was lack of technicians with sufficient experience for executing industrial schemes. It may be noted that, during the Plan period, there were certain centrally sponsored schemes for handloom development financed from the Cess Fund of the Government of India. These included schemes for the setting up of Dyeing and Finishing Plant and 4 Dye houses, supply of fly-shuttle looms, jacquards, take-up motion attachments, varnished healds, semi-automatic looms, etc., rebate on sale of handloom cloth, funds for share capital and working capital of Weavers' Co-operative Societies, etc. The State Government incurred expenditure of Rs. 65.31 lakhs on these handloom development schemes, and disbursed a loan of Rs. 13 lakhs under the State Aid to Industries Act for meeting the credit requirements of small scale and cottage industries. These amounts were in addition to the State Plan.

In the Cottage Industries Sector, the schemes aimed at (1) Strengthening the headquarters Staff for investigating and formulating schemes of small scale and cottage industries (2) providing facilities for training of artisans and craftsmen (3) making arrangements for supply of seeds for development of sericulture (4) providing facilities for the marketing of handloom cloth, and (5) establishment of pilot production centres for development of selected small scale and cottage industries. Of these, facilities for marketing of cloth were provided mainly through co-operative organisations of weavers. The details in respect of these co-operatives and their marketing organisation have already been mentioned in the Chapter on Co-operation.

A brief review of the progress made under the various schemes is given below :—

Staff.

Before the Plan period, there was hardly any staff for the development of small scale and cottage industries. During the Plan period, one post of Additional Director of Industries, two posts of Deputy Directors of Industries for Administration, and Extension, and three posts of Assistant Directors with technical qualifications were created.

Training.

The schemes included in the Plan for training related to the establishment of tuitional classes, reorganisation of the Cottage Industries Institute and itinerant schools for women and girls.

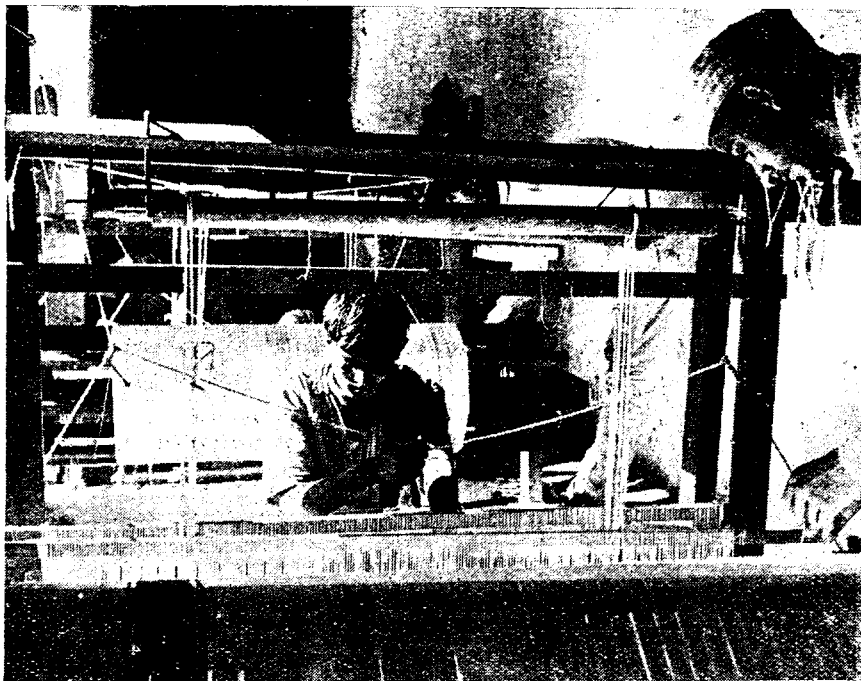
Tuitional Classes.—Tuitional classes were opened in various rural arts, crafts and industries in order to enable skilled artisans and their wards to learn improved methods and technique of production. These



Dyeing and Block printing in Ormanjhi.

classes covered a wide range of crafts and industries, such as cotton-weaving, wool and silk weaving, dyeing and printing, tailoring and cutting, stone craft, blacksmithy and tinsmithy, electroplating, etc. The original provision for this scheme was Rs. 17.41 lakhs, which was revised to Rs. 10.69 lakhs. The provision had to be reduced because some of the classes could not be started in time for want of trained instructors. Originally, 35 classes were started, and 14 more classes were sanctioned in the last year of the Plan; but all of them could not start functioning for want of trained instructors. Additional 72 classes were, however, set up in the Community Project areas for training of craftsmen during the Plan period, for which provision was available outside the State Plan. The physical target was to produce 2,956

trainees. Actually, however, 736 artisans could only be trained through these classes. The original estimate was based on the assumption that craftsmen could be trained within six months. But, it was found that in most of the cases, the training period had to be extended to one year. The delay in starting some of the tuitional classes on account of difficulties in getting trained instructors also accounted for the shortfall of the physical target. Many of the tuitional classes were started in the later three years of the Plan period.



Carpet weaving in an Industrial Training Centre.

Cottage Industries Institute.—It was proposed to expand the existing Cottage Industries Institute, Gulzarbagh, with a view to providing greater scope for training in crafts and industries. The Cottage Industries Institute, Gulzarbagh, is an old institution, imparting training upto diploma and certificate standards in textile manufacture, textile chemical technology, leather manufacture, ceramics, toy-making, leather work, electroplating, bamboo industry, soap and disinfectant making. As against a provision of Rs. 14.53 lakhs, the actual expenditure during the Plan period was Rs. 11.93 lakhs. The shortfall was due to the fact that the expansion of the Institute, which was dependant on the availability of land for construction of buildings, could not be fully effected because of the delay in acquisition of land. It was in the fourth

year of the Plan that the land could be secured, and the construction of the buildings was taken up in the last year of the Plan period. In the absence of buildings, equipments provided for the re-organisation scheme were not procured, and it was also not possible to admit larger number of trainees. The scheme is, however, being continued in the Second Five-Year Plan. During the Plan period, 214 persons only could be trained as against the physical target of 1,305.

Itinerant schools for women and girls.—Two itinerant schools for women and girls were also run during the period, with the headquarters at Bhagalpur and Monghyr. The total expenditure on this scheme was Rs. 0.50 lakh as against the Plan provision of Rs. 0.51 lakh. 134 students were trained as against the target of 470. The shortfall in the physical target was due to the poor response of the women in the rural areas, for whom the training was specially intended.



Industrial Training Centre, Pusa.

Research.

A Handloom Research and Design Centre was set up with the object of providing improved designs and technique to handloom weavers. It also provided training to supervisors and skilled artisans in advanced designing, jacquard weaving and fitting up of take-up motion attachments. As many as 100 designs of printed and woven fabrics were evolved and distributed through various institutions

for extension among weavers. Out of a total provision of Rs. 0.50 lakh, the expenditure incurred on this scheme was Rs. 0.41 lakh. The small shortfall in the expenditure was due to the scheme having been included towards the end of the Plan period.

A scheme for the establishment of a Small Industries Research Institute at Sindri was sanctioned during 1955-56, but its execution was subsequently deferred on account of the decision of the Government of India to set up at Patna a branch unit of the Regional Small Industries Service Institute, Calcutta.

Sericulture.

A scheme for the re-organisation of Government Silk Institute, Bhagalpur, with a provision of Rs. 6.01 lakhs was taken up to provide for expansion of the Institute with additional staff, increase in the number of trainees, purchase of new equipments, etc. The total expenditure on this scheme was Rs. 4.14 lakhs. The shortfall in the expenditure was on account of the delay in the construction of buildings. The total number of students, who passed out from the Institute, was 84 as against the target of 120.

Eri-rearing demonstration parties were set up for demonstration of improved methods of rearing worms and for distributing disease free layings. 73,734 disease free seeds were distributed against the target of 1,52,000.

The Eri Silk Farms at Ranchi and Begusarai were also developed at a total cost of Rs. 0.70 lakh.

For the development of Tassar Silk, the three Tassar Seed Supply Stations at Bhagalpur, Chaibasa and Amrapara (Santhal Parganas) were reorganised on modern lines. They distributed disease free layings among the rearers and demonstrated improved method of weaving among silk-weavers. Three sub-stations were also run at Boarjore, Kharsawan and Begusarai. A total sum of Rs. 2.02 lakhs was spent, as against the Plan provision of Rs. 2.35 lakhs. 1,11,413 disease free seeds were distributed, as against the target of 1,11,000.

The Mulberry Demonstration Farm at Roshana continued to supply disease free layings all over the State. 14,449 disease free eggs were supplied against the Plan provision of 50,000. The shortfall in the physical target was due to the fact that jute cultivation in some parts proved more profitable than mulberry cultivation.

Village Industries.

The development of village industries on an organised basis was taken up in different parts of the country only after the setting up of the All-India Khadi and Village Industries Board. The Board was formed two years after the commencement of the First Five-Year Plan. Assistance to registered institutions, Co-operative Societies and others were provided directly by this Board. Only the scheme for Palmgur making, which subsequently came within the purview of the All-India Khadi and Village Industries Board, was taken up through the State Government in 1949. In the First Five-Year Plan, a provision of Rs. 3.28 lakhs was made for this scheme. The expenditure during the Plan period amounted to Rs. 2.55 lakhs. 25 Production Centres and one Training Institute were run under this scheme. A Palmgur Producers Co-operative Societies' Union was also formed. 798 persons were trained in Palmgur making as against the target of 1,000. 14 Co-operative Societies of Palmgur makers were also formed with a total membership of 280.

During 1955-56, the following other schemes of village industries were taken up with the financial assistance from Government of India :—

			Total expenditure during 1955-56.
			Rs.
1.	Gur and Khandsari	... ..	22,583
2.	Bee-keeping	... ..	12,777
3.	Soap-making from non-edible oil	... ..	33,300
4.	Village Leather Industry	... ..	36,000
5.	Village Pottery	... ..	5,120
Total			1,09,780

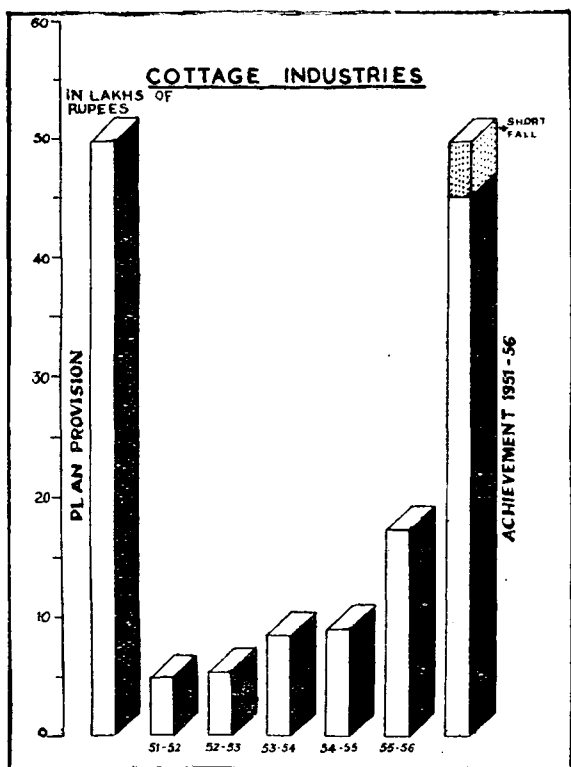
Small Scale Industries.

Under this head, two schemes, relating to Pottery Development and Toy Development Centres at Ranchi were included towards the end of the Plan period by way of adjustment. These Centres were intended as pilot projects for development of pottery and toy making at Ranchi, where local talent was available. Since the schemes were started rather late, only a beginning could be made on these lines. These schemes have been carried forward to the Second Five-Year Plan.

Other Industries.

The following four schemes were originally included under the head "Other Industries" in the First Five-Year Plan :—

Schemes.	Plan provision (in lakh rupees.)
1. Extra staff for the department of Industries	3.68
2. Establishment of Bihar Provincial Industrial Research Laboratory.	8.04
3. Superphosphate Factory ...	54.55
4. Stemmed Bonemeal Manufacture ...	4.71



Of these schemes, the scheme of Stemmed Bonemeal Manufacture was dropped, because, after further investigation, it was found that its manufacture in Bihar would be uneconomical. In 1954-55, a scheme of State Financial Corporation was included in the Plan in order to meet the credit requirements of medium and

small scale industries in this State. The original provision of Rs. 60 lakhs under this sector was subsequently revised to Rs. 86.27 lakhs due to the inclusion of a provision of Rs. 20 lakhs for the State Financial Corporation and increased provision for the superphosphate factory. The earlier estimate for the superphosphate factory had to be revised because of increased expenditure on land, buildings and water supply arrangements.

Staff.

Before the Plan period, there was practically no staff attached to the Industries Department for investigation of projects of industries in the State. The staff for advisory services of industries included only one gazetted officer. A beginning was made during the Plan period and an Assistant Director of Industries for investigation and an Assistant Director of Industries for advisory services were added to the headquarters staff. A post of Intelligence Officer, for collection of statistics relating to industries, was created. An Industrial Economist was also appointed during 1955-56. There was no field staff of the Industries Department before the Plan period. In this direction also a beginning was made by creation of 18 posts of Inspector of Industries—one for each district during the Plan period.

Bihar Provincial Industrial Research Laboratory.

This Laboratory, which was functioning from 1947, was intended to be expanded with a view to meeting the research requirements of industrial development. Unfortunately, however, the Research Laboratory did not function on the lines envisaged in the original scheme, and it was considered advisable that it should be reorganised on different lines. Construction of the buildings for the Laboratory was held up pending reorganisation of this scheme. A sum of Rs. 3.15 lakhs could only be spent against the Plan provision of Rs. 8.04 lakhs.

Superphosphate Factory.

The original provision made for this scheme was Rs. 41.09 lakhs. This provision was revised to Rs. 54.55 lakhs during the Plan period, as the detailed estimates showed that the original estimates for acquisition of land, construction of buildings, water supply arrangement and construction of railway site and yard had been under-estimated. The factory was expected to go into production towards the end of 1953. Arrangements were made for supply of plant and equipment of the factory by a French Firm through India Stores Department of the High

Commissioner of India in the U. K. Due, however, to certain unforeseen difficulties, the machinery required for the Plant could only be received by the end of the Plan period. Even then the detailed working drawings for the erection of the part of the factory and of the ancillary equipment had not been received. These were received in August, 1956. It is expected that the factory would go into production by the end of 1957.

State Financial Corporation.

No scheme had been included in the original Plan for development of medium and small scale industries in the private sector. One of the handicaps, which private enterprise suffered from, was lack of adequate financial assistance. The Central Government enacted the State Financial Corporation Act, 1951, for enabling the State Governments to set up a Financial Corporation with a view to meeting the credit requirements of medium and small scale industries. The Bihar State Financial Corporation was set up towards the end of 1954-55, with an authorised capital of Rs. 2 crores, and a paid up capital of Rs. 50 lakhs, of which Rs. 20 lakhs were subscribed by the State Government. The Corporation began to function effectively from the middle of 1955-56, and, by the end of the Plan period, it had sanctioned loans of Rs. 10.55 lakhs for credit requirements of small scale and medium industries in the State.

HOUSING & ROADS



= 100 houses
(INDUSTRIAL HOUSING)



= 500 miles
(IMPROVED ROADS)

POSITION PRE-PLAN

PROGRESS IN PLAN PERIOD

NIL

1511



1952 MILES

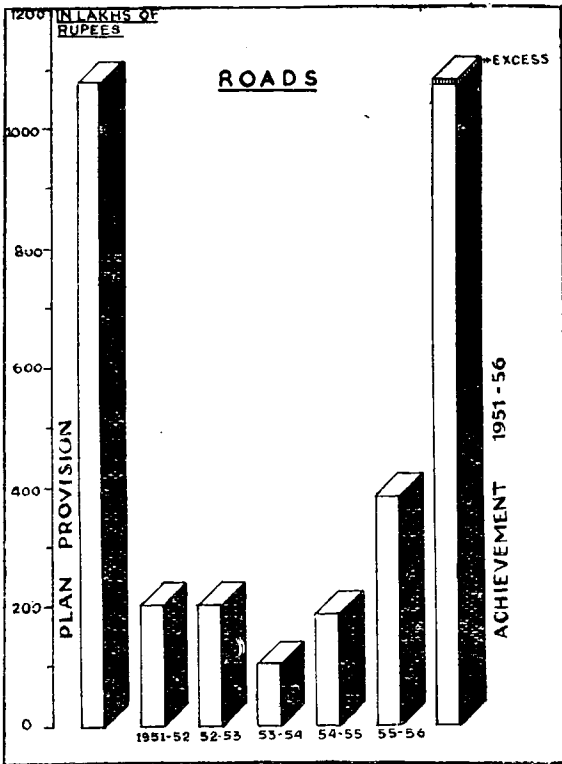


4220 MILES

CHAPTER XII.

ROADS.

Economic progress of a country is very much dependant on an efficient transport system and roads are an essential pre-requisite of improved transport. As in other aspects of economic development, Bihar is very much deficient in roads also. As early as in 1943, the Nagpur Formula had laid down a particular goal for road programme in our country, according to which it was stipulated that no village in a developed agricultural area should remain more than 5 miles from the main roads. According to that formula, and based on the 1951 census, we should have had to metal and black top 13,160 miles of road by 1954, out of which 4,606 miles were required to be improved by March, 1951. Actually in 1951, there were 1,952 miles of improved roads in the State which included the State roads as well as the national highways. By 1956, there would be 4,220 miles of improved roads in the State. Even with the improvement effected in the First Plan, the length of metalled roads in Bihar would be 10.5 miles per lakh of population, against an average of 27 miles even in 1950 for all Part A



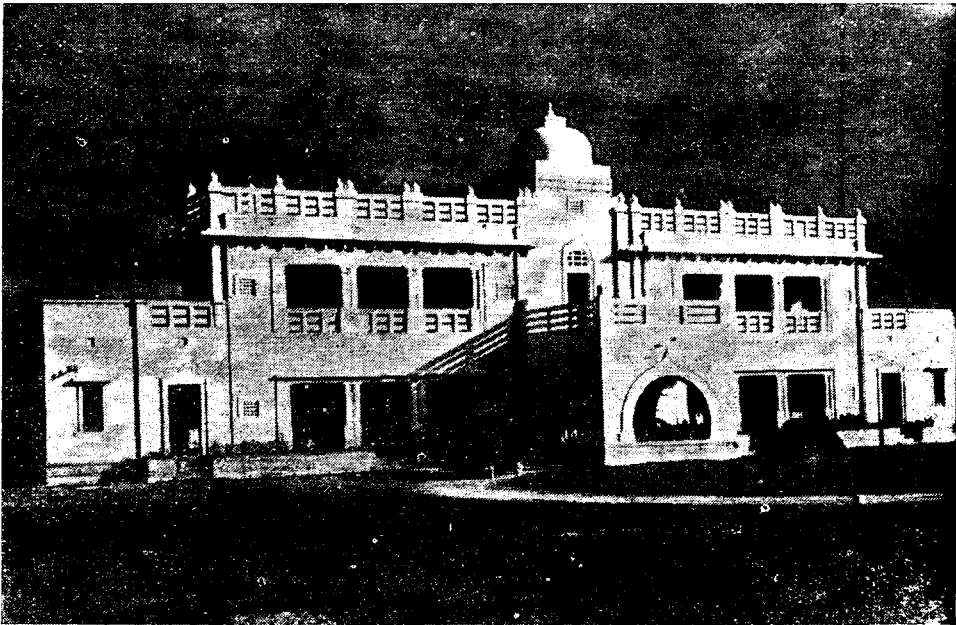
States of India. In North Bihar, particularly, the mileage per lakh of the population at the end of the First Five-Year Plan is estimated to be 5.4 miles. This shows the relative backwardness of Bihar in roads, which are so vital to the economic development of the area.

Originally a provision of Rs. 8 crores was available for improvement of 1,842 miles of roads. The Plan provision was subsequently raised to Rs. 10.75 crores. The road programme in Bihar consisted of the following two schemes :—

Schemes.	Provision (in lakh rupees.)
(1) Road Development Schemes ...	1,000
(2) Improvement of communication in Sugar factory areas	75
Total ...	1,075

Road Development Schemes.

The original provision under this head was Rs. 7.25 crores, which was subsequently raised to Rs. 10 crores. This increased provision

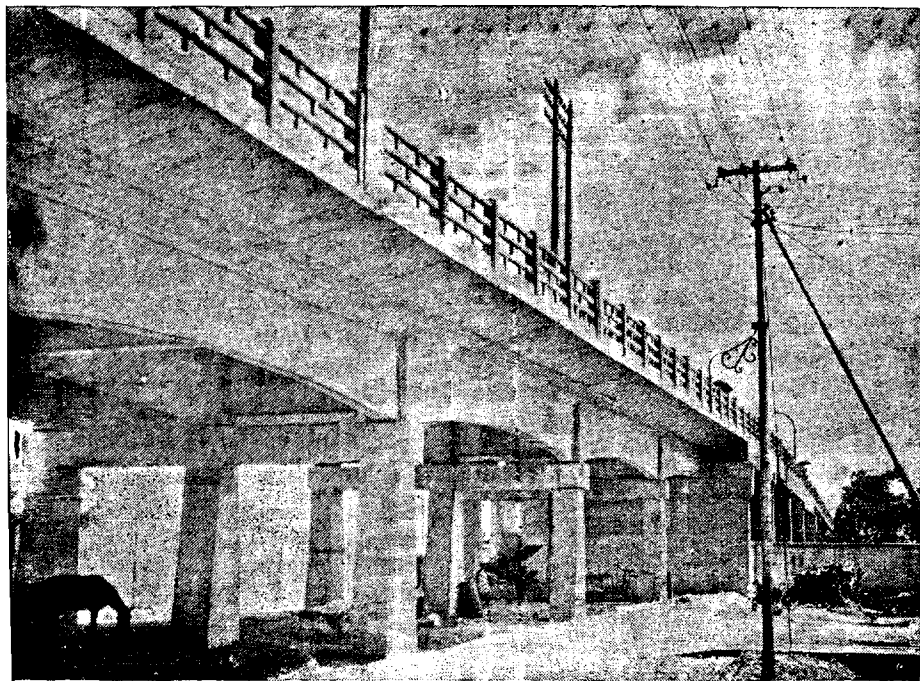


Circuit House, Rajgir.

could be available because the progress on road development schemes in the State in 1954 was considered by the Planning Commission to be well ahead of schedule. With this increased provision, it was possible to take up additional 43 roads for improvement, covering 713.5 miles, at an estimated cost of Rs. 5.66 crores, limiting the expenditure to Rs. 2.75 crores during the Plan period. Later on, further roads were taken up, and the total length of the roads included under adjusted Plan provision, approved by the Planning Commission, was 1,098 miles at a cost of Rs. 8.31 crores. Thus, including the original target of 1,842 miles, 2,940 miles of roads were under improvement in the First Five-Year Plan. Since the ceiling of expenditure during the Plan period was fixed at Rs. 10 crores, the physical target to be achieved was fixed at 2,236 miles. Against the above target, the total expenditure during the Plan period was Rs. 10.237 crores and the physical target achieved was 2,256 miles.

Improvement of Communication in Sugar Factory Areas.

The original Plan provided for the development of 300 miles of roads at an expenditure of Rs. 75 lakhs around Sugar factory areas, in order to facilitate the movement of cane from the fields to the factories. The work was to be taken up by the District Boards, but in 1954, due



Chiraya Tanr Overbridge, Patna.

to slow progress it was decided that the Public Works Department would take up the work. The roads were to be provided with cement concrete pavement, and it was found that the physical target was far in excess of what could be done within the Plan ceiling. The detailed estimates showed that only 63 miles of roads could be completed with a provision of Rs. 75 lakhs. However, 76 miles of roads, costing roughly Rs. 90 lakhs, were taken up under this scheme, and work started late in 1954. The total amount of provision could not be spent on this scheme, firstly, because the work started late in 1954, and secondly, because of the inherent difficulty in the construction of cement concrete roads, specially in North Bihar. It was, therefore, decided that Rs. 25 lakhs be placed at the disposal of the Local Self-Government Department, and further saving on this scheme be utilised on the general schemes of road development. A few roads of the Second Five-Year Plan were also taken over in March, 1956, but only a very small amount could be spent on these roads before 31st March, 1956.

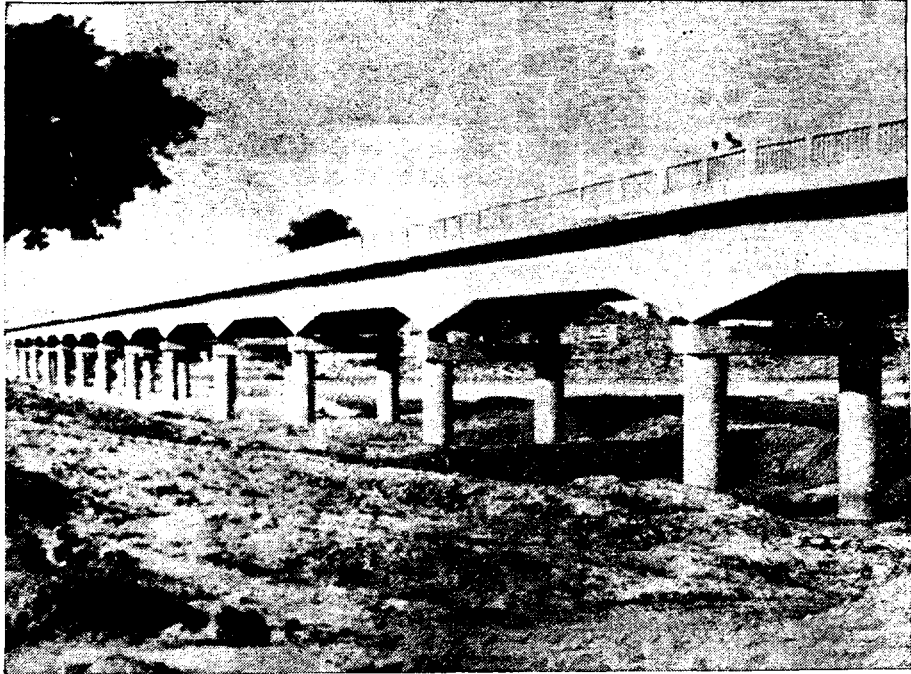
At the end of the First Plan period, a sum of Rs. 29.30 lakhs was spent on this scheme, and 12 miles of roads were metalled or cement concreted. The remaining work is proposed to be completed in the Second Plan period.

Overall Achievement.

At the beginning of the First Five-Year Plan, there were approximately 1,900 miles of roads in charge of the Public Works Department, which included only 1,500 miles of improved roads. At the end of the Plan period, 4,700 miles of roads were under Public Works Department, out of which 3,860 miles have already been metalled. The increase in mileage of improved roads is, therefore, about 150 per cent during the First Plan period.

The road development programme of Bihar during these five years was one of the biggest programmes in India. A sum of Rs. 50.59 crores was provided for development of roads in Part A States during the Plan period, with a physical target of about 6,000 miles of roads to be improved. Our expenditure being Rs. 10.78 crores and physical progress 2,268 miles of improved roads, our contribution in expenditure works out to approximately 21 per cent and physical progress nearly 30 per cent of All-India achievement of Part A States. A statement showing the list of roads, along with their total mileage, taken up for

improvement, in the different districts of Bihar is given at the end of this Chapter. Though the total mileage adds up to 2,986, credit has been taken for only 2,268 miles of roads which actually were improved



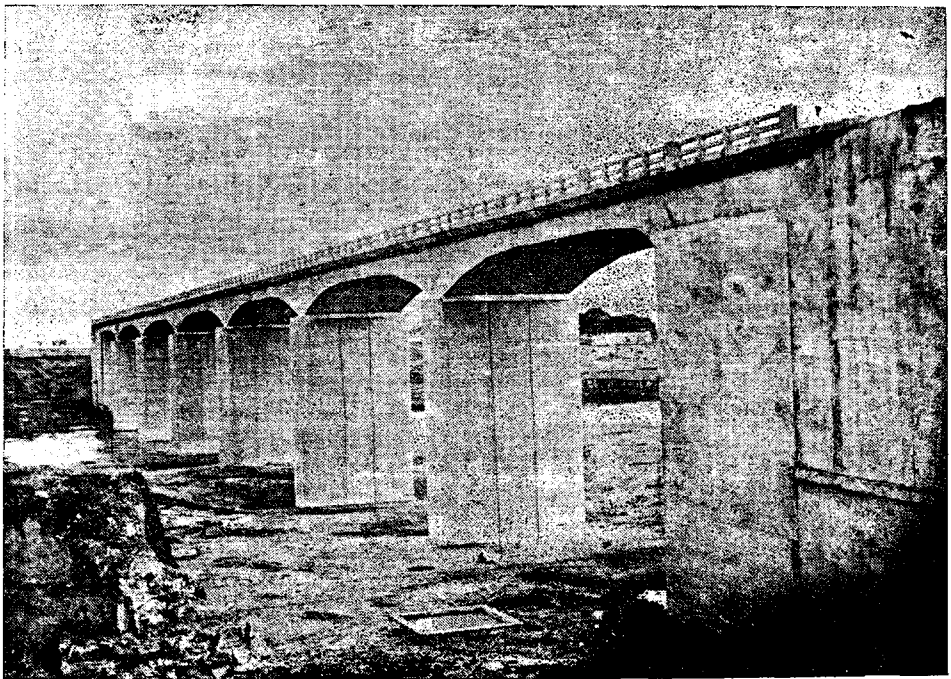
Kiul Bridge, Jamui.

during the Plan period. The table below gives the particulars of work done :—

Schemes.	Physical targets in miles of improved roads.			Actual achievement in miles of improved roads.		
	Metalled.	Unmetalled	Total.	Metalled	Unmetalled	Total.
1. Road Development schemes.	1,960	276	2,236	2,083	173	2,256
2. Improvement of communication to Sugar Factory areas.	21	..	21	12	..	12
			2,257			2,268

Bridges.—The physical targets achieved in road programme during the Plan period include construction of several costly bridges. The particulars of some of the important bridges constructed during the period are given below :—

Name of the bridges.	Location.	Total cost (Rs. in lakhs.)
1. Puppun Bridge	.. Grand Trunk Road at 331 mile.	9.67
2. Barakar Bridge	. Grand Trunk Road at 215 mile.	29.92
3. Bakhra Bridge	.. Patna-Ranchi Road ..	6.36
4. Kichaniya Bridge	.. Patna-Ranchi Road ..	8.54
5. Sanjay Bridge	.. Singhbhum District ..	2.36
6. Khalkhalia Nala Bridge	.. Bhagalpur-Dumka Road .	2.98
7. Juthmulpur Bridge	.. Darbhanga-Samastipur Road	4.15
8. Chiraya Tanr Over Bridge	Patna	9.82
9. Andar Bridge	.. Siwan-Andar Road ..	1.4
10. Akharaghat Bridge	.. Muzaffarpur-Sitamari Road.	11.89
11. Kiul Bridge	.. Jamui	15.8
12. Anjan Bridge	.. Sikandra-Jamui-Ghorghat Road.	1.53
13. Gumani Bridge	.. Barharwa-Barabait Road ..	2.0
14. Nagpheni Causeway	.. Bero-Gumla-Road ..	2.76



Barakar Bridge, Grand Trunk Road.

Personnel.—In view of the large expansion included in the State Plan, the technical personnel of the Public Works Department had to be strengthened. The requirement of technical personnel depends upon the work load. A Public Works Division is expected to handle (Maximum) original works amounting to Rs. 40 lakhs or Rs. 13.3 lakhs of repair works in a year. The expansion of the cadre could not keep pace with increase in works and expenditure mostly due to non-availability of requisite personnel. In 1951, there were only 4 Superintending Engineers, 16 Executive Engineers in charge of Public Works Divisions, 64 Assistant Engineers and 187 overseers. With the expansion of the programme of Road Development under adjustments to the First Five-Year Plan, more number of Divisions and other officers were required, and therefore, in 1954, the cadre was expanded. Now there are 30 sanctioned Public Works Divisions (19 permanent and 11 temporary), 131 posts of Assistant Engineers and 423 posts of Overseers. All these posts have not been filled up till now due to dearth of technical personnel. However, action is being taken to fill them up as quickly as possible.

STATEMENT SHOWING PARTICULARS OF ROADS TAKEN UP FOR IMPROVEMENT IN THE FIRST FIVE-YEAR PLAN.

Serial no.	Name of Road.	Mileage.
PATNA DISTRICT.		
1.	Dinapur-Maner	11.2
2.	Bihar-Ekanger Sarai	23.2
3.	Mokameh-Barhaiya	10.0
4.	Bihar-Rajgir including Nalanda Link ...	15.83
5.	Kutchra road running along outfall channel (Serpentine) from Bailey Road to Boring Road and thence to Bankipur-Dinapur road in Rajpur village	1.29
6.	Provision of a 4" cement concrete pavement over the existing metalled road in the heavily congested area viz. 8th and 9th miles of Patna-Bukhtiarpur road in Patna City ...	2.0
7.	Interim Bypass between Patna Junction and Patna City Railway Station, Viz. :—	
	(1) Kankarbagh road from Chiraiatanr road crossing to Agamkuan.	} 6.75
	(2) Sadikpur road joining Kankarbagh road on the west and main road near Marufganj on the east.	
	(3) Ajatshatru path road from Patna City Railway Station to Marufganj.	
8.	Six Municipal roads in Patna Town, viz. :—	
	(1) Station road and the road leading from Patna Junction Railway Station to lower road <i>via</i> Kadamkuan.	} 3.3
	(2) Exhibition road	
	(3) Dakbungalow road (connecting Patna-Gaya road and Station road) including Bhattacharya road.	
	(4) Small link connecting Frazer road with Dakbungalow road.	
	(5) Jamal Road	
	(6) Mithapur road (between Khagaul road no. 3 and Railway crossing to the west of Patna Junction).	

Serial no.	Name of Road.	Mileage.
9.	Municipal road connecting the Bihar-Ekangarsarai-Jehanabad road on the west near the Biharshariff Railway Station and Bihar-Barbigha road on the east	0.75
10.	Lane to the north of Chajjubagh at Patna ...	0.33
11.	Construction of road over bridge and its approaches to the east of the Patna Junction Railway Station at level crossing no. 78 ...	...
12.	Municipal lane leading to Gandhighat at Patna	0.14
13.	Mainbazar road in Biharshariff town joining the Bihar-Barbigha road at one end and Bihar Municipal road at the other end ...	0.71
14.	Hisua-Nardigang-Banganga-Rajgir (Patna District Portion)	4
15.	Bikram-Paliganj-Arwal upto Patna District Border	18
16.	First three miles of Sadikpur-Fatehpur road	3.0
17.	Construction of a low level road on Western side of the over bridge to the east of Patna Junction	0.22
18.	Road between Chiraiyatanr over bridge and the Patna-Gaya Railway line crossing (link to <i>ad interim</i> Patna Bye-pass) ...	0.57
19.	Approach road to Bikram Basic Training School, Patna	0.30
20.	Widening of the road from Mokameh to Hathidah	5.75
21.	Widening of road crust of Bihar-Rajgir road	...
22.	Widening of road crust of Nalanda Link road from 9' to 12' including construction of Bye-pass	0.84
23.	Providing Bye-passes at Deepnagar and Panditpur on Bihar-Rajgir road and widening of this road in village Belwa ...	1.81
24.	Construction of an access road for Phulwari Camp Jail	0.94

Serial no.	Name of Road.	Mileage.
25.	Construction of a R.C.C. fort bridge over river Saraswati at Rajgir Kund ...	...
26.	Widening of the Kankarbagh road ...	...
27.	Stabilising the flanks of Khagaul-Dinapur road	3.62
Grand total ...		114.55

GAYA DISTRICT.

1.	Jehanabad-Ekangar Sarai ...	11.0
2.	Gaya-Nawadah ...	35.0
3.	Dobhi-Gaya ...	20.0
4.	Nawadah-Pakribarawan ...	20.0
5.	Hariharganj-Aurangabad ..	16.5
6.	Gaya-Jehanabad ...	28.0
7.	Dobhi-Chatra ...	6.0
8.	Road connecting Bodh Gaya with Gaya-Dobhi road ...	2.0
9.	Hisua-Nardiganj-Banganga-Rajgir (Gaya District Portion) ...	11.1
10.	Arwal-Jehanabad ...	22.0
11.	Daudnagar-Aurangabad ...	18.0
12.	Pali-Arwal-Daudnagar (up to Gaya District Border) ...	26.0
13.	Road from Barun (336th mile of G. T. Road) to Nabinagar R. S. ...	17.0
Grand total ...		232.6

SHAHABAD DISTRICT.

1.	Mohania-Ramgarh ...	9.3
2.	Dehri-Nasriganj ...	16.0
3.	Dehri Station approach road ...	0.95
4.	Road between Ramrekhaghat at Buxar and Arrah-Chausa road ...	0.33

Serial no.	Name of Road.	Mileage.
5.	Arrah-Byepass road along the Arrah canal connecting the Patna-Arrah road and Arrah-Sasaram road	2.12
6.	Behea-Piro	20.0
7.	Mohania-Bhabua	8.89
8.	Bhabhua-Chainpur	15.50
9.	Arrah-Salempur	10.00
Grand total		83.09

SARAN DISTRICT.

1.	Siwan-Mairwa	12.8
2.	Chapra-Marhawra	16.8
3.	Mairwa-Darauli	11.0
4.	Siwan-Ander	7.0
5.	Chapra-Rewaghat	24.0
6.	Chapra-Siwan-Gopalganj	60.0
7.	Siwan-Chainwa	9.0
8.	Bhantapokhar-Zeeradi	2.26
9.	Ander-Raghunathpur	7.00
10.	Siwan-Siswan	21.00
11.	Road connecting Banwari-Chak (Palezaghat) with Chapra-Sonepur Road	1.71
12.	Construction of a Pontoon bridge over the river Gandak connecting Sonepur with Hajipur	...
Grand total		172.57

CHAMPARAN DISTRICT.

1.	Sugauli-Bettiah	18.0
2.	Motihari-Turkulia-Govindganj	22.0
3.	Bettiah-Bagaha	39.0
4.	Lauriya-Ramnagar	13.0
5.	Motihari-Madhubanighat	9.0
Grand total		101.0

Serial no.	Name of Road.	Mileage.
MUZAFFARPUR DISTRICT.		
1.	Jhapaha-Minapur	8.0
2.	Hajipur-Muzaffarpur	34.34
3.	Muzaffarpur-Sitamarhi	34.46
4.	Muzaffarpur-Rewaghat	21.00
5.	Mahnar-Mahnar Bazar	4.0
6.	Certain roads in Muzaffarpur town	6.0
7.	Hajipur-Bhairampur-Mahnar	19.0
8.	Hajipur-Lalganj-Vaishali-Rewaghat (Bakhra road)	24.0
Grand total		150.80

DARBHANGA DISTRICT.

1.	Sakri-Bahera	10.0
2.	Samastipur-Darbhanga	28.0
3.	Darbhanga-Rohika-Jainagar	34.80
4.	Portion of Darbhanga-Pandasarai road from its Junction with Samastipur-Laheriasarai road to Government building in the South	0.51
5.	Dholi-Kalyanpur	12.0
6.	Rohika-Benipatti-Pupri	22.0
7.	Further improvement to Sakri-Bahera road	...
8.	Rosera Sagi	2.0
Grand total		109.31

Serial no.	Name of Road.	Mileage.
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SAHARSA DISTRICT.

1.	Bihpur-Kishanganj-Madhipura-Gauripur-Pipra-Birpur	87
2.	Madhipura-Murliganj	14.2
3.	Approach road to the Government buildings in the New Colony at Saharsa	6.4
4.	Supaul-Pipra road	13.0
5.	Metalling of Bihpur-Birpur road (41st mile to 44th mile) from Madhepura to Singheswar Asthan	...
Grand total		120.60

MONGHYR DISTRICT.

1.	Manjhaul-Sagi	16.00
2.	Begusarai-Manjhaul with a bridge over Burhi Gandak river	10.00
3.	Tarapur-Kharagpur	7.50
4.	Tarapur-Belhar	13.00
5.	Bihar-Barbigha-Sheikhpura-Sikandra	30.50
6.	Pakri-Barwan-Sikandra	14.00
7.	Sikandra-Jamui-Karagpur-Bariarpur-Ghorghat-Bhagalpur border	58.00
8.	Monghyr-Bariarpur	10.50
9.	Barhaiya-Lakhisarai Surajgarha-Monghyr	40.50
10.	Pachbir-Sahebpur Kamal Junction	2.00
11.	Sarwan-Chakai up to S. P. border (portion of Temporary N.H.)	21.00
12.	Maheshkhunt-Gogri-Parbatta-Sultanganj Ghat	21
13.	Khagaria-Parihora-Bhakhri	21
14.	Maheshkhunt to Sonbarsa Raj <i>via</i> Pipra-Karua-Kaithi-Sonbarsa-Pansalwa-Bhelabad-Purnagar and Mali	25

Serial no.	Name of Road.	Mileage.
15.	Karua-Chautham	1
16.	Pansalwa to Beldor and Sonebarsa ...	8.5
17.	Sultanganj-Tarapur	8
18.	Jamui-Chakai <i>via</i> Jhajha and Gidhaur ...	40
19.	Lakhisarai-Sheikhpura	18
20.	Lakhisarai-Sikandra	18
21.	Surface dressing of the Road from Sarwan to Chakai (Section of Sarwan-Chakai-Jasidi-Chopa-Hansdiha-Bhagalpur Road) up to Khalkhalia Nala ... ..	...
22.	Widening of culverts and bridges on Sarwan-Chakai-Chopa-Hansdiha-Bhagalpur Road up to Khalkhalia Nala ... ..	...
Grand total ...		383.50

BHAGALPUR DISTRICT.

1.	Ghorghat-Sultanganj-Bhagalpur ...	22
2.	Hansdiha-Bhagalpur (Portion of Temporary N.H.)	42
3.	Bhagalpur-Colgong (portion of Temporary N.H.)	19
4.	Construction of a bridge on Khalkhalia Nala with its approaches in the 6th mile of Bhagalpur-Dumka road ... ..	...
5.	Dhakamore-Banka	5.00
6.	Sultanganj-Tarapur (Bhagalpur District) ...	4.00
7.	Amarpur-Banka	12.00
8.	Godda-Pirpanti (Bhagalpur District) ...	6.00
9.	Naugachia-Titanga	12.50
10.	Bihpur-Gopalpur (Bavangama-Gosaingaon)	12.0
11.	Akbarnagar-Sahkund	7.0
12.	Amarpur-Shahkund	12.0
13.	Approach road to Barahat P.-S. from 23rd mile of Bhagalpur Dumka Road ...	1.17
14.	Widening of Bridges and Culverts in Sarwan-Chakai-Chopa-Hansdiha road up to Khalkhalia nala ... ..	...
Grand total ...		154.67

Serial no.	Name of Road.	Mileage.
PURNEA DISTRICT.		
1.	Katihar-Manihari	15.9
2.	Purnea-Dhamdaha-Rupauli	35.5
3.	Katihar-Purnea	17.2
4.	Murliganj-Purnea	28.0
5.	Jogbani-Kalabalua	31.0
6.	Portion of Karhagola-Darjeeling Road from Karhagolaghat to Junction with proposed N.H. 31 from Monghyr Ghat	6.79
7.	Kalabalua-Sarsi	9
8.	Amour-Baisi	12
9.	Klishanganj-Dinapur (West Bengal Border)	14
10.	Ganga-Darjeeling road from the 26th mile to 30th mile within the limits of the Purnea- Municipality	4
Grand total ...		173.39
SANTHAL PARGANAS DISTRICT.		
1.	Dumka-Litipara-Sahibganj	96
2.	Hansdiha-Dumka	32
3.	Dumka-Ramipurhat	35
4.	Murarai-Amrapara	18
5.	Chopa-Lakra Pahari	31
6.	Chakai (Monghyr border) Jasidih-Chopa- Hansdiha	41.5
7.	Lilipara-Pakur	18.0
8.	Godda-Pirpainti (District portion)	33.0
9.	Godda-Hansdiha	20.0
10.	Approach road to landing ground at Dumka ...	2.0
11.	Road from Jasidih Railway Station up to Jasidih on the Chakai-Jasidih-Hansdiha Road (as section of Temporary N.H.)	0.24
12.	Maheshpur-Pakuria	15.0
13.	Widening of culverts and Bridges on Sarwan- Chakai-Hansdiha Road upto Khalkhalia Nala
Grand total ...		341.74

Serial no.	Name of Road.	Mileage.
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RANCHI DISTRICT.

1.	Gumla-Kolebira	14
2.	Nagpheny-Causeway on Koel River on Bero-Gumla Road
3.	Ranchi-Itki Road	12
4.	Metalling a portion of Ghagra-Simdega Road	5.75
5.	Old and new Hazaribagh Road	3.0
6.	Namkum-Tupudana	9.75
7.	Khunti-Tamar	27.0
8.	Simdega-Birmitrapur	28.0
9.	Ranchi-Chaibassa	95.0
10.	Metalling and black topping Gumla-Simdega Road	42.75
Grand total ...		237.25

HAZARIBAGH DISTRICT.

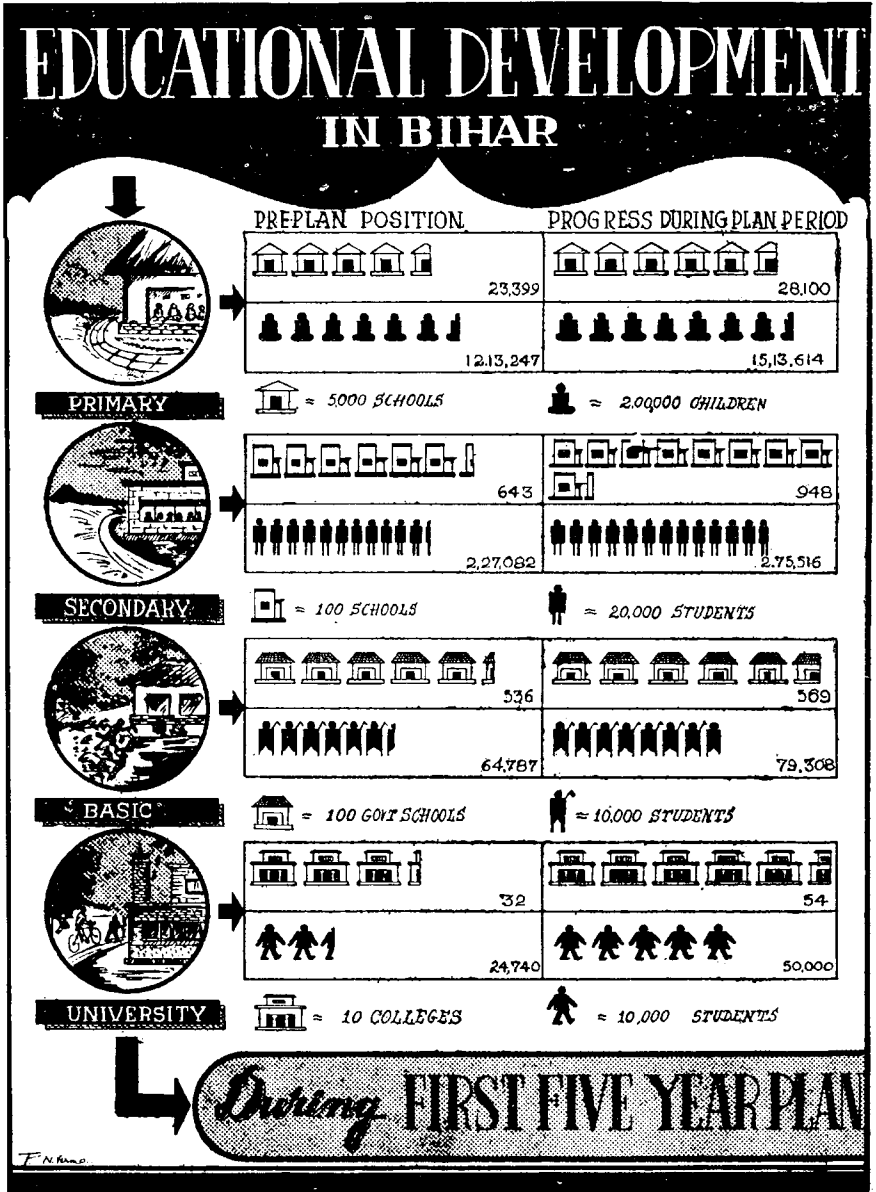
1.	Jamua-Koderma	40.0
2.	Gonia-Chatra-Gosaindih	38.0
3.	Jamua-Giridih	32.0
4.	Jamua-Kharagdiha-Chatra-Sarwan	14.5
5.	Domchanch-Dhosakhola-Meghathori	13.0
6.	Doranda-Gawan <i>via</i> Shankh, Bendro and Ganpat Bagi	14.5
7.	Ramgarh-Gola-Petarbar upto Manbhum District Board border and link to Jaridih	46.0
8.	Hazaribagh-Gharwa-Damsite	3.5
9.	Construction of a causeway over river Usri on Giridih-Bengabad road ... ..	...
10.	Metalling and Blacktopping Domchanch-Jamua Road ... ..	...
Grand total ...		191.50

Serial no.	Name of Road.	Mileage.
MANBHUM DISTRICT.		
1.	Dhanbad-Pathordih-Sindri	16.0
2.	Chas-Dhanbad-Govindpur	32.0
3.	Purulia-Chandil-Jamshedpur	49.55
4.	Raghunathpur-Chandankiari Chas road (upto Hazaribagh border)	35.0
Grand total ...		132.55
SINGHBHUM DISTRICT.		
1.	Military diversion road in Mauza Mango and Paridih joining Chandil-Jamshedpur road at one end and Pipe Line road at the other end	2.0
2.	Chandil-Jamshedpur road from the border of Manbhum and Singhbhum districts to the point near the 14th mile of the road from where Military diversion road takes off ...	1.4
3.	Chaibasa-Haludpokhar	26.0
4.	Haludpokhar-Jamshedpur	11.0
5.	Widening of existing narrow culverts on Ranchi-Chaibassa Road ... ..	...
6.	Link road connecting Ghatsila with N.H. 33	1.0
7.	Seraikela-Kandra	14.0
8.	Kharsawan-Chakradharpur	20.0
Grand total ...		75.4
PALAMAU DISTRICT.		
1.	Chandwa-Balumath-Gonia	21.00
2.	Daltonganj-Hariharganj-Aurangabad	43.50
3.	Ranchi-Daltonganj road (Palamau District portion)	55.9
4.	Daltonganj-Garhwa-Ranka-Godarmana	46.0
5.	Rohla-Bishrampur	3.0
6.	Hilly section of Ranchi-Netarhat road	15.0
7.	Roads in Netarhat Plateau	14.90
8.	North Koel bridge link road	12.50
9.	Construction of a bridge on north Koel river at Garu ... ..	...
Grand total ...		211.8

CHAPTER XIII.

EDUCATION.

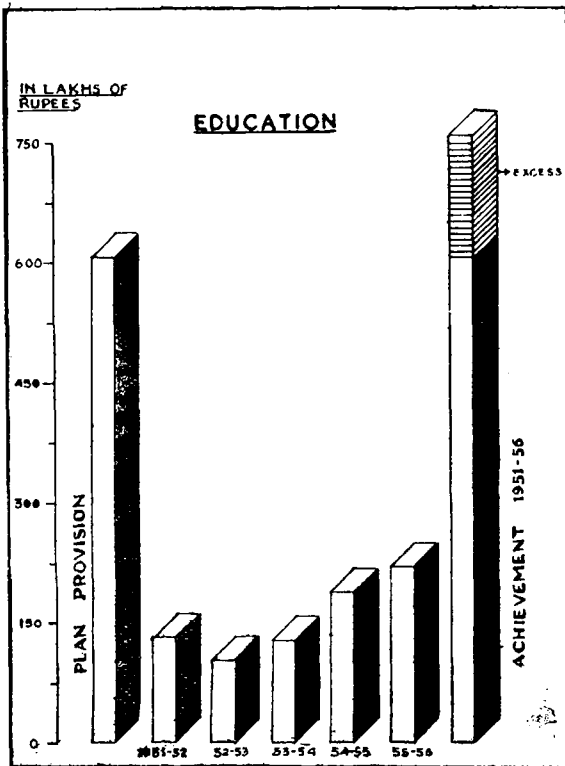
The provision of universal, free and compulsory primary education for all children of school-going age and of Adult (Social) Education for all illiterate persons was the objective before the Government. The



limited resources of the country underlined the need of planning. The educational facilities available in the country, as a whole, in 1951 provided for 40 per cent of the children of age-group 6 to 11. But in Bihar, the corresponding percentage was only about 28, which meant that special efforts were required to bring up this State to the level of other States in the matter of primary education.

In Bihar, we had already a Post War Plan of educational development for the period 1945-46 to 1949-50. It had forty-three schemes under education, but the number was reduced to 29 in 1949, when a two-year programme was drawn up. Soon after the formation of the Planning Commission, the State plan had to be modified. A provision of Rs. 570.47 lakhs was made, and the number of schemes reduced from 29 to 16 only, a few of them having been transferred to the normal budget. Two more schemes were added in 1954 after adjustment when the total plan provision was raised to Rs. 604.4 lakhs.

The limitation of finance and personnel greatly interfered with the objectives set out at the beginning. Though on revision, the Plan provision was increased to Rs. 604.42 lakhs, and the total expenditure amounted to Rs. 763.39 lakhs, we have still very far to go to catch up with the rest of India.



The progress achieved during the First Five-Year Plan period in respect of the various educational schemes is briefly discussed below.

Primary Education.

Accepting the thesis that the minimum of education between the ages of six and eleven is a necessary condition of preparation of life and character, and is the birth-right of every individual, the National Plan aimed at providing educational facilities for at least 60 per cent of the children between the age-group of six to eleven. Within the limited financial provision, the State Plan could only ensure primary education to 30 per cent of children within this age group. The main schemes relating to the development of primary education were as follows :—



A basic school in Ormanjhi.

Basic education centres.—Basic Education, as is well known, derived its inspiration from the teaching of Mahatma Gandhi, who first propounded the maxim of 'learning by doing'. This system is a radical departure from conventional education. The scheme envisages the close integration between the schools and the community so as to make education as well as the children more social minded and co-operative. It endeavours to achieve this, firstly, by organising the

school itself as a living and functioning community with its social and cultural programmes and other activities and, secondly, by encouraging students to participate in the life around the school and in organising various types of social services to the local community. Self-sufficiency, self-reliance, purposeful activities, co-operative work, social service programme, are some of the salient features of Basic Education. In 1949-50, the total number of Government Basic schools stood at 100, the number of Senior Basic Training Schools at 13 and Post Basic School at 1. Soon afterwards, there was considerable expansion of basic education. There were in all 562 basic institutions for boys and 7 for girls during the plan period, entirely financed by Government. This comprised 535 Basic Schools, 20 Senior Training Schools and 14 Post-Basic Schools. There were 33 basic schools functioning as branch schools which were included in the establishment of 535 Basic schools. Though 536 institutions had been set up before the Plan, all these schools were organised and equipped during the Plan period. 33 more basic institutions were set up during the Plan period. One post-basic and one Senior Training School were financed outside the State Plan. In addition to these Government institutions, 50 non-Government basic schools, out of 129 Middle and Primary schools developed as Basic



Training of spinning in a basic school.

institutions, and 12 non-Government post-basic Schools were given non-recurring grants amounting to Rs. 1.11 lakhs for their development on the Basic lines.

While the total annual expenditure incurred over Basic schools in 1950-51 i.e., before the commencement of the Plan period, was only Rs. 30.11 lakhs, the expenditure incurred in the year 1955-56 amounted to Rs. 55.00 lakhs. The total expenditure on this scheme amounted to Rs. 235.7 lakhs, as against the provision of Rs. 188 lakhs.

The physical target for opening new institutions under this scheme was 20 schools with 76,525 students. As against this the target achieved was 33 schools with 13,776 students. Though there had been rise in the number of institutions, this was not reflected in the number of pupils enrolled in them. The target in regard to number of students was rather over-estimated and a little ambitious. It was not possible for the schools to achieve the full strength of students in all the grades and run them with the desired efficiency.

The statement below gives the districtwise distribution of the basic institutions during the plan period :—

District.	Number of Basic schools.	Senior Basic Training Schools.	Post-Basic Schools.
1. Patna ..	30	2	1
2. Gaya ..	35	1	1
3. Shahabad ..	28	1	..
4. Saran ..	43	1	1
5. Champaran ..	52	1	1
6. Muzaffarpur ..	62	2	2
7. Darbhanga ..	53	1	1
8. Monghyr ..	29	1	2
9. Bhagalpur ..	24	1	1
10. Purnea ..	22	1	2
11. Saharsa ..	12	1	1
12. Santhal Parganas ..	28	1	..
13. Ranchi ..	24	2	1
14. Hazaribagh ..	20	1	..
15. Manbhum ..	23	1	..
16. Singhbhum ..	28	1	..
17. Palamau ..	22	1	..
Total ..	535	20	14

Other Primary Schools.—Another scheme for improvement of those primary schools, in which basic scheme could not be introduced for the time being, was also taken up during the Plan period. This was an omnibus scheme and included within it several sub-schemes. These are enumerated below, along with a note on the achievement during the plan period item-wise:—

Improvement in the initial salary of Primary School teachers.—The minimum salary of a primary school teacher was fixed at Rs. 15 per month during 1945-46, and Government made specific grants to local bodies for this purpose. This was not, however, fully implemented by different employing agencies with the result that the salary of a primary school teacher ranged between Rs. 10 to Rs. 15 before 1949, when according to the Chief Minister's announcement of February, 1949, scales of pay of all teachers were liberally revised. A middle passed and trained teacher was allowed a starting salary of Rs. 30 in the scale of Rs. 30—1—bi—40. The lowest scale of salary was Rs. 20—1—bi—30 meant for untrained middle or U. P., or L. P. pass teachers. While the scales of pay were revised before the First Plan, the effects of improvement could be evident during the beginning of the plan period. Particularly, the teachers, for the first time, drew their increments during 1951-52. By the end of the First Plan period, the scale of salary allowed to non-matric trained teachers (Rs. 30—1—bi—40) was further raised to Rs. 35—1—45 with effect from the 1st April, 1955.

Appointment of additional Deputy Inspectors and Sub-Inspectors of Schools.—At the beginning of the plan period, there were only 269 Sub-Inspectors of Schools and 57 Deputy Inspectors of Schools. Towards the end of the First Five-Year Plan, the number of Sub-Inspector of Schools rose to 444 and that of Deputy Inspector of Schools to 59.

Appointment of additional District Inspectresses of Schools.—The number of District Inspectresses was raised to 9 just by the beginning of the plan period.

Conversion of Lower Primary Schools into Upper Primary.—In order to prevent a relapse into illiteracy it is desirable to encourage schooling atleast up to the Upper Primary stage. With this end in view, 600 L. P. schools were upgraded to U. P. schools during the plan period. The total increase in the number of U. P. schools was, however, from 4,797 in 1951 to 6,102 in 1956. The statement below

gives the districtwise distribution of the upgraded U. P. schools during the plan period :—

District.	Financed from—		Total.
	District education fund.	Municipal fund.	
1. Patna	36	6	42
2. Gaya	42	6	48
3. Shahabad	27	3	30
4. Saran	39	3	42
5. Champaran	27	3	30
6. Muzaffarpur	42	6	48
7. Darbhanga	42	6	48
8. Monghyr	36	6	42
9. Bhagalpur	27	3	30
10. Purnea	27	3	30
11. Saharsa	30	..	30
12. Santhal Parganas	27	3	30
13. Ranchi	27	3	30
14. Hazaribagh	27	3	30
15. Mahbhum	27	3	30
16. Singhbhum	27	3	30
17. Palamau	27	3	30
Total	537	63	600

Another statement showing the total number of U. P. Schools, districtwise, which were functioning at the end of the Plan period, is also given below :

Districts.	Number of U. P. Schools.	
	Boys.	Girls.
1. Patna ..	414+1	36
2. Gaya ..	474+1	30
3. Shahabad ..	475	15
4. Saran ..	392	15
5. Champaran ..	311	13
6. Muzaffarpur ..	519	37
7. Darbhanga ..	523	15
8. Monghyr ..	552+1	28
9. Bhagalpur ..	255	22
10. Purnea ..	275	10
11. Saharsa ..	222	6
12. Santbal Parganas ..	307	6
13. Ranchi ..	282	24
14. Hazaribagh ..	186	15
15. Manbhum ..	316+1	12+2
16. Singhbhum ..	188+1	6
17. Palamau ..	108	6
	5,799+5	296+2

NOTE.—The figures preceded by (+) sign referred to schools for Anglo-Indians.

Replacement of untrained teachers by trained ones.—Due to the dearth of trained teachers, a large number of untrained teachers had to be appointed in the various primary schools. In 1950-51 out of 39,286 teachers employed in the primary schools, there were 22,400 trained teachers and 16,876 untrained. Considerable importance was given in the plan period to replace as many of the untrained teachers as possible. In making fresh appointments, preference was given to the trained teachers. As a result of this, in 1955-56 out of a total number of 46,207 teachers, the number of trained teachers increased to 28,364.

The percentage of trained teachers thus worked out to 61.38 in 1955-56 against 57.04 in 1950-51.

Construction of office-cum-residence for the inspecting staff.—Sanction of a sum of Rs. 3.59 lakhs was accorded for the construction of office-cum-residence for Sub-Inspectors of Schools.

Head teacher's allowance.—A sum of Rs. 3.74 lakhs was sanctioned during 1955-56 for the payment of head-teacher's allowance to headmasters of middle, U. P. and Multiteacher L. P. schools at the rate of Rs. 5, Rs. 2 and Re. 1 respectively.

Training Schools.

The old teachers' training schools for Middle passed persons were known as Elementary Training Schools. By the commencement of the plan period, they were expanded and re-organised under the scheme of Post War Educational Development, subsequently taken over under the Five-Year Plan. The content of the training was also sought to be brought on Basic Education lines. These Elementary Training Schools, numbering 55, had provision for the training of 20 teachers only in each of the schools. After re-organisation, the number of schools was reduced to 39, and the number of seats was increased to 50 in each. At the end of the First Plan period, the number of these expanded schools, re-designated as Junior Basic Training Schools, (subsequently, only Junior Training Schools) was 39, and the number of seats in them was raised to 3,750.

Besides these training schools, which were primarily for men, two Junior Training Schools for women were also opened during the First Five-Year Plan period, each providing training for 50 women at a time.

The statement below gives the districtwise distribution of these schools :

Serial no.	District.	Number.
1.	Patna	2
2.	Gaya	2
3.	Shahabad	3
4.	Saran	2
5.	Champanan	1
6.	Muzaffarpur	3
7.	Darbhangha	3
8.	Monghyr	4*
9.	Bhagalpur	2
10.	Purnea	2
11.	Saharsa	1
12.	Santal Parganas	3
13.	Ranchi	3*

*Including 1 for women.

Serial no.	District.	Number.
14.	Hazaribagh	2
15.	Manbhum	3
16.	Singhbhum	3
17.	Palamau	2
Total (Bihar)		41

These training schools were put in charge of trained graduate headmasters, and the number of teachers in each of the Training schools was increased from one trained graduate and two undergraduates trained to two trained graduates and two trained undergraduates. The number of seats has been further increased from 50 to 100 in 36 out of the 39 schools meant for men.

During 1950-51, there were 16,876 untrained teachers, out of a total number of 39,286 teachers in Primary schools. Quite a number of these untrained teachers had exceeded the age of regular training and, therefore, arrangements for their short training course was made during the First Five-Year Plan period and 1,444 teachers have undergone this short term intensive training of 4 to 5 months' duration.

Girls' Education.

There were the following 4 schemes in the State Plan for expansion of girls' education :

Scheme.	Plan provision (Rs. lakhs).
1. Opening of 40 Government middle schools for girls ...	12.50
2. Opening of 15 Government high schools for girls ...	26.75
3. Establishment of a college for women ...	7.00
4. Women's training college ...	*

Middle schools.—With a view to providing facilities for girls education, it was decided to establish one middle school for girls in each Subdivision. The target laid down was 40 such schools to be brought under Government control or to be newly established. Up to the 1950-51, 24 of Girls' Middle Schools had already been taken

*Provision included under general scheme for opening training colleges.

under State control, and by the end of the First Five-Year Plan period, 16 more schools were established. The statement below shows the districtwise distribution of these schools :—

Serial no.	District.	Number.
1.	Patna	4
2.	Gaya	3
3.	Shahabad	3
4.	Saran	2
5.	Champanan	1
6.	Muzaffarpur	1
7.	Darbhanga	2
8.	Monghyr	3
9.	Bhagalpur	2
10.	Purnea	2
11.	Saharsa	2
12.	Santal Parganas	5
13.	Ranchi	3
14.	Hazaribagh	2
15.	Manbhum	1
16.	Singhbhum	3
17.	Palamau	1
Total (Bihar)		40

High Schools.—Before the plan, there was one Government Girls' High School at Bankipore and the other attached to the B. N. R. Training College. A scheme of opening of 15 Government Girls' High Schools at district headquarters of the State was included in the State Plan. 14 privately-managed Girls' High Schools had already been taken under State control before the plan period. But all these schools were improved, recognised and properly equipped during the plan period. At the end of the plan period, all the 15 Government Girls' High Schools were established at the district headquarters, so that each district has now a fully equipped Government Girls' High School except Saharsa. These 15 schools have 6,026 students on their rolls.

College for women.—Since 1946, the Government college for women, with science classes attached to it for teaching Biology, Physics and Chemistry up to I. Sc. standard, has been in existence at Patna. During the plan period, provision for the teaching of Psychology in I. A., Political Science in B. A., was made, and a sum

of Rs. 7 lakhs was sanctioned and paid towards the construction of buildings for the college. Further development of this college for women has been included in the scheme relating to expansion of existing Government managed and aided colleges.

A Training College for women was set up as a part of the scheme for opening Training Colleges. The details of this are given in a later paragraph.

Craft Teaching in Secondary Schools.

There was a scheme for craft teaching in middle schools in the Post War Development Programme, but this had to be dropped when the First Five-Year Plan was prepared. Later on, with the assistance of Government of India, for the implementation of the recommendation of the Secondary Education Commission, craft teaching in selected middle schools was sanctioned at a cost of Rs. 3,000 per middle school. During the two years, 1954-56, a sum of Rs. 6.75 lakhs was sanctioned for 225 selected middle schools. This scheme was implemented during the plan period.

Training Colleges.

Before the commencement of the First Plan there was only one Teachers' Training College in the State at Patna. To meet the



Youth Hostel, Rajgir.

growing demand of trained personnel, and, specially of trained women teachers for the new Government High and Middle schools, Teachers' Training College at Turki and Women's Training College at Patna were established during the plan period. The Training College at Turki was subsequently, financed out of provision for basic education centres, and in its place another Teachers' Training College was established during 1954-55 at Bhagalpur. The Turki Training College started with training facilities for 50 graduate teachers. The number of seats has since been increased to 100. There is provision of 60 graduate teachers at Patna Women's Training College, and 115 at Bhagalpur.

Outside the scheme, one more Training College at Ranchi has been established with training facilities for 115 graduate teachers.

Expansion of Colleges.

Developments under this scheme, viz., opening of the Departments of Geology, Botany and Zoology in the Science College, Patna; Geography, Mathematics and Political Science departments in the Patna College, Patna, Hindi, Mathematics, Economics (Honours), Urdu in L. S. College, Muzaffarpur. were implemented by the time the First Five-Year Plan commenced. The other developments under this scheme were the following:—

- (1) Amir Manjil at Circular Road at Ranchi was acquired for Women's College.
- (2) Development grant was sanctioned to the Patna University for the establishment of a laboratory of Phonetics and Phonology in the Patna College.
- (3) Two colleges viz., one at Ranchi and the other at Bhagalpur were raised to the post-graduate standard in Arts.
- (4) By the end of the plan period, the number of I. Sc. seats under the Bihar University was increased from 1,072 to 2,608.
- (5) In consequence of the passing of the Patna University and Bihar University Act, 1951, steps were taken to equip the Patna University, as the teaching University, while the Bihar University became an affiliating University. Statutory grant of Rs. 35 lakhs was made to the Patna University and Rs. 18 lakhs to the Bihar University on a recurring basis. Besides these statutory grants, a total sum of Rs. 42.51 lakhs was sanctioned to the Bihar University and Rs. 16.85 lakhs to the Patna University for the development of collegiate education.

- (6) The number of scholars was raised from 24,740 in 1951-52 to about 50,000 at the end of the plan period, i.e., 1955-56, while the number of teachers increased from 1,108 to 2,000.
- (7) In Patna University the number of seats in I. Sc., classes was raised from 512 to 592. The increased seats were in the Biology section.

Ranchi Degree College.

Although this College has been functioning since 1946, considerable development has been made during the First Five-Year Plan period. The Post Graduate class in Anthropology has been started, and provision for teaching B. A. (Hons.) courses in Hindi, History, Geography and Economics has been made. A sum of Rs. 1.30 lakhs has been sanctioned for the construction of a second storey to the existing building. A further non-recurring grant of Rs. 3 lakhs has been sanctioned to the Bihar University for the construction of a building to be located at Morabadi grounds. The total expenditure during the Plan is Rs. 6.75 lakhs. This Scheme was, afterwards, merged with the general scheme relating to expansion of existing Government managed and aided colleges.

Technical Education.

In the original plan, only the following 2 schemes were included under Technical Education :—

	Provision (in lakh Rs.)
(1) Establishment of Electrical and Mechanical College, Sindri.	... 87.77
(2) Tirhut School of Engineering, Muzaffarpur	... 22.99
	Total ... 110.76

Later on, 2 more Engineering Schools at Ranchi and Sindri were provided. These institutions made provision for the training of 128 mechanical and electrical engineers, 307 diploma holders and 90 overseers.

Since the development projects began to be implemented, it became evident that there would be shortage of technical personnel and specially of Civil Engineering graduates and diploma holders of

all categories. It was, therefore, decided to start one more College of Engineering at Muzaffarpur, and 3 more schools of Engineering at Muzaffarpur, Bhagalpur and Patna. In the last year of the plan, it became necessary to start two more Engineering schools to meet the shortage of overseers to be required in the second plan. The Engineering technical personnel to be turned out from institutions started in 1954 and 1955 will be available during the Second Plan period.

Adult Education.

The new revised scheme of Adult (Social) Education was introduced in 1949. In 1951, the number of Social Education centres stood at 2,251, exclusive of sub-centres or squads working under the main social education centres. The number of adults educated at these centres was 96,818. During the plan period 2,125 centres were working and altogether 2,38,053 persons were made literate through these centres. The districtwise distribution of these centres is shown below :—

Serial no.	Districts.	Number.
1.	Patna	350
2.	Gaya	203
3.	Shahabad	43
4.	Saran	49
5.	Champan	80
6.	Muzaffarpur	294
7.	Darbhanga	300
8.	Monghyr	88
9.	Bhagalpur	98
10.	Purnea	67
11.	Saharsa	100
12.	Santhal Parganas	91
13.	Ranchi	63
14.	Hazaribagh	65
15.	Manbhum	90
16.	Singhbhum	48
17.	Palamau	96
Total (Bihar)		2,125

The establishment of the circulating libraries on a monthly grant of Rs. 15 each per month, which was taken up at the beginning of the plan period, continued to make steady progress. The number at the beginning was 300 and it rose to 320 at the end of the plan period.



Women's Night School, Baghauni (Samastipur).

Five Jatra parties and 4 Mod Mandalis, for the entertainment of adults and for the promotion of culture and education through recreation, continued to function during the plan period.

There was further strengthening of this programme by setting up a demonstration-cum-training unit for social education during the later part of the plan period. There were 5 training institutes during the period. Besides these, there was one Janta College at Turki in which training courses for graduates was also introduced. As a result of the training courses, 4,097 workers were trained in social education, out of whom 285 were ladies.

On the publication side, the Adult Education Board has to its credit 96 books for neo-literates, 8 Guide books, 3 Primers and 3 charts, besides weekly journal 'Jan Jivan'. 128 radio sets and 106 Magic lanterns were purchased during the period for use in the Adult Education Centres.

Eight projectors and 149 films were purchased during the period for the State Film Library. 11,310 slides were supplied to be shown in the educational institutions. Arrangements exist for showing films in 90 High Schools through the private exhibitors.

Two notable seminars were held during the plan period, one being the Regional seminar at Patna and the other the Fourth National seminar at Bikram.

Under the scheme of relief to educated un-employment, 250 urban social education centres and 100 rural social education centres were sanctioned during the plan period.

Health and Physical Culture.

A college of Health and Physical Education has been established at Patna. At present, the college is housed in the Patna Basic Training School buildings. Five categories of training courses of different durations were held annually in this college, the total number of trainees during the period being 322.

To ensure proper supervision of physical culture and training in various types of educational institutions, 4 Assistant Superintendents of Health and Physical Education, one for each Division, were appointed. A Lady Superintendent of Health and Physical Education, attached to the Government College of Physical Health, was also appointed to supervise physical education and organisation of games in girls' schools all over the State.

A Board of physical education consisting of distinguished officials and non-officials, interested in promotion of physical culture and training, was established.

The total expenditure of the scheme during the plan period stood at Rs. 2.85 lakhs.

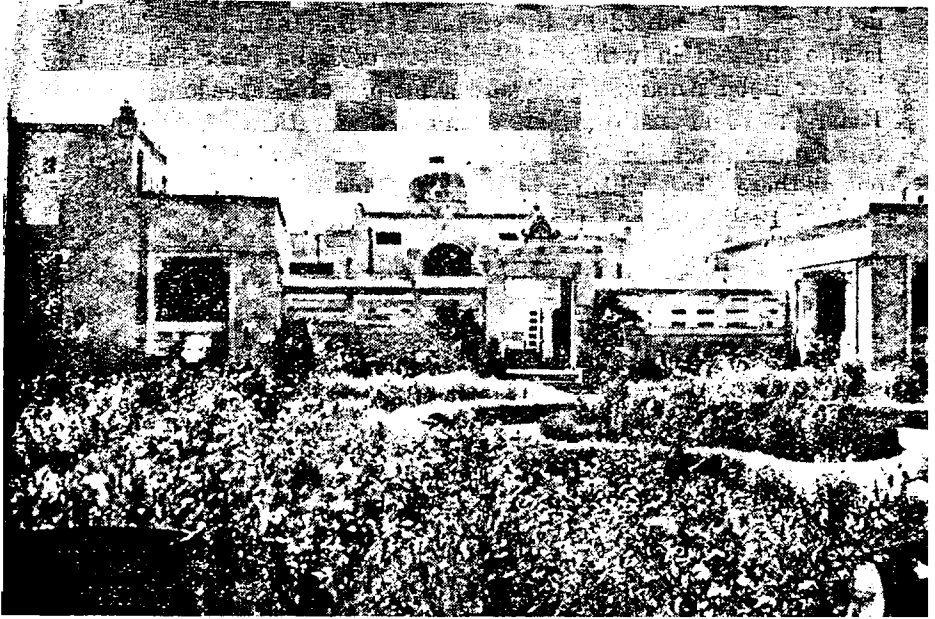
Oriental Education.

A scheme for improvement of oriental education with a provision of Rs. 10 lakhs was taken up in the State Plan.

The objects of this scheme were—

- (1) Establishment of the Magadh Institute of Pali i.e., the Nalanda Institute of Post Graduate Studies and Research in Pali and Budhistic learning.
- (2) Establishment of a Mithila Institute of Sanskrit at Darbhanga.
- (3) Establishment of a Sanskrit Mahavidyalaya.
- (4) Re-organisation of Islamic studies.

The Institute at Nalanda has been developed into an international centre of higher studies and research in Budhistic literature and learning. The Institute has made a beginning with Pali, Tibetan, Chinese,



Nalanda Pali Institute, Nalanda.

Sinhalese and Burmese languages. A Library of manuscripts relating to Budhistic faith, along with literature in Sanskrit and other languages, has been set up.

The Mithila Institute at Darbhanga, which is intended to be developed into centre of higher studies in research and Sanskrit learning, prepared students of M. A., Ph. D., and D. Litt. Degree of Bihar University. A number of rare Sanskrit books and important manuscripts were published by the Institute.

Three Sanskrit Colleges were established at Patna, Bhagalpur, Ranchi, while steps were taken to take over and develop the old Dharmasamaj Sanskrit College at Muzaffarpur. Sanskrit High Schools were set up at Motihari, Chapra, Arrah, Monghyr and Sultanganj.

A sum of Rs. 33,220 as recurring grant was sanctioned for the establishment of the Arabic and Persian Institute. A sum of Rs. 15,000 was sanctioned for the purchase of books and a sum of Rs. 1,300 was sanctioned for purchase of furniture for the Institute.

K. P. Jayaswal Research Institute.

The K. P. Jayaswal Research Institute, which was established in 1950, continued its researches in the field of Medieval and Ancient Indian history. Some parts of the ancient Tibetan manuscripts were deciphered and edited by the scholars of the Institute. The Institute is also engaged in writing a "History of Babu Kuer Singh and his brother Babu Amar Singh" and a history of "Freedom Movement in Bihar". The Institute is carrying on excavations at Kumhrar, and at three other places in Patna City. Valuable antiquities have been dug out at these sites, which will throw considerable light on the history of ancient Patliputra and the Mauryan emperor.

CHAPTER XIV.

MEDICAL AND PUBLIC HEALTH.

The progress of any project during a certain period has to be judged and considered against the background of the conditions which prevailed before the commencement of that period and the resources in finance and personnel which were made available. Before reviewing the progress of the Health Department during the First Five-Year Plan period, therefore, it is necessary to review briefly the conditions which prevailed at the beginning of the First Five-Year Plan before indicating the progress made during the period under review.

Amalgamation of Medical and Public Health Departments.

Up to the beginning of 1952, the medical and public health services were working as two independent departments, each under a separate Minister, though there was one Secretary for the two departments, who was also the Secretary of the Local Self-Government Department. This did not always ensure the co-ordination necessary between the preventive and the curative sides. In 1952, a separate Health Department consisting of Medical and Public Health Sections, under a Minister for Health was formed. But the two departments continued to work under two different Directors. Since Government had accepted the recommendations of the Bhore Committee, and the general policy of the Government of India was that the Medical and Public Health Departments should be integrated into one Health Department, the two Directorates were amalgamated, and a post of Director of Health Services was created in 1953. The Director was assisted by three Deputy Directors of Health Services, each incharge of different sections of the Health Services. The post of an Assistant Director of Health Services (Administration) in charge of the Budget, Accounts and the office establishment was also created, and so was the post of the Assistant Director of Maternity and Child Welfare work in order to implement the proposed expanded activities in Maternity and Child Health Services and the greatly expanded training programme for Nurses, Lady Health Visitors, Dais, etc. This measure was adopted on a temporary basis as an experiment. The experiment having been found useful, the amalgamation has now been effected on a permanent basis. At the close of the First Five-Year Plan, a post of Deputy Director (Administration) and of Assistant Director (Planning) were created for proper planning and execution of the Second Five-Year Plan.

Plan Provision.

When the First Five-Year Plan was given effect to, the Medical and Public Health Departments were faced with a situation wherein

MEDICAL DEVELOPMENT IN BIHAR



**NUMBER OF
GOVT.
HOSPITALS**

* + + + + 40

† + + + + + + + + + + 201

ONE CROSS = 10 HOSPITALS

**NUMBER OF
BEDS**

* [bed icon] [bed icon] [bed icon] [bed icon] [bed icon] 4256

† [bed icon] [bed icon] [bed icon] [bed icon] [bed icon] [bed icon] 5862

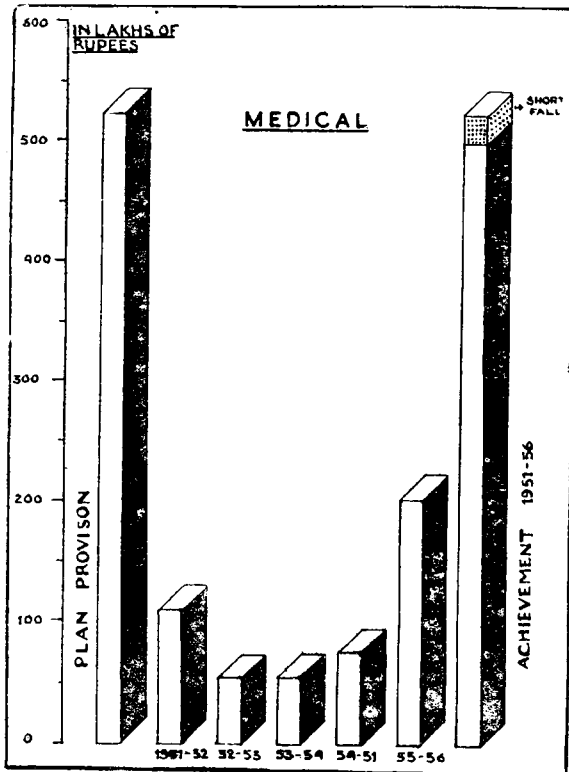
ONE BED = 1000 BEDS

* PRE-PLAN POSITION

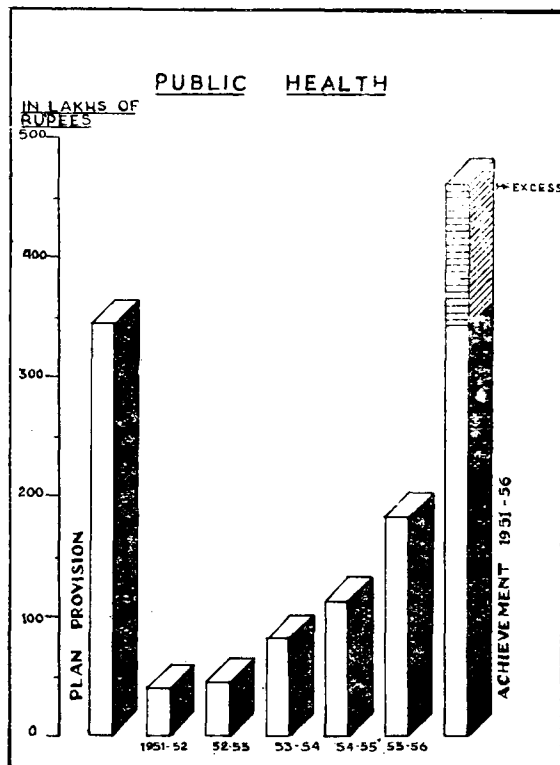
† PROGRESS DURING PLAN PERIOD

they had to meet ever increasing demands from the public within limited financial provisions. When the original Plan was drawn up, the Medical Department had submitted proposals amounting to about Rs. 7 crores. Owing to the financial stringency, cuts were made in the provisions of various departments. The Medical Department's provision was reduced from Rs. 7 crores to nearly Rs. 4.04 crores in the State Plan. A provision of Rs. 1.96 crores was available for Public Health schemes. Yet the demands made by the public were so insistent, and the existing medical relief and public health arrangements were so poor that it was realised that even the barest requirements could not be provided without provision of additional expenditure. This resulted in the request of the Health Department for additional grants when the provision for medical schemes was increased to Rs. 5.25 crores and that of Public Health Schemes to Rs. 3.47 crores. The tempo of expenditure, was low during the first three years of the Plan period, but was very considerably accelerated during the last quarter of 1954-55 and during 1955-56. As against the total Plan provision of Rs. 8.72 crores both for Medical and Public Health schemes, the total expenditure was Rs. 9.65 crores.

The necessity for increased expenditure was based on the fact that Bihar, had very nearly the minimum health facilities available in any



Part A State when the Five-Year Plan period began. As a very great leeway had to be made, it was necessary to spend more on provision of health facilities. During 1944-45 the total budget for the Medical and Public Health Departments was about Rs. 63 lakhs, which works out to approximately Re. 0-3-0 per capita per annum. The expenditure rose to Rs. 1.08 crores, i.e., Re. 0-4-0 per capita per annum in 1946-47, when the National Government took over charge and the budget has continued to increase, so that in 1951-52 and 1952-53, it amounted to Rs. 1.82 and Rs. 1.84 crores, respectively and Rs. 3.16 crores in 1953-54. The total expenditure during 1955-56 was Rs. 3.9 crores. The per capita allotment, therefore, increased from Re. 0-4-0 in 1946-47 to Re. 0-7-2 in 1951-52 and Re. 0-7-9 in 1952-53, Re. 0-12-6 in 1954-55 and Re. 0-15-7 in 1955-56. In spite of this increase in the per capita amount and the total amount to be spent on health projects, our expenditure and grants do not compare very favourably with some of the other States in India. For instance, the per capita expenditure on health services is Rs. 1-12-0 in West Bengal. For comparison with an advanced country of the West, it may be stated that the per capita expenditure on health services is Rs. 135 in the United Kingdom.



General Progress.

However, the additional health facilities provided in the State have resulted in a reduction in the mortality rate by about 13 per thousand of the population since 1946-47. In terms of total number of deaths occurring in the State, while 8,36,690 deaths occurred in 1944, there were only 3,74,111 deaths in 1953-54. There is thus an approximate reduction in deaths amounting to 4.6 lakhs a year. The death-rate has shown a decrease also in infantile mortality which has been reduced from 111.3 per thousand to 63.16. Plague has been practically eradicated and the death-rate from cholera which was 1.3 per thousand in 1946-47 has now been reduced to .034 per thousand. Similarly the death-rate from small-pox has been reduced from .3 per thousand to .016.

Hospitals and Dispensaries.

When the First Five-Year Plan began, the total number of hospitals and dispensaries in the State were 728, of which 40 hospitals and dispensaries, with a bed capacity of 4,256, were managed by the State. The population to hospital-dispensary ratio at the beginning of the First Five-Year Plan was 55,255 persons per dispensary. It now amounts to 47.047 persons per dispensary, as a result of the increase in the number of hospitals and dispensaries generally, which by the end of the First Plan was 855, of which 201 hospitals and dispensaries, with a bed capacity of 5,862 are under the management of the State. The bed capacity which has, therefore, increased by 1,506 during the First Five-Year Plan period works out to one bed for 6,862 of population. The total number of hospital beds in India in 1950-51 was 1,16,730. In Bihar we have a population equal to about 1/9th of the whole of the country. Therefore, even according to the low standard of population hospital bed ratio, there should have been about 13,000 beds in 1951, whereas, we had only about 4,500. The target regarding the increase of beds on an all-India basis was 16,324 as against which our *pro-rata* target is 1,800. Against this the bed capacity has increased by 1.405. 300 beds were added during 1955-56, so that although the increase in beds which has occurred during the First Five-Year Plan is proportionate to the target aimed at by the whole country, we still have not been able to make up the great deficiency with which the First Five-Year Plan was started. This necessitates an increasing effort for provision of additional facilities during Second Five-Year Plan.

Technical Personnel.

No progress in the Health Department can be expected without adequate technical staff. The number of Medical Officers registered

during 1951 was 4,813, but this had risen to 5,817 in 1955. This worked out to a ratio of one doctor for every 8,325 of the population during 1951, and a ratio of one doctor for every 7,065 of the population during 1955. While countries like U. K. and U. S. A. have one doctor for every thousand of the population, we are far behind the minimum standard even now. Added to the difficulties arising out of the deficiency in the total number of doctors in the State is the fact that whereas about 85 per cent of the population live in rural areas, only 20 per cent of the doctors live or serve in the rural areas. In the rural areas, therefore, the ratio even today works out to barely one doctor for every 27,000 of the rural population. If it is considered that we should have a minimum of one doctor for every 5,000 of the population, it would have been necessary for us to have at least 8,200 doctors by the end of the First Five-Year Plan as against the existing 5,817.

Medical Graduates.—Previously 40 students used to be admitted in the Patna Medical College. This figure has been raised to 100. Similarly, against the 40 students being admitted in Darbhanga Medical College, we are now admitting 60. But with 160 students being admitted each year, we could barely meet our present requirements and could, with difficulty, maintain the doctor-population ratio. A decision has, therefore, been taken to start a third Medical College at Ranchi and in anticipation 20 students were admitted at Patna and 30 at Darbhanga. When this college functions fully, it is proposed to admit 100 students at the Ranchi Medical College each year. This college will have a 1,000 bedded hospital, of which at least 750 beds will be provided during the Second Five-Year Plan. At the same time it is anticipated that the total number of admissions at Darbhanga will be raised to 100, so that in the near future we hope to admit in all 300 medical students. Even this increase in the number of medical students may soon be found insufficient to meet the rapidly developing requirements of the State Health Services.

STATEMENT SHOWING THE DEFICIENCY OF DOCTORS IN THE STATE.

	Total number of Doctors in India.	11 per cent of total which Bihar should have to equal India average.	Actual number available in Bihar.	Deficiency.
1	2	3	4	5
End of 1950	59,300	6,523	4,813	1,710
End of first Plan Period	70,000	7,700	5,817	1,883
At the rate of one doctor for 5,000 population.	80,000	8,200	5,817	2,383
Existing annual rate outturn of doctors	2,500	300	160	140

Post-Graduates.—Adequate facilities were provided in the existing Medical Colleges for M.S. and M.D. Examinations. 49 selected Medical Officers were sent for Post-Graduate training abroad in U. K. and U. S. A. At present there are 138 Medical officers possessing post-graduate qualifications. Out of a cadre of 566, 71 possess post-graduate degrees from abroad, 67 M.D. and M.S. from the two Colleges in Bihar; 96 of these are engaged in teaching work in the two Colleges.

Training of Pharmacists.

The Government of India have laid down that in future instead of the ordinary compounders, who used to be trained in Sadar and Sub-divisional hospitals, regular diploma course should be instituted for the teaching and registration of Pharmacists. The Government have, therefore, decided to start a school of Pharmacy in Patna. The construction of the Hostel and Laboratories of the Patna School was to be started before the end of the First Five-Year Plan period, and provision was made in the first instance to admit 50 students each year in the school. The school could not materialise during the First Five-Year Plan but the scheme is to be completed in early part of the Second Five-Year Plan period.

Public Health Ancillary Staff.

A Health Institute has been established at Patna under the First Plan, and no difficulty is now foreseen in the training of the requisite number of Health personnel in the State. As very few licentiate Medical Officers, with public health qualifications, were available in the State for Public Health work, 125 licentiate doctors without any public health qualification had to be employed as Assistant Health Officers. In order to train them in public health work and enable them to obtain L.P.H. qualification, L.P.H. classes have been started in the Health Institute and it is expected that all Assistant Health Officers who do not possess L.P.H. qualification, will be trained during the Second Year Plan period. The Health School from Gulzarbagh has been shifted and integrated with Public Health Institute, where training of 90 Sanitary Inspectors has been started.

Medical Education.

During the First Five-Year Plan period, 41 additional posts of teachers and Medical Officers attached to the teaching institutions have been sanctioned. Departments of Cardiology and Veneriology have been started in the Patna Medical College and Chest Surgery and Plastic Surgery Units have also been opened. A new surgical block, with 250 beds and 8 operation theatres, and a complete teaching unit,

has been opened at Patna, in addition to increasing the bed capacity of the Women's hospital at Patna by another 60 beds. A Blood Bank and a Pediatric Unit with 50 beds have been opened, and a 100 bedded Women's hospital is nearing completion at Darbhanga Medical College Hospital.

In 1947, there were 162 Medical graduates in the Medical Department and 28 in the Public Health Department making a total of 190. Today, there are 566 graduates working in the Health Services, of whom 138 possess post-graduate qualifications.

Training Programme for Nursing Personnel and Other Ancillary personnel.—Unsatisfactory as was the situation regarding the number of doctors in the State, the position regarding the ancillary health personnel was found to be worse. Deficiency in regard to the members of the Nursing staff was most marked. In 1951, the number of sanctioned posts for Nurses in the State Hospitals was only 228. In 1955, this number had risen to 570.

The School of Nursing in Patna Medical College Hospital admitted 25 student Nurses and the Darbhanga Medical College Hospital admitted 20 student Nurses every year. The training facilities at Patna Medical College Hospital have been increased by admission of additional 30 students each year.

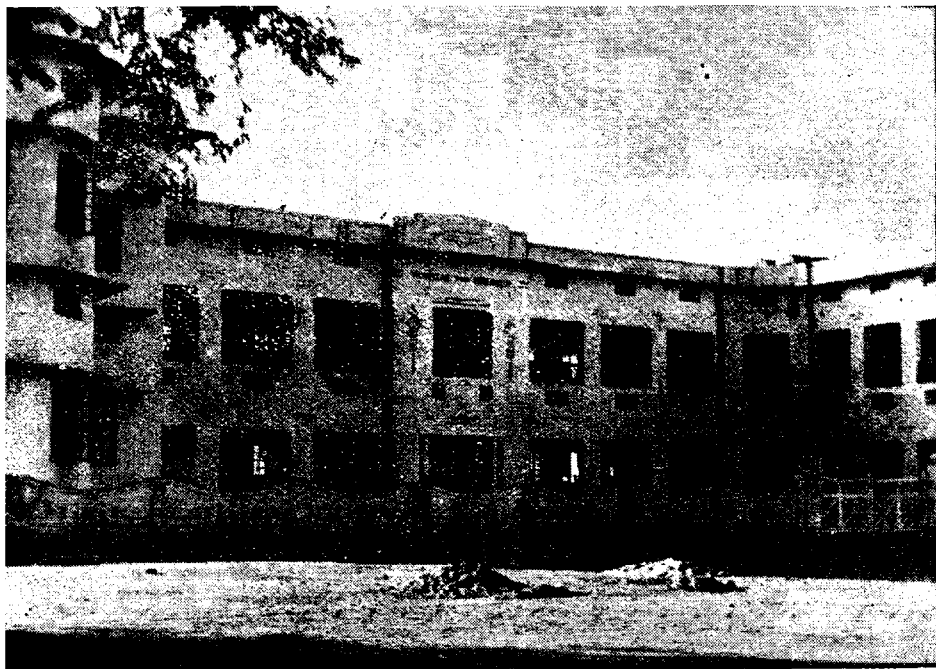
Auxilliary Nurse Midwives.—To meet the requirements of various primary health units in N. E. S. and C. D. Blocks in the rural areas. Auxilliary Nurse Midwives Schools were opened at Patna and Ranchi in which 60 students (30 in each) are admitted each year. The Midwifery School at Gaya has been expanded, where, at present 46 trainees are trained. This School also will be converted into Auxilliary Nurse Midwives School in near future.

Lady Health Visitors.—To meet the requirements of Maternity and Child Welfare Centres and Family Planning centres—two Schools were opened at Patna and Ranchi. Each of the two schools is admitting 30 students. Another School at Bettiah will be opened in near future.

It will be thus seen that additional number of nurses, midwives and Lady Health Visitors receiving training per year are 200 at the end of the First Five-Year Plan.

Training of Dais.—200 Dais are being trained each year at the various Sadar and Subdivisional Hospitals and also at the Maternity and Child Welfare centres. Refresher courses are being given to 400 Dais, and all are provided with a Maternity Kit-box at the end of the training period. It may be noted that the training programme regarding the Nurses, Dais, etc., indicated above has been evolved with the active

help and co-operation of the Government of India, W.H.O. and UNICEF. Equipment worth Rs. 3,11,730 has been supplied by the UNICEF, and the W.H.O. has provided one senior Lady Doctor and 7 experienced Nursing personnel of different categories. They will serve in Bihar for a period of two years.



Children's Hospital, Patna.

Improvements in Patna and Darbhanga Medical Colleges.—The improvement of the Patna Medical College was made on all sides during the First Five-Year Plan. The Physiology Department was provided with increased accommodation. The College has been provided with a good canteen. The annual admission of students has been raised from 60 to 100, and additional hostel accommodation for male and female students has also been provided.

The Patna Medical College Hospital has been considerably expanded and a new block known as Rajendra Surgical Block has been opened with the provision of 250 beds. A 88 bedded children hospital has been constructed and the Women's hospital has been expanded with 75 additional beds. Besides several new Departments like V. D. and Skin, Cardiology, etc., have been created.

Similarly, several improvements have been made in the Darbhanga Medical College and Hospital. Admission of students has been

increased up to 60 annually, and additional accommodation for male and female students has been provided. Departments of Orthopaedic surgery and pediatrics have been started. Hospitals beds have been increased from 240 to 450 and wards have been opened for children and women. The staff has been provided suitably with quarters. A nurses training school with accommodation for 100 nurses has been started. Construction of a 100 bedded Women's hospital was started in 1955

Provincialisation of Sadar and other Hospitals.

A provision of Rs. 149 lakhs was available for improvement of the Sadar hospitals under State control. All the 17 Sadar hospitals are now completely under State control, and have been provided with X'ray set and other equipments. Because of unavoidable delay in a few of the building projects, the total amount utilised during the Plan period was only Rs. 112 lakhs. Further improvement of these Hospitals has been included in the Second Plan.

A provision of Rs. 21 lakhs was available for State control of important subdivisional hospitals and Rs. 12 lakhs for opening a dispensary in each thana. The State Government, subsequently decided to provincialise all the remaining subdivisional hospitals. The expenditure, therefore, was Rs. 32 lakhs as against the original plan provision of Rs. 21 lakhs. All the Subdivisional hospitals have been provincialised; and 55 State dispensaries have been opened in thanas, in which no dispensaries existed before. In addition to these, 11 State dispensaries have been opened in certain rural and backward areas. 7 Static and 7 mobile health centres have been started, each health centre having at least three sub-centres. In addition to these rural health centres and dispensaries, Government have also opened a 50 bedded Infectious diseases hospital at Bowli Hall, Patna City. The State Government have also provincialised, the Lady Elgin Zenana hospital, Gaya, Infectious diseases hospital, Gaya, the Maharani Janki Kuer hospital and the K. E. M. hospital at Bettiah. They have further provincialised fifteen dispensaries in Saharsa district and 24 dispensaries in Darbhanga District. With the abolition of Zamindari, 23 hospitals and dispensaries run by the Zamindars have been taken over by the Health Department.

Maternity and Child Welfare Services.

Maternity and Child Welfare Services have been very greatly expanded during the First Five-Year Plan. With the active help and collaboration of the Government of India, UNICEF and W.H.O. 35 new Maternity and Child Welfare Centres have been opened, making

a total of 63 Maternity and Child Welfare centres, which are functioning under the Government and Maternity and Child Welfare Society. The importance of this work cannot be over-estimated. The



Maternity and Child Welfare in Ormanjhi.

extent of the services rendered through the Maternity and Child Welfare Organisation can be gauged by the following :—

- (1) Number of children attending the centres—4,26,862.
- (2) Number of expectant and nursing mothers, who attended the centres—1,04,404.

Home visiting and domicilliary services—

- (1) Domicilliary visits to children—1,05,457.
- (2) Ante-natal and post-natal visits to mothers—62,176.
- (3) Number of labours conducted at the patient's residences—6,600.

Distribution of milk, rice, etc.—

- (1) Total quantity of milk supplied to children and mothers—
1,345½ maunds of powdered milk (equivalent to 10,764½ maunds cow's milk).

- (2) Sugar and Gur—33 maunds 17 seers.
- (3) Rice—12,500 maunds (worth Rs. 3,61,664).
- (4) Soap—12,061 lbs.
- (5) Cloth—6,880 yards.

The expenditure on Maternity and Child Health Services and the training programme amounted to Rs. 14,00,000 during the First Five Year Plan.

Tuberculosis Control.

In 1946, there were 163 tuberculosis beds in the State. This number rose to 375 in 1951, and to 457 in 1955. Government have sanctioned the opening of 10 bedded tuberculosis wards in 19 Subdivisional hospitals and sanctioned the construction of the Koilwar Tuberculosis Hospital.

While mention will be made of the B.C.G. Vaccination when dealing with the activities of Public Health Section, it may be noted that the tuberculosis training and demonstration centre, which was opened towards the end of 1951, has rendered extremely good service. Approximately 32—34 thousand patients are being examined at this centre annually and apart from giving treatment to 44 indoor patients, domicilliary treatment is being given to about 600 patients.

Leprosy Control.

So far leprosy work was almost entirely in the hands of voluntary organisations, most prominent among them being the missionary institutions. Since this disease, in spite of the existing institutions, was showing a tendency to be on the increase, leprosy control centres with adequate number of sub-centres and mobile services have been set up at the following places :—

- (1) Mairwa in Saran.
- (2) Sitamarhi in Muzaffarpur.
- (3) Barney in Bhagalpur.
- (4) Govindpur in Manbhum.
- (5) Hura in Manbhum.
- (6) Chakradharpur in Singhbhum.
- (7) Gamaharia in Singhbhum.
- (8) Manoharpur in Singhbhum.

In addition to these, Government have sanctioned opening of a Leprosy Institute at Brahmbe. Government have also given a grant of Rs. 500 to each of the 101 dispensaries in the districts of Singhbhum,

Manbhum and Santhal Parganas for improving the leprosy services in these areas.

Venereal Disease Control.

15 bedded Skin and Venereal disease ward was opened at Ranchi. 24 bedded ward was sanctioned for Darbhanga Medical College and Hospital. A serological Laboratory was started in the venereal disease department of Patna Medical College Hospital.



Children's Welfare Centre, Ekhlaspur, Bhabua.

Rural Health Services.

Since 85 per cent of the people live in rural areas, organisation of health services in rural areas has special importance of its own. So far medical relief and public health arrangements in the rural areas have been solely the functions of the local bodies, who, though they received certain appreciable grants from the State exchequer, have not been able to provide adequate medical relief in rural areas. Recently, the per capita expenditure per annum on medical relief by local bodies was examined, and it was found that it ranged from 0-0-6 per capita per annum to 0-2-0. This provision is wholly inadequate. At the same time, it was appreciated that there were only about 590 dispensaries in the whole State which works out to a dispensary population ratio of approximately one dispensary for every 70,000 of the population but

there are more dispensaries in certain areas and very few in others. There were 55 thanas in the jurisdiction of which there were no dispensaries. The State Government opened 55 dispensaries to make up this deficiency, but it was realised that the mere opening of a few dispensaries would not solve the problem of medical relief.



Cleaning a tank, Raneshwar.

A policy has now been initiated in this State with the concurrence of the Government of India and the Community Project authorities that the whole State will be divided into 597 N.E.S. Blocks (now 574). In each of the N. E. S. Blocks there will be a State Health Centre or primary centre and one Mobile Health Centre. The Static Health centre will be in charge of a doctor, who will be assisted by adequate Public Health and Maternity and Child Welfare staff. This Static Health Centre will function as a Dispensary-cum-Primary Health Centre. The mobile health centre will have 3 sub-centres located at strategic points in the area. A doctor, a midwife, or lady health visitor and a Sanitary Inspector or an auxilliary health worker will be provided for each mobile health centre, and an auxilliary health worker and a trained dai at each of the sub-centres. The doctor will visit these sub-centres on certain fixed days, at least twice a week. This doctor, who will not be permitted private practice, will, in addition to giving medical relief at the sub-centres, also be responsible for the organisation of maternity and child welfare services and for carrying

out public health measures in this area. In other words, when all the blocks have been provided with this type of improved health services, there will not only be 500 State Rural dispensaries in the rural areas but there will also be 500 rural health officers. In pursuance of this policy, 7 such static and mobile health centres have already been opened and 225 more will be opened during the Second Plan period.

Public Health Reorganisation.

One of the most important public health schemes started during the current plan period has been the implementation of the interim Public Health reorganisation scheme, wherein it has been laid down that in each district there will be a District Medical Officer of Health, an Assistant Medical Officer of Health in each subdivision, a sanitary inspector for each of 2 thanas and a Health Inspector in each thana besides 2 disinfectors in each thana and a vaccinator for every 30,000 of the population. This has ensured epidemic control of a higher order than ever before and has resulted in reduction in incidence of epidemics.

Mass B.C.G. Vaccination Programme.

Improved measures for control of tuberculosis were taken up during the plan period with the co-operation of the Government of India.



A pucca drain in Bihar Shariff.

Since isolation and hospitalisation of all tuberculosis patients, of which the rough estimate is a quarter million in Bihar, was not possible financially, Government decided to join in the mass B.C.G. Vaccination project. The scheme was started with 3 B.C.G. teams in 1949. The number of teams increased to 12 by end of the First Plan period. 76.87 lakhs people were tuberculin tested and 35.43 lakhs were given B.C.G. vaccination. It is hoped that by the end of 1961, the entire viable population of Bihar will have been tested and vaccinated. 4 out of 12 teams were earmarked for carrying out mass B.C.G. vaccination in areas where leprosy is prevalent, since it has been considered possible that B.C.G. vaccination will serve as prophylactic measure against the spread of leprosy as also against the spread of tuberculosis.

Small-pox Control.

It has been noted that there is a 5-6 yearly cycle of epidemic of small-pox. In order to combat the next cycle which was anticipated in 1955-56 and to attain its peak in 1956-57 a campaign for mass vaccination was started in 1952. This campaign was intensified during the last 2 years as a result of which the total number of persons vaccinated and revaccinated since the beginning of the campaign is as follows :—

		No. of persons vaccinated (in lakhs).
Primary vaccination	...	42
Revaccination	...	282
		<hr/>
	Total	324
		<hr/>

The production of vaccine doses has been increased from 70 lakh doses a year in 1951 to 125 lakh doses in 1955.

Malaria and Kala-Azar Control.

Of all the diseases malaria takes the heaviest toll of lives not only because of the high incidence of deaths from the disease but also because of the debilitating result of the frequent attacks of this disease, which exposes the patient to other diseases. The Government of India, with the co-operation of T.C.M., W.H.O. and other international agencies, have started a National Malaria Control programme, in which Bihar is participating fully. According to a survey, which was carried out some time ago, 21 million people in Bihar live in areas where malaria is endemic and the spleen index ranges from 45 to 95 per cent.

The National Anti-Malaria Control Programme was started in Bihar in 1953, with 7 units providing cover to 7 million of the population.

This programme was expanded further so that by the end of the Plan period, there were 17 Malaria units functioning in the State giving Anti-Malaria cover to 17 million of the population. While the whole of Chotanagpur areas has been covered, a little more than half of North Bihar has also been given similar protection. The results of this campaign have been most hopeful. The incidence of Malaria during the last 2 years has come down to about one-third of what it used to be before. It is a matter of great satisfaction that, in spite of the unprecedented floods in North Bihar last year, the figures for Malaria throughout the State, and in the North, in particular, were about one-third of what they were in previous years. This could be possible due to the plan whereby an attempt was made to spray each house in each village in the flood-affected areas with D.D.T., which has been found to be very effective against Anophline and at the same time against sandflies though, unfortunately, it is not so effective against the common culicine mosquitoes. As a result of the widespread spraying with D.D.T., there has been considerable fall also in the incidence of Kala-Azar. In certain areas where in previous years, we found hospital wards full of Kala-Azar patients, they have now become almost free of this disease, and only an occasional patient reports to the hospital for treatment of Kala-Azar.



Inoculation and distribution of medicines for malaria control at Pusa.

Filaria Control.

One of Bihar's serious health problems has been the widespread incidence of filaria. The incidence of filariasis is high throughout the

State particularly in areas like Patna, Gaya, Muzaffarpur, Darbhanga, etc. Since the disease carrying vector, i.e., culex mosquitoes thrive in areas where drainage is poor, the conquest of filariasis is primarily a Public Health Engineering problem. The drainage in these areas has to be improved. As an experimental measure, Government have started in collaboration with the Government of India, a National Filaria Control Project in Bihar during 1955-56. Treatment and survey units have been started at Patna and at Muzaffarpur and a survey unit has been set up at Gaya also. It is hoped that when these schemes are functioning fully, there will be an appreciable improvement in incidence of this disease. The scheme consists primarily of anti-larval and anti-mosquito measures, and mass examination and treatment of the infected individuals with new anti-filarial drugs.

Family Planning.

There has been steady increase in the population, which is now assuming alarming proportions. Since production, particularly, of foodstuffs cannot possibly keep pace with the increase in the population, and since increase in the population and the increase in the national income are not keeping pace with each other, until the rate in the growth of population is controlled, there will be great deterioration in the per capita income of the individual, setting up a vicious circle of malnutrition and disease due to poverty. Close study of these statistics indicated that increase in the population is due not so much to increase in the birth-rate as to the reduction in the death-rate. It has already been indicated how the annual reduction of deaths now amounts to about 4.6 lakhs. Since public health and medical relief are being improved still further, and at an accelerated rate, increase in population is bound to occur still more and since we do not propose to stop the progress in health, it is essential to adopt measures to control the population. With this object in view 30 Family Planning Clinics were set up in the State during the Plan period, besides imparting education on family planning to the married women attending our Maternity and Child Welfare Centres and in the rural M.C.H. Centres functioning under the Community Projects and N.E.S. Blocks. In the first instance, except where medical reasons indicate otherwise, measures which are comparatively simple and which entail the use of purely indigenous materials found suitable in spacing of births are being advocated on a mass scale.

Indigenous System of Medicine.

Government have been taking steps for the development of Indigenous and Homeopathic Systems of Medicines. The progress has, however, been slow due to lack of funds. In the First Five-Year Plan

schemes were included to develop and improve the Government Ayurvedic and Tibbi Colleges, to improve, by giving subsidies, the private Ayurvedic Colleges at Bhagalpur and Begusarai, help the establishment of three Ayurvedic Colleges at Bhagalpur and Begusarai, three Ayurvedic Dispensaries in each district of the State and in finalisation of legislative measures to develop Homeopathic and Indigenous Systems of Medicine.

There are 275 Ayurvedic and 30 Unani dispensaries in the State managed by District Boards and 200 Ayurvedic and 15 Unani dispensaries subsidised by Government. There are also 10 Ayurvedic and one Tibbi dispensaries which are managed by Government. There is a Government Ayurvedic College as well as a Government Tibbi College, and, in addition, there are three private Ayurvedic Colleges. During the First Five-Year Plan period, efforts were made to place the development of these systems of medicine on a sound footing, and a considerable amount of spade work was done for the upgrading of the Government institutions and to prepare plans for the same.

Improvement and expansion of Ayurvedic and Tibbi Colleges.—A scheme for improvement of the Government Ayurvedic and Tibbi Colleges at Patna was included in the Plan. Detailed plans and estimates were prepared for all the buildings, and administrative approval was also accorded for the construction of the buildings of the Ayurvedic College and hospital and a combined Dissection Hall for the two colleges at a cost of nearly Rs. 20 lakhs. Land acquisition proceedings for acquiring three acres of land for the siting of all the buildings were also taken up. Out of a provision of Rs. 11 lakhs for this scheme, Rs. 8.10 lakhs were utilised during the plan period. It is expected that these buildings will be ready soon. Government have also been keen that the standards of teaching should be raised in the two colleges. The Director of Institute of Indigenous Medicine, Jamnagar, was specially requested to visit Patna and to give his recommendations. He has submitted a comprehensive report, which has been of considerable value.

State Government subsidy.

Government have been giving subsidy every year to the important private Ayurvedic Colleges of the State at Begusarai, Bhagalpur and Madhubani. The amount of grants sanctioned to these colleges are as follows :—

S. N. Y. Ayurvedic College, Bhagalpur—Rs. 0.83 lakh.

Ayodhya, Shivkumari Ayurvedic College, Begusarai—Rs. 0.635 lakh.

Shivganga Ayurvedic Mahavidyalaya, Madhubani—Rs. 0.08 lakh.

It is the Government's intention to get these colleges improved as much as possible and, thereafter, provincialise them gradually and to get them further expanded.

New dispensaries in districts.—A scheme for opening three new Ayurvedic dispensaries in each district was included in the State Plan. Under this scheme Rs. 2.17 lakhs were spent during the five-year period. Half of the expenditure had to be met by the District Boards and the balance, i.e., Rs. 1,500 a year to be sanctioned as a subsidy by Government. These dispensaries have been doing valuable work in the rural areas. 51 such dispensaries were opened by the District Boards with the aid of the State Government during the Plan period.

Legislative measures.—Government have been keen on placing the indigenous system of medicine on a firm footing. With this end in view, two laws were enacted for the development of Ayurvedic and Unani Systems of Medicine and Homeopathic system respectively. State Council and Faculties have been constituted and the bulk of expenditure relating to these bodies has been met by Government. It is hoped that there will be gradual development of indigenous systems of medicine under the guidance of these bodies.

Homeopathy.

The Homeopathic System of Medicine is widely practised in the State and a substantial section of the people not only the poor classes but also the well-to-do, take recourse to this treatment. Although no census of Homeopathic practitioners is available, they are estimated to be 5,000. Majority of them are inadequately trained.

State Board of Homeopathy.—The Bihar Development of Homeopathic Act has been enforced since November, 1955 and a State Board of Homeopathy has been established to register all Homeopathic practitioners in State and frame regulations for standardisation of Homeopathic education in Bihar.

Government subsidy.—The State Government opened 14 dispensaries and they propose to open more and continue subsidy to large number of Homeopathic charitable dispensaries, so that people may continue to benefit from them.

Urban Water-Supply.

Before the First Five-Year Plan, the towns provided with piped water-supply in the State were Jamshedpur, Patna, Gaya, Arrah, Monghyr, Bhagalpur, Muzaffarpur and Daltonganj. Thus out of the

total urban population of 27,04,731 in the State 9,81,239 persons, a little over 32 per cent of the urban population, were provided with piped water. But the water works even in those towns had worn out to such an extent that supply of piped water to the people had become irregular and unsatisfactory. Difficulties were experienced, particularly, during the summer months, when the major portion of the towns, including even Patna, was subjected to severe scarcity of water. The Water-works had been badly neglected during war years, and Government were faced with the problem of their immediate re-organisation to avert a complete breakdown. Together with this problem, Government had also to consider the extension of protected water-supply to other towns, where the population had increased considerably, and showed a distinct trend to increase further. During the period of the First Five-Year Plan, the State Government, therefore, undertook re-organisation of existing waterworks of 6 towns and 6 other new towns were selected for provision of piped water-supply, namely, Biharshariff, Sasaram, Deoghar, Jugsalai, Chapra and Hazaribagh. The schemes of these towns are nearing completion and water-supply is being given to these towns. At a later stage a few more towns namely, Purulia, Khagaria, Bettiah and Forbesganj were also selected for provision of piped water-supply, and the schemes in all these towns have been taken up and the work is under execution.

It is well known, that the municipalities concerned were not in a position to make any contribution towards such costly schemes and, therefore, the schemes had to be financed by Government on half grant and half loan basis. Repayment of loans was spread over a period of 20 to 30 years to enable the municipalities to repay in easy instalments.

The original provision was Rs. 82.90 lakhs which was raised to Rs. 197.9 lakhs after readjustment. All these schemes are in advance stage of execution and some of the schemes have already been completed and others are nearing completion. The amounts finally sanctioned up to the end of the First Five-Year Plan are as follows :—

Name of Scheme.				Expenditure sanctioned.
				Rs.
(1) Patna	...	...	...	32,24,610
(2) Gaya	...	...	...	23,16,500
(3) Deoghar	...	...	...	18,48,999
(4) Biharshariff	...	...	...	15,16,974
(5) Hazaribagh	...	...	...	31,31,036
(6) Daltonganj	...	...	...	12,13,295
(7) Jugsalai	...	...	...	6,38,000

Name of Scheme.	Expenditure sanctioned.		
	Rs.		
(8) Monghyr ... ..	...	...	4,76,084
(9) Chapra ... ..	...	...	14,38,324
(10) Sasaram ... ..	...	...	14,15,000
(11) Bhagalpur ... ..	...	...	13,25,000
(12) Muzaffarpur ... ..	...	...	10,45,000
(13) Arrah ... ..	...	...	14,88,000
(14) Bettiah ... ..	...	...	8,49,000
(15) Khagaria ... ..	...	...	6,53,000
(16) Forbesganj ... ..	...	...	10,09,700
(17) Purulia ... ..	...	...	11,00,000

	Total	...	2,46,88,522

Some of the important features of these schemes and the work involved, thereunder, are as follows :—

(1) *Patna*.—The existing water-supply system in Patna had become too old and was inadequate for the growing need of Patna. On the advice of the Geological Survey of India, it was considered necessary to secure the required quantity of water-supply through tube-wells of about 1,000 feet depth, and, accordingly, tube-wells were sunk by the Public Health Engineering Department in Kadamkuan area and other areas of the town. With the sinking of these tube-wells, Patna has now a copious supply of sweet and wholesome drinking water all the year round. But the scheme could not be completed in the First Plan and it has, therefore, been carried over to the Second Five-Year Plan.

(2) *Gaya*.—There was no extension of head works at Gaya, while additions to the distribution and service connections had been going on. The result was a complete break down of the system. The State Government, therefore, sanctioned a scheme of re-organisation and extension of the water-supply system of this town at a cost of Rs. 23.66 lakhs. The sinking of tube-wells on both sides of river Phalgun has been completed, and supply of water has commenced from the tube-well sunk near the Railway bridge. The scheme has now been completed and full supply on permanent basis has commenced.

(3) *Deoghar*.—The river intake has been completed including 2 infiltration galleries. The water tower on the Nandan Pahar has been completed. Laying of mains is nearing completion and filters are being installed. The previous scheme of water-supply from surface wells to the congested part of the town has been revised altogether with draining of water from Darwa river through infiltration gallery for supply of water to the whole town.

(4) *Biharshariff*.—All the four tube-wells with pump chambers have been completed, including installation of pumps. Their yield has been found to be satisfactory. Two R. C. overhead reservoirs have been completed. Laying of mains have been constructed and the supply is being given from the 1st April 1954.

(5) *Hazaribagh*.—The Hazaribagh water-supply scheme which was estimated to cost Rs. 26.89 lakhs has been completed, and supply was started some time in 1954. This scheme was executed with the assistance of the Damodar Valley Corporation, which designed and constructed an earthen dam on the Charwa river, about three and half miles away from the town, at a cost of Rs. 5.50 lakhs.

Rising main and distribution mains have been laid. Water tower and filters have been completed. The work is complete in all respects.

(6) *Daltonganj*.—The reorganisation of the water-supply system has also been undertaken, because the existing waterworks was on the point of collapse, and it was impossible to maintain adequate supply for the growing population of the town. It was estimated to cost about Rs. 12 lakhs. The scheme has been completed in all respects. Filtered water is now being supplied to the town in sufficient quantity.

(7) *Jugsalai*.—Jugsalai started getting protected water-supply from the 1st April 1954, at an estimated revised cost of Rs. 9.38 lakhs. It provides for a maximum supply of 5 lakh gallons per day of 24 hours at the rate of 20 gallons per head per day for an estimated population of 25,000. The supply is derived from the seepage water of the cooling tanks of TISCO, Ltd.

One water tower, pumping station, intake well, settling tank, gravel filter and distribution mains have been completed in all respects.

(8) *Muzaffarpur*.—The water-supply system of Muzaffarpur was dislocated by the earthquake of 1934. Since then several schemes of re-organisation were formulated, but none of them could be executed. In the meantime, supply from the present five tube-wells was being maintained, though with great difficulty, as three out of these five wells showed signs of exhaustion. The reorganisation scheme was taken up at a cost of Rs. 10.45 lakhs. All the five tube-wells with pump chambers have been completed and pumps have been installed. Two water towers and laying of distribution main have been completed and water-supply is being given.

A supplementary scheme costing above Rs. 9 lakhs has been prepared by the Public Health Engineering Department, which is being considered by the State Government. The scheme has been carried over to the Second Five-Year Plan.

(9) *Chapra*.—All the five tube-wells, as well as construction of pump chambers, have been completed and pumps installed. Laying of rising and distribution mains has been completed, and the supply has been started from 1st January, 1955.

(10) *Sasaram*.—There was previously no piped water-supply in the town. The town derived its water-supply from open surface wells, most of which were brackish and failed during summer. But with the introduction of piped water-supply, pure drinking water is now being supplied to the town. Sinking of all five tube-wells with pump chambers has been completed. The water tower as well as the laying of mains have been completed.

(11) *Bhagalpur*.—While the population of Bhagalpur had been increasing, the supply of water from the existing head works and old tube-wells had been dwindling every year, threatening to create water famine in the whole town, despite its being situated on the banks of Ganga. The State Government, therefore, sanctioned a scheme of re-organisation costing Rs. 13.25 lakhs under the re-organisation scheme. Six new tube-wells have been sunk in the town. A clear water reservoir has been constructed and the old filters have been renovated. Two new overhead water towers have been constructed and much improvement has been made to waterworks. The cost of the scheme has now been revised to Rs. 24 lakhs and the scheme has been carried over to the Second Plan.

(12) *Monghyr*.—Monghyr was supplied with piped water-supply by deriving water from river Ganga from the Kastharini Ghat, and the pumps were placed on a floating barrage. The place being rocky, no tube-wells could be sunk and supply in the towns was inadequate. The waterworks have been reorganised with laying of additional mains and construction of water towers. Laying of mains in Fort area has been completed. Clear water reservoir has been completed and settling tank and slow sand filters have been completed.

A supplementary estimate costing Rs. 29.62 lakhs has been prepared by the Chief Engineer, Public Health Engineering Department which is being considered by the State Government. The scheme has been carried over to the Second Five-Year Plan.

The water-supply schemes for Arrah, Bettiah, Purulia, Khagaria. Forbesganj and Purulia were sanctioned at later stage and the work is under progress.

Rural Water-Supply.

The question of providing every village with a surface well or tube-well for supply of pure drinking water in the State of Bihar presents a huge task. The problem is acute due to the nature of the soil. The

districts of North Bihar are subject to heavy floods each year and during floods, surface wells get submerged under water and become unfit for supply of pure drinking water. On the other hand, the South Bihar areas, specially the districts of Chotanagpur and Santal Parganas in Bhagalpur Division, have rocky soil, and there is great difficulty in finding out a constant source of water-supply.



A covered well in a rural centre.

The State Government were trying to solve the problem of water-supply within limited resources they had. Prior to 1947-48, a sum of Rs. 1.5 lakhs was provided annually in the budget and grants were given to the District Boards for sinking of wells. This amount was doubled from 1947-48. A sum of Rs. 3 lakhs was given to the District Boards each year to meet emergent situation. But it was noticed that there was delay in utilising the grants for construction of wells. So from 1950-51, the amount, which was previously allotted to the District Boards, are now being placed at the disposal of the Gram Panchayats for construction of wells.

In the First Five-Year Plan, a provision of Rs. 14 lakhs was available for this scheme. The entire amount was placed at the disposal of the District Officers for construction of wells. The total amount spent during the period was Rs. 14.19 lakhs. In addition to this, provision

for supply of pure drinking water was available under Community Project and N. E. S. programme, flood relief, and welfare schemes for backward classes. Altogether, 38,273 surface wells and tube-wells were provided throughout the State during the Plan period. The statement below shows the number of wells and tube-wells sunk by various departments during the Plan period :

Name of Department.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.	Total
1	2	3	4	5	6	7
Gram Panchayat ..	541	411	564	624	..	2,140
Revenue Department (local works programme).	..	..	171	1,447	6,966	8,584
Revenue Department (Improvement grant).	..	..	218	1,209	1,830	3,257
Welfare Department (for scheduled castes).	..	..	62	130	96	288
(For scheduled tribes) ..	..	..	88	165	63	316
Community Project ..	..	9	194	781	321	1,305
Community Development	..	1	32	145	651	829
N. E. S. ..	..	..	..	1,575	3,277	4,852
L.S.-G. Department ..	1,155	687	4,860	4,000	6,000	16,702
Total ..	1,695	1,108	6,189	10,076	19,204	38,273

The statement does not indicate the number of tube-wells sunk by Agriculture Department, which though meant primarily for agricultural purposes, can also be used for obtaining drinking water.

During the later part of 1954, Government of India introduced a scheme of National Water-Supply and Sanitation programme specially for rural areas, for which they provided grants to the States to the extent of half the cost on such schemes. The following projects were sanctioned under this scheme.

Name of Projects.	Estimated cost. Rs.
1. (a) Water-supply to Dipnagar, Bargaon, Nalanda, Silao and Rajgir (including subsidy at the rate of Rs. 30 per family for 8,400 persons of villages other than Rajgir which is going to be sewerred, and Rs. 20,000 for public latrines in Rajgir).	13,13,900
(b) Sewerage and sewage disposal for Rajgir village ...	3,95,771

Name of Projects.	Estimated cost. Rs.
2. (a) Water-supply to Bodh Gaya and 8 surrounding villages (including subsidy at the rate of Rs. 30 per family for 4,000 people of the 8 villages for borehole or dug well latrines).	3,15,000
(b) Sewerage and sewage disposal for Bodh Gaya	3,62,600
3. Water-supply to 20 villages round Nabinagar Road Railway Station (including subsidy at the rate of Rs. 30 per family for 10,000 people of the 20 villages for borehole or dug well latrines).	6,78,000
4. Water-supply to Singheshwar Asthan and 9 neighbouring villages in the district of Saharsa (including subsidy at the rate of Rs. 30 per family for 12,000 persons of the ten villages and Rs. 20,000 for public latrines for Mela.	7,64,000
5. Water-supply to Basukinath, Jamundi and five other villages in the district of Santal Parganas (including subsidy at the rate of Rs. 30 per family for 5,500 people of the 7 villages for borehole or dug well latrines and Rs. 10,000 for public latrines for floating population of Basukinath and Jarmundi).	5,18,000
6. Water-supply to Areraj in the district of Champaran (including subsidy at the rate of Rs. 30 per family for 2,000 persons of Areraj and 10,000 for public latrines for floating population).	2,37,000
7. Jharia water-supply scheme	75,00,000
Total	<u>1,20,84,271</u>

The significant feature of these projects is that they cover groups of villages as distinct from individual village. Considerable progress has already been made on the execution of these projects. A sum of Rs. 58 lakhs was spent by Public Health Engineering Department by March, 1956 on this scheme.

STATEMENT OF PUBLIC HEALTH AND AVAILABLE MEDICAL FACILITIES BEFORE AND AFTER THE FIRST FIVE-YEAR
PLAN IN THE STATE OF BIHAR.

	Patna.		Gaya.		Shahabad.		Muzaffarpur.		Saran.		Champanan.		
	Before.	After.	Before.	After.	Before.	After.	Before.	After.	Before.	After.	Before.	After.	
	1	2	3	4	5	6	7	8	9	10	11	12	13
A. PUBLIC HEALTH.													
Total death rate (per 1,000) ..	12.63	10.24	19.49	23.67	17.26	9.86	13.51	11.57	10.19	11.94	15.90	9.56	
Total birth rate ..	18.611	18.64	29.88	24.94	29.83	19.53	24.64	25.91	17.46	23.62	22.10	19.51	
Death from Cholera ..	0.82	0.23	1.01	2.07	0.61	0.03	0.98	0.04	0.27	0.05	1.60	Nil	
Death from Small-pox ..	0.22	0.06	0.47	0.45	0.40	0.09	0.07	0.03	0.31	0.01	0.40	Nil	
Death from Plague ..	Nil	Nil	Nil	Nil	Nil	Nil	few	Nil	Nil	Nil	few	Nil	
Death from Fever ..	8.63	7.28	14.25	18.01	13.11	8.50	11.33	10.73	6.59	8.22	11.58	7.82	
Death from other causes ..	2.92	2.78	3.76	3.97	3.14	1.83	1.13	1.16	3.02	3.47	4.94	1.67	
Infantile mortality rate ..	96.37	107.76	120.87	168.85	111.24	142.28	61.40	52.86	63.50	58.53	86.20	75.42	
B. AVAILABLE MEDICAL FACILITIES.													
Hospitals and Dispensaries ..	59	64	60	61	49	54	43	44	29	31	43	48	
Hospital beds ..	1,365	1,433	455	496	453	457	311	346	366	381	357	362	
T. B. beds ..	24	44	..	10	..	10	..	10	..	10	..	10	
Doctors in Government Institutions in districts in M. C. and H.	38	58	18	22	19	20	12	18	9	19	15	15	
Nurses in Government Institutions in districts and in M. C. and H.	83	121	13	24	2	7	4	6	4	8	18	24	
Lady Health Visitors ..	..	1	..	..	..	..	..	..	..	..	..	..
Midwives ..	1	2	4	10	2	2	..	..	..	..	..	1
Trained Dais ..	7	13	2	9	7	9	2	10	2	8	1	7	
Health Workers and Sanitary Inspectors.	36	47	52	63	43	44	37	39	40	44	36	34	
Vaccinators ..	..	84	..	102	..	89	117	..	..	105	..	84
Disinfectors ..	..	62	..	76	..	66	52	..	..	58	..	50

STATEMENT OF PUBLIC HEALTH AND AVAILABLE MEDICAL FACILITIES BEFORE AND AFTER THE FIRST FIVE-YEAR PLAN IN THE STATE OF BIHAR—*contd.*

	Darbhanga.		Monghyr.		Purnea.		Bhagalpur.		Shaharsa.		Santal Parganas.	
	Before.	After.	Before.	After.	Before.	After.	Before.	After.	Before.	After.	Before.	After.
1	14	15	16	17	18	19	20	21	22	23	24	25
A. PUBLIC HEALTH.												
Total death rate (per 1,000) ..	13.94	11.34	12.40	7.05	7.66	5.30	10.56	8.17	8.12	5.61	8.89	5.75
Total birth rate ..	22.45	26.07	17.97	13.42	10.09	12.95	15.36	14.75	13.04	15.17	10.36	9.61
Death from Cholera ..	0.50	0.29	0.61	0.04	0.90	0.01	0.72	0.07	1.37	0.24	0.33	0.03
Death from Small-pox ..	0.16	0.03	0.28	0.04	0.08	0.02	0.57	0.09	0.12	0.02	0.35	0.01
Death from Plague ..	few	Nil	few	Nil	..	..	..	..	..	..	..	..
Death from Fever ..	11.86	9.75	9.57	6.25	6.04	4.64	8.17	6.85	6.21	4.87	7.73	5.29
Death from other causes ..	1.42	1.05	1.94	1.09	0.64	0.70	1.10	1.66	0.42	0.48	0.48	0.25
Infantile mortality rate ..	68.70	63.74	80.85	74.68	96.47	40.40	75.80	72.28	35.74	29.37	75.86	58.73
B. AVAILABLE MEDICAL FACILITIES.												
Hospitals and Dispensaries ..	55	61	40	41	62	65	25	32	31	33	38	48
Hospital beds ..	604	756	363	465	238	238	203	243	161	193	286	361
T. B. beds ..	..	24	..	10	..	10	..	10	..	10	..	20
Doctors in Government Institutions in district in M. C. and H.	22	38	11	17	9	18	10	12	40	57	17	30
Nurses in Government Institutions in districts and in M. C. and H.	37	51	1	1	2	5	2	4	2	3	3	4
Lady Health Visitors ..	..	1	..	1	..	..	..	..	..	..	..	..
Midwives ..	..	7	..	..	..	1	..	..	..	4	..	1
Trained Dais ..	11	38	4	4	1	36	3	11	9	33	3	28
Health Workers and Sanitary Inspectors.	31	32	30	35	43	45	25	29	21	20	40	54
Vaccinators ..	..	125	..	95	..	84	..	48	..	43	..	77
Disinfectors ..	..	48	..	52	..	60	..	38	..	32	..	72

STATEMENT OF PUBLIC HEALTH AND AVAILABLE MEDICAL FACILITIES BEFORE AND AFTER THE FIRST FIVE-YEAR PLAN IN THE STATE OF BIHAR—*concl'd.*

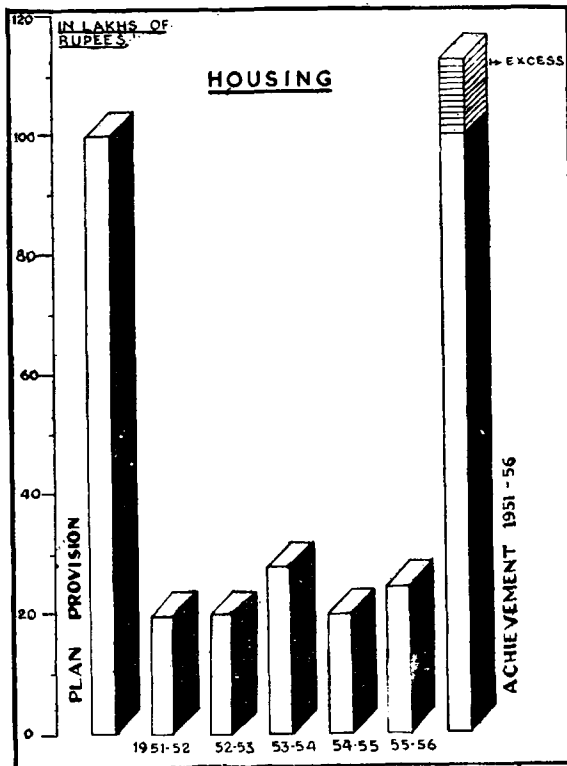
	Ranchi.		Hazaribagh.		Singhbhum.		Palamau.		Manbhum.	
	Before.	After.	Before.	After.	Before.	After.	Before.	After.	Before.	After.
1	26	27	28	29	30	31	32	33	34	35
A. PUBLIC HEALTH.										
Total death rate (per 1,000)	14.36	8.51	9.34	8.70	10.52	4.62	15.02	13.85	11.34	8.33
Total birth rate	18.71	13.81	14.31	17.79	16.36	10.78	24.07	24.79	18.69	14.86
Death from Cholera	0.14	0.02	0.30	0.04	0.10	..	0.52	0.01	0.79	0.06
Death from Small-pox	0.14	0.02	0.08	0.02	0.61	0.04	0.43	..	0.10	0.04
Death from Plague .. ..	..	..	..	..	..	..	..	..	..	..
Death from Fever	12.56	7.83	7.96	8.78	8.23	3.74	12.20	12.07	9.23	7.27
Death from other causes	1.52	0.99	1.00	0.87	0.58	0.24	1.87	1.76	1.22	1.00
Infantile mortality rate	75.98	72.82	58.93	36.63	60.63	34.87	54.49	76.88	37.16	31.72
B. AVAILABLE MEDICAL FACILITIES.										
Hospitals and Dispensaries	36	58	47	60	41	41	23	27	44	52
Hospital beds	480	648	454	464	161	207	175	204	654	654
T. B. beds	185	233	..	10	..	10	..	10	..	10
Doctors in Government Institutions in districts in M. C. and H.	25	40	16	23	11	25	11	18	10	10
Nurses in Government Institutions in districts and in M. C. and H.	44	60	6	9	1	2	3	6	3	8
Lady Health Visitors .. ..	..	..	..	..	..	..	..	..	..	..
Midwives	1	1	2	5	2	5	..	..	..	..
Trained Dais	3	3	1	19	14	34	..	9	2	21
Health Workers and Sanitary Inspectors	45	42	49	44	13	27	30	32	33	37
Vaccinators .. ..	..	62	..	59	..	46	..	31	52	52
Disinfectors .. ..	..	12	..	66	..	36	..	40	..	52

CHAPTER XV.

HOUSING.

The problem regarding provision of suitable houses for the major section of the population, living in slums and unsanitary conditions, is of a very huge magnitude. Before the advent of independence, very little had been done towards solving this problem. Within the limited financial provision of the First Five-Year Plan, it was not possible to undertake any ambitious scheme of housing programme. But a beginning was made in setting up a proper organisation for planning housing projects.

A Department of Housing was created in July, 1955, with a part time Secretary and a Deputy Secretary with an unit of Engineers, Overseers, draftsmen, etc. After the establishment of this department, housing activities of all departments of State Government, except Public Works Department, have been brought together under this organisation. This department was made responsible for planning and execution of various housing projects to meet the different requirements of the community.



In the First Plan, the following three schemes were included :—

Scheme.	Provision (in lakh rupees).
(1) Industrial Housing	100.00
(2) Construction of houses for sweepers ...	11.20
(3) Construction of houses for landless Harijans	6.33
Total ...	117.53

Of these, this scheme on industrial housing is shown under the head "Housing" in the State Plan. The other two schemes formed part of general schemes on amelioration of backward classes, in the First Plan, executed by the Welfare Department.

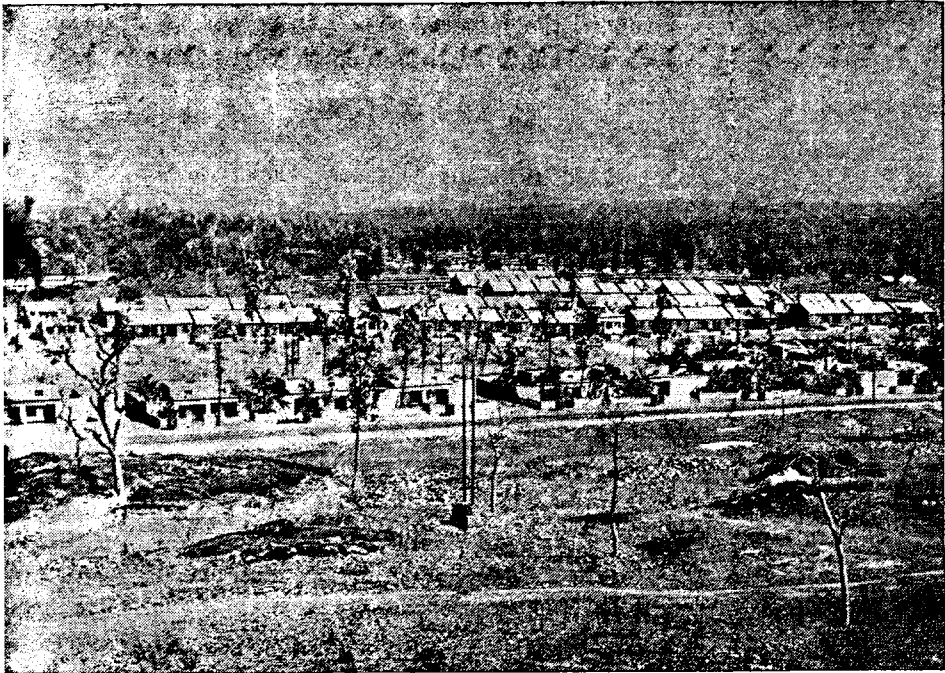
Industrial Housing.

This scheme was intended to provide tenements for the industrial workers in the State. By a resolution passed unanimously at a meeting of the Bihar (Central) Labour Advisory Board, which is a tripartite body, consisting of the representatives of the employers, employees and the State Government, it was decided in 1950, that the housing of the industrial workers was the responsibility of the employers, and the State Government should give them such assistance as may be necessary. Under the Bihar Scheme, the State Government gave 50 per cent of the cost of construction of houses as loan at 3 per cent interest recoverable in 25 annual equated instalments, and the remaining 50 per cent has to be found by the employers. The statement below gives the distribution of loans under this scheme to the different industrial concerns :—

Recipients of loans.	Amount (rupees in lakh).
(1) Tata Locomotives	80
(2) Rohtas Industries	20
(3) Tatanagar Foundry	2.5
(4) Dehri Rohtas Light Railway, Dalmianagar ...	5
(5) S. K. G. Sugar, Ltd., Lauria	5
Total ...	112.5

Under this scheme, the employers meet the shortfall in the rent and all the losses. The workers pay rent, which is $2\frac{1}{2}$ per cent of the cost of construction of the tenements including provision of ancillary services, but excluding the cost of land and its development. In no case the rent is to exceed 10 per cent of the wages. Government have also laid down rules of allotment. The tenements constructed under this scheme are mortgaged to Government for a period of 25 years or until the full redemption of loan, whichever is earlier. At the end of this period, the ownership of the houses passes on to the employers. The employers, therefore take all the interest in putting up satisfactory tenements. The average cost of construction of the two-roomed tenements is Rs. 5,400, in addition to Rs. 1,200 per unit for ancillary services. Accommodation in the tenements consists of two rooms each of $12' \times 10'$, two Verandahs 7 ft. wide, kitchen, store, bathroom, flush latrine and a courtyard. A brief review of the constructional work done, with the loan assistance provided by Government, is given below :—

Tata Locomotives.—The Tata Locomotives completed construction of 1,403 tenements during the Plan period. One bachelors' hostel for 56 persons and 178 tenements were under construction, which are expected to be completed in all respects by the end of 1956. With the



Industrial Housing Colony, TELCO, Jamshedpur.

loan provided in 1954-55 of a sum of Rs. 10.5 lakhs, an additional 262 tenements were taken for construction by them, which are expected to be completed by March, 1957. A sum of Rs. 14.5 lakhs was advanced by the State Government in 1955-56. Another set of 400 tenements was taken up for construction by the Company. These tenements are expected to be completed by the end of 1957.

Rohtas Industries.—A loan of Rs. 20 lakhs was given to Rohtas Industries in 1952-53. 600 tenements were taken up for construction by them, of which 80 per cent of the work was completed during the Plan period. The construction is expected to be completed in all respects within 1956.

Tatanagar Foundry.—A loan of Rs. 2.5 lakhs was given to them in 1954-55. They took up construction of 100 tenements, which are expected to be completed within 1956.

Dehri Rohtas Light Railway; Dalmianagar.—During 1955-56, a loan of Rs. 5 lakhs was advanced to them. 100 tenements are under construction and it is expected that they will be completed by October, 1957.

S. K. G. Sugar, Ltd., Lauria.—During 1955-56, a loan of Rs. 5 lakhs was given to the factory. They took up construction of 140 tenements, which are expected to be completed by March, 1957.

Other Schemes.

The schemes executed by the Welfare Department related to provision of quarters for municipal sweepers and homeless Harijans. A brief review of the work done during the period is given below :—

Construction of Houses for Sweepers.—A sum of Rs. 11.20 lakhs was provided in the First Five-Year Plan for the construction of 200 quarters for municipal sweepers. The cost for twin quarters, which accommodates two families, is about Rs. 5,500. The entire amount was given to the local bodies as a free grant by the State Government. The physical target was fully achieved.

Construction of houses for landless and homeless Harijans.—A sum of Rs. 6.33 lakhs was provided in the First Five-Year Plan. As against the target of 1,160 houses, 1,404 houses were constructed during the Plan period. Each house cost about Rs. 800. The beneficiaries were required to contribute 25 per cent of the cost in the shape of labour or materials. The remaining 75 per cent of the amount was given as free grant. The buildings were of mud and thatch.

The following additional housing schemes were taken up for execution in the State, with the assistance of Government of India :—

Sahibganj Labour Colony.—A loan of Rs. 5.66 lakhs was given to Messrs. Dwarka Das Radha Krishna and Bharatiya Engineering Works, Sahibganj, in 1951-52, out of which the Central Government contributed two-third of the amount as interest free loan and State Government provided one-third at 3 per cent interest. 108 one-roomed tenements were constructed at Sahibganj (Santhal Parganas).

Low Income Group Housing Scheme.—This scheme was entrusted to the Patna Improvement Trust, and a provision of Rs. 10 lakhs was made for that purpose in 1955-56. About 240 acres of lands were acquired in Patna for development and construction of suitable tenements for low income group people residing in slum areas, which had to be acquired. The tenements are already under construction. The scheme will be continued during the Second Five-Year Plan.

Co-operative Housing Scheme for Government Servants.—Certain Government servants of Patna have formed a co-operative housing society known as Patliputra Co-operative Housing Construction Society Ltd., with the object of constructing houses for their members. A sum of Rs. 9 lakhs was advanced by the State Government as loan to the Society at the rate of 3 per cent interest returnable in 25 years. All classes of Government servants are eligible for the membership of the society.

CHAPTER XVI.

LABOUR WELFARE.

Industrial productivity is conditioned to a large extent by the well-being of the workers. Labour Welfare is, therefore, accepted as not merely an essential right of the workers engaged in productive enterprise, but an inherent condition of improving industrial efficiency. The idea of labour welfare which formerly applied only to industrial workers is now extended to cover agricultural labour also.

The following six schemes pertaining to labour welfare were included in the First Five-Year Plan for execution in Bihar :—

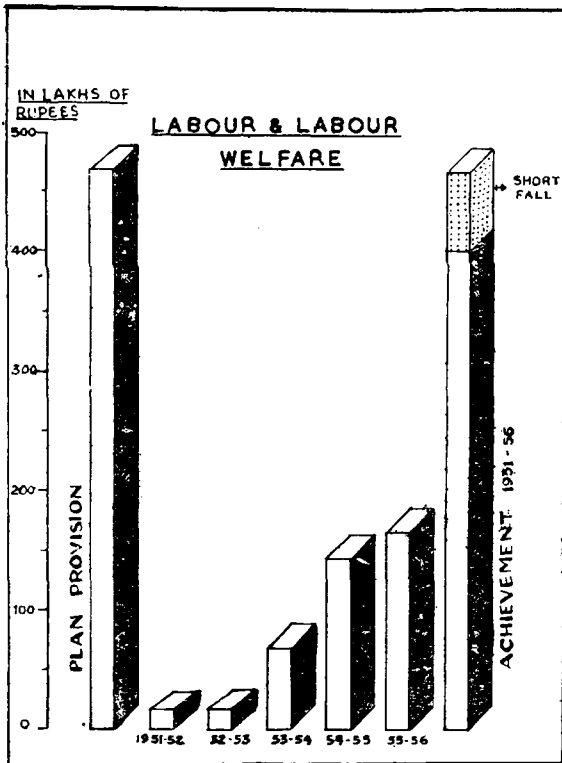
Schemes.	Plan provision (rupees in lakh).
(1) Implementation of the Minimum Wages Act in Agriculture.	3.12
(2) Strengthening of the Factory Inspectorate	1.56
(3) Strengthening of the Boilers Inspectorate	0.47
(4) Administration of the Industrial Statistics Act	2.45
(5) Implementation of the Employees' State Insurance Act.	1.38
(6) Welfare Centres 	14.30
Total	<hr/> 23.28 <hr/>

The progress in each field of development indicating the results and level of development reached at the end of the First Five-Year Plan period is given below :—

Minimum Wages in Agriculture.

The Minimum Wages Act came into force in the year 1950. The plan provided Rs. 3.12 lakhs for the strengthening of the administrative machinery of the Labour Department, for implementation of the Minimum Wages Act in agriculture in the whole of the State, and also for the implementation of the various labour laws. It was decided to appoint four Labour Superintendents and seven Labour Officers, and a

number of Labour Inspectors for the implementation of the Act under the direct control and supervision of one full-time Chief Inspector of Agricultural Wages. These posts were created in June, 1953. Prior to the First Five-Year Plan, the total strength of Labour Officers was only four, and there was no post of either Labour Superintendent or Labour Inspector. During the plan period, the post of Chief Inspector of Agricultural Wages, all the four posts of Labour Superintendents and



several posts of Labour Officers were filled up, each district having one Labour Officer. 54 posts of Labour Inspectors were also filled up. Though another 60 posts of Labour Inspectors were created, the posts could not be filled up, chiefly, because the fixation of minimum wages in Bhagalpur and Tirhut Divisions could not be enforced during the First Plan period. It has been decided by the State Government to proceed cautiously in the enforcement of the Minimum Wages Act in agriculture in view of the various difficulties involved in it.

The State Government fixed the minimum wages for all employments in Part I of the Schedule of the Act. The minimum wages for certain categories of workers of those employments which were left out

earlier, were fixed by the end of 1954. As for the agricultural workers, the State Government fixed the minimum wages in the district of Patna on experimental basis in the first instance. As the experiment proved successful, and with the experience gained, the minimum wages were fixed in the districts of Gaya and Shahabad in 1953. The operation of this Act was then extended to the whole of the Chotanagpur division by the end of 1954. Rapid survey of wages and other preliminary enquiries for fixation of minimum wages in Bhagalpur and Tirhut Divisions were also taken up. 26 Labour Inspectors were appointed for Patna Division and 28 Labour Inspectors for Chotanagpur Division to supervise the operation of the Act.

Factory Inspectorate.

With the enforcement of the Factories Act, 1948, the number of registered factories in Bihar considerably increased. The total strength of the Factory Inspectorate, formerly, consisted of one Chief Inspector of Factories and seven Inspectors of Factories. With the increase in the number of registered factories, it was not possible for the staff, as it stood in 1951-52, to cope with the proper administration of the Factories Act and the rules framed thereunder. With a view to increasing the efficiency of the Inspectorate and to ensure more effective supervision of the factories, one post of Deputy Chief Inspector of Factories and two more Inspectors of Factories were provided during the First Five-Year Plan. The appointment of the Deputy Chief Inspector of Factories was made in December, 1953 and that of two Inspectors of Factories during the year 1954-55. Up to March, 1956, the total expenditure was Rs. 1.54 lakhs as against the provision of Rs. 1.56 lakhs in the plan. The Inspectorate was reorganised and more circles were created to implement the scheme. As a result of this increase, a larger number of factories were registered.

In view of the rapid industrialisation, calling for the solution of new problems, both for handling and safety arrangement, high technical skill and knowledge for handling modern equipments became necessary to conduct inspection of modern factories. During this period, a small unit of specialists, qualified for duties of factory Inspectorate, to carry on investigation and research in day to day problems and to advise field staff on all such matters, was set up. This specialist unit under the Medical Inspector of Factories, Bihar looked after the health and hygiene of the industrial workers, and an Industrial Hygiene Laboratory was set up at Patna. Silicosis survey in refractories industries in Bihar was conducted by the Medical Inspector of Factories, under the guidance of the Chief Inspector of Factories, and with the

help and assistance of the Chief Adviser of Factories, Ministry of Labour, Government of India and the Industrial Hygiene Unit. This survey report, which has since been published, has furnished valuable data on the incidence of silicosis and on its rate of frequency in relation to dust exposure. Taking into consideration the development of chemical factories in the State of Bihar, one permanent post of Chemical Inspector of Factories was sanctioned during this period to complete the team of experts. Unfortunately, this post though sanctioned, could not be filled up due to non-availability of suitable candidates.

Boiler Inspectorate.

For the proper inspection of boilers, necessity was felt for suitable augmentation of the strength of the Inspectorate. Before the First Plan, the total strength of the Boiler Inspectorate consisted of seven Inspectors. A scheme for strengthening the Boiler Inspectorate was included in the State Plan, with an original provision of Rs. 1.09 lakhs, which was subsequently revised to Rs. 0.47 lakh. This provided for the appointment of two additional Inspectors of Boilers. The two Inspectors of Boilers were appointed during 1953-54. The proposal about creation of different circles in the State for better administration is under consideration of the State Government.

Industrial Statistics.

It was intended to cover 63 industries in this State, within the purview of the Census of Manufacturing Industries Rules, 1945, for the administration of the Industrial Statistics Act, 1942. A sum of Rs. 3 lakhs was originally provided in the Plan under this Scheme, which was subsequently revised to Rs. 2.45 lakhs. The total expenditure, however, amounted to Rs. 2.59 lakhs during the Plan period. A statistical wing with a Statistical Authority, Statistical Officer and other subordinate staff was set up. Several surveys, such as industrial housing survey, survey of industrial indebtedness and implementation of the Industrial Statistics Labour Rules, were taken up. Under the Industrial Statistics Labour Rules, statistics of employment, attendance, earnings and hours of work of industrial workers, engaged in factories registered under section 2(m) of the Factories Act, 1948, were collected. The industrial housing survey was completed during the plan period. The main object of this survey was to assess potential demand of housing for industrial workers at Jamshedpur.

The survey of indebtedness of industrial workers has been started after completing the preliminary work. The survey is still continuing. It has been decided by Government to conduct a sample survey at Jamshedpur covering 1,000 workers and at other important industrial centres in Bihar. The actual position regarding indebtedness would be known after the sample survey has been completed. This survey has proved very useful and Labour Department are now in possession of some important statistics which would help them in taking decision in matters connected with labour. The housing survey has gone a long way in providing Government with the information regarding industrial housing.

Employees' State Insurance.

The scheme, included in the State Plan, envisaged provision of medical benefits to insured workers, to cover employees working in factories (using power and employing 20 or more persons at a time), and whose remunerations, in the aggregate did not exceed Rs. 400 per month. The State Government's responsibility under the Act is to provide medical care to insured persons and fix up the nature and scale of medical benefit, etc. The cost of this scheme is to be borne by the Employees' State Insurance Corporation and the State Government in the ratio of 3 : 1. A sum of Rs. 1.97 lakhs was originally provided in the Plan for implementing this scheme, which was revised to Rs. 1.38 lakhs. It was decided to implement the Employees' State Insurance Scheme in the first instance at only two places, viz., Katihar and Patna, including Dinapore, and to extend its benefits subsequently, to other places like Kumardhobi, Dalmianagar and Monghyr and to cover the rest of the State gradually. Unfortunately, the implementation of the scheme could not be taken up till the year 1954-55 due to certain unavoidable reasons. The post of the Administrative Medical Officer and other staff for the administration of the scheme was sanctioned during the plan period and it was filled up in 1955. During the year 1955-56, important surveys were conducted and it was expected that the scheme would be implemented at least at Katihar and Patna, including Dinapore, during the year 1955-56.

This decision of the State Government could not be given effect to, as the arrangements regarding the implementation of the scheme could not be finalised by the Employees' State Insurance Corporation. The Corporation was opposed to the idea of implementing the scheme, in the beginning, at places where there was small concentration of workers and they preferred to take up only those areas where there is heavy concentration of workers. A proposal was made on their behalf

to enforce the scheme at Jamshedpur, by entering into arrangements with the management, regarding the continuation of their various medical facilities. As the members of the families of the workers are getting medical facilities from the employers at Jamshedpur and some other industrial centres in this State, the Corporation, as well as the State Government, felt difficulties in implementing the scheme at such places, unless the scheme itself was revised to extend the benefits to the families of the workers. As the Corporation was not able to revise this scheme, extending its benefits to the families of the workers, its implementation at Jamshedpur and other important industrial centres could not be taken up. For these reasons a sum of Rs. 11,000 was only spent during the First Five-Year Plan period against the revised provision of Rs. 1.38 lakhs. It has now been decided to take up the execution of this scheme during the Second Five-Year Plan period.

Welfare Centres.

At the time when the scheme was included in the First Five-Year Plan, there were only three Government Welfare Centres, in this State, at Jamshedpur, Katihar and Dalmianagar. None of these welfare centres had buildings of its own. It was proposed to have at least five fully equipped welfare centres by the end of 1955-56. The scheme also provided for appointment of Welfare Officers, Lady Welfare Officers and Sewing Instructresses, besides provision of recreation and sports for labourers and their families and health and hygiene centres. A sum of Rs. 6.55 lakhs was originally provided in the First Five-Year Plan for this purpose, which was revised to Rs. 14.30 lakhs due to increased cost of building. Physical targets were achieved. During the plan period all the five model welfare centres, with staff and equipments, were set up. The buildings for four labour welfare centres and residential accommodation for the staff of the centres in respect of three centres at Katihar, Dalmianagar and Jamshedpur were taken up for construction. The buildings for the fifth centre at Biharshariff could not be taken up, during the plan period.

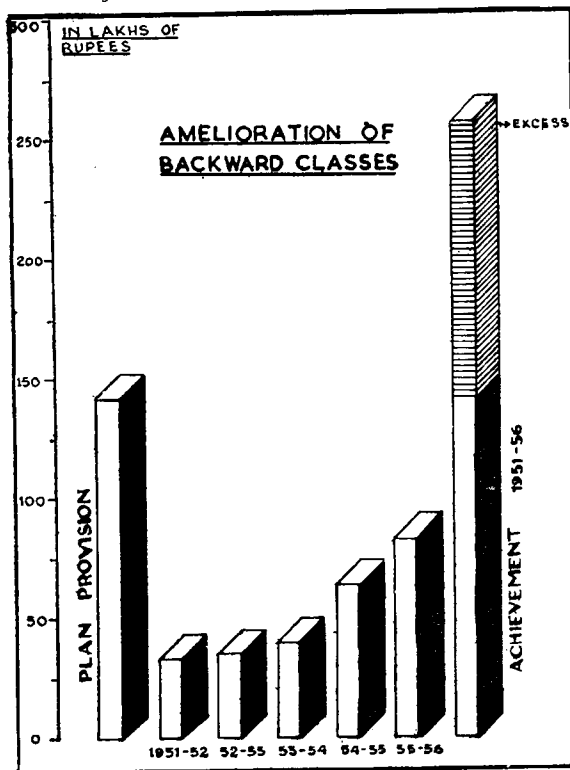
The buildings of the welfare centre at Jamshedpur was completed during the plan period, and the others are under construction. A female section has been opened at each of the Welfare Centre and an Assistant Lady Labour Welfare Officer has been put incharge of this section. These welfare centres provided for recreation, sports, including indoor and outdoor games, night schools, handicrafts, sewing, etc. Each of these centres has one Labour Welfare Officer and one Assistant Lady Welfare Officer, besides other staff.

CHAPTER XVII.

AMELIORATION OF BACKWARD CLASSES.

The State has a very large population of scheduled castes, scheduled tribes and other backward classes. The tribal population, enumerated in Bihar during the last census, was 40.49 lakhs, which works out to 10.06 per cent of the total population. The population of scheduled castes is 50.58 lakhs, which is 12.57 of the total population. Other backward classes, enumerated as such, constitute 15.60 per cent of the total population, numbering 62.76 lakhs. Thus, over 38 per cent of the total population of Bihar consists of only backward classes. The various sections of this population have their own needs and problems. While the economic and educational backwardness is common to all, untouchability and other social disabilities are problems peculiar to the scheduled castes.

For meeting the special needs and problems of the backward classes, the State Plan included 18 schemes with a provision of Rs. 141.4 lakhs. Considerable assistance was available from the Centre also;



many of the schemes in this category qualified for grants from Government of India under Article 275(1) of the Constitution outside the State Plan. The total expenditure on welfare schemes amounted to Rs. 257.7 lakhs during the plan period, including assistance from the Centre. A brief review of the work done during the plan period is given in the following paragraphs :—

Administration.—There were three schemes in the State Plan for strengthening the administration of the various welfare schemes intended for the backward classes. These were :

	Plan provision (Rs. in lakh).
(1) Establishment charges for the staff employed for aboriginal welfare work.	19.35
(2) Establishment charges for staff employed for Harijan Welfare work.	14.27
(3) Establishment charges for staff employed for backward Muslim communities welfare work.	1.21
Total	34.83

The District Officers have been entrusted with the execution of the programme of welfare in their respective districts. They are assisted in their work by District Aboriginal Welfare Officers and Thana Welfare Officers. Before 1951, there were 167 Thana Welfare Officers, but the number was increased to 239 during the Plan period. 3 Special Officers, each in charge of the welfare of Paharias in Santhal Parganas, Tana Bhagats in Ranchi and Rohatas Adhaura scheme in Shahabad, were appointed. For proper execution of the welfare programmes of the scheduled castes, 4 Divisional Welfare Officers, one for each Division of Bihar with Headquarters at Patna, Muzaffarpur, Bhagalpur and Ranchi, were appointed. They are assisted by 17 District Harijan Welfare Officers, one for each district, excepting Hazaribagh, where the work is managed by the District Development Officer. 107 zonal Sewaks, spread over the three Divisions of the State, namely, Patna, Tirhut and Bhagalpur, one for 2 or 3 thanas, were also appointed. These officers organise, integrate and implement the many sided programme for Harijan welfare work under the immediate control of the respective District Officers.

For backward Muslim communities, one Superintendent and 4 Divisional Supervisors were appointed with effect from the year 1954-55. These posts were created in the year 1947, but were abolished from

1st September, 1952, as it was then felt that Education Department could supervise the work of 560 Maktab opened in the different parts of the State. Subsequently, with effect from the year 1954-55, these posts were recreated, as it was considered necessary to have this staff for attending to other aspects of the welfare of the backward Muslim communities in addition to the supervision of the Maktab.

There is also a Special Officer for backward classes in the district of Champaran to look after the welfare of Tharus and Dhangars, who are most backward among the backward classes of the State.

The total expenditure on these three schemes amounted to Rs. 35.18 lakhs as against the total provision of Rs. 34.83 lakhs.

Scheduled tribes welfare.—The following six schemes were taken up in the State Plan for the welfare of the scheduled tribes:—

Name of the schemes	Plan provision (Rs. in lakhs).
1. Award of scholarships to tribal students	... 15.70
2. Construction of hostels for tribal students	... 15.17
3. Special scheme of aboriginal uplift in Santhal Parganas and Chotanagpur Division.	12.00
4. Opening of Graingolas	... .. 6.50
5. Grants-in-aid to institutions and individuals working for welfare of aboriginals, book grants, University fee, etc.	2.12
6. Scheme for cultural development of aboriginals	0.25
	Total 51.74

Scholarships.—Scholarships are awarded to the scheduled tribes students on the recommendations of specially constituted stipend committees. There are separate Committees for school and college students. For awarding stipends to school students, there are District Stipend Committees in each district, having scheduled tribes population, of which the District Inspectors of Schools are the Chairmen, and the District Welfare Officers are the Secretaries, except in Hazaribagh district, where the District Development Officer is the Chairman and the District Inspector of Schools, the Secretary. For award of stipends to the College students, there is a Central Stipend Committee, of which the Minister in charge, Welfare Department, is the Chairman, and the Secretary to Government in the Welfare

Department, the Ex-officio Secretary. The stipends are awarded at the following rates :—

College : Rs. 30 per month.

Schools—

Classes I to V—Rs. 6 per month.

Classes VI to VII—Rs. 10 per month.

Classes VIII to XI—Rs. 15 per month.

The total number of stipends awarded during the plan period is as follows :—

Year.	Number of stipends awarded.			
1951-52	1,915
1952-53	2,433
1953-54	2,718
1954-55	3,888
1955-56	5,096
			Total	16,050

The college students, who fail to get stipends from the Government of India, are awarded stipends by the State Government. The scheduled tribe students are also exempted from payment of the University or Board examination fee and the loss sustained by the University or the Board is reimbursed by Government. Besides, book grants are also given to the scheduled tribe students. This scheme has been receiving grants-in-aid from the Government of India under Article 275(1) of the Constitution from the year 1951-52.

Construction of hostels for aboriginal students.—The villages in Chotanagpur and Santhal Parganas are scattered, and the long distance between the villages and educational institutions is a great hindrance in the way of educational uplift. In order to remove this difficulty, Government have undertaken to build hostels where there are pressing need. The policy is to build a hostel at each thana Headquarters. The scheduled tribe students are not required to pay any seat rent. Government provides furniture, utensils, cook-cum-servants, lamps (where there is no electricity), etc. 57 hostels have been opened by 1955-56; 40 hostels are housed in Government building and the rest in

hired houses. 28 hostels buildings were constructed in the plan period. The districtwise distribution of these hostels is given below :—

Districts.	Number of hostels.		
Monghyr	...	...	1
Bhagalpur	...	...	1
Santhal Parganas	...	...	16
Ranchi	...	...	6
Hazaribagh	...	...	3
Singhbhum	...	...	22
Manbhum	...	...	8
			<hr/>
	Total	...	57
			<hr/>

This scheme also received grants-in-aid from the Government of India under Article 275(1) of the Constitution.

Aboriginal uplift in Santhal Parganas and Chotanagpur Division.— A special scheme for the welfare of Adivasis prepared by Syt. A. V. Thakkar, popularly known as Thakkar Bapa, was started in 1948, and is in operation. It is executed in the five districts of Chotanagpur Division through the agency of Adimjati Seva Mandal, Ranchi and in Santhal Parganas through the Santhal Paharia Sevak Mandal, Deoghar. The total number of schools opened under this scheme till 1950-51 was 243. During the First Plan period, 575 schools and 36 hostels have been maintained. The districtwise distribution of these schools and hostels is shown below :—

Name of district.	Number of schools.		Number of hostels.	
1. Gaya	..	..	1	..
2. Shahabad	..	..	10	..
3. Champaran	..	..	1	..
4. Monghyr	..	..	27	..
5. Santhal Parganas	..	..	73	5
6. Ranchi	..	..	207	21
7. Hazaribagh	..	..	86	5
8. Singhbhum	..	..	48	1
9. Manbhum	..	..	47	1
10. Palamau	..	..	75	3
			<hr/>	<hr/>
	Total		575	36
			<hr/>	<hr/>

The important feature of this scheme is that 20 per cent of the boys and girls in the hostels receive free food at Government cost. Besides,

under this scheme, 531 wells, 9 Cottage Industries centres, 11 Medical centres and 14 graingolas have been maintained during the First Plan period. 187 miles of roads have been constructed and 10 families were resettled in Santhal Parganas. The scheme also received grants-in-aid from the Government of India under Article 275(1) of the Constitution.

Graingolas.—Economic exploitation of aboriginals by greedy money and grain lenders was a serious problem. The Mahajans charged exorbitant rates of interest and the simple aboriginals, who once became indebted, could hardly come out of their clutches. To combat this evil, a scheme for opening graingolas was taken up. Grains stocked in these golas are issued to the aboriginals, primarily, for the purpose of seeds and also for consumption in times of scarcity. The loans in kind are realised with 25 per cent interest in kind. The scheme is run on business lines, and in course of some years, it is expected that it will not only become self-sufficient, but will be able to pay for the salary of Thana Welfare Officers and incidental expenses. The scheme has proved highly popular and beneficial; and reports indicate that unscrupulous Mahajans have either reduced the rates of interest on loans advanced by them or are being ousted from the field. This scheme aims at providing every unit of 20 adivasi villages with one graingola. 162 such graingolas were opened till 1950-51. So far 390 graingolas have been opened during the First Five-Year Plan period. The question of transferring these graingolas to Co-operative societies is also under the consideration of the Government. These graingolas are at present under the administrative control of the Welfare Department. Districtwise distribution of graingolas and graingola buildings opened and constructed by the Welfare Department up to the end of 1955-56 is noted below :—

Name of districts		No of grain-golas.	No. of buildings.
1.	Ranchi	96	9
2.	Hazaribagh	57	8
3.	Singhbhum	50	14
4.	Santhal Parganas	72	9
5.	Bhagalpur	4	1
6.	Manbhum	54	17
7.	Palamau	18	9
8.	Shahabad	8	1
9.	Monghyr	5	..
10.	Purnea	7	..
11.	Champaran	15	..

This scheme is also eligible for a grant from the Government of India under Article 275(1) of the Constitution.

Grants-in-aid.—Suitable grants-in-aid are given to non-official organisations, institutions and individuals working for the welfare of scheduled tribes. The Adimjati Seva Mandal and the Santhal Paharia Seva Mandal are also given grants-in-aid from time to time for the general welfare of adivasis. Besides these two organisations engaged in the work of welfare of adivasis in Bihar, there are a few other organisations of similar type in the State, as for example, Seva Kendra, Gumla, Nirban Ashram, Ranchi, Hindu Anathalaya, Ranchi, Chichan Mission, Mahuadanr and Kinkal Mission, Ranchi, who have been given suitable grants from time to time for the furtherance of their object.

Besides, suitable funds have been placed at the disposal of the District Aboriginal Welfare Officers for the welfare of the scheduled tribes. During the year 1954-55, the Adimjati Seva Mandal, Ranchi submitted a scheme of re-organisation of the non-official part of the work of the Mandal. A grant of Rs. 48,000 was received from the Government of India during the year 1954-55 for this scheme. The scheme, after due scrutiny, was sanctioned during the year 1955-56. Under this scheme, the Mandal will carry on work relating to the welfare of scheduled tribes from twenty different centres located in the tribal areas.

This scheme is eligible for a grant under Article 275(1) of the Constitution. The total number of institutions and organisations who were allowed grants is 43 up to 1955-56. Encouragement is given non-official agencies engaged in social service to enlist their whole hearted co-operation with Government in the work of Aboriginal welfare.

Cultural Development.—The question of preservation and advancement of Adivasi languages and culture has also received due attention of the State Government. Five cultural Boards for the major aboriginal tribes, namely, Santhal, Munda, Oraon, Ho and Kharia were constituted in the very beginning. Instead of having different Cultural Boards for different tribes, a common Cultural Board was formed.

Government also sanctioned the establishment of a Tribal Research Institute at Ranchi in the year 1953-54 for conducting research on right lines into the custom, manners, languages, culture, etc., of the tribes inhabiting the different parts of the State. The Institute functioning with one Director, 2 Assistant Directors, five Research Assistants, Laboratory Assistants and other ministerial and menial staff. Exhibits are being collected from all the tribes of the State for the museum. Many apparatus have also been purchased.

There was a provision in the scheme for rehabilitation of Kharia families. By the end of the plan period, 290 families were rehabilitated in the following three districts :—

Name of Districts.	Number of families rehabilitated.		
1. Ranchi	15
2. Singhbhum	255
3. Manbhum	20
		Total	290

Scheduled Castes.

The following four schemes were included in the Plan for the welfare of the scheduled castes :

Name of schemes.	Plan provision (Rs. in lakhs).
1. Award of scholarships to scheduled caste students	35.17
2. Construction of hostels for scheduled caste students.	2.35
3. Construction of Sweepers' quarters, University fee, book grants and other miscellaneous expenditure.	22.15
4. Grants-in-aid to institutions working for welfare of scheduled castes and individual grant to Harijan Sewak Sangh for Chautarwa Dome Settlement and Co-operative Credit Societies.	8.92
	Total
	68.59

Scholarships.—With a view to promoting education among the scheduled castes, the State Government have taken up the scheme of awarding scholarships. The rates of scholarships are the following :—

Schools—

Class I—Rs. 1 per month.

Classes II to III—Rs. 2 per month.

Classes IV to V—Rs. 4 per month.

Classes VI to VII—Rs. 7 per month.

Classes VIII to XI—Rs. 10 per month.

Colleges—Rs. 35 to 45 per month.

Technical stipends—Rs. 15 to 35 per month.

A total number of 45,209 stipends were awarded under this scheme. This scheme has been receiving grants-in-aid from the Central Government under the special grants-in-aid schemes of the Ministry of Home Affairs.

Hostels for scheduled caste students.—It has been the policy of the State Government to accommodate both Harijan and Non-Harijan students in the same hostel, because life in common hostels is bound to develop community and reciprocity of thoughts and provide opportunities for contact between different classes and communities which is essential for building up of strong nation. Since, however, it was not possible to accommodate all Harijan students in hostels functioning from before, Government have taken up opening of hostels. 17 hostels were opened and one building constructed for scheduled castes up to 1950-51. The number of hostels and buildings has since increased to 38 and 12 respectively by the end of 1955-56. The districtwise distribution of these hostels is shown below :—

Name of Districts.				Number of Hostels.
1. Patna	...	...	...	4
2. Gaya	...	...	...	5
3. Shahabad	...	...	...	6
4. Saran	...	...	...	4
5. Champaran	...	...	...	4
6. Muzaffarpur	...	...	...	3
7. Darbhanga	...	...	...	4
8. Bhagalpur	...	...	...	1
9. Purnea	...	...	...	1
10. Monghyr	...	...	...	3
11. Manbhum	...	...	...	2
12. Palamau	...	...	...	1
			Total	38

The scheduled caste students are awarded suitable book grants, hostel grants and other grants. They are also exempted from university examination fee, and the loss to the University or the Board in fees is reimbursed by Government. The number of students awarded book grants, university fees and other petty grant during the plan period was 14,705.

Grants-in-aid.—Government sanction suitable grants-in-aid to non-official organisations for removal of untouchability and for the welfare of the scheduled castes. Under this scheme, the State Government give financial assistance to the Bihar Harijan Sewak Sangh for running Credit Co-operative Societies in order to save the sweepers from debt and to extricate such of them as are already in debt from the clutches of rapacious money-lenders. This scheme is executed by the Harijan Sewak Sangh under the supervision of Registrar, Co-operative

Societies. The number of such Co-operative Credit Societies opened till 1955-56 was 39.

There is an old weaving shed at Chaüterwa Dome Settlement in the district of Champaran and due to lack of funds and requisite appliances, it was not in working order. In order to revive the weaving industry, the State Government had sanctioned a sum of Rs. 9,000 to the Harijan Sewak Sangh during 1953-54 and Rs. 3,000 during 1954-55.

Government have also taken steps to exempt the members of Ex-criminal Tribes from payment of irrigation charges. Under this scheme about 128 members of the Chaüterwa Dome Settlement have been benefited.

Primary and Residential schools have also been opened for the education of Harijan boys under this scheme. The number of such institutions maintained and given grants-in-aid till 1956 was 258. The districtwise distribution of Co-operative Societies organised and schools opened under this scheme is given below :—

Name of Districts.	Number of Co-operative Societies.	Number of Schools.
1. Patna	11	14
2. Gaya	2	20
3. Shahabad	5	14
4. Saran	2	12
5. Champaran	4	16
6. Muzaffarpur	2	18
7. Darbhanga	2	16
8. Bhagalpur	1	13
9. Purnea	4	14
10. Monghyr	2	15
11. Santhal Parganas	2	6
12. Saharsa .. .. .	..	7
13. Ranchi	1	5
14. Hazaribagh	1	9
15. Singhbhum .. .. .	..	4
16. Manbhum .. .. .	..	5
17. Dhanbad .. .. .	..	5
18. Palamau .. .. .	..	9
	• 39	202

Construction of Sweepers' quarters and other miscellaneous expenditure.—Along side the question of liquidation of debts of sweepers employed in Municipalities, Government took up the problem of providing them dwelling houses affording reasonable amenities of residence. The details in respect of housing programme have already been given in Chapter XV.

Welfare of other Backward Classes.

The following five schemes were included in the State Plan for amelioration of backward muslim communities and other backward classes :—

Name of Schemes.	Plan provision (Rs. in lakh).
1. Award of Scholarships and Book grants to backward Muslim Community students. ...	10.09
2. Construction of Hostels for backward class Muslim Community Students. ...	0.38
3. Grants-in-aid to Maktabas ...	9.60
4. Book grants, University fee, building grants-in-aid to libraries for Backward Muslim Communities. ...	1.26
5. Award of Scholarships to Backward class students ...	20.83
Total ...	42.16

Scholarships.—A scheme with a provision of Rs. 10.09 lakhs for backward muslim community students and another scheme with a provision of Rs. 20.83 lakhs for backward students were included in the State Plan. The scholarships are awarded by specially constituted Stipend Committees. For award of stipends to school students, there are four Divisional Stipend Committees, of which the Divisional Inspectors of Schools are the Ex-officio Secretaries. For awarding stipends to college students, there is a Central Stipend Committee, of which the Minister Incharge, Welfare Department, is the chairman

and the Secretary to the Government in the Welfare Department the ex-officio Secretary. These Committees are constituted every year. The scholarships to students reading in colleges and other technical institutions are awarded on the recommendation of the Central Stipends Committee and those reading in Schools on the recommendation of the Divisional Stipend Committees, subject to the approval of the Stipend Committee.

The following kinds of stipends are awarded to Backward Muslim students at the rates noted against each kind of stipend :—

1. School stipends—

Classes I to V—Rs. 2 per month.

Classes VI to VII—Rs. 6 per month.

Classes VIII to XI—Rs. 8 per month.

2. Madarsa stipends—

Junior stipends—Rs. 5 per month.

3. Stipends in Basic School—Rs. 10 per month.

4. College Stipends—

(i) Degree and Intermediate—Rs. 25 per month.

(ii) Post-graduate classes—Rs. 25 per month.

5. Medical stipends—Rs. 30 per month.

6. Engineering stipends—

(i) Bachelor of Civil Engineering—Rs. 30 per month.

(ii) Post-graduate classes—Rs. 25 per month.

7. Technical and Industrial stipends—Rs. 10 per month.

8. Tibbi stipends—

Tibbi College—Rs. 15 per month.

9. Shamshul Hoda Stipends—

(i) Mullah and Maulvi—Rs. 7 per month.

(ii) Alim and Fazil—Rs. 10 per month.

The total number of stipends awarded to the backward Muslim students during the plan period was 13,108 as against the plan target of 10,914. The annual distribution of these awards was as follows :—

Year.	Number of stipends awarded.			
1951-52	2,130
1952-53	2,212
1953-54	2,150
1954-55	2,175
1955-56	4,441
			Total	13,108

The rates of scholarships to the backward class students are as follows :—

College—Rs. 30 per month.

School—

Classes VI to VII—Rs. 10 per month.

Classes VIII to XI—Rs. 15 per month.

The statement below shows the number of stipends awarded up to 1955-56 to the students of backward class :—

Year.	Number of stipends awarded.			
1951-52	961
1952-53	1,308
1953-54	2,536
1954-55	2,710
1955-56	4,767
			Total	12,282

This scheme has been receiving grants-in-aid from the Central Government under the special grants-in-aid of the Ministry of Home Affairs.

Educational uplift of the tharus of Champaran.—As a part of the scheme for the welfare of the backward classes, the State Government opened 11 Lower Primary, 3 Upper Primary and 2 Middle Schools in

the year 1953-54 for the educational uplift of the Tharus of Champaran, the most backward among the other backward classes. This scheme is executed through the local Education Committee which has been formed with the Subdivisional Officer, Bettiah as Chairman. The other members are the District Welfare Officer, Champaran, District Inspector of Schools, Champaran and the Deputy Inspector of Schools, Champaran, besides, one non-official nominee of the Subdivisional Officer and the M. L. As. representing the Tharuhat areas. The schools are administered by this Committee subject to the direction of Government. The District Education Council gives guidance to the Committee and grants are sanctioned through District Inspector of Schools, Champaran as the Secretary of the District Education Council. These schools are treated as aided and subsidised schools and their entire deficit is met by Government. The Tharu boys reading in middle stage of the schools started in Tharuhat areas have also been exempted from payment of school fees from the School session of 1954-55 and the loss sustained by the school in fee-income is reimbursed by the State Government. A Special Officer, appointed to hold charge of the scheme looks after these schools and other uplift measures for Tharus and other backward classes.

This scheme also has been receiving grants-in-aid from the Central Government under the special grants-in-aid scheme of the Ministry of Home Affairs.

Hostels for Backward Muslim Community Students.—Housing accommodation in towns is a great problem and the number of hostels attached to Government institutions under the control of the Education Department are not adequate to accommodate all the students of other Backward classes including Backward Muslims. It has, therefore, been considered necessary to start and maintain hostels at Government cost for such students. The idea is not to have special hostels exclusively for the students of other Backward Classes including Backward Muslims and segregate them and force on them a life of seclusion. If after accommodating the students of other Backward classes including Backward Muslims in these hostels, there are still seats remaining unfilled, they are offered to the students in the other category. Three hostels located at Patna, Dumka and Ranchi were maintained during the plan period. Two buildings for hostels were constructed at Darbhanga and Bhagalpur also.

Grants-in-aid to Maktabas.—Spread of education among Backward Muslims through Welfare Maktabas is an important item. There are 560 maktabas throughout the State. About 20,000 students receive education in these Maktabas. In each Maktab, there is a teacher who

is paid by the Government. The District Advisory Committees of which the District Inspector of Schools is the Chairman, conduct the appointment, transfer and discharge of Maktab teachers subject to the approval of the Government. Up to 1948-49, 500 Maktabs functioned. During 1949-50 Government sanctioned 60 additional Maktabs (including 10 in Serai-kella-Kharsawan), thus raising the number of Welfare Maktabs to 560 which was the number up to 1950-51. These Maktabs exist at present, that is up to 1955-56. These Maktabs will be maintained during the Second Plan also. Out of 560 Maktabs, 52 Maktabs are meant for Backward Muslim Girls. The distribution of these Maktabs, districtwise is given below :—

District.	Maktabs for boys.	Maktabs *for girls.	Total.
1. Patna	29	3	32
2. Gaya	38	4	42
3. Shahabad	34	4	38
4. Muzaffarpur	32	3	35
5. Saran	32	3	35
6. Champaran	41	3	44
7. Darbhanga	51	4	55
8. Ranchi	32	4	36
9. Hazaribagh	44	4	48
10. Palamau	22	2	24
11. Singhbhum	17	2	19
12. Manbhum including Dhanbad	23	2	25
13. Bhagalpur	17	3	20
14. Saharsa	7	1	8
15. Monghyr	25	3	28
16. Purnea	39	4	43
17. Santhal Parganas	25	3	28
	508	52	560

Book grants, University fee, Building grants-in-aid to Libraries for Backward Muslim Communities.—Grants for the purchase of books

and appliances, for payment of their University fees, for subsidizing libraries and institutions and for the construction of Maktab buildings are sanctioned by Government from year to year.

At present under this scheme, library grants and Book grants are awarded to the libraries for the Backward Muslim Communities libraries and students reading in schools and colleges. The library grants vary from Rs. 50 to Rs. 100 each, but the book grants are awarded at the following rates :—

Colleges—

- (i) I. A., I. Com., I. Sc.—Rs. 30 lump payment.
- (ii) B. A., B. Com., B. Sc.—Rs. 40 lump payment.
- (iii) Post Graduate classes—Rs. 50 lump payment.
- (iv) Tibbi College—Rs. 30 lump payment.

Schools—

- (i) Classes I to V—Rs. 5 lump payment.
- (ii) Classes VI to VII—Rs. 8 lump payment.
- (iii) Classes VIII to XI—Rs. 15 lump payment.

Under this scheme grants-in-aid are also sanctioned to A. Q. Ansari Irba Middle School, Ranchi, from the year 1953-54. The achievements made under this scheme during the First Plan period are as follows :—

- (i) Number of students awarded book grants in schools and Colleges—1,824.
- (ii) Number of libraries given financial aid—63.
- (iii) Number of Institutions given grant-in-aid—1.

APPENDICES

APPENDIX I

STATEMENT SHOWING PHYSICAL PROGRESS OF SELECTED SECTORS DURING THE FIRST FIVE-YEAR PLAN.

Development Head.	Unit.	Position in 1951 (Pre-Plan).	Progress in Plan period 1951—56.
AGRICULTURE.			
Bihar Agricultural College ..	.. Graduates ..	35	235
Agricultural Schools ..	.. Number ..	Nil	17 Agricultural Schools and 4 Extension Training Centres.
Distribution of Rahat Pumps ..	.. Pumps ..	2,126	3,564
Installation of tube-wells ..	.. Tube-wells ..	10	1,026
Surface percolation wells ..	.. Wells ..	6,216	16,459
Medium Irrigation Schemes ..	.. Schemes ..	19	408
Lift Engines and pumps ..	.. Pumping sets ..	740	2,348
Open borings ..	.. Boring ..	1,963	7,082
Distribution of phosphatic fertilisers ..	.. Tons (annual) ..	5,419	8,558
Distribution of Ammonium Sulphate ..	.. Ditto ..	13,695	25,821
Distribution of Fish Fry ..	.. Fish Fry in laes ..	50	229
Reclamation of wastelands by manual labour.	.. Acreage ..	34, 855	1,60,595 Besides, 62,940 acres reclaimed through official initiative without assistance of loan.
Reclamation of wastelands by tractors ..	.. Ditto ..	1,619	7,211
VETERINARY AND ANIMAL HUSBANDRY.			
Bihar Veterinary College ..	.. Students ..	40	300
Number of dispensaries ..	.. Number ..	168	240
Poultry development ..	.. Eggs ..	28,923	2,69,276
Production of milk through Patna and Muzaffarpur Milk Unions.	.. Maunds ..	Nil	26,825
Co-operative Milk Unions ..	.. Number ..	..	3
CO-OPERATION.			
Multi-purpose Co-operative Societies ..	.. Societies ..	4,717	12,268
Weavers' Co-operative Societies ..	.. Ditto ..	146	575

APPENDIX I—*contd.*

Development Head.	Unit.	Position in 1951 (Pre-Plan).	Progress in Plan period 1951—56.
RURAL DEVELOPMENT.			
Formation of Gram Panchayats ..	Number ..	1,424	6,512
IRRIGATION.			
Area irrigated by Government Canals and tube-wells.	Acreage ..	8,00,000	14,63,000
POWER.			
Electric Power Produced ..	M.W. ..	47	208
INDUSTRY.			
Bihar Institute of Technology, Sindri ..	Engineers ..	Nil	128
Tirhut School of Engineering ..	Overseer ..	Nil	207
Ranchi School of Engineering..	Ditto ..	Nil	60
ROADS.			
Improved Roads ..	Miles ..	1,952	4,220
EDUCATION.			
<i>Primary Education—</i>			
Number of Primary Schools ..	..	23,399	28,100
Number of boys and girls in Schools ..	..	12,13,247	15,13,614
<i>Secondary Education—</i>			
Number of Schools ..	..	643	948
Number of boys and girls in the schools ..	..	2,27,082	2,75,516
Number of colleges ..	..	32	54
Number of students ..	..	23,534	35,807
Number of technical and vocational institutions.	..	167	185
Number of students ..	..	12,479	14,215
<i>Basic Schools—Government Managed—</i>			
Number of schools ..	..	524	569
Number of pupils ..	..	64,787	79,308
<i>Middle Schools—</i>			
Number of schools ..	..	1,948	2,701
Number of pupils ..	..	2,87,832	3,36,383

APPENDIX I—concl'd.

Development Head.	Unit.	Position in 1951 (Pre-Plan).	Progress in Plan period 1951—56.
MEDICAL AND PUBLIC HEALTH.			
<i>Number of Doctors—</i>			
Number in State .. .. .	.. .. .	4,813	5,817
Employed by State Government .. .. .	.. .. .	495	740
Number of beds in State .. .. .	.. .. .	4,256	5,862
Ratio to population .. .. .	.. .. . One bed to	9,499	one bed to 6,862
Number of hospitals }	} Government	40	201
Number of dispensaries }			
	Total	728	855
HOUSING.			
Industrial Housing Scheme .. .. .	.. .. . Number of houses	Nil	1,511
GENERAL COST OF LIVING INDEX.			
		Index.	April, 1956.
Bamshedpur .. .. .	.. .. . (Base 1949)	116	104
Baria .. .. .	.. .. .	116	86
Behri-on-Sone .. .. .	.. .. .	116	93
Bonghyr .. .. .	.. .. .	110	88

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.			Progress of	
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD-							
1	Reorganisation of the Department of Agriculture. (Not started).	4.64	4.64	..	..	..	..
2	Headquarters and supervisory staff.	93.50	74.89	48.68	11.01	10.70	9.00
3	Staff for Minor Irrigation Works (Agriculture).	75.89	60.88	39.21	6.31	9.24	8.89
4	Staff for Minor Irrigation Works (Revenue).	23.66	15.70	20.27	4.08	2.70	3.42
5	Bihar Agricultural College.	14.07	10.00	13.05	2.07	..	1.70
5(a)	Agricultural College, Ranchi.	..	..	10.00	..	..	..
6	Higher Training abroad.	0.92	0.10	0.45	0.82	0.07	..
7	Mali Training Scheme.	0.39	0.19	2.32	0.20	0.16	..
7(a)	Four Extension Training Centres.	..	..	9.90	..	..	..
7(b)	Seventeen Agricultural Schools.	..	..	28.17	..	..	..
7(c)	Refresher Course and Inservice Training Scheme.	..	..	1.76	..	..	..
8	Creation of Mycological Section.	3.00	2.88	3.44	0.31	0.24	0.98
9	Preparation of Manual Tables.	17.91	12.00	16.48	2.71	4.47	2.71
10	Establishment of Sugarcane Research Sub-Station, Patna.	12.85	8.87	10.31	2.73	4.66	1.23

II.

PROGRESS.

Expenditure (in lakhs of Rs.).				Progress of Physical Target:		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals, 1951-56
9	10	11	12	13	14	15

AGRICULTURE.

..
7.09	7.15	12.43	46.37	No target	..	..
6.65	7.75	10.60	43.13	Ditto	..	..
4.07	4.83	4.60	19.62	Ditto	..	..
0.94	4.70	5.12	12.46	Graduates	245	235
..	..	3.91	3.91	..	..	..
0.01	..	0.005	0.085	..	..	23
..	0.85	1.42	2.45	Trainees ..	..	280
..	3.69	4.67	8.36	} V. L. W.	1,400	1,704
..	8.77	11.17	19.94			
..	0.52	0.40	0.92	..	..	..
0.95	1.09	0.53	3.79	No target	..	..
2.40	3.20	4.33	17.19	Ditto	..	..
1.57	1.55	1.60	10.61	Ditto	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—							
11	Intensification of Sugarcane Research.	17.57	13.38	14.39	1.69	3.66	2.91
12	Expansion of Entomological Section.	5.26	3.64	3.45	0.97	1.00	0.56
13	Expansion of Horticultural Section.	4.09	3.28	3.41	0.36	0.48	0.51
14	Expansion of Botanical Section.	11.34	9.39	21.15	..	0.82	1.48
15	Expansion of Agricultural Chemistry Section.	1.95	1.75	1.92	..	0.17	0.68
15(a)	Establishment of four Regional Agricultural Research Institutes.	..	..	7.87	..	..	..
15(b)	Irrigation Research Stations.	..	..	2.13	..	..	..
15(c)	Research on Agricultural Implements.	..	..	1.61	..	..	..
16	Reclamation of waste land by manual labour—and improvement and tacavi loans.	15.33	10.24	8.89	4.13	1.63	1.77
17	Land Reclamation and State farming. (<i>Dropped</i>).	48.42	40.00	2.87	8.42	1.93	0.94
18	Purchase and maintenance of tractors for State Tractor Organisation.	41.60	26.76	12.66	4.23	2.79	2.09
19	Rahat Pump Scheme	37.59	30.00	14.79	7.59	7.46	2.54
20	Installation of Tubewells.	21.41	20.75	5.72	0.66	0.49	0.70

II.—*contd.*PROGRESS—*contd.*

Expenditure (in lakhs of Rs.).					Progress of physical target.	
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals, 1951-56.
9	10	11	12	13	14	15
AGRICULTURE—<i>contd.</i>						
2.75	2.54	2.29	14.15	No target	..	..
0.62	1.02	0.83	4.03	Ditto	..	..
0.57	0.59	1.36	3.51	Ditto	..	..
3.06	3.65	7.41	16.42	Ditto	..	..
0.53	0.39	0.17	1.94	Ditto	..	..
..	0.34	2.37	2.71	Ditto	..	..
..	..	0.24	0.24	Ditto	..	..
..	0.005	1.18	1.185	Ditto	..	..
1.70	1.90	2.26	9.26	Acres ..	1,80,000	1,60,595
..	..	..	2.87	Do.	10,000	4,000
1.79	2.18	3.56	12.41	Do.	45,000	7,211
0.08	0.20	1.50	11.78	Pump ..	7,415	3,564
0.19	0.91	3.00	5.29	Tube-wells installed.	172	116

APPENDIX
SCHEMEWISE

Seria no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD—
21	Surface Percolation Wells.	2,37.09	2,02.00	59.96	35.09	13.00	4.35
22	Medium Irrigation Schemes.	46.84	41.50	57.76	5.34	8.25	4.92
23	Lift Engines and Pumps.	61.14	24.98	25.86	39.16	22.61	0.24
24	Open Borings ..	70.62	65.50	13.91	5.12	3.00	1.23
25	Minor Ahars, Pynes and Bundhs.	7,84.24	4,06.25	5,13.25	3,78.00	1,98.08	68.39
26	Rural Compost Scheme.	45.47	38.15	9.91	7.32	6.32	3.59
27	Distribution of Phosphatic Ferti- lisers and Bone- meal.	42.08	35.90	9.00	6.18	1.51	0.53
28	Town Refuse Com- post Scheme.	1,31.15	12.21	7.87	0.94	0.98	1.25
29	Distribution of green manuring seeds. (Dropped).	0.27	0.18	0.13	0.09	0.13	..
30	Paddy Seed Multi- plication Scheme. (Dropped).	15.71	13.70	3.53	2.01	2.16	1.37
31	Distribution of dis- ease-free potato seeds.	1.16	1.00	1.70	0.16	0.20	0.30
32	Fruit Production Scheme.	8.19	5.14	4.86	3.05	0.92	0.85
33	Improvement of Sugarcane Culti- vation in Bihar.	52.58	45.92	38.36	6.66	7.87	7.31

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).					Progress of physicals target.	
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals 1951-56.
9	10	11	12	13	14	15
AGRICULTURE—contd.						
1.61	11.94	37.26	68.16	Wells ..	17,720	16,459
3.24	17.96	29.34	63.71	Schemes ..	353	408
0.01	2.85	0.70	26.41	Pumping sets	2,363	2,348
0.68	2.67	4.63	12.21	Borings ..	6,900	7,082
70.92	95.51	1,14.71	5,47.61	Minor Ahar, Pynes and Bundhs.	43,750	29,546
..	..	..	9.91	Tons in lacs	60	16.84
0.64	2.82	6.17	11.67	Tons ..	30,500	13,647
1.83	1.86	1.89	7.81	Do. ..	5,00,000	3,11,072
..	..	..	0.13	Maunds ..	3,000	1,560
..	..	..	3.53	Ditto ..	3,50,000	11,738
0.40	0.48	0.41	1.79	Ditto ..	10,000	6,640
0.87	0.93	1.10	4.67	No target	..	..
7.31	7.85	8.67	39.01	Ditto ..	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD-
34	Establishment of an Experimental Farm at Dumka.	4.83	4.83	2.18	..	..	1.64
35	Establishment of Experimental Farms at Hazaribagh, Motihari and Saharsa.	9.60	9.00	3.54	..	..	..
36	Motor Truck Scheme.	6.93	4.75	14.91	1.18	1.26	0.87
37	Plant Protection Scheme.	22.43	17.87	32.97	1.36	4.82	4.41
38	Establishment of registered model farms.	2.75	2.75	0.003	..	0.002	0.001
	<i>(Dropped).</i>						
39	Destruction of wild animals.	1.50	1.50	1.02	..	0.21	0.23
40	Prize Distribution Scheme.	2.06	1.86	0.60	..	0.14	0.10
40(a)	Jute Seed Multiplication Farm.	..	..	2.03	..	..	..
40(b)	Demonstration grants for N. E. S. Blocks.	..	..	20.63	..	..	..
40(c)	Demonstration Farms in the N. E. S. Blocks.	..	..	52.00	..	..	..
	Total	..	12,84.33	11,80.88	5,49.95	3,24.132	1,43.771

II—*contd.*PROGRESS—*contd.*

Expenditure (in lakhs of Rs.).					Progress of physical target.	
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals 1951-56.
9	10	11	12	13	14	15
0.29	0.48	0.19	2.60	No target	..	..
..	0.22	1.81	2.03	Ditto ..	..	..
0.87	8.94	2.13	14.07	Ditto ..	..	..
3.19	4.47	15.47	32.36	Ditto ..	..	..
..	..	..	0.003	Model farms	458	200
0.19	0.08	0.10	0.81	No target	..	..
0.08	0.09	0.08	0.49	Ditto	..	..
..	..	2.92	2.92	..	..	..
..	6.99	14.63	21.62	..	..	..
..	..	57.00	57.00	..	..	..
1,27.10	2,23.965	3,86.165	12,05.133	..	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD—
41	Provision of supervisory staff.	1.68	1.11	1.45	0.57	0.27	0.28
42	Scheme for the establishment of Animal Husbandry Department in Bihar.	8.72	4.92	6.11	2.46	0.89	1.13
43	Expansion of Bihar Veterinary College.	10.43	5.52	7.37	1.52	0.75	0.72
44	Scheme for training of ex-soldiers as stockmen.	2.70	1.06	2.11	1.06	0.40	0.28
45	Provincial Live-stock Research Station.	10.57	6.69	5.52	..	..	0.02
46	Control of Biological factors affecting the value of hides and skins.	0.76	0.52	0.3	..	..	0.06
47	Provincialisation of district hospitals.	5.98	3.79	2.26	..	0.50	0.05
48	Expansion of Veterinary Service.	33.50	20.65	15.22	..	..	0.07
49	Training and employment of village veterinary practitioners.	1.69	1.32	0.96	0.31	0.33	0.22
49(a)	Scheme for the training of 100 live-stock overseers.	..	..	1.39	..	..	..
50	Expansion of the Government Cattle Farm.	3.75	2.76	2.60	0.08	0.28	0.75
51	Scheme for grading up village cattle with Tharparkar bulls.	4.81	2.57	2.72	1.59	0.53	0.43

II—contd

PROGRESS—contd.

Expenditure (in lakhs of Rs.).					Progress of physicals target.	
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals 1951-56.
9	10	11	12	13	14	15
AGRICULTURE—contd.						
0.30	0.30	0.39	1.54	Range ..	1	1
1.44	1.67	1.47	6.60	No target	..	..
0.59	2.05	1.55	5.66	Student ..	150	88
0.29	0.51	0.57	2.05	Trainee ..	441	437
0.07	0.34	0.68	1.11	Section ..	7	2
0.07	0.09	0.08	0.30	Centre ..	1	1
0.15	0.20	0.35	1.25	Hospital ..	3	4
0.59	2.23	8.76	11.65	Dispensary	95	72
0.16	0.16	0.04	0.91	Salutaries	80	97
..	..	8.85	1.28	..	..	93
0.47	0.74	0.40	2.64	No target	..	..
0.48	0.48	0.73	2.65	Bulls ..	130	118

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—							
52	Scheme for the maintenance of 400 bulls in key villages.	11.86	6.90	8.82	2.70	1.70	1.26
52(x)	All-India key village	68	Nil	6.02	Nil	0.51	0.62
53	Scheme for the improvement of Goshalas in Bihar.	1.97	0.47	1.22	1.27	0.25	0.24
54	Scheme for the establishment of Bachaur Cattle Breeding Farm, Pusa.	14.47	8.24	9.62	4.89	1.74	1.17
55	Scheme for the establishment of Haryana Cattle Breeding Farm, Dumraon.	19.04	11.51	17.12	5.52	2.21	1.65
56	Scheme for the establishment of model Goshalas on Wardha lines in Bihar.	3.74	2.12	2.12	1.52	0.51	0.73
57	Scheme for the establishment of Sheep and Goat Breeding Farm, Gaya.	4.16	2.50	2.39	1.36	0.47	0.34
58	Scheme for the establishment of Central Poultry Development in Bihar.	7.54	4.30	5.48	1.31	0.67	0.74
59	Scheme for Wool-shearing and Grading Centre in Sasaram.	0.96	0.54	0.70	0.19	0.06	0.07
60	Opening of Artificial Insemination Centres in Bihar.	11.35	5.05	12.07	0.90	0.86	0.81
60(x)	Establishment of Bull-rearing Farm at Gauriakarna, Hazaribagh.	..	..	8.80	..	..	..
Total		..	92.54	122.38	27.25	12.93	11.64

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).					Progress of physical target.	
1953-54, Actuals.	1954-55, Actuals.	1955-56 Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actuals, 1951-56.
9	10	11	12	13	14	15
AGRICULTURE—concl.						
1.38	1.51	3.09	8.94	Bulls ..	640	622
1.10	1.30	1.67	5.20	Centres ..	12	13
0.29	0.11	0.12	1.01	Bulls ..	190	201
1.56	1.77	1.37	7.61	Cattle ..	500	766
1.67	2.99	3.85	12.37	Cattle ..	500	570
0.11	0.10	0.10	1.55	Cattle ..	300	142
0.36	0.38	1.35	1.90	Sheep ..	300	478
				Goat ..	200	219
0.72	1.02	1.60	4.75	Egg ..	1,00,000	2,69,276
0.08	0.12	0.26	0.59	Sheep ..	1,50,000	2,77,075
1.04	3.35	5.10	11.16	Centre ..	192	114
..	..	6.68	6.68	.. ..	..	..
12.92	21.85	40.06	99.40	..	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—DAIRYING							
61	Scheme for the appointment of Dairy Development Officer and staff.	2.00	1.27	1.27	0.44	0.35	0.27
62	Scheme for carrying out rapid survey in large milk producing and consuming areas (<i>Terminated</i>).	0.56	0.26	0.26	0.30	0.24	0.07
62(a)	Grant of loan to Co-operative Milk Union.	..	..	4.00	..	..	..
	Total ..	..	1.53	5.53	0.74	0.59	0.34
SUB-HEAD—							
63	Management of private forests, etc.	125.73	108.18	111.16	17.55	19.72	11.87
64	Education and Training.	18.00	14.80	11.13	..	2.08	2.59
65	Forest Research ..	2.02	2.02	2.71	..	0.47	0.55
	Total ..	..	125.00	125.00	17.55	22.27	15.01
SUB-HEAD—							
66	Central Co-operative Training Institute.	7.28	4.01	4.01	2.90	0.73	0.70
67	Credit Agricole—Construction of Depot buildings.	13.82	12.86	12.86	..	0.72	1.74
68	Organisation of Vegetable Growers' Co-operative Societies.	0.57	0.57	0.57	Merged with	scheme no. 70	

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
AND MILK SUPPLY.						
0.25	0.36	0.24	1.47	No target	..	..
..	..	..	0.31	Ditto	..	..
..	2.29	1.51	3.80	Unions	4	3
0.25	2.65	1.75	5.58	..	..	..
FORESTS.						
17.18	23.68	37.20	109.65	Area in sq. miles.	11,760	11,760
2.15	2.03	2.54	11.39	Rangers ..	30	36
				Foresters ..	150	170
				Guards ..	980	1,180
				Gazetted	13	17
0.48	0.81	0.85	3.16	No target	..	..
19.81	26.52	40.59	124.30	..	..	..
CO-OPERATION.						
0.73	0.91	3.43	6.50	Trainees	1,500	2,164
2.28	2.88	4.60	12.22	Godowns completed.	24	23
..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
69	Co-operative Farming through Cane-growers' Co-operative Societies under Joint Registrar, Co-operative Societies.	0.85	0.64	0.64	0.07	0.06	0.09
70	Scheme for the organisation of rural development centres by forming whole village Multipurpose Co-operative Societies.	22.74	15.84	15.84	5.95	3.14	3.34
71	Village Welfare Scheme.	0.38	0.38	0.38	Merged with scheme no. 70		
72	Scheme for the development of Handloom Industry.	8.16	4.70	4.70	2.87	0.76	0.78
	Total ..	..	39.00	39.00	11.79	5.41	6.65
							SUB-HEAD—
73	Reorganisation of headquarters staff.	3.06	2.25	1.68	0.31	0.27	0.32
74	Research on local fishery problems.	1.78	1.58	1.00	..	..	..
75	Opening of fish fry distribution centres.	7.90	5.34	4.55	1.16	0.88	0.81
76	Prospecting and catching of spawn.	1.07	0.80	0.80	0.11	0.16	0.11
77	Mechanization and equipment.	0.25	0.18	0.18	0.03	0.04	0.03
78	Prohibition of fishing in the Sone River.	0.31	0.24	0.24	0.03	..	0.04
79	Training of Personnel.	0.27	0.20	0.14	0.03	..	0.04
	Total ..	..	10.59	8.59	1.67	1.35	1.35

II—*contd.*PROGRESS—*contd.*

Expenditure (in lakhs of Rs.).				Progress of Physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
Co-OPERATION—<i>concl'd.</i>						
0.08	0.09	0.12	0.44	Co-operative Farming.	10	10
3.13	3.34	3.41	16.36	Societies	7,400	9,289
..
0.80	0.78	0.85	3.97	Number of Co-operative Societies.	180	575
7.02	8.00	12.41	39.49	..	..	..
FISHERIES.						
0.34	0.35	0.36	1.64	No target	..	..
..	0.01	0.06	0.07	Ditto	..	..
0.87	0.92	0.99	4.47	Fish fry in lacs.	260	229
0.14	0.16	0.16	0.73	Sites. Number of <i>hundies</i> in collection.	125 8,900	81 7,525
0.04	0.04	0.04	0.19	No target	..	..
0.03	0.04	0.04	0.15	Ditto	..	..
0.03	0.03	0.03	0.13	Trainees	32	16
1.45	1.55	1.68	7.38	..	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
80	Changes in connection with the implementation of the Bihar Village Panchayat Raj Act, 1949.	137.24	124.65	124.65	12.59	12.60	17.26
	Total ..	..	124.65	124.65	12.59	12.60	17.26
SUB-HEAD—							
81	300 tube-wells in North Bihar.	185.00	174.00	132.10	9.00	35.47	32.82
82	Tube-wells in South Bihar (P.B. B.E.B. and D.S. Schemes).	137.33	85.47	140.02	52.33	25.20	29.25
83	Drainage of Chœurs and other irrigation Schemes.	156.43	118.50	331.56	38.43	77.60	54.03
84	Sakri (Lower Valley) Scheme.	29.73	9.57	18.94	19.73	12.72	2.19
85	Tribeni Canal Expansion Scheme.	28.04	22.56	29.00	5.04	12.53	2.96
86	Emergency Pumping Scheme (500 CUSECS).	93.00	93.20	29.47	..	7.75	13.23
87	Further 300 tube-wells in sugar factory areas.	161.00	161.00	195.52	..	..	0.03
88	Sakri (Upper Valley) Irrigation Scheme (merged with T.C.A. programme).	53.00	53.00				
89	Further 200 tube-wells in South Bihar.	98.00	98.00	..			D R O P

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actual 1951-56.
9	10	11	12	13	14	15
RURAL DEVELOPMENT.						
21.75	27.69	43.80	123.10	Gram Panchayat.	6,500	6,512
21.75	27.69	43.80	123.10	..	..	..
IRRIGATION PROJECTS.						
15.80	23.81	24.02	131.92	Acres	120,000	13,000
23.85	25.39	33.76	137.45	Do.	45,100	13,000
29.16	29.57	133.85	324.21	Do.	7,15,000	6,78,730(A)
1.25	0.93	1.65	18.74	Do.	15,000	50,000
2.98	4.58	4.46	27.51	Do.	28,000	28,105
2.49	2.94	3.66	30.07	Do.	90,000	11,000
28.31	132.28	84.53	245.15	Do.	..	3,000
P E D	..	..	..	..	..	..

(A)—Irrigation 1,14,200 and Reclamation 5,64,528 acres.

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
90	Irrigation dams and weirs in hilly districts.	158.00	158.00	38.33	..	11.61	13.60
						SUB-HEAD—	
90(a)	Programme for permanent improvement of scarcity areas.	350.00	..	350.00	..	..	..
	Total	..	973.30	1265.44	124.53	182.88	148.11
						SUB-HEAD—	
91	P.B.B.E.B. Emergency Tube-well Irrigation Scheme (Elec.).	84.09	61.49	70.23	22.60	14.47	15.89
92	Dehri-Sasaram Lift Irrigation and Electrification Scheme (Elec.).	67.60	54.14	43.09	13.46	6.00	7.41
93	Gaya Electric Supply Scheme.	79.80	64.44	80.02	15.36	18.42	15.53
94	Hazaribagh Electric Supply Scheme.	32.97	28.16	28.61	4.81	4.06	4.38
95	Kodarma and Mica Mines Area Electrification Scheme.	45.84	44.55	45.01	1.29	1.85	7.57
96	Coal-mines Area Electrification Scheme.	397.00	100.00	154.50	—	..	12.87
97	Taking over of derelict electric supply undertakings and Backward Area Electrification Scheme.	33.00	18.00	18.00	—	—	—

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.			
1953-54, Actuals.	1954-55, Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual 1951-56.	
9	10	11	12	13	14	15	
IRRIGATION PROJECTS—concl'd.							
6.12	1.40	5.13	37.86	Acres	..	60,000	30,095
5.68	70.04	265.70	341.42	Ditto	..	3,89,500	6,00,000(A)
115.64	290.94	556.76	1,294.33	..	..	..	..
POWER PROJECTS.							
14.35	16.55	11.49	72.75	Killo Watts	..	2,700	1,994
9.94	7.64	9.29	40.28	Ditto	—	1,700	1,711
15.31	11.50	21.73	82.49	Ditto	..	3,000	1,863
3.87	2.97	5.87	21.15	Ditto	..	800	312
8.72	7.56	20.31	46.01	Ditto	..	3,000	1,490
23.36	46.49	78.64	161.36	Ditto	..	6,750	5,693
0.30	1.04	9.19	10.53	Ditto	..	3,150	10

(A) Irrigation 50,000 acres and Reclamation 5,50,000 acres.

APPENDIX
SCHEME WISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals,	1952-53, Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD—
98	Giridih Electric Supply Scheme.	27.00	18.49	27.34	0.51	0.60	6.29
99	Giridih - Madhupur-Jasidih Electric Supply Scheme.	27.00	27.00	37.59	..	..	6.94
100	North Bihar Tube-well Electrification Scheme (Elec.).	171.00	171.00	181.47	5.73	28.73	70.80
101	Buxar Tube-well Electrification Scheme (Elec.).	47.00	26.45	23.77	..	1.95	2.22
102	Thermal Power Station Scheme in North Bihar (<i>Dropped</i>).	83.00	46.00	..	..	..	..
102(a)	Electrification of the towns of Katihar, Purnea and <i>en route</i> villages.	23.73	..	15.54	..	..	..
102(b)	Electrification of the towns of Kishanganj and neighbouring areas.	10.90	..	5.14	..	..	..
102(c)	Electrification of the towns of Saharsa, Madhipura and <i>en route</i> villages.	11.69	..	9.79	..	..	..
102(d)	Loan to the licensee undertaking at Muzaffarpur.	10.00	..	10.00	..	..	..
102(e)	Electrification of Baigania, the towns of Sitamarhi, Raxaul and <i>en route</i> villages.	31.46	..	28.67	..	..	..

II—*contd.*PROGRESS—*contd.*

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
POWER PROJECTS—<i>contd.</i>						
3.92	2.89	2.57	16.27	Killo Watts	700	656
12.56	5.47	8.26	33.23	Ditto ..	1,150	501
48.58	28.11	19.63	195.85	Ditto ..	3,100	5,084
3.79	5.49	5.27	18.72	Ditto ..	600	706
..	..	..	..	Ditto ..	400	..
..	0.08	7.13	7.21	Ditto ..	650	..
..	..	3.96	3.96	Ditto ..	300	..
..	0.40	3.80	4.20	Ditto ..	300	72
..	..	10.00	10.00	.. ..	..	..
..	..	14.08	14.08	Killo Watts	900	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—							
102(f)	Utilisation of Damodar Valley Corporation Power in Dehri, Aurangabad and Bhabua area.	97.80	..	40.84	..	..	..
102(g)	Utilisation of Damodar Valley Corporation Power in Gaya and Patna area.	39.52	..	52.23	..	..	..
102(h)	Coal-mines area Electrification Scheme.	44.74	..	18.26	..	..	..
102(i)	Electrification of Sini, Chakradharpur and rural areas in Singhbhum district.	77.63	..	44.13	..	..	..
102(j)	Electrification of Dumka town and adjoining areas.	3.30	..	7.18	..	..	..
102(k)	Expansion of power supply from Maithon to Jamalpur, Monghyr, Bhagalpur, Sahibganj and the adjoining areas.	219.07	..	14.22	..	..	..
	Total ..	..	709.72	955.63	63.76	76.08	149.90
SUB-HEAD—							
103	Headquarters staff	0.70	0.70	4.76	..	0.68	0.76
104	Tuitional classes ..	22.12	17.41	10.69	..	0.81	1.12
105	Reorganisation of Cottage Industries Institute.	25.81	23.09	14.53	..	1.88	1.77
106	Reorganisation of Silk Institute.	4.50	4.50	6.01	..	0.58	0.66

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
POWER PROJECTS—concl'd.						
..	0.79	44.45	45.24	Killo Watts	6,255	..
..	25.83	50.40	76.23	Ditto ..	260	..
..	..	17.67	17.67	Ditto ..	4,400	..
..	..	50.57	50.57	Ditto ..	2,500	..
..	2.30	4.35	6.65	Ditto ..	60	62
..	..	11.75	11.75	Ditto ..	..	..
144.7	165.11	410.41	946.20	..	..	..
COTTAGE INDUSTRIES.						
0.92	0.80	1.20	4.36	No target	..	..
1.96	2.13	3.54	9.56	Trainees ..	2,956	736
3.21	2.77	2.30	11.93	Ditto ..	1,305	214
0.85	1.23	0.82	4.14	Ditto ..	120	84

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—							
107	Itinerant schools for women and girls.	4.40	0.40	0.51	..	0.12	0.09
108	Eri-rearing demonstration party.	0.45	0.39	0.30	..	0.04	0.05
109	Purchase of Japanese Machinery (<i>not started</i>).	0.50	0.50	0.50	..	..	..
110	Tassar seed supply stations.	5.03	4.46	2.35	..	0.14	0.25
111	Tassar seed supply sub-stations.						
112	Marketing Organisation.	1.49	1.44	1.44	..	0.05	0.11
113	Eri Silk Farm ..	1.21	1.06	1.06	..	0.08	0.14
114	Mulberry Demonstration Farm.	1.73	1.14	0.58	..	0.02	0.07
115	Rural Industrialisation.	0.29	0.29	0.29	..	0.01	0.05
116	Demonstration and Propaganda.	0.54	0.45	0.64	..	..	0.08
117	Palmgur Scheme ..	4.46	3.39	3.28	..	0.46	0.44
117(a)	Handloom Research and Design Centre.	0.87	..	0.50	..	..	..
117(b)	Pottery Development Scheme.	2.55	..	1.55	..	..	..
117(c)	Toy making ..	0.29	..	0.19	..	..	..
117(d)	Branch of Regional School of Technology, Sindri.	0.42	..	0.31	..	..	..
117(e)	Spun Silk Mill ..	4.00	..	..	..	..	..
117(f)	Tassar Seed Research Station.	1.45	..	0.54	..	..	..
Total ..		..	59.22	50.03	..	4.87	5.50

II—*contd.*PROGRESS—*contd.*

Expenditure (in lakhs of Rs.):				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
COTTAGE INDUSTRIES—<i>concl'd.</i>						
0.09	0.10	0.10	0.50	Trainees	470	134
0.06	0.07	0.07	0.29	Eggs ..	1,52,000	73,734
..	..	..	..	No target	..	..
0.33	0.46	0.84	2.02	Eggs ..	1,11,000	1,11,413
0.31	0.34	6.73	7.54	No target	..	..
0.14	0.18	0.16	0.70	Eggs ..	2,90,000	87,609
0.09	0.09	0.14	0.41	Do. ..	50,000	14,449
0.05	0.04	..	0.15	No target	..	..
0.09	0.20	0.29	0.66	Ditto ..	..	..
0.43	0.41	0.81	2.55	Trainees ..	1,000	798
..	0.15	0.26	0.41	..	..	..
..	..	0.04	0.04	..	..	..
..	..	0.09	0.09	..	..	..
..
..
..
8.53	8.97	17.39	45.35	..	..	..

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD—							
118	Extra staff for the Department of Industries.	3.68	3.43	3.68	1.23	0.92	0.78
119	Establishment of Bihar Provincial Industrial Research Laboratory.	4.50	10.77	8.04	2.29	0.70	0.62
120	Super phosphate Factory (<i>Factory not yet started</i>).	54.55	41.09	54.55	1.31	0.40	6.73
121	Steamed Bonemeal manufacture (<i>Dropped</i>).	4.71	4.71	..	..	..	..
121(a)	State Financial Corporation.	20.00	..	20.00	..	..	..
Total		..	..	60.00	86.27	4.83	8.13
SUB-HEAD—							
122	Road Development schemes.	1779.20	725.00	1000.00	188.20	202.10	202.36
123	Improvement of communication in sugar factory areas.	90.00	75.00	75.00	..	..	..
Total		..	..	800.00	1075.00	188.20	202.36

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56, Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
OTHER INDUSTRIES.						
0.67	0.61	0.63	3.61	No target	..	..
0.60	0.64	0.59	3.15	Ditto	..	..
4.29	6.01	14.21	31.64	Tons	45 000	..
..
..	20.00	..	20.00		..	..
5.56	27.26	15.43	58.40			
ROADS.						
104.40	182.00	332.89	1023.75	Miles of improved road.	2,236	2,256
..	3.22	26.08 } +25.00* }	29.30 } +25.00 }	Ditto	21	12
104.40	185.22	388.97	1078.05			

*Represents expenditure incurred by L.S.-G. Department out of funds placed at their disposal by P.W.D.

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
SUB-HEAD --							
124	Opening of basic education centres.	490.60	188.00	188.00	28.80	43.17	43.66
125	Improvement of those primary schools in which basic schemes cannot be introduced at present.	401.21	117.00	117.00	64.01	12.79	13.47
126	Expansion of 55 elementary training schools and opening of 15 new E. Schools.	19.10	16.60	16.60	2.50	2.88	2.85
127	Opening of 40 Government middle schools for girls.	58.09	12.50	12.50	1.09	1.80	2.29
128	Opening of 15 Government high schools for girls.	57.79	26.75	26.75	3.36	3.61	4.38
129	Opening of two training colleges for graduate teachers.	6.73	6.40	6.40	0.33	0.60	0.82
130	Establishment of a college for women.	8.24	7.00	7.00	1.24	1.24	1.14
131	Expansion of existing Government-managed and aided colleges.	37.07	32.48	32.48	4.59	5.00	3.34
132	Opening of a degree college at Ranchi.	44.76	21.20	21.20	2.56	2.20	0.34
133	Establishment of Electrical and Mechanical College, Sindri.	87.77	68.92	87.77	11.33	41.40	16.99

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54, Actuals.	1954-55, Actuals.	1955-56, Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
EDUCATION.						
47.63	46.24	55.00	235.70	School Students	20 76,525	33 13,776
17.22	76.59	91.71	211.78	School Students	2,400 287,000	4,652 2,69,108
3.26	3.59	6.71	19.29	Trainees	60	1,848
5.97	3.34	3.79	17.19	School Students	16 2,858	16 2,746
6.10	6.45	6.54	27.08	School Students	1 1,955	1 1,981
..	1.01	0.63	3.06	Trainees	150	340*
0.84	0.01	3.50	6.73	Students	175	180
11.13	20.94	26.39	66.80	College Students	9 9,401	32 25,170
4.20	..	0.01	6.75	Students	303	1,012
15.88	6.85	10.34	91.46	Graduates	210	128

*Figures of physical targets indicate increase in seats in all the Training Colleges.

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52, Actuals.	1952-53, Actuals.
1	2	3	4	5	6	7	8
134	Tirhut School of Engineering, Muzaffarpur.	22.99	17.59	22.99	2.62	6.87	2.75
134(a)	School of Engineering, Ranchi.	6.10	..	6.10	..	..	..
134(b)	School of Engineering, Sindri.	3.60	..	3.60	..	..	..
135	Adult Education ..	1092.17	39.00	39.00	8.21	7.36	0.30
136	Training abroad (Terminated).	1.79	1.00	1.00	0.79	0.12	0.21
137	Supervision of Physical Culture and training.	5.02	4.50	4.50	0.52	0.53	0.52
138	Improvement of oriental education.	30.00	10.00	10.00	4.00	0.28	1.10
139	Opening of a Research Institute.	1.78	1.53	1.53	0.25	0.57	0.40
	Total ..	..	570.47	604.42	136.20	130.42	100.56
							SUB-HEAD—
140	Improvement of the Patna Medical College.	25.58	23.00	23.00	2.58	1.98	0.03
141	Conversion of Darbhanga Medical school into a college.	58.40	53.00	82.50	5.40	17.49	12.49
142	Training School of Lady Health Visitors.	2.00	2.00	2.00	..	0.17	0.12
143	Post-Graduate studies abroad.	3.48	3.00	3.00	0.48	1.41	0.68
144	Reorganisation of nursing services.	11.25	11.25	11.25	..	..	0.01

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
EDUCATION—concl.						
2.44	7.21	2.99	22.26	Diploma holders.	240	307
..	0.52	1.82	2.34	Overseers per year.	60	..
..	0.70	0.36	1.06	Ditto ..	30	..
7.83	7.64	7.11	36.24	Centre Adults	..	2,125
..	0.03	..	0.36	..	33,182	2,38,053
0.62	0.58	0.60	2.85	Students	500	322
2.30	2.45	4.01	10.14	Ditto ..	200	608
0.44	0.45	0.44	2.30	..	..	..
125.86	184.60	221.95	763.9			
MEDICAL.						
0.06	3.97	16.96	23.00	Students	100	..
				Doctor	60	60
				Bed	568	400
7.69	15.04	29.79	82.50	Doctor	60	80
				Bed	568	600
0.11	0.05	1.55	2.00	Trainee School	60	92
					2	2
0.23	0.25	0.43	3.00	Medical Officer.	41	49
..	0.24	4.00	4.25	School Trainee	3	3
					135	191

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52 Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD—
145	Teaching of Pharmacy and Pharmaceutics.	5.00	5.00	1.60	..	..	..
146	Government subsidy to Ayurvedic colleges at Begusarai and Bhagalpur.	1.25	1.25	1.25	..	0.07	0.18
147	Improvement of Government Ayurvedic and Tibbi colleges at Patna.	11.00	11.00	11.00	..	..	..
148	Two 130-bedded hospitals and 10 primary units.	59.50	59.50	59.50	4.87	21.12	5.99
149	Expansion of Maternity and Child Welfare Centres.	1.05	1.05	1.05	..	0.32	0.33
150	Provincialisation of Sadr hospitals.	115.73	99.00	149.00	16.73	19.69	18.96
151	Improvement of Patna Medical College Hospital.	46.00	46.00	68.00	1.34	31.91	2.05
152	Provincialisation of important Sub-divisional hospitals.	16.33	15.00	21.00	1.33	2.67	2.79
153	Provision of dispensary in each Thana.	12.00	12.00	12.00	..	0.18	0.94
154	Opening of three Ayurvedic dispensaries in each district of the State.	3.90	3.60	1.87	..	..	..
155	Establishment of an Ayurvedic Anti-T.B. Hospital at Digha. (Not started.)	2.30	2.30	..	..	..	..
156	Plans for Anti-T.B. measures.	38.50	38.50	53.50	..	10.46	6.10

I—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
MEDICAL—contd.						
..
0.07	0.69	0.63	1.64	..	..	..
..	0.60	7.50	8.10	..	..	..
7.11	11.43	9.85	55.50	Hospital.. Bed .. Dispensary	9 343 16	2 259 16
0.63	1.27	1.00	3.55	Centres ..	40	40
19.36	22.28	31.71	112.00	Hospital.. Bed ..	16 1,766	17 1,798
3.74	4.69	57.39	99.78	Hospital.. Bed ..	2 1,141	2 1,436
3.35	3.37	19.82	32.00	Hospital.. Bed ..	40 1,675	39 1,378
1.07	2.84	6.97	12.00	Dispensary	52	52
0.77	0.63	0.77	2.17	Dispensary	..	..
..
6.00	6.22	11.21	40.00	Hospital.. Bed ..	2 302	15 210

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.			Progress of	
			Original.	Revised.	Up to March, 1951.	1951-52 Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
157	Treatment of venereal diseases.	4.50	4.50	2.50	..	0.23	0.16
158	Leprosy scheme ..	7.00	7.00	16.00	..	2.04	1.86
159	Drug control scheme	3.00	3.00	3.00	..	0.34	0.70
160	Development of Homeopathic and indigenous system of medicine.	5.03	2.97	1.87	..	..	0.12
	Total ..	..	403.92	524.89	30.73	110.08	53.51
							SUB-HEAD—
161	Establishment of Public Health Institute (training of medical graduates and licentiates in Public Health).	11.56	11.50	11.50	0.06	1.07	0.54
162	Urban Water-Supply, Sewerage and Drainage Schemes.	82.90	82.90	197.90	..	16.99	20.31
163	Rural Water-Supply	14.00	14.00	14.00	..	8.85	4.50
164	Anti-malaria Control Scheme.	7.56	6.30	6.30	1.26	1.27	1.20
165	Plague Eradication Scheme.	5.50	4.20	4.20	1.30	1.04	0.97
166	Anti-T.B. measure, B. C. G. Vaccination.	3.92	3.72	7.72	0.20	0.45	0.94
167	Reserve Health Units	0.95	0.39	0.39	0.56	0.40	0.02
168	Interim Urban and Rural Public Health Organisations.	73.00	73.00	105.00	..	9.91	17.40
	Total ..	..	196.01	347.01	3.38	39.98	45.88

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
MEDICAL—concl'd.						
0.71	0.39	1.01	2.50	Hospital .. Bed ..	....	....
1.78	2.72	4.60	13.00	Hospital .. Bed ..	1 75	....
0.70	0.59	0.67	3.00	..	..	..
0.17	0.33	0.27	0.89	..	..	..
53.55	77.60	206.14	500.88			
PUBLIC HEALTH.						
1.53	0.03	5.33	8.50	Trainee	55	26
27.31	37.58	86.55	188.74	No target	..	..
..	..	0.84	14.19	Ditto ..	..	..
24.67	49.59	57.23	133.96	Headquarters Control. Units ..	1 17	1 17
0.43	0.43	1.33	4.20	Do. ..	3	9
1.24	1.87	4.85	9.35	Do. ..	12	12
0.003	..	0.003	0.426	Do. ..	..	12
25.21	24.09	28.39	105.00	Sanitary Inspectors. Health Inspectors. Vaccinators Disinfectors Clerical staff.	240 470 1,397 944 51	240 470 1,397 944 51
80.393	113.59	184.523	464.36			

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52 Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
							SUB-HEAD-
169	Industrial Housing Scheme.	115.00	100.00	100.00	..	20.00	20.00
	Total ..	..	100.00	100.00	..	20.00	20.00
							SUB-HEAD-
170(a)	Minimum Wages in Agriculture.	5.64	5.64	3.12	..	0.05	0.14
170(b)	Factory Inspectorate	1.75	1.75	1.56	..	..	..
170(c)	Boiler Inspectorate	1.09	1.09	0.47	..	..	..
171	Industrial Statistics	4.05	3.00	2.45	1.05	0.36	0.41
172(a)	Employees' State Insurance.	1.97	1.97	1.38	..	..	..
172(b)	Welfare Centre ..	15.05	6.55	14.30	..	0.17	0.18
	Total ..	..	20.00	23.28	1.05	0.58	0.73
							SUB-HEAD-
173	Establishment charges for staff employed for Aboriginal Welfare Work.	26.99	19.35	..	7.64	3.55	3.62
174	Establishment charges for staff employed for Harijan Welfare Work.	17.85	14.35	14.27	3.48	2.31	2.68
175	Establishment charges for staff employed for Backward Muslim Community Welfare Work.	5.30	1.35	1.21	3.95	0.35	0.18
176	Award of scholarships to aboriginal students.	21.70	15.70	..	6.09	2.88	3.20

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951—56 Actuals.	Unit.	Plan, 1951—56.	Actual, 1951—56.
9	10	11	12	13	14	15
HOUSING.						
28.00	20.15	24.50	112.65	Houses	2,350	1,063
28.00	20.15	24.50	112.65			
LABOUR AND LABOUR WELFARE.						
0.35	0.84	1.91	3.29	No target	..	..
0.26	0.60	0.68	1.54	Ditto	..	..
0.03	0.12	0.13	0.28	Ditto	..	..
0.49	0.56	0.77	3.59	Ditto	..	..
..	..	0.11	0.11	Ditto	..	..
2.31	4.94	4.56	12.16	Ditto	..	..
3.44	7.06	8.16	19.97			
AMELIORATION OF BACKWARD CLASSES.						
3.58	4.95	5.23	20.93	Staff	590	760
2.60	2.75	2.86	13.20	Do.	187	190
0.05	0.16	0.31	1.05	Do.	20	20
3.29	4.64	6.41	20.42	Stipend	14,297	16,050

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Total cost.	Five-year cost.		Progress of		
			Original.	Revised.	Up to March, 1951.	1951-52 Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
177	Construction of hostels for aboriginal students.	8.67	5.74	15.17	3.90	0.91	1.26
178	Special scheme of aboriginal uplift in Santal Parganas and Chotanagpur Division.	20.80	12.00	..	8.81	3.35	6.63
179	Award of scholarships to scheduled caste students.	42.64	33.50	35.17	10.14	6.23	6.51
180	Construction of hostels for scheduled caste students.	8.19	7.86	2.35	0.43	0.23	0.27
181	Award of scholarships and book-grants to Backward Muslim Community students.	15.22	8.00	10.09	7.22	2.14	1.98
182	Construction of hostels for Backward class Muslim Community students.	2.80	2.80	0.38	0.20	0.03	0.05
183	Grants - in - aid to Maktabas.	13.95	10.10	9.60	3.85	1.85	1.96
184	Award of scholarships to Backward class students.	10.62	10.00	20.83	0.62	1.65	1.99
185	Opening of Grain-golas.	18.54	6.50	..	12.04	2.59	1.80

II—contd.

PROGRESS—contd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
AMELIORATION OF BACKWARD CLASSES—contd.						
1.85	5.20	2.23	11.45	Hostel ..	66	57
				Building ..	..	28
5.62	14.63	16.87	47.10	School ..	306	575
				Hostel ..	36	36
				Wells ..	276	531
				Cottage Industry	..	9
				Medical centre	..	11
				Road constructed	..	187
				Graingola	..	miles. 14
				Resettlement	..	10
6.43	8.68	13.00	40.85	Stipend ...	39,929	45,209
0.75	0.31	2.03	3.59	Hostel ..	36	38
				Building ..	7	12
1.97	1.98	2.89	10.96	Stipend ..	10,914	13,108
0.11	0.09	0.08	0.36	Hostel ..	3	4
				Building ..	..	3
2.06	1.95	2.04	9.86	Maktabs ..	560	560
5.29	5.90	8.89	23.72	Stipend ..	9,889	12,282
				Schools for Tharus.	..	16
4.16	3.30	5.24	17.09	Graingola	405	390
				Building ..	68	68

APPENDIX
SCHEMEWISE

Serial no.	Name of the Scheme.	Five-year cost.			Progress of		
		Total cost.	Original.	Revised.	Up to March, 1951.	1951-52 Actuals.	1952-53 Actuals.
1	2	3	4	5	6	7	8
186	Grants-in-aid to institutions and individuals working for welfare of aboriginals, book-grants, University fee, etc.	2.61	2.12	..	0.49	0.20	0.53
187	Construction of sweepers' quarters, University fee, book-grants and other miscellaneous expenditure.	11.34	6.49	22.15	4.94	4.82	0.94
188	Grants-in-aid to institutions working for welfare of scheduled castes and individual grant to Harijan Sewak Sangh for Chautarwa Dome Settlement and Co-operative Credit Societies.	5.43	4.32	8.92	1.11	1.06	1.18
189	Book-grants, University fee, building grants-in-aid to libraries for Backward Muslim Communities.	1.60	0.66	1.26	0.94	0.20	0.25
190	Scheme for cultural development of aboriginals.	0.34	0.25	..	0.10	0.55	0.25
Total		..	160.00	141.40	75.95	34.90	35.28
Civil Works		..	..	..	..	182.00	..
Grand total ..		..	5729.28	6674.06	..	1883.3	965.9

II—concl'd.

PROGRESS—concl'd.

Expenditure (in lakhs of Rs.).				Progress of physical target.		
1953-54 Actuals.	1954-55 Actuals.	1955-56 Actuals.	Total 1951-56 Actuals.	Unit.	Plan, 1951-56.	Actual, 1951-56.
9	10	11	12	13	14	15
AMELIORATION OF BACKWARD CLASSES—concl'd.						
0.36	0.88	3.69	5.66	Students.. Institutions	.. ..	3,981 43
0.98	5.73	7.93	20.40	Quarters ..	200	200
				Students ..	2,500	14,705
				Houses ..	1,160	1,404
1.19	2.25	2.36	8.04	Wells .. Co-operative Societies.	.. 38	155 39
				Institutions	258	459
0.30	0.10	0.08	0.93	Students	..	1,824
				Libraries	..	63
				Institution	..	1
0.33	0.66	2.32	2.11	Kharia- families settled.	290	290
40.92	64.16	82.46	257.72			
..	..	..	182.0			
911.2	1456.9	2538.3	7327.6			

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.				1954-55	
	Centre's share.		State share.	Total.	Centre's share..	
	Loan.	Grant.			Loan.	Grant..
	1	2	3	4	5	6	7
MINISTRY OF COMMERCE AND INDUSTRY.						
1. Handloom schemes financed out of Cess Fund.	8.75	0.82	..	9.57	5.00	9.42
2. Gur and Khandesari
3. Toy making
4. Calico Printing
5. Handicrafts design Centre
6. Marketing Organisation for Handicrafts.
7. Development of Brass and Bell metal Industries (subsidies to workers).
8. Development of Wood and Lacquer Industries (for subsidies and loan).
9. Development of stoneware industry (subsidies and loan).
10. Pottery Development Centre
11. Small Industries Service Institute
12. Development of Tassar Industry in Bihar.
13. Scheme for the reorganisation of Eri-seed supply station in Bihar on the recommendation of the Central Silk Board.
14. Scheme for the Development and Organisation of Oilseeds and Oil Pressures' Co-operative Societies.	..	0.35	0.85	1.20	0.25	0.13
15. Scheme for the organisation of Oilmen's Co-operative Societies within the Community Project areas and popularisation of Wardha Ghanies.	0.34	0.40

III.

DURING THE FIRST FIVE-YEAR PLAN PERIOD.

[RUPEES IN LAKHS.]

1954-55—concl'd.		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share.	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
..	14.42	12.11	21.12	0.54	33.77	25.86	31.36	0.54	57.76
..	0.17	..	0.17	..	0.17	..	0.17
..	0.14	0.12	0.26	..	0.14	0.12	0.26
..	0.10	0.10	0.20	..	0.10	0.10	0.20
..	0.07	0.07	0.14	..	0.07	0.07	0.14
..	..	0.05	0.03	0.08	0.16	0.05	0.03	0.08	0.16
..	0.02	0.02	0.04	..	0.02	0.02	0.04
..	..	0.08	0.04	0.12	0.24	0.08	0.04	0.12	0.24
..	..	0.03	0.01	0.04	0.08	0.03	0.01	0.04	0.08
..	..	1.24	1.01	..	2.25	1.24	1.01	..	2.25
..	1.04	1.04	2.08	..	1.04	1.04	2.08
..	1.70	0.41	2.11	..	1.70	0.41	2.11
..	1.69	..	1.69	..	1.69	..	1.69
0.37	0.75	..	0.12	0.13	0.25	0.25	0.60	1.35	2.20
1.01	1.75	0.34	0.40	1.01	1.75	0.68	0.80	2.02	3.50

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951—54.				1954-55		
	Centre's share.		State share.	Total.	Centre's share.		
	Loan.	Grant.			Loan.	Grant.	
	1	2	3	4	5	6	7
16. Pilot scheme for the organisation of Lac Growers' Co-operative Societies.	0.02	
17. Scheme for the organisation and Development of Co-operative Societies in areas inhabited by Scheduled Tribes in the State of Bihar.	0.21	
18. Purchase and distribution of fertilisers.	78.79	..	..	78.79	70.50	..	
19. Medium and long-term loans for construction of godowns for storage of seeds and manures and for purchase of agricultural implements.	18.00	..	
20. Grant of financial assistance to cottage and small-scale industries under the Bihar State Aid to Industries Act.	2.32	2.32	0.86	..	
TOTAL	..	87.54	1.17	3.17	91.86	94.95	10.18
MINISTRY OF EDUCATION.							
21(a) Basic and Social Education	9.07	4.96	14.03	0.25	16.92
21(b) Single teacher primary schools—unemployment programme.	6.60	2.09	8.69	..	19.17
21(c) Other Educational Schemes	14.34
21(d) Bihar Institute of Technology, Sindri.	1.13
21(e) Sindri School of Engineering	0.14
21(f) Ranchi School of Engineering, Ranchi.	1.00
21(g) Chaibassa Junior Technical School, Chaibassa.	0.03
TOTAL	15.67	7.05	22.72	0.25	52.73

III.—*contd.*

DURING THE FIRST FIVE-YEAR PLAN PERIOD.

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share.	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
0.02	0.04	..	0.02	0.02	0.04	..	0.04	0.04	0.08
0.20	0.41	..	0.82	0.82	1.64	..	1.03	1.02	2.05
..	70.50	94.50	..	..	94.50	243.79	..	..	243.79
..	18.00	..	..	..	..	18.00	..	..	18.00
0.96	1.82	6.14	..	15.00	21.14	7.00	..	18.28	25.28
2.56	107.69	114.49	28.50	19.52	162.51	296.98	39.85	25.25	362.08
24.98	42.15	..	9.08	8.09	17.17	0.25	35.07	38.03	73.35
2.23	21.40	..	10.70	10.70	21.40	..	36.47	15.02	51.49
7.37	21.71	..	39.68	22.08	61.76	..	54.02	29.45	83.47
5.72	6.85	..	..	..	..	..	1.13	5.72	6.85
0.29	0.43	..	..	..	..	..	0.14	0.29	0.43
0.33	1.33	..	0.60	2.88	3.48	..	1.60	3.21	4.81
0.03	0.06	..	0.24	0.24	0.48	..	0.27	0.27	0.54
40.95	93.93	..	60.30	43.99	104.29	0.25	128.70	91.99	220.94

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.				1954-55	
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
	1	2	3	4	5	6	7
MINISTRY OF FINANCE.						
22. Local Development Works	14.47	..	14.47	..	66.85
TOTAL	14.47	..	14.47	..	66.85
MINISTRY OF FOOD AND AGRICULTURE.						
23. Rural Development Extension Training Centre.	..	6.62	0.74	7.36	..	1.23
24. Extension Training Centre, Ranchi	0.41
25. Agricultural Schools	4.96	..	4.96	..	8.58
26. Grow More Food Publicity schemes.	..	1.10	1.10	2.20	..	0.26
27. Key Village Scheme	1.39	0.84	2.23	..	0.76
28. Gosadan Scheme	0.53	0.54	1.07	..	0.09
29. Soil Conservation in Harharo Catchment in the district of Hazaribagh.
30. Tube-wells	0.75	..
31. Special Minor Irrigation schemes	0.47	..	..	0.47	23.84	..
TOTAL	0.47	14.60	3.22	18.29	24.59	11.33
MINISTRY OF HEALTH.						
32. Extension of Maternity Welfare Centres.
33. National Filaria Scheme
34. National Malaria Control Scheme	..	19.64	7.50	27.14	..	29.03
35. National Water-Supply and Sanitation Programme.	25.00	..
36. Rural Water-Supply and Drainage Programme.
TOTAL	19.64	7.50	27.14	25.00	29.03

III.—*contd.*

DURING THE FIRST FIVE-YEAR PLAN PERIOD.

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share.	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
..	66.85	..	66.85	..	66.85	..	148.17	..	148.17
..	66.85	..	66.85	..	66.85	..	148.17	..	148.17
1.94	3.17	..	0.97	2.09	3.06	..	8.82	4.77	13.59
0.07	0.48	..	2.00	0.68	2.68	..	2.41	0.75	3.16
0.95	9.53	..	2.11	1.70	3.81	..	15.65	2.65	18.30
0.25	0.51	..	0.25	0.25	0.50	..	1.51	1.60	3.21
0.47	1.23	..	0.90	0.73	1.63	..	3.05	2.04	5.09
0.09	0.18	..	0.40	0.40	0.80	..	1.02	1.03	2.05
..	..	..	7.18	..	7.18	..	7.18	..	7.18
..	0.75	7.31	..	..	7.31	8.06	..	..	8.06
..	23.84	105.68	..	..	105.68	129.99	..	..	129.99
3.77	39.69	112.99	13.81	5.85	132.65	138.05	39.74	12.84	190.63
..	..	..	0.86	..	0.86	..	0.86	..	0.86
..	..	..	12.40	3.10	15.50	..	12.40	3.10	15.50
9.22	38.25	..	31.93	15.54	47.47	..	80.60	32.26	112.86
18.00	43.00	75.00	..	112.00	187.00	100.00	..	130.00	230.00
..	..	..	37.92	37.92	75.84	..	37.92	37.92	75.84
27.22	81.25	75.00	83.11	168.56	326.67	100.00	131.78	203.28	435.06

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.				1954-55	
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
	1	2	3	4	5	6	7
MINISTRY OF HOME AFFAIRS.						
37. Establishment charges for staff employed for scheduled tribes welfare work.	..	5.83	5.32	11.15	..	3.00
38. Tribal Research Institute, Ranchi						
39. Staff for the welfare of Paharias in Santal Parganas.36
40. Subsidising of High Schools						
41. Opening of Primary schools in backward areas.	..	3.85	9.80	13.65	..	..
42. Opening of training centres for teachers employed in Hindi schools in backward areas.						
43. Grant to Chaibassa College10	.10	.20	..	..
44. Chaibassa Technical School07
45. Construction of hostels for the scheduled tribe students.	..	2.23	3.85	6.08	..	2.60
46. Award of scholarships to scheduled tribe students.						
47. Special scheme of scheduled tribes uplift in Chotanagpur and Santal Parganas.	..	13.92	10.57	24.49	..	6.53
48. Educational schemes of Paharias of Santal Parganas.						
49. Cottage industry for Paharias ..						
50. Agricultural scheme for Paharias	..	.39	..	.39	..	.79
51. Animal Husbandry Scheme for Paharias.						
52. Opening of Grain-Golas for Paharias.						

III.—*contd.*

DURING THE FIRST FIVE-YEAR PLAN PERIOD.

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share.	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
1.86	4.86	..	3.39	2.92	6.31	..	12.22	10.10	25.32
..	.36	..	.20	.20	.40	..	.56	.20	.76
..	..	..	..	..	..	..	3.85	9.80	13.65
..	..	..	..	..	..	..	.10	.10	.20
..	.07	..	1.325	1.325	2.65	..	1.395	1.325	2.75
3.05	5.65	..	2.70	2.70	5.40	..	7.53	9.60	17.13
7.51	14.04	..	3.175	3.175	6.35	..	27.99	25.62	53.61
		..	2.985	2.985	5.97				
			1.38	1.38	2.76				
			.305	.305	.61				
..	.79	..	.05	.05	.10	..	1.93	.75	2.68
			.11	.11	.22				
			.285	.285	.57				

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.				1954-55	
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
	1	2	3	4	5	6	7
53. Opening of Grain Golas for scheduled tribes.	..	3.23	6.79	10.02	..	.60
54. Minor Irrigation Works	17.44	46.01	63.45	..	4.00
55. Establishment of fruit orchard for benefit of Paharias.06
56. Organisation of Co-operative Societies in Scheduled Areas.27
57. Schemes for improvement of cattle in Chotanagpur and Santal Parganas.	..	.21	.20	.41	..	.30
58. Scheme for establishment of Poultry Development Centres.	..	.36	.36	.72	..	.58
59. Scheme for opening of Wool Shearing and Grading Centres.05
60. Settlement of Kharias	Included in the scheme for cultural development of Aborigines.				
61. Settlement of Paharias16
62. Grant of loans to Scheduled tribes	..	.13	.22	.35	..	..
63. Construction of hill-paths and village roads in Santal Parganas, Ranchi, Singhbhum and Palamau.	..	1.35	..	1.35	..	1.85
64. Provision of dispensaries in rural areas.	..	.49	.97	1.46	..	1.08
65. Improvement and maintenance of hospitals and dispensaries in Seraikella and Kharsawan.30
66. Leprosorium-cum-Research Institute at Brahmba near Ranchi.36
67. Special Development Schemes in scheduled areas.85
68. Medical schemes for Paharias22

III.—*contd.*

DURING THE FIRST FIVE-YEAR PLAN PERIOD.

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share.	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
2.78	3.38	..	1.50	3.50	5.00	..	5.33	13.07	18.40
26.85	30.85	..	4.00	21.00	25.00	..	25.44	93.86	119.30
.10	.16	..	.07	.07	.14	..	.13	.17	.30
.09	.36	..	.82	.82	1.64	..	1.09	.91	2.00
.21	.51	..	.285	.285	.57	..	.795	.695	1.49
.33	.91	..	.455	.455	.91	..	1.395	1.145	2.54
.08	.13	..	.115	.115	.23	..	.165	.95	.36
..	..	..	.564	.564	1.128	..	.564	.564	1.128
..	.16	..	.17	.17	.34	..	.46	.39	.85
..
..	1.85	..	3.50	3.50	7.00	..	6.70	3.50	10.20
1.08	2.16	..	1.57	1.57	3.14	..	3.14	3.62	6.76
.30	.60	..	.30	.30	.60	..	.60	.60	1.20
.34	.70	..	.35	.35	.70	..	.71	.69	1.40
.85	1.70	..	.475	.475	.95	..	1.325	1.325	2.65
..	.22	..	.19	.19	.38	..	.41	.19	.60

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.			1954-55.		
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
1	2	3	4	5	6	7
69. Public Health Organisation— National Malaria Programme.	..	.87	2.65	3.52	..	1.00
70. Anti-Leprosy work through B. C. G.23
71. Supply of village type medicines16
72. Construction of wells in Tribal Areas.	1.00
73. Water Supply Scheme in Paharia locality.	1.12
74. Thakkar Leprosy Cure Centre
75. Welfare Centre at Kuru02	.01	.03	..	..
76. Grant-in-aid to institutions and individual working for the welfare of Scheduled tribes—Book-grants, University fee, etc.	..	.52	.57	1.09	..	.50
77. Reorganisation of non-official part of the Adimjati Seva Mandal.
78. Cultural Development of the Scheduled tribes. (Including expenditure on settlement of Kharias.)	..	.62	.75	1.37	..	.52
79. Establishment of Palm Gurm-making centres in Tribal Areas.
80. Interim Rural Health Unit Scheme
81. Provincialisation of Subdivisional hospitals in scheduled areas.
82. Opening of Leprosy Control Centres.
83. Opening of 4 Maternity and Child Welfare Centres.
84. Scheme for the welfare of aboriginals of Adhaura and Rohtas P.-Ss. of Shahabad District.
85. Scheme for the aboriginals of Monghyr District.

III.—*contd.*DURING THE FIRST FIVE-YEAR PLAN PERIOD—*contd.*

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
4.53	5.53	..	5.48	7.68	13.16	..	7.35	14.86	22.21
.64	.87	..	.45	.45	.90	..	.68	1.09	1.77
.23	.39	..	.35	.35	.70	..	.51	.58	1.09
..	1.00	..	2.45	1.85	4.30	..	3.45	1.85	5.30
1.16	2.28	..	.51	.51	1.02	..	1.63	1.67	3.30
..	..	..	.80	.20	1.00	..	.80	.20	1.00
(To be contributed by Santal Paharia Seva Mandal.)									
..	..	..	..	..	..	..	.02	.01	.03
.31	.81	..	1.00	.25	1.25	..	2.02	1.13	3.15
..	..	..	.50	..	.50	..	.50	..	.50
.12	.64	..	.05	.05	.10	..	.67	1.27	2.01
..	..	..	.105	.105	.21	..	.105	.105	.21
..	..	..	.40	.40	.80	..	.40	.40	.80
..	..	..	2.25	2.25	4.50	..	2.25	2.25	4.50
..	..	..	1.70	1.70	3.40	..	1.70	1.70	3.40
..	..	..	.12	.12	.24	..	.12	.12	.24
..	..	..	1.90	2.03	3.93	..	1.90	2.03	3.93
..	..	..	.80	1.11	1.91	..	.80	1.11	1.91

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.			1954-55.			
	Centre's share.		State share.	Total.	Centre's share.		
	Loan.	Grant.			Loan	Grant.	
1	2	3	4	5	6	7	
86. Scheme for the aboriginals of Purnea District.	
87. Scheme for the welfare of Asurs	
88. Rehabilitation of Birhors	
89. Subsidised High Schools in backward areas.	
90. Opening of two primary schools for aboriginals in hilly regions of Adhaura and Rohtas P.-Ss. of Shahabad.	
91. Educational Development Scheme of Seraikella and Kharswan.	
92. Exemption from tuition fees for Scheduled tribes at the secondary stage.	
93. Scheme for distribution of improved bucks and improved boars.	
94. Scheme for livestock improvement in tribal areas of Adhaura and Rohtas P.-Ss. of Shahabad District.	
95 (a) Scheme for opening a combined livestock farm at Seraikella.	
(b) Establishment charges for the staff employed for scheduled castes welfare work.	..	.25	7.34	7.59	..	.30	
96 (a) Book-grant, University fee and other petty grants.	}	..	.39	6.86	7.19	..	1.80
(b) Construction of sweepers' quarters.							
(c) Housing scheme for landless and homeless Harijans.							
(d) Wells							
(e) Subsidy for cottage industries							

III.—*contd.*DURING THE FIRST FIVE-YEAR PLAN PERIOD—*contd.*

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
..80	1.10	1.90	..	.80	1.10	1.90
..05	.05	.10	..	.05	.05	.10
..095	.095	.19	..	.095	.095	.19
..50	4.26	4.76	..	.50	4.26	4.76
..016	.016	.032	..	.016	.016	.032
..	1.50	6.38	7.88	..	1.50	6.38	7.88
..	2.00	1.00	3.00	..	2.00	1.00	3.00
..0627	.0627	.1254	..	.0627	.0627	.1254
..095	.095	.19	..	.095	.095	.19
..755	.755	1.51	..	.755	.755	1.51
2.51	2.81	..	.50	2.84	3.34	..	1.05	12.69	13.74
3.79	5.59	..	3.25	6.18	9.43	..	5.38	16.83	22.21

APPENDIX

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951-54.			1954-55.		
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
	1	2	3	4	5	6	7
97 (a) Grant-in-aid to institutions and organisations for the welfare of scheduled castes and removal of untouchability including grant of Bihar Harijan Sevak Sangh, for Co-operative Societies.	..	.78	2.65	3.43	..	.78
(b) Primary and residential schools						
(c) Scheme for the welfare of ex-criminal tribes.						
98. Construction of hostels for backward classes students.	..	.05	.38	.43	..	.05
99. (a) Award of scholarships to backward classes students.	..	..	..	..	..	..
(b) Schools for Tharus of Champaran.	..	1.35	7.29	8.64	..	2.85
100. Establishment charges for the staff employed for backward classes welfare work.	..	.03	.85	.88	..	.03
101. Grain Golas for Tharus of Champaran.	..	.07	.42	.49	..	.07
TOTAL .. ..	..	54.42	113.96	168.38	..	34.44
MINISTRY OF IRRIGATION AND POWER.						
102. Damodar Valley Corporation ..	1054.00	..	..	1054.00	180.00	..
103. Mayurakshi Left Bank Canal Scheme.	..	..	1.15	1.15	..	..
104. Kosi Project .. ..	..	..	..	..	200.00	..
105. Rural and small town electrification scheme.	..	..	..	..	6.00	..
TOTAL	1054.00	..	1.15	1055.15	386.00	..

III.—*contd.*DURING THE FIRST FIVE-YEAR PLAN PERIOD—*contd.*

[RUPEES IN LAKHS.]

1954-55— <i>concl'd.</i>		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
1.45	2.23	..	2.07	2.30	4.37	..	3.63	6.40	10.03
.55	.60	..	.075	1.075	1.15	..	.175	2.005	2.18
..
2.99	5.84	..	3.00	3.00	6.00	..	7.020	13.28	20.48
.13	.16	..	.0792	.2408	.32	..	.1392	1.2208	1.36
.49	.56	..	.15	..	.15	..	.29	.91	1.20
64.33	98.77	..	64.12	97.31	161.43	..	152.98	275.60	428.58
..	180.00	255.56	..	..	255.56	1489.56	..	..	1489.56
28.21	28.21	..	..	23.79	23.79	..	..	53.15	53.15
..	200.00	700.00	..	..	700.00	900.00	..	..	900.00
..	6.00	..	..	..	..	6.00	..	..	6.00
28.21	414.21	955.56	..	23.79	979.35	2395.56	..	53.15	2448.71

EXPENDITURE ON CENTRALLY SPONSORED SCHEMES

[RUPEES IN LAKHS.]

Name of the scheme.	1951—54.			1954-55.		
	Centre's share.		State share.	Total.	Centre's share.	
	Loan.	Grant.			Loan.	Grant.
1	2	3	4	5	6	7
PLANNING COMMISSION.						
106. Community Projects ..	9.32	20.42	11.11	40.85	7.28	27.12
107. National Extension Service Development.	0.64	1.36	0.43	2.43	4.80	11.92
TOTAL	9.96	21.78	11.54	43.28	12.08	39.04
MINISTRY OF TRANSPORT.						
108. National Highways .. ..	..	98.97	..	98.97	..	42.16
109. Inter-State Roads (Grants-in-aid from Government of India).	..	..	..	..	..	7.34
110. Central Road Fund (State's allocation).	..	..	58.40	58.40	..	..
TOTAL .. ..	..	98.97	58.40	157.37	..	49.50
MINISTRY OF RELIEF AND REHABILITATION.						
111. Rural Rehabilitation (including Housing) Scheme.	22.12	..	..	22.12	3.36	..
112. Urban Small Loans Schemes and Urban Rehabilitation Scheme (excluding Housing).	5.51	..	..	5.51	1.58	..
113. Housing Schemes	21.02	..	..	21.02	4.23	..
114. Relief (including Administration)	..	37.41	5.42	42.83	..	4.05
TOTAL	48.65	37.41	5.42	91.48	9.17	4.05
GRAND TOTAL	1200.62	278.13	211.41	1690.16	552.04	297.15

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III.—concl'd.

DURING THE FIRST FIVE-YEAR PLAN PERIOD—concl'd.

[RUPEES IN LAKHS.]

1954-55—concl'd.		1955-56.				Grand Total.			
State share.	Total.	Centre's share.		State share.	Total.	Centre's share.		State share	Total.
		Loan.	Grant.			Loan.	Grant.		
8	9	10	11	12	13	14	15	16	17
25.13	59.53	118.77	56.10	35.50	210.37	135.37	103.64	71.74	310.75
7.82	24.54	31.50	86.59	37.91	156.00	36.94	99.87	46.16	182.97
32.95	84.07	150.27	142.89	73.41	366.37	172.31	203.51	117.90	493.72
..	42.16	..	37.32	..	37.32	..	178.45	..	178.45
..	7.34	..	15.00	..	15.00	..	22.34	..	22.34
31.18	31.18	..	..	27.98	27.98	..	..	117.56	117.56
31.18	80.68	..	52.32	27.98	80.30	..	200.79	117.56	318.35
..	3.36	6.00	..	..	6.00	31.48	..	..	31.48
..	1.58	3.00	..	..	3.00	10.09	..	..	10.09
..	4.23	6.00	..	..	6.00	31.25	..	..	31.25
0.88	4.93	..	5.43	0.99	6.42	..	46.89	7.29	54.18
0.88	14.10	15.00	5.43	0.99	21.42	72.82	46.89	7.29	127.00
232.05	1081.24	1423.31	517.13	461.40	2401.84	3175.97	1092.41	204.86	5173.24

NOTE.—Figures given in the statement above are subject to slight modifications on final verification of accounts.]