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GOVERNMENT OF NAGALAND

CURRENT EVALUATION REPORT ON KHANDASARI SUGAR PROJECT, DIMAPUR AND SUGARCANE DEVELOPMENT PROGRAMME IN THE STATE

**EVALUATION UNIT (PLANNING AND CO-ORDINATION DEPARTMENT) GOVERNMENT OF
NAGALAND KOHIMA**

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PREFACE

This is the first evaluation report issued by the Evaluation Unit under the Planning and Co-ordination Department. This relates to the functioning of the Khandasari Sugar Project, Dimapur and progress of Sugar Cane Production Programme in the State.

It is hoped that the report will be found useful by the Government and will meet the needs of our policy makers and administrators who are responsible for recommending programme action and execution. It may be utilised by the implementing agency to exercise internal control more effectively over its operations.

The assistance and co-operation from the officers of the Industries Directorate and Suggar Mill Project are gratefully acknowledged by Evaluation Unit.

My thanks are due to Shri S. S. Sangal, who conducted the study single-handed and prepared the report.
Kohima, Sept., 1970.

R. M. DHAR,
Evaluation Officer, Government of Nagaland.

CHAPTER-I
INTRODUCTION

1. 1. Nagaland, practically having negligible revenue of its own, is industrially the most backward State in the Indian Union. In the table below, where percentages of State's resources to total outlay for 4th Plan are arranged in ascending order, Nagaland is having 2nd position in the country with only 5 crores of rupees (12.5% of total outlay) as its own resources taking it for granted that the newly imposed taxes are realised in full for which State Government is facing strong opposition from the public.

PERCENTAGE OF STATE'S RESOURCES TO TOTAL OUTLAY FOR THE 4TH
PLAN ARRANGED IN ASCENDING ORDER
(Rs. In crores)

State	State resources	Central Assistance	Total outlay	% age of States resources to total outlay
1	2	3	4	5
Jammu& Kashmir	13.40	145.00	158.40	8.4
Nagaland	5.00	35.00	40.00	12.5
Assam	41.75	220.00	261.75	15.9
Rajasthan	82.00	220.00	302.00	27.1
Orissa	62.60	160.00	222.60	28.1
West Bengal	101.50	221.00	322.50	31.5
Madhya Pradesh	121.00	262.00	383.00	31.6
Kerela	83.40	175.00	258.40	32.8
Bihar	193.28	338.00	531.28	36.4
Andhra Pradesh	180.50	240.00	420.50	42.9
Uttar Pradesh	439.00	526.00	965.00	45.5
Mysore	177.00	173.00	350.00	50.6
Tamilnadu	317.36	202.00	519.36	61.1
Haryana	146.50	78.50	225.00	65.1
Gujarat	297.00	158.00	455.00	65.3
Punjab	192.56	101.00	293.56	65.6
Maharashtra	652.62	245.50	898.12	72.7
Total	3,106.47	3,500.30	6,606.47	47.0

Source: - Yojana, June 14,1970

1.2 Even in 1963, when Nagaland emerged as the sixteenth State of the Indian Union, the State could hardly concentrate on developing this easternmost part of the country economically partly due to heavy strains of political instability and partly because the economy of the State was characterised by primitive agriculture, negligible industry and insufficient roads for communication. However, before this newly formed small State, with a keen desire of giving better life to its people, economic reconstruction has been the primary consideration.

1. 3. Therefore, with a view to ensuring integrated economic growth in the region through industrialization, the National Council of Applied Economic Research was approached to make a detailed study and suggest possible ways and means. Consequently, NCAER conducted a Techno-Economic Survey in 1964-65 and recommended that a major industrial break-through cannot be expected in the region but possibilities for the development of sugar cane cultivation in the State exist. Then, during ad-hoc plan years elaborate investigations were carried out to study the feasibility of establishing industries based on the raw material resources of the State. The investigations fully established that there is sufficient potential for growing adequate raw material for starting two major industries : 1. Pulp and Paper Mill and 2. Sugar Mill in the State. Planning Commission too approved the establishment of the above two major projects. Thus the State Government could take this bold step towards industrialisation as a means for achieving accelerated economic growth with the objectives of

- (i) increasing its own revenue, and
- (ii) aiming to create sufficient employment opportunities.

1. 4. Establishment of Pulp and Paper Mill at Tuli in Mokok-chung District is still in the making and plans are already half-way for its installation. It is likely to be implemented by 1973-74. But Sugar Mill of 1000 tonnes daily crushing capacity is expected to run a trial season by December 1971. And as a forerunner to the Sugar Mill, a Khandasari Mill of 60 tonnes daily crushing capacity was commissioned in 1967-68, completing the first phase of the programme towards the first step of industrialisation in the State. It was established just to work on trial basis with the objective of utilising the sugar cane already grown in the State profitably in such a way that healthy climate is created for growing good quality cane in the State, so as to feed the sugar mill with adequate quantity of raw material by the time it is ready for crushing.

CHAPTER II

OBJECTIVES AND METHODOLOGY

Objectives

2. 1 Khandasari Sugar Mill, though established on a trial basis, has completed 3 seasons of its working and about Rs. 20 lakhs have been spent by the Government. Since a Sugar Mill of a 1000 tonnes daily crushing capacity at a cost of Rs. 3.5 crores (Approx.) is to come up by December 1971, it was felt necessary to study the various aspects of the functioning of the project to find out its impact on the psychology of sugar cane growers in general. Development programme for growing sugar cane in the State was also studied with a view to determining the extent of achievement made during the last 3 years towards the set objectives of creating healthy climate for the cultivation of sugar cane. The purpose of this study was, therefore, to make an assessment of programme performance in terms of its total objectives laid down at the time when programme was initiated.

2. 2. The scope of this study also included the examination of problems related to the availability of skilled and unskilled workers needed for running the project, their working conditions and the extent to which improved and scientific methods of sugar cane cultivation have been adopted in the State.

Methodology

2. 3. The project was visited personally to make an on-the-spot study of its working. Information and data regarding investment on the plant, skilled and unskilled labour, cost of necessary inputs and outputs and sugar cane plantations were collected through schedules specifically designed for the purpose. In addition, qualitative information was gathered through personal discussions with the Project Officer, Director of Industries, Sugar cane Development Officer and Manager, Co-operative cane farm, Dimapur. Some karigars (Sugar manufacturers) of the project, unskilled workers and sugar cane growers were also contacted to make the correct assessment of the programme. Above all, the data were supplemented by personal observations and assessment of the local situations.

2. 4. The study was commenced on the 24th April, 1970. The field work of collection of data, visit to various sugar cane farms and discussions were completed on 12th September, '70. The scrutiny and analysis of data and the drafting of report were completed on 30th September, 1970.

CHAPTER III

KHANDASARI SUGAR PROJECT, DIMAPUR

Investments

3. 1. Capital investments in the project like cost of plant and machinery, construction cost of factory building, approach road and electrification etc. and recurring investments such as cost of raw-material, administrative and other expenses are given in the following table for all the three years since 1967-68 when it went into production for the trial season.

TOTAL INVESTMENT MADE ON THE PROJECT

CAPITAL INVESTMENT	1967-68	1968-69	1969-70	Total
1. Plan & Machinery (details as per Annexure I)	4,95,773.66	82,268.20	14,093.80	5,92,135.66
2. Building				
(a) Factory Building	1,92,650.00	-	-	1,92,650.00
(b) Repairs of factory building	-	-	8,100.70	8,100.70
(c) Approach Road	-	-	8,025.00	8,025.00
(d) Internal EI electrification	-	-	4,210.10	4,210.10
(e) Molases pit	-	-	1,687.00	1,687.00
(f) Other civil works	-	1,14,746.05	-	1,14,746.05
Sub Total	1,92,650.00	1,14,746.05	22,022.80	3,29,418.85
3. Cost of Raw Material				
(a) Sugarcane	9,418.00	97,600.00	2,63,496.56	3,70,514.56
(b) Consumable Material	65,728.37	44,200.00	28,704.50	1,38,632.87
(c) Fire wood	-	20,000.00	26,281.70	46,281.70
Sub Total	75,146.37	1,61,800.00	3,18,482.76	5,55,429.13
4. Other Manufacturing Expenses				
(a) Electricity charges	-	-	3,975.52	3,975.52
(b) Repair & Maintenance	-	5,376.75	23,343.74	28,720.46
(c) P.O.L.	5,754.34	6,998.78	4,537.34	17,290.46
Sub Total	5,754.34	12,375.53	31,856.60	49,986.47
5. ADMINISTRATIVE/ESTABLISHMENT EXPENSES				
(a) Salary, Wages & Allowances	20,415.12	1,59,974.00	2,27,135.50	4,07,524.62
6.MARKETING EXPENSES				
(a) Central Excise Duty	1,225.00	22,575.00	-	23,800.50
Total	7,90,964.99	5,53,738.78	6,13,591.46	19,58,295.23

3. 2. It may be seen from the above table that the total expenditure incurred on the project upto the end of 3rd season of its working which ended on 10.6.70 amounted to Rs. 19,58,295.23 of which the investment on plant and machinery, construction of building and other civil works was of the order of Rs. 9,21,554.51 which accounts for 47 percent of the total investment. Details of expenditure incurred on plant and machinery alone amounting to Rs. 5,92,135.66 accounting for 30 percent of the total investment, are given in Annexure I.

Working of the Project

3. 3. Strictly speaking evaluation of Khandasari Sugar Project cannot be based on the concept of cost benefit. Nevertheless it should not be forgotten that such project should be evaluated with reference to the objectives set out and the operational efficiency. In other words, the Project was primarily established as a forerunner to the Sugar Mill Project, with

the clear objective of ensuring regular disposal of raised cane in such a way that sugar cane cultivation— atmosphere is created in the area, during the process of cane multiplication till the sugar factory of 1000 tonnes daily crushing capacity comes into operation.

3. 4. It can be reasonably anticipated that the factory should have functioned with the above objectives in view. The table on the next page gives very clearly the operational efficiency of the factory.

3. 5. It may be seen from the table that for all the 3 seasons factory worked very much below the capacity (see col. 8). And more distressing was the point that percentage recovery of sugar as given in col. 11 went too low (2.81) even if the no. of days, factory worked went up and the crushing was continued for more than the scheduled time.

DETAILS FO THE WORKING OF KHADASARI SUGAR PROJECT

Years	Daily Crushing Capacity Available (tones)	Period Mill worked	Total No. of days	No. of Days lost Due to various reason*	No. of Days Actually Worked (cols4-5)	Cane Crushed (tones)	Average Daily crushing Capacity (cols. 7/6)	Daily Crushing Capacity Lost Cols2-8	Quantity Of sugar Produced (tones)	Percentage Recovery of sugar
1	2	3	4	5	6	7	8	9	10	11
1967-68	60	6-3-68 to 22-3-68	11	4	7	128.0	18	42	6.4	5.00
1968-69	60	5-1-69 to 15-4-69	100	41	59	1,218.4	21	39	44.5	3.65
1969-70	60	8-12-69 to 10-6-70	185	75	100	3,293.7	30	30	92.7	2.81

* Worked for 2 shifts (of 8 hours each) a day
* Reasons were Electric failures, Breakdown of Motor, Rain, shortage of fuel, Jamming of juice etc

3. 6. Deficient implementation and unsound planning both accounted for such inefficient functioning of the factory. Lack of foresight on the part of project authorities, in not making adequate arrangement of fuel, delay in repairing the machinery, non-availability of good quality sugar cane etc., were found to be the reasons of low sugar recovery. Over and above, management failed to take proper and timely steps in the disposal of Molasses in 1968-69 and produce of 1969-70. Khandasari sugar as well as molasses could not be disposed of even upto the end of September '70, posing difficult problem for the coming crushing season too. Though in this study no attempt has been made to analyse the financial results of the working of the project in terms of input-output ratio, but it cannot be denied that with a little foresight and planning on the part of authorities more revenue should have been earned. Total income of the project is shown in the following table.

INCOME OF KHANDASARI SUGAR MILL

Item	1967-68		1968-69		1969-70	
	Quantum (Qtls)	Price (Rs)	Quantum (Qtls)	price (Rs)	Quantum (Qtls)	price (Rs)
1	2	3	4	5	6	7
1. Khandasari Sugar	64	16,706	445	1,30,920	927	Not yet Sold
Molasses	44	3,300	528	5,400	1,500	-do-

3.7 It is evident from the figures that even if Khandasari Sugar and molasses were sold, total income of the project could have been about 3 lakhs only which is less than even the expenditure incurred on the cost of Raw Material (Rs. 5,55,429.13) and Establishment charges (Rs. 4,07,524.62). Adequate thinking had not been given at all to ensure that a better return materialises from the investment on the plant.

3.8 Wrong functioning of the project, apart from giving huge operational losses to the State (about 16.5 lakhs in 3 years), created unhealthy atmosphere amongst the sugar cane growers. It is an admitted fact that in the beginning of industrialisation in a State, having no such experience we must lose and Operational losses, must be ignored irrespective of its magnitude but it should be tolerated only for the sake of future development and never at its cost.

Manpower and Technical Know how

3.9. Thus it was observed that for all the 3 seasons the project did not function satisfactorily. Apart from the reasons given above, lack of proper supervision of its actual day, to day working, due to the absence of well experienced and qualified technical staff was found to be the main reason for under utilisation of capacity and low operational efficiency. The project was being administratively looked after in the beginning by the Director of Industries from Kohima and now for about 2 years Project Officer, Sugar Mill is looking after its affairs. Though they are both well experienced and capable persons but day to day functioning of the project could not be practically handled from a distance. Moreover they were always busy with other office and field works. At the time of visit the following staff were found in position in the project.

Technical	No. of posts	Qualifications	Scale of pay	Term of appointment
(a) Supervisory personnel				
1. Manager	1	B.Sc. passed with three months training	Rs. 250-660/-	Temporary
2. Foreman	1	B.Sc. & A.M.I.E.	Rs. 220-550/-	Work Charge
(b) Skilled personnel				
1. Mechanic	1	Matric passed	Rs. 195-440/-	-do-
2. Filter	1		Rs. 155-305/-	-do-
3. Fieldman	1		Rs. 140-220/-	-do-
4. Store-Keeper	1		Rs. 140-220/-	Temporary
5. Driver	1		Rs. 125-185/-	-do-
6. Karigar(Sugar Manufacturer)	1		Rs. 12/- per day	casual
7. Motor operator	1		Rs. 6/- per day	-do-
(c) Semi-Skilled Personnel				
1. Mate	5		Rs.6/-per day	-do-
2. Helper	3		Rs.6/-per day	-do-
3. Field watchman	5		Rs.6/-per day	-do-
(d) Unskilled				
1. Casual Labour	150		Rs. 4/per day	Casual
(e) Ministerial Personnel				
1. UDA Cum Asstt.	1	B.A.	Rs. 220-330/-	Temporary
2. Typist	1	Matric passed	Rs. 140-220/-	-do-
3. Peon	1		Rs. 90-145/-	-do-
4. Chowkidar	2		Rs. 90-145/-	-do-
5. Canc clerk	1		Rs.7 per day	Casual
6. Time keeper	1		Rs.7 per day	-do-

3. 10. It may be seen that the staff available for the project was very much inadequate and incompetent. One Manager who is B. Sc. plucked having only 3 months training at his command and one foreman are the only two supervisory personnel to handle the affairs. They are also not very well qualified and need more training for handling the machine efficiently. Burning of 60 H. P. Electric Motor in 1968-69 was an evidence of their incapacity and incompetence to handle such equipments. Proper arrangements were not made to have a good man with necessary administrative skill and good background of sugar technology, who could take important decisions on the spot and may handle the affairs efficiently. 3 Technically qualified and trained supervisors were also not provided to supervise the work of 3 shifts efficiently. Experts from Institute of Sugar Technology, Kanpur also emphasized the necessity of having the above staff for the project.

3. 11. It is true that Government should preferably appoint local men but in such big investments Government should, in no case, appoint incompetent and inexperienced persons. Rather department should take advance action to send the locals outside the State to get adequate training. In case of non-availability of locals even for training, as reported by the Project Officer, Government should relax the rules and be liberal in making suitable appointments in the interest of the future of the project.

3. 12. Regarding availability of unskilled man power for the project, it need not be mentioned that there is acute shortage of labour, despite heavy participation ratio. Agriculture which remains as the primary sector of economy needs much of the unskilled manpower and so scope for its diversion to industries is very much limited. Further the present output of skilled and Semi-skilled manpower in the State is very little. Therefore to run the project State had to depend mostly on external supply of manpower. This problem is to be viewed in the context of present employment policy and innerline regulations.

3. 13. Lastly it was seen that in the project all the employees were employed on casual and temporary basis. It was found that working conditions of the workers were very much miserable. No suitable and satisfactory housing facility was provided to them. Labour conditions became more difficult since all were outsiders having high mobility due to their attachment with their family at home. Local men were not coming ahead for unskilled labour partly because of the low wages and partly because of their having no aptitude for the industrial pattern and so did find difficulty in getting themselves adjusted to the modern industrial system. It was also found that some locals were attached with Karigars (Sugar Manufactures) to train them in manufacturing sugar. But it was reported that they did not show any interest in the work and most of them left without even informing the authorities.

3. 14. Therefore it is very essential that attempts should be made to induce local people to come forward ; working condition should be made easy and more facilities should be provided to them. This fact should be appreciated that the interest of employees are closely linked with the efficient running of the project.

CHAPTER IV

DEVELOPMENT OF SUGAR CANE PRODUCTION

4.1 Proposed sugar Mill of 1,000 tonnes capacity costing about Rs. 3.5 crores is expected to come up within a year and will have its trial season next year i.e. December 1971. As already estimated, it will require about 1.5 lakh tonnes of sugar cane each crushing season and the requirement of total area was estimated to be about 10,000 acres. For the trial crushing season too, at least 3,500 acres of area giving approximately 70,000 tonnes of sugar cane would be the minimum requirement of the Mill.

4.2 Since the trial crushing season is only one year ahead, it was found imperative to study the progress of the sugar cane development programme in its entirety with a view to ascertain the reasons for success or failure of the programme in different areas.

4.3 As stated above, during the trial period of sugar factory, the acreage of sugar cane should not be less than 3.500 acres. While 4.300 acres, targeted to be developed and cultivated by Sugar Mill Farm, Co-operative Societies and individual sugar cane growers was as under:

- 1. Sugar Mill Farm 700 acres
- 2. Co-operative Societies 1.600 acres (for 20 societies @ 80 acres each)
- Individual Growers 2.000 acres
- Total 4,300 acres

4. 4. It was learnt during the visit to the project that plantation of sugar cane in Sugar Mill Farm could begin only by 22nd March, 1969 and by 1970-71 there will be hardly 300 acres of sugarcane as against the targeted area of 700 acres ; out of this area some cane will again be required to be used as seed for further multiplication. It need not be mentioned that a sum of Rs. 9.99.837.07 has been spent on the development of Sugar Mill Farm in the years 1969-70 & 1970-71 and because of strong opposition from the Nagas, most of the investment in labour, Bulldozers and Tractors remained idle and inspite of the best attempts much progress could not be made. It was found during the visit to the Farm that about 50 acres of standing crop was uprooted by the Nagas. They were found encroaching the project land and even brought stay-orders from High Court against their eviction. Under the circumstances the working of the Mill will not at all be possible since Government and project authorities have not been able to tackle the problem.

4. 5. The progress made by co-operative societies in planting sugarcane was found to be almost negligible. Whatever may be the reasons including opposition from encroachers, delay in giving patta etc. but the fact remains that only 4 or 5 societies out of 20 could come forward and covered only 100 acres of area under sugar cane cultivation so far, as against the total targeted area of 1,600 acres.

4. 6. As regards individual growers, it was found during the visit to the different areas that their psychology was adversely affected by the poor working of Khandasari Sugar Project. At the same time Deragoan Co-operative Sugar Mill, who used to consume their cane, also appeared to have disappointed them. It was learnt that growers needed assurance of their cane being accepted which has not been possibly given to them, so they were found sitting idle without taking any interest in cane cultivation. Otherwise sufficient potential of growing sugar cane exists in the Mikir Hill and Dhan-siri—Doyapur areas. Though no data is available regarding the area under sugar cane cultivation by individual growers, however, on the basis of discussions with several growers it was roughly estimated to be about 1.200 acres only. It was found with great distress that these areas were neglected and project authorities failed in maintaining contacts with the individual growers with a view to provide them Technical advice and win over their psychology. This was reported to be due to insufficient extension staff and lack of transport facilities at their disposal.

4. 7. It was also observed that the knowledge of sugar cane growers regarding its scientific cultivation was very much scanty and quality of cane except in Sugar Mill Farm, was found to be very much poor. Twelve individual growers, availing loan, were interviewed personally through a questionnaire. Only 3 out of 12 reported to have applied chemical fertiliser (urea) in their sugar cane fields, while use of pesticides was adopted by only 2 growers. It was also observed that except in case of Dimapur Co-operative Farm, yield of sugar cane per acre showed the decreasing trend as is clear from the following table ;

Areas under sugar cane (Acres)	Qty. of yield	(in Qtls)
	1968-69	1969-70
15	3,000	2,000
16	5,400	3,700
3	700	600
6	1,000	900
17	4,900	3,300

It is beyond doubt that the success of the scheme will depend on efficient plantation of sugar cane combined with adoption of other necessary inputs. It was found that project authorities could not meet the requirement of individual cultivators properly.

4. 8. For the development of sugarcane, growers were provided financial assistance by the Government for growing sugarcane in the form of crop-loan. During the period between 1969-70 and 1970-71 Rs. 5,60,000.00 have been advanced to the growers. This year also 2 installments had been advanced to the cultivators. Project Officer reported during discussions that because of audit objections, no amount is going to be advanced as 3rd or 4th installments. This decision will further hit the programme of sugar cane cultivation and even the standing crop may be spoiled.

4.9 In case of individual growers, it was also found that mostly the Nepalis and Kacharis were growing sugar cane and very few locals were reported to have availed the loan and planted sugar cane. Out of 12 individual growers, only 3 were locals. One took up sugar cane cultivation in 1969-70 and another planted cane only this year while the third one did not plant any cane so far. On the whole upto 1969-70 only 2 locals came forward and planted sugar cane. Among those, who took loan but did not plant, were 7 and 4 locals in the years 1968-69 and 1969-70 respectively.

4. 10. The progress of sugar cane development programme, as analysed above, created doubts about the success of the- Mill. And it is not understood as to how and on what basis project authorities are going ahead with the erection of Mill Machinery and other programmes without ensuring the availability of sufficient raw material' to feed the sugar mill.

CHAPTER V

MAIN RECOMMENDATIONS

5. 1. As observed above, the sugar cane development programme and scheme of starting Khandasari Sugar project as a fore-runner to the Sugar Mill had failed. But at the same time it must succeed. This is a big challenge, put forward by the Government's bold and ambitious programme of having a major industrial break-through in the State, which planners, authorities and Nagas must accept. Problems confronted during the course of this study call for serious thinking and plans should be re-drawn so that the sugar cane cultivation atmosphere is created and the sugar industry may thrive well and improve the economy.

5.2. With a view to find out a realistic and practical solution of the problems the following concrete suggestions have been made

5. 3. Firstly, Khandasari sugar project need major repairs and replacements and proper arrangements should be made for doing the same at the earliest, so as to consume the cane already grown during 1970-71 as well. Mistakes committed in past should be avoided and the psychology of sugar cane growers should not be allowed to be spoiled further.

5. 4 Secondly, proper advance arrangements should be made to have 3 technically qualified and trained supervisors from outside to handle the affairs of 3 shifts efficiently and Government, in no case, should leave such big investment in the hands of incompetent and inexperienced personnel, as was done in the past.

5. 5 Thirdly, since the progress of sugar cane development programme in deforested land, to be developed by co-operative societies and project authorities, was found very much low in the wake of stiff opposition from Nagas and stay-orders from High Court, project authorities should divert their attentions and concentrate more on the development of Mikir Hill, Dhansiri Doyanpur areas and other existing cane areas in Dimapur.

5. 6 Government should take energetic steps immediately to see that the required cane cultivated area, wherever more potentiality exists, is taken up for quick development and

fresh plantations so as to provide sufficient cane at least during the trial season of 1971-72 to feed the sugar Mill.

5. 7 Fourthly, since the quantity of sugar cane depends on the cane cultivated area, project authorities and Agriculture Department should work in close co-ordination to provide the necessary inputs and technical advice to all the interested sugar cane growers having scanty knowledge of scientific cultivation of sugar cane.

5. 8 Government should see that the extension wing at the disposal of Project Officer and Agriculture Department are well equipped with technically qualified personnel. Extension staff should be provided with all the necessary tools including transport facilities to enable them to do their work in this hilly terrain smoothly, as then-achievements alone by way of providing technical guidance and necessary inputs to have efficient plantation in the interior areas ensuring systematic and integrated development of sugar cane cultivation, will pave the way for making sugar Mill a success.

Sl. No	Item	Expenditure incurred during (Rs)			
		1967-68	1968-69	1969-70	Total
1	Main plan& Machinery including erection	1,81,233.74	=	5,725,30	1,86,959.04
2	Weigh Bridges	27,077.41	-	-	27,077.41
3	Water Tank	5,253.00	-	-	5,253.00
4	Water Supply System	48,435.00	-	-	48,435.00
5	Electric Transformer	20,000.00	-	-	20,000.00
6	External Wiring	84,770.00	-	-	84,770.00
7	Vehicle (Jeep)	19,149.94	-	-	19,149.94
8	Vehicle (truck)	34,859.71	-	-	34,859.71
9	Tractors	74,994.86	-	-	74,994.86
10	Laboratory equipment	-	12,306.90	-	12,306.90
11	Workshop Machinery	-	14,107.30	-	14,107.30
12	Cycles	-	705.00	-	705.00
13	Spare Electric Motor	-	3,613.00	-	3,613.00
14	Spare parts, Testing Instrument	-	22,536.00	-	22,536.00
15	Erection of Machinery	-	20,600.00	-	20,600.00
16	Furniture	-	8,400.00	-	8,400.00
17	Renewal of Machinery	-	-	8,368.50	8,368.50
	Total	4,95,773.66	82,268.20	14,093.80	5,92,135,66

5. 9 Lastly, recently constituted Industrial Development Corporation should also include Project Officer who is having wide experience of major industrialisation to his credit. It is hoped that he may be of much help in arriving at purposeful major decisions regarding the project.

APPENDIX

GOVERNMENT OF NAGALAND EVALUATION
UNIT
CURRENT EVALUATION OF THE KHANDASARI SUGAR
PROJECT

1. BACKGROUND DATA

- 1. Date of approval of the Scheme.
- 2. Date of commencing of work.
- 3. Original target Date of commissioning the plant.
- 4. Actual date of commissioning of the plant:
 - (a) Trial.
 - (b) Regular.

,2. INVESTMENT ON THE PLANT

	Item	1967—68	1968—69	' 1969—70
1.	Cost of machinery			
2.	Civil works			
3.	Auxiliary Furnishings			
4.	Laboratory			
5.	Repairs and Replacements			
6.	Transport			
7.	Establishment Charges (personnel)			
8.	Others (Specify)			
	* Total			

3. Cost of Raw materials 1

Item	1967—68 Quantum Cost	1968—69 Quantum Cost	1969—70 Quantum Cost
1. Sugar-cane			
2. Sulphur			
3. Lime			
4. Power			
5. Others (Specify) Lime stone			
Total			

4. OPERATION OF THE PLANT AND PRODUCTION:

Year	Season of working			Duration No. of shift per days	Duration of each shift (Hrs)	Total No. of hours of work	Break-down (Stop-age) of work during crushing period			Quatunm of sugarcane crush ed (Tonesh)	Production (Q)
	From (Date)	To Date	Total No. of days				No. of days	Hours	Reasons		Sugar
1	a	3	4	5	6	7	8	9	10	11	12

5. STAFF:

Post	Scale	Name of incumbent	Term of appointment	Technical qualification	Past experience	Period of working in the plant		Reason for
			contract/casual temporary/ permanent			From	To	leaving
1	2	3	4	5	6	7	8	9
				-				

6. PROCUREMENT OF RAW MATERIALS (SUGAR-CANE ONLY)

Source	1967-68	1968-69	1969-70
1. Production in Govt. Sugar-cane farm.			
2. Supply from Co-op. farms.			
3. Supply from individual Sugarcane growers to whom loans have been extended.			
4. Supply from other Local cultivators.			
5. Supply from farms of Agriculture departments.			
6. Supply from outside the State.	I		
Total			
7. INPUT & OUTPUT BALANCE :			
In put (Rs.)			Out put (Rs.)
Item 1967-68 68-69 69-70 I			Item 1967-68 68-69 69-70
1. Labour			
2. Excise duty			
3. Raw materials			
4. Capital outlay.			
Total			Total

EVALUATION UNIT EVALUATION STUDY OF KHANDASARI SUGAR PROJECT
QUESTIONNAIRE FOR SUGAR CANE GROWERS

1. IDENTIFICATION PARTICULARS:

1. 1. State. 1. 2. Village.
1. 3. Name of the respondent.
1. 4. Mainly owner cultivator/tenant cultivator.
1. 5. Whether member of any co-operative society growing sugarcane.

of operational holding in acres (1970-71)

Owned land	Land taken on lease	Land given on lease	Total cultivated area 1+2—3
(1)	(2)	(3)	(4)

3. Has he entered into any agreement with Khandasari Mill officials ?

4. If so, what are the terms and conditions ?
Varriety Terms and conditions.

5. Did he receive any special facility for taking up sugar cane cultivation If so, what are they ?

Varriety	Nature of facilities	Extent obtained during ? 1968-69 1969-70 1970-71
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6. Did any officer of the Mill or Agriculture Department visit his field during 1969-70 and 1970-71 ? If yes,

Designation	Month of visit	Nature of advice given	Views of respondent on such assistance
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7. Has he seen any demonstration/trial of sugar cane cultivation ? If yes, when and where ?
8. Has he got any knowledge of the following :

Type of recom- mendations	Unit	Awareness Yes/No	Details of recommendation	Recommendations adopted by the respondent actual 1969-70 1970-71
------------------------------	------	---------------------	------------------------------	---

Fertiliser doses per acre

- | | | |
|----|-------------|----------|
| 1. | Nitrogenous | (in Kgs) |
| 2. | Phosphatic | „ |
| 3. | Potassic | „ , |

Plan protection

- | | | |
|----|--------------------------|-----------------------------|
| 1. | Preventive | (No. of sprayings/dustings) |
| 2. | Basal doses of esticides | (In kgs per acre) |

Intercultural operations

- | | | | | |
|----|-------------------------|--------|-------------------------|---------|
| 1. | No. of Weedings/Hocings | Number | o. of irrigations given | Number. |
|----|-------------------------|--------|-------------------------|---------|

9. MENTION DETAILS AS BELOW FOR THE LAST 3 YEARS (1968-69 TO 1970-71)

Year	Name of the Variety	Area in Acres As per agreement	Actually Shown	Qty. of seed used	Qty. produced in qts	Qty used as seed	Qty sold to Khandasari Mill	Others

10. Any area covered under sugar cane cultivation other than that sown as per agreement with Khandasari Mill officials. If yes, give details for the last 3 years.

11. DID HE FACE ANY PROBLEM REGARDING

- | | |
|----|------------------------------------|
| 1. | Adoption of recommended practices. |
| 2. | Procurement of good seed. |
| 3. | Fertilisers |
| 4. | P.P. materials and equipment. |
| 5. | Harvesting. |
| 6. | Transportation. |
| 7. | Price offered. |
12. Would he like to continue growing sugar cane.
13. If yes, with what suggestions.
14. If no, give reasons.
15. Year in which sugar cane cultivation has been adopted for the first time.