

**ESTIMATES COMMITTEE  
1960-61**

**HUNDRED AND TWENTY-SEVENTH REPORT  
(SECOND LOK SABHA)**

**MINISTRY OF FOOD AND AGRICULTURE  
(Department of Food)**

- I. Directorate of Sugar and Vanaspati.
- II. National Sugar Institute, Kanpur.



**LOK SABHA SECRETARIAT  
NEW DELHI**

*March, 1961*  
*Chaitra, 1883 (Saka)*

Price : Rs 1.15 nP.

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## CORRIGENDA

Hundred and Twenty-seventh Report of the Estimates Committee on the Ministry of Food & Agriculture (Department of Food) on the subjects (i) Directorate of Sugar and Vanaspati; and (ii) National Sugar Institute, Kanpur.

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Page 8, para 16, line 2, for '7:0' read '7.0'  
line 3, for '7:2' read '7.2'

Page 24, para 42, line 2, for 'targetted' read 'targeted'

Page 26, para 50, marginal heading, for 'or' read 'for'

Page 27, line 6, for 'recommended' read 'recommend'

Page 28, para 56, table, for 'Consumption o Vanaspati'  
read 'Consumption of Vanaspati'

Page 29, line 5, for '4:75' read '4.75'

Page 35, para 78, line 5, for 'Department' read  
'Departmental'

Page 38, para 86, item (i), for 'Junce' read 'Juice'

Page 41, para 96, marginal heading, for 'Audt' read 'Audit'

Page 69, under Class IV, for 'Relivers?' read 'Relievers'

P. T. O.

Page 80, Sl. No.16, line 1, for 'tha' read 'that'

Page 81, Sl. No.23, line 8, for 'obained' read 'obtained'

Page 88, Sl. No.4, line 3, for 'Assistant' read  
'Assistants' and delete '&'

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# CONTENTS

	PAGE
COMPOSITION OF THE COMMITTEE . . . . .	(ii)
INTRODUCTON . . . . .	(v)
<b>DIRECTORATE OF SUGAR AND VANASPATI :</b>	
<b>I. ORGANISATION AND FUNCTIONS</b>	
A. Introduction . . . . .	1
B. Functions . . . . .	1
C. Organisation . . . . .	2
D. Office Accommodation . . . . .	7
<b>II. SUGAR</b>	
A. Sugarcane . . . . .	8
(a) Production . . . . .	8
(b) Prices . . . . .	8
(c) Sugarcane Cess . . . . .	11
B. Sugar . . . . .	11
(a) Production and consumption . . . . .	11
(b) Incentive for increasing sugar production . . . . .	12
(c) Price Control . . . . .	12
(d) Sugar distribution . . . . .	13
(e) Sugar Export . . . . .	16
<b>III. SUGAR INDUSTRY</b>	
A. Progress made during First and Second Plans . . . . .	23
B. Expansion during Third Plan . . . . .	24
C. Cooperative Sugar Factories . . . . .	25
D. Payment of Compensation to Sugar Factories . . . . .	26
E. Development Council for Sugar Industry . . . . .	27
<b>IV. VANASPATI</b>	
A. Introduction . . . . .	28
B. Quality Control of Vanaspati . . . . .	29
C. Colourisation of Vanaspati . . . . .	31
D. Effect of Vanaspati on Health . . . . .	31
E. Vegetable Oils Products Committees . . . . .	32
F. Miscellaneous . . . . .	32
<b>NATIONAL SUGAR INSTITUTE, KANPUR</b>	
A. Introduction . . . . .	34
B. Functions . . . . .	34

	PAGE
C. Organisation . . . . .	35
D. Budget Estimates and Expenditure	36
E. Activities . . . . .	37
(a) Teaching . . . . .	37
(b) Research . . . . .	38
(c) Technical Advice and Assistance . . . . .	38
(d) Schemes . . . . .	39
(e) Review of Work . . . . .	41
F. Miscellaneous . . . . .	41
(a) Experimental Sugar Factory . . . . .	41
(b) Regional Research Stations . . . . .	42
(c) Annual Report . . . . .	42

**APPENDICES :**

I Organisation chart of the Directorate of Sugar and Vanaspati . . . . .	45
II Statement showing the sanctioned and actual strength of officers and staff (category-wise) of the Directorate of Sugar and Vanaspati as on the 1st April, 1958, 1959 and 1960 . . . . .	47
III Statement showing the visits paid by four sugar inspectors to each sugar factory in their zones during the years 1957-58, 1958-59 and 1959-60 . . . . .	51
IV Constitution and functions of the Development Council for Sugar Industry . . . . .	56
V Statement showing installed capacity of Vanaspati factories in production during First and Second Plan periods . . . . .	58
VI Note on the progress of researches for finding a suitable colour for Vanaspati . . . . .	60
VII Note on the progress of research on the effect of consumption of hydrogenated oils on health . . . . .	64
VIII Statement showing the strength of staff (category-wise) sanctioned and actually working in National Sugar Institute during the last four financial years . . . . .	65
IX Statement showing the budget estimates, revised estimates and actual expenditure of the National Sugar Institute for 1956-57, 1957-58, 1958-59 and 1959-60 and Budget Estimates for 1960-61 . . . . .	70
X Summary of recommendations/conclusions . . . . .	78
XI Analysis of recommendations contained in the Report . . . . .	87

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1960-61

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## SECRETARIAT

Shri Avtar Singh Rikhy—*Deputy Secretary.*

Shri K. Ranganadham—*Under Secretary.*

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\*Elected with effect from 25-11-60 vice Shri Dinesh Singh resigned.

## INTRODUCTION

1, the Chairman, Estimates Committee, having been authorised by the Committee to submit the report on their behalf, present this hundred and twenty-seventh Report on the Ministry of Food and Agriculture—Department of Food, on the subjects Directorate of Sugar and Vanaspati and National Sugar Institute, Kanpur.

2. A statement showing an analysis of the recommendations contained in this report is also appended to the Report (Appendix XI).

3. The Committee wish to express their thanks to the Secretary of the Ministry of Food and Agriculture (Department of Food) and other officers of the Ministry for placing before them the material and information that they wanted in connection with the examination of the estimates. They also wish to thank the representatives of the Cawnpore Sugar Merchants Association, Kanpur and the Vanaspati Manufacturers Association of India, Bombay for giving evidence and making valuable suggestions to the Committee.

NEW DELHI—1;  
March 24, 1961.  
*Chaitra 3, 1883 (Saka).*

H. C. DASAPPA,  
*Chairman,*  
*Estimates Committee.*



# **DIRECTORATE OF SUGAR & VANASPATI**

## **I. ORGANISATION AND FUNCTIONS**

### **A. Introduction**

After the commencement of World War II when it became extremely difficult to supplement the local production of sugar by imports, Government decided to control the distribution of available supplies under the Defence of India Rules. A Sugar Controller for India was appointed in 1942 to deal with the control and distribution of sugar in the country. Sugar Controller was also designated as Vegetable Oil Products Controller in 1945 on the imposition of control on price and distribution of vanaspati. With the abolition of control on sugar, the office of the Sugar Controller was abolished in 1948 and the residuary functions were performed by the late Department of Food until September, 1948, and thereafter by the late Department of Agriculture until 1951, when the Departments of Food and Agriculture were merged into the combined Ministry of Food and Agriculture. In October, 1956, the Ministry was bifurcated and the subject of sugar and vanaspati was allocated to the new Ministry of Food. On the merger of the two Ministries again in April 1957, the subject of sugar and vanaspati continued to remain in the Department of Food of the Ministry of Food and Agriculture.

Historical  
Background.

On the abolition of the Office of Sugar Controller for India in 1948, the work relating to control over prices and quality of vanaspati was continued and the designation of the Office was changed as the Office of the Vegetable Oil Products Controller. Control over sugar was re-imposed in September, 1949. This work was carried out for some time in the sugar and vanaspati section of the Ministry but with the increase in work, some staff was sanctioned for this work in the Office of Vegetable Oil Products Controller which was re-designated as Directorate of Sugar and Vanaspati in 1954.

### **B. Functions**

2. The functions of the Directorate of Sugar and Vanaspati in brief are:—

- (1) Development of the sugar and vanaspati industries including work connected with the licensing and establishment of new factories and expansions of existing units. Management of sugar factories taken over by Central Government.

- (2) Work relating to the Development Council for Sugar Industry.
- (3) Work in connection with allotment of controlled materials to both the industries and certifying essentiality for import of machinery and spare parts.
- (4) Assistance to co-operatives in the establishment of co-operative sugar factories.
- (5) Control on sugar with a view to check rise in price and to ensure equitable distribution of supplies.
- (6) Control on the quality of vanaspati manufactured in the country.

### C. Organisation

Administrative Set-up.

3. The Directorate of Sugar and Vanaspati is an attached office of the Department of Food, Ministry of Food and Agriculture. Headed by the Chief Director, the Directorate is broadly divided into the following four divisions:—

<i>Division</i>	<i>Officer Incharge</i>
1. Division dealing with the development of sugar industry under the provisions of the Industries (Dev. & Reg.) Act, 1951.	Director (Sugar Technical).
2. Division dealing with sugar control and distribution.	Director (Sugar Control).
3. Division for rendering technical advice to the cooperatives for establishment of cooperative sugar factories.	Processing Engineer.
4. Division dealing with Vanaspati Industry.	Dy. Director (Vanaspati).

A chart showing the organisational set-up of the Directorate is given in Appendix I.

Staff Position.

4. A statement showing the sanctioned and actual strength of officers and staff (class-wise) of the Directorate as on the 1st of April 1958, 1959 and 1960 is given in

Appendix II. The following table gives the sanctioned strength of staff (excluding class IV):—

	As on Ist April of			Per-centage increase in 1959 over 1958	Per-centage increase in 1960 over 1958
	1958	1959	1960		
Class I	17	21	23	23.5	35.3
Class II (Gazetted)	19	19	30	Nil	64.7
Class II (Non-Gazetted)	15	16	17	6.6	13.3
Class III	113	136	185	20.3	63.7
TOTAL	164	192	255	17	55.6

It will be seen that there has been increase of staff to the extent of 55.6 per cent (excluding Class IV staff) in 1960 as compared to 1958. The actual expenditure on the Directorate has also increased from Rs. 6.82 lakhs in 1957-58 to Rs. 10.50 lakhs in 1959-60—a rise of 53.9% in three years. The representative of the Ministry stated in his evidence that the increase was due to introduction of control on sugar in 1958 which was tightened up in 1959 and which still continued. He explained that the allotment of sugar every month which was only 30,000 tons to 40,000 tons in 1959 to start with had now increased to 1,30,000 tons. Further, allotment orders had to be issued every month in respect of 4,000 applications. All these applications had to be registered and the accounts in respect of Rs. 90 lakhs received as deposit with the applications had to be settled.

*The Committee learnt with concern that the strength of the Directorate had not been reviewed by the Special Reorganisation Unit or by any other body since its inception in 1954. Even with the increase in the activities of the Directorate, the Committee do not consider that such a large increase in staff was justified. A detailed review is bound to bring to notice scope for economy. The representative of the Ministry agreed that there was need for an examination of the staff position and undertook to have a detailed review made. The Committee have drawn pointed attention in the succeeding paragraphs to some of the features in this Directorate which in their opinion call for rectification.*

Review of Directorate.

5. *The Committee further recommend that Government may employ the internal economy unit, which is understood to be functioning in the Department of Food, to review the organisation from time to time with a view to effecting rationalisation and reduction in staff as also improving efficiency.*

Too many supervisory levels.

6. *The Committee are surprised at the numerous tiers of supervisory officers obtaining in the Directorate. For example, there are as many as five supervisory levels (Section Officer—Assistant Director—Deputy Director—Director—Chief Director) in the case of Bills Section I and II, and four levels (Section Officer—Deputy Director—Director—Chief Director) in the case of Sugar Technical, Sugar Control, Statistical, Disposal and Tender Accounts Sections. They were informed that level jumping was adopted in the Sugar Technical Section in respect of certain classes of work. The Committee suggest that the number of levels may be reduced and that level jumping may also be resorted to in respect of matters which require attention at higher level. They have referred in their 126th Report to a similar position obtaining in the Department of Food and their observations there are equally applicable to this case.*

Amalgamation of Sections.

7. *The Committee find that Co-ordination Section consists only of 1 Section Officer and 2 clerks and Export/Parliament/Policy Section consists of 1 Section Officer, 2 Technical Assistants, 2 Junior Technical Assistants and 2 Computers. Neither the strength of the Co-ordination Section nor its work appears to justify its existence as a separate Section. The Committee suggest that it may be examined whether the Co-ordination Section and Export/Parliament/Policy Section which too does not appear to have sufficient work-load could be combined into one Section.*

Duplication of Functions.

8. *The Committee note that one of the functions of the Co-operation Section of the Directorate is "to render assistance to co-operative sugar factories in operation with a view to improving their working efficiency." They also find that one of the functions of the National Sugar Institute is "to give technical advice and assistance to sugar factories with a view to improving their working efficiency." It seems to the Committee that there is avoidable duplication of effort between the Directorate of Sugar and Vanaspati on the one hand and the National Sugar Institute on the other in this regard, a matter which the Committee consider deserves examination.*

9. The Committee understand that there are four Inspectors (Sugar) one each at Bombay, Calcutta, Kanpur and Delhi. The functions of these inspectors are collection of samples for ascertaining the quality of sugar marked on the bags and checking of grades; ensuring that the controlled material released to the sugar factories is properly consumed and that the various provisions of the Sugar Control Order are effectively implemented and collection of market information. It was stated in evidence that there was persistent pressure on the Government that they should see to the proper grading of sugar but as there were about 170 factories to cover, the work involved was much more than the four inspectors could cope with. Inspectors  
(Sugar).

It was also stated that each sugar factory was inspected at least once a year. It is however seen from the statement (Appendix III) subsequently furnished by the Ministry that 28 sugar factories out of 155 working during 1957-58, 56 out of 156 during 1958-59 and 30 out of 158 during 1959-60 (excluding 6 in Madras, 1 in Kerala and 3 in Mysore which, it is understood, are visited by the Vanaspati Inspector posted at Madras) were not visited by the Inspectors (Sugar) even once a year. *The Committee consider this position as very unsatisfactory.*

10. Besides these four inspectors, there are six inspectors whose main duty is to visit sugar factories in the controlled region with a view to ensuring that sugar is despatched promptly against the allotment orders. They also collect information regarding despatches, stocks, etc. and resolve movement difficulties by personal contact with the railway authorities.

*The Committee are of the view that it may be better if the two sets of inspectors are combined and utilised for both types of work. The Government should ensure that each sugar factory is inspected by the inspectors at least once a year, if not more often. This may also result in saving both time and expenditure on travelling.*

11. There are 42 Technical Assistants and 33 Junior Technical Assistants in the Directorate. The representative of the Ministry stated in his evidence that these Assistants had some accounts or statistical qualifications and were doing accounting, statistical work etc. as distinguished from the general type of work done by ordinary graduate Assistants. Technical  
Assistants.

Provision of Technical Assistants not determined on rational basis.

12. *The Committee are surprised to note that 3 Technical Assistants and 2 Junior Technical Assistants have been provided in the Typing and Despatch Section. There seems to be hardly any justification for staff qualified in accounts or statistics being put on routine and non-technical work of this nature. They cannot help concluding that the provision of Technical and Junior Technical Assistants has not been determined on any rational basis.*

*The Committee are also of the view that the designation of Technical/Junior Technical Assistant for persons employed on non-technical work is wrong and misleading and needs to be revised to something more apt and therefore suggest that the feasibility of progressively replacing such Technical Assistants and Junior Technical Assistants in the Directorate by Upper Division Clerks and Lower Division Clerks respectively may be examined.*

Class IV Staff.

13. *The Committee find that several Sections of the Directorate are provided each with one daftri and one peon. The Committee consider this provision as excessive and recommend that the strength of Class IV staff be reduced by adjustment on the basis of 1 daftri and 1 peon for two Sections. In this connection, the Committee would like to draw attention of the Ministry to recommendation made on the subject in para 24 of their 76th Report on the Ministry of Scientific Research and Cultural Affairs—Part I (CSIR).*

The representative of the Ministry stated in his evidence that generally speaking the number of Class IV staff (56 on 1st April, 1960) was much too large and that he was in favour of reducing it.

Staff in the Ministry employed on Sugar and Vanaspati work.

14. *The Committee were informed that a post of Joint Secretary had been created recently in the Ministry of Food and Agriculture—Department of Food to look after Sugar and Vanaspati work as well as the work connected with subsidiary foods for which appreciable provision was being made in the Third Plan. The work pertaining to Sugar and Vanaspati was looked after by 1 Under Secretary, 2 Section Officers, 8 Assistants, 1 Upper Division Clerk and 8 Lower Division Clerks. There was a Subsidiary Foods Unit to deal with work pertaining to subsidiary foods. It was stated in evidence that the main functions of the two Sections in the Ministry dealing with Sugar and Vanaspati work were administrative in character, including correspondence with the State Governments. They also dealt with work relating to the administration of the National Sugar Institute.*

*The Committee feel that as the office of the Chief Director (Sugar and Vanaspati) is situated at Delhi and the work*

*relating to the National Sugar Institute is only of administrative nature, there may not be adequate justification for employing so much staff in the Ministry on Sugar and Vanaspati work. They suggest that the position in this respect may be carefully reviewed by the Ministry with a view to effecting economy.*

#### **D. Office Accommodation**

15. The Study Group of the Committee which visited the Directorate noticed that generally there was congestion in the Sections. The Committee were informed by the representative of the Ministry that the Directorate of Sugar and Vanaspati was in occupation of 10,000 sq. ft. of barrack type accommodation against their requirements of 18,000 sq. ft. *The Committee suggest that the question of providing sufficient and more convenient accommodation may be taken up without delay.*

## II. SUGAR

### A. Sugarcane

#### (a) *Production*

Increase in  
Cane Pro-  
duction.

16. The production of sugarcane has increased from 4·9 million tons in 1949-50 to 7·0 million tons in 1958-59. The expected production in 1960-61 is 7·2 million tons and the target for production in 1965-66 has been fixed at 9·0 to 9·2 million tons.

#### (b) *Prices*

Price  
Fixation.

17. The power to fix price of sugarcane is derived from the Essential Commodities Act 1955 and is exercised by the Central Government. The minimum price of sugarcane is fixed under clause 3 of the Sugarcane (Control) Order 1955, relevant extract from which is reproduced below:—

“3. (1) The Central Government may, after consultation with such authorities, bodies or associations as it may deem fit, by notification in the Official Gazette, from time to time fix the *minimum price* of sugarcane to be paid by producers of sugar or their agents for the sugarcane purchased by them, having regard to:

- (a) the cost of production of sugarcane;
- (b) the return to the grower from alternative crops and the general trend of prices of agricultural commodities;
- (c) the availability of sugar to the consumer at a fair price;
- (d) the price at which sugar produced from sugarcane is sold by producers of sugar; and
- (e) the recovery of sugar from sugarcane.

Provided that the Central Government or with the approval of the Central Government, the State Government may, in such circumstances and subject to such conditions as it may specify allow a suitable rebate in the price so fixed.”



18. The minimum price of sugarcane fixed for 1959-60 was Rs. 1.62 per maund for delivery at factory gate and Rs. 1.50 for delivery at purchasing centres connected by rail. The same price is being continued in the season 1960-61. The announcement of the minimum sugarcane price is made generally in February/March for the season commencing from the following November.

Minimum  
Price of  
Sugarcane.

19. The representative of the Ministry stated in evidence that no adequate assessment had been made of the cost of production of sugarcane. He added that certain surveys had been made but they were not dependable. When his attention was drawn to clause 3 of the Sugarcane (Control) Order 1955 and he was asked as to how the minimum price of sugarcane had been fixed if its cost of production had not been determined, the representative of the Ministry replied that that clause had been taken into consideration in a general way.

Assessment  
of Produc-  
tion Cost.

*The Committee do not feel happy over this position and consider it important that an assessment is made early of the cost of production of sugarcane in different areas in order to fix the minimum price of sugarcane to be paid to the producers having regard to the provisions of clause 3 (1) of the Sugarcane (Control) Order 1955.*

20. The price linking formula is for determination of the extra price of sugarcane over and above the minimum price, if found due on the basis of sugar recovery and the price realised for sugar by the factories. The formula has been laid down in clause 3-A of the Sugarcane (Control) Order, 1955 and the Schedule thereto. The formula has been applied from the season 1958-59 on a statutory basis. The Committee understand that payments in respect of that year have not yet been made by factories for the reason that the formula contains a factor 'X', which has to be determined by the Central Government from time to time on the basis of the recovery and duration of the season of the factory for the year. This factor has not yet been determined because the method of costing which formed the basis of this formula has become inoperative in certain respects as a result of the Tariff Commission's report on cost structure of sugar. Apart from varying the estimates of costs in respect of certain items, the Commission has included certain items in the cost of production which, under the old formula, were to be adjusted from the price of sugar realised by the

Price Link-  
ing Formula

factories. Further, the Commission has adopted an altogether different basis for determining the profit element. The Commission has allowed a return of 12 per cent on employed capital to provide not only for reasonable profit, but also for certain items of expenditure. Under the old system, a uniform element of profit alone was allowed on each maund of sugar. The Commission has not allowed any rehabilitation allowance while under the old formula such allowance was made.

Tariff  
Commissions  
Report  
to be  
expedited.

21. In view of the difficulties experienced in working the present price-linking formula and the representations received from the industry and on behalf of the canegrowers, the Government of India have referred to the Tariff Commission the question of revising the price linking formula for sharing the sugar prices between the factories and the canegrowers. The Commission has been asked to keep in view the need for making the formula simple, easy of application and intelligible to the canegrowers. The Commission will *inter alia* examine the justification of the industry's claims for rehabilitation allowance in the matter of division of sugar price between the canegrowers and the industry and the effect of the price linking formula on the establishment of new factories with heavy capital outlay. No time limit has been fixed for the submission of the report by the Tariff Commission.

*The longer the time taken in settling the question of price linking, the more complicated the problem will become because of the number of agriculturists, particularly those who supplied small lots of cane. As it is, payments to sugarcane suppliers are yet to be made for 1958-59 season. The Committee suggest that the Tariff Commission may be requested to expedite the submission of the Report as much as possible.*

Payment of  
higher  
sugarcane  
prices in  
Maharashtra  
and Gujarat.

22. The Committee understand that in Maharashtra and Gujarat States the sugar factories are able to pay a higher price for sugarcane than the statutory price. *The Committee feel that the example of Maharashtra and Gujarat is worth emulating by sugar factories in other regions.*

(c) *Sugarcane Cess*

23. The Committee were informed that sugarcane cess <sup>Cess in various States.</sup> was levied by the following States at the rates shown against each on cane crushed in sugar factories:—

Name of State	Rate at which cess is levied.
Uttar Pradesh	· -/3/- per maund of cane
Bihar	· 19 nP. per maund of cane.
Punjab	· 9nP. per maund of cane.
Maharashtra and Gujarat	· Rs. 5/- per ton of cane.
Madras	· Rs. 2/- per ton of cane.
Mysore	· Rs. 6/- per ton of cane.
Andhra Pradesh	· Rs. 5/- per ton of cane.
Madhya Pradesh	· 12 nP. per maund of cane if the cane purchased by any factory during a crushing season exceeds 10 lakh maunds.

No cane cess was levied in other States. It was stated by the Ministry that the purpose underlying the levy of sugarcane cess which was being collected by the State Governments under their respective law had not been specified in their Acts except in the case of States of Bombay and Mysore.

**B. Sugar**(a) *Production and Consumption*

24. The following table gives the figures of production, consumption etc. of sugar during 1957-58, 1958-59 and 1959-60 seasons:—

	(In lakh tons)		
	1957-58	1958-59	1959-60
Opening stocks on 1st November	4.31	3.31	1.41
Production of sugar during the year	19.78	19.19	24.22
<b>TOTAL STOCK</b>	<b>24.09</b>	<b>22.50</b>	<b>25.63</b>
Off take for internal consumption	20.42	20.80	20.21
Export	0.36	0.29	..
Closing stocks on 31st October	3.31	1.41	5.42

*The Committee are glad to note that there has been an increase in production of sugar in 1959-60 season over 1958-59 season to the extent of 5·03 lakh tons. They hope that the increase in production will be maintained.*

(b) *Incentive for increasing sugar production*

**Rebate on  
excise duty.**

25. As a general measure for maximising production of sugar in 1959-60, sugar factories were allowed 50 per cent rebate in excise duty (which is Rs. 11·25 per cwt.) on such production as was in excess of their average production during the previous two seasons 1957-58 and 1958-59. In the case of factories which went into production only in 1957-58 or thereafter or other factories which for special reasons did not function during 1957-58 and/or 1958-59 the grant of rebate was to be considered on merits. The total value of this concession given to the sugar factories during 1959-60 came to Rs. 5 crores. The Government have decided to continue this rebate at the same rate on sugar produced by the factories during 1960-61 season in excess of their average production of the two seasons 1958-59 and 1959-60. In the case of factories which went into production only in 1958-59 season or thereafter, or which did not function during 1958-59 and/or 1959-60, the question of granting a rebate is to be considered on merits, as during the last season.

*Increase in sugar production in the case of older factories may mean special additional effort and to some extent even uneconomic cost if they function already under optimum conditions. On the other hand, production in comparatively new factories is bound to increase in time as they approach optimum conditions of production. The Committee do not see adequate justification for allowing the concession to factories which are comparatively new for, in their case, the benefit would have seemingly been gained under fortuitous circumstances at the expense of the public exchequer. The representative of the Department, in his evidence, conceded that there might be certain factories which were taking undue advantage. The Committee suggest that the matter may be carefully reviewed.*

(c) *Price Control*

**Limited  
Price con-  
trol.**

26. The Committee understand that control over ex-factory price of sugar is exercised in the surplus region of U. P. and Bihar which produce about 63% of total production in the country. Punjab, though deficit, was also brought under control as it was felt that (in the conditions prevailing at the time control was imposed), the Punjab prices might continue to be high and thereby create difficulty in enforcing controlled prices in West U. P. There is no

control over ex-factory price in other States. The controlled ex-factory price for U. P. and North Bihar factories is Rs. 37·85 per maund and for factories in Punjab and South Bihar Rs. 38·35 per maund for ISS D-29 grade with the prescribed differentials for other grades.

The Committee were informed that the object of control had been to prevent the sugar prices from rising unduly high. The industry in the deficit States had been developed on the basis of locational advantages enjoyed by them as much in respect of quality of sugarcane as of market prices. It was, therefore, considered to be not prudent to take these advantages away, particularly from the point of view of development of sugar industry which had been taking place in deficit States. Moreover, price of sugar in deficit States was governed by the landed price of sugar from the surplus region of U. P. and Bihar. It was, therefore, considered by Government that by controlling ex-factory price of sugar in surplus region of U. P. and Bihar, the price of sugar in other regions would automatically get regulated. It was stated in evidence that Government did not wish to disturb the existing pattern of trade, for they felt that the alternative to it was to take over the entire production of sugar and resort to State trading which were not called for.

(d) *Sugar Distribution*

27. The Central Government release every month specific quantities of sugar for consumption in various States depending upon the availability of sugar and requirements. Inter-State movement of sugar is banned so that sugar allotted to a State is available for consumption therein. Sugar of factories in the controlled region, that is, U. P., Bihar and Punjab is allotted to tenderers of sugar who are licensed wholesale dealers nominated by the State Governments. The sugar factories in the non-controlled region are required to sell sugar in accordance with the directions of the State Governments concerned. Further distribution of sugar in the States is the concern of the State Governments. The District Magistrates have been empowered under Order No. G.S.R. 501|Ess.Com.-dated the 23rd April, 1960 to fix price of sugar allotted to their nominees at controlled ex-factory price from factories in U. P., Bihar and Punjab having regard to—

Controlled  
Distribution  
Scheme.

- (i) the ex-factory price paid or payable to the sugar factory supplying the sugar;
- (ii) the actual transport charges incurred by him;
- (iii) any octroi or other tax paid or payable by him; and

- (iv) a sum not exceeding one rupee per maund for his profit and any incidental charges.

Justification for Distribution Control.

28. The Committee enquired of the representative of the Ministry whether there was adequate justification for enforcing control on sugar distribution. The representative replied that it was realised that control was not an end in itself and that it should not be continued unnecessarily. He added that in view of the improvement in production of sugar in the last season, Government had been considering whether all the phases of control were necessary and to what extent they could be relaxed. It would appear, however, that most of the State Governments were in favour of the *status quo* being maintained because of fluctuations in production. The matter was further complicated by the fact that apart from the internal market, the exports had to be taken into account. Under the Sugar Export Promotion Act, quotas were allotted to each sugar factory for which they got only the international sugar price.

Decision on relaxation of controls to be expedited.

29. The Committee find that in addition to the carry over from 1959-60 season of over 5 lakh tons of sugar, Government expect a surplus of at least 5 lakh tons for this year. Even with the export of sugar, the prospects of maintaining sufficient reserve stock representing 2 months consumption requirements (say 5 lakh tons) are very good. *They suggest that the question of relaxing controls on sugar may be expeditiously examined. They would, however, like to emphasise that if a decision is taken to relax the controls, careful watch may be kept on its repercussions to ensure that no scare about shortage of sugar is again created in the market.*

Releases to be made at regular intervals.

30. It was represented to the Committee by a Sugar Mills Association that sometimes the interval between two consecutive releases of sugar was as long as 40 days and in season this caused considerable inconvenience to the factory which had to pay in cash for sugarcane on delivery and had storage accommodation for only 50% of the production. *The Committee recommend that it may be ensured that releases are made at regular intervals so as not to cause inconvenience to the sugar factories.*

Delay in lifting sugar quotas.

31. Some representatives of the trade have expressed dissatisfaction with the present system of distribution of sugar through the State Governments' nominees and have represented that some of the State Governments' nominees, due to lack of experience of the trade and limited financial resources, fail to lift the allotted quotas in time or in full and thereby create scarcity conditions. *The Committee recommend that the reasons for the quotas not being lifted by the allottees in time or in full may be gone into.*

32. The Committee understand that two State Governments viz. Uttar Pradesh and Assam are levying an administrative charge of 25 nP and 13 nP per maund of sugar respectively. The Punjab Government has a scheme for distribution of sugar at a uniform pooled price throughout the rural and urban areas of the State. Under the scheme, savings are adjusted against excesses at different places. It has resulted in some savings to the State Government. The Government of Maharashtra is levying a charge of Re. 1 per bag of sugar distributed through cooperative societies in the districts and 20 nP per bag on sugar distributed through the cooperatives in Greater Bombay. The State Government advances loans to the cooperative societies through the State Cooperative Bank for purchase of sugar from factories and the levy is to recover the cost on interest on the capital invested by the State Government. Only a small quantity of sugar—less than 1000 tons per month—is being distributed under the scheme in the State.

Levy of  
Administrative  
charges.

The representative of the Ministry stated in evidence that the Government of India had taken up the matter with the Punjab Government in regard to the profit allegedly being made by them as they were of the view that such practice was unjustified. *The Committee hope that it will be possible to evolve an arrangement whereby there is no attempt on the part of State Governments to make profits on the sale of an essential commodity like sugar. They would, in this context, like to endorse the following view expressed by the Minister of Food and Agriculture in Lok Sabha on the 7th December, 1960:—*

“Food is a commodity, in which no Government must think of making any profits, because it is not merely a social problem but also an economic problem.”

33. There is a scheme under which sugar is supplied to Kanpur and Calcutta which are major consumption centres at fixed f.o.r. destination prices. The object of the scheme is stated to be to keep the price of sugar under check. Under the scheme the sugar factories get only the ex-factory price and the difference between the f.o.r. destination price is credited to the Government account. The Committee understand that the difference between the f.o.r. destination price and the ex-factory price plus actual freight for the allotments made during 1958-59 and 1959-60 is estimated at Rs. 6 lakhs. *The Committee suggest that in view of improvement in the production of sugar, the need for continuing this scheme particularly in the case of Kanpur, which is situated in the sugar producing area, may be examined.*

F. O. R.  
Destination  
Price  
Scheme.

(e) *Sugar Export***Expansion of Exports.**

34. As already stated, under the Sugar Export Promotion Act each factory is compulsorily allotted an export quota based on its production, to be delivered to the export agency at international market price. Government have released 50,000 tons of sugar each in September, 1960 and January, 1961 for export through the Indian Sugar Mills Association. The price expected on an average, is £30 per metric ton and the foreign exchange to be earned is of the order of Rs. 4 crores. It was stated in evidence that out of 50,000 tons of sugar released in 1960, 17,596 tons had been exported by 31st December, 1960. *The Committee recommend that the efforts made to explore the possibilities of exporting sugar to U.S.A. and other foreign countries may be pursued vigorously.*

**Sugar Price.**

35. The price of Indian sugar is considerably higher than the rest of world price. The controlled ex-factory price for U.P. and North Bihar factories is Rs. 37.85 per maund and for those in the Punjab and South Bihar is Rs. 38.35 per maund. There will be certain price differentials depending upon grades and areas.

**Desirability of approximating Indian sugar price to International price.**

36. The Committee were informed that the loss on export of sugar in the normal international market would be Rs. 13 to Rs. 14 and in the case of exports to U.S.A. the loss would be about Rs. 6 to 7 per maund.

It has to be noted that the above difference is worked out on the basis of not taking the excise duty of Rs. 10.70 nP into account, for the exports are fully exempt from the duty. It is this difference that comes in the way of competing in the world market and of stepping up the exports. The Committee find that as compared to other sugarcane producing countries our retail price is almost double. The following table indicates the retail price of sugar obtaining in foreign countries as compared to India on 1st January, 1960:—

<i>Countries</i>	<i>Rs. per seer</i>
Aden	0.55
Brazil	0.43
Cuba	0.54
Indonesia	0.58
Panama	0.46
Peru	0.35
India	1.02

*The desirability of bringing down the price of sugar in India to the price obtaining in international market is impor-*



*tant not only from the point of view of exporting sugar but also for the purposes of making possible increase in the export of fruit preservatives where sugar is an important raw material.\* India is already becoming surplus in its sugar and with the many irrigational projects the prospects are indeed bright for the sugar industry. The surpluses are going to be quite large. It would be difficult to prevent the farmers from resorting to a commercial crop like sugar along with the food-grains. In such circumstances, the need for approximating the indigenous price of sugar to that in the international market cannot be over-emphasised.*

37. Broadly speaking the break-up of the ex-factory price of sugar for 1959-60 season is as under:—

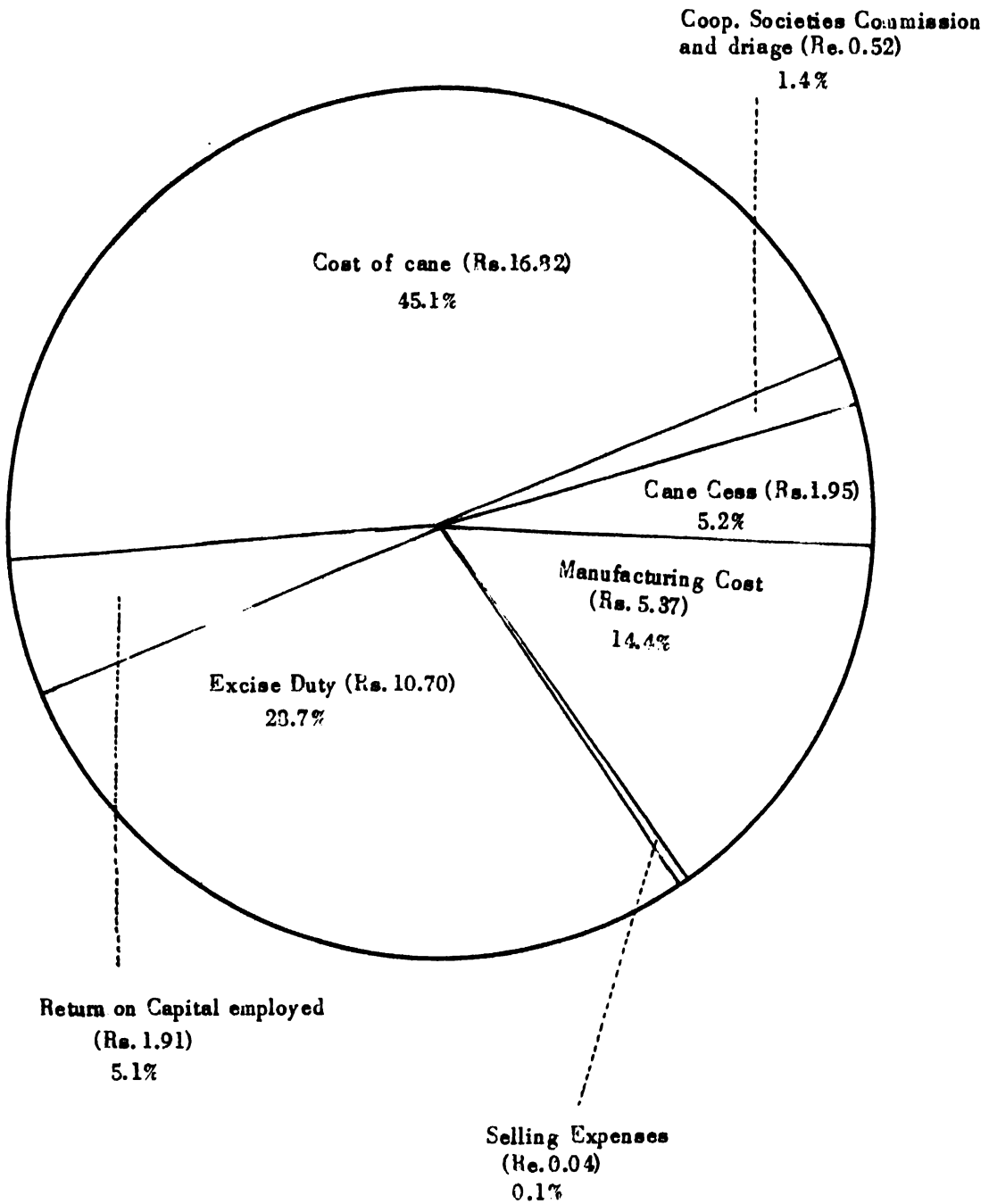
Particulars	U.P. and North Bihar (Rs. per md.)
No. of crushing days . . . .	151
Recovery % . . . . .	9.63
<hr/>	
(1) Raw materials †	
(i) Cost of Cane . . . . .	16.82
(ii) Coop. Societies Commission and draige . . . . .	0.52
(iii) Cane Cess . . . . .	1.95
TOTAL . . . . .	19.29
<hr/>	
(2) Manufacturing cost . . . . .	5.37
(3) Selling Expenses . . . . .	0.04
(4) Excise Duty . . . . .	10.70
(5) Return on Capital employed . . . . .	1.91
Fair Selling Price ‡	37.31

\*The Committee have discussed in para 87 of their report on the Directorate of Marketing and Inspection the desirability of allotting the quota of sugar at world market price to the fruit products industry to encourage export of fruit products.

†The cost of cane has been taken at the minimum price fixed by Government.

‡Under the Sugar (Contol) Order 1955, the price fixed was Rs. 37.85 per maund. The Committee understand that this was done on the basis of the average duration and recovery for preceding two years, 1957-58 and 1958-59, as in the beginning of 1959-60 season, when this price was fixed duration and recovery were not known. The margin of 54 nP per maund which has so resulted is to be adjusted towards export loss and in calculations for the future.

DISTRIBUTION OF EX-FACTORY SUGAR PRICE  
1959-60 Season



*It would be interesting to see the similar break-up of the sugar price in other countries for that would indicate a way to plan for the reduction of it in India. The Committee would urge the Government to indicate to the industry the various ways of bringing about this approximation in price between Indian and International prices.*

38. The Committee also find that not only the yield per acre in India is low but that the recovery percentage of sugar from sugarcane is equally low. The following figures pertaining to some leading producing countries are illustrative:—

Cane yield and sugar recovery.

Country	Tons of cane recovered an acre	Recovery per cent of cane	Tons of sugar recovered an acre
Cuba	17.12	12.25	2.095
Puerto Rico	24.16	12.23	2.956
Hawaii	62.05	10.46	6.489
Peru	41.14	12.33	5.076
Egypt	30.42	9.97	3.032
Java	56.20	11.49	6.440
Philippines	27.08	8.45	2.287
Japan and Formosa	28.27	12.93	3.657
Australia	21.34	14.33	3.060
India	14.49	9.89	1.433

*Though the average of yield of cane as well as the average of recovery per cent is low in India as a whole, it has to be noted that in certain parts of India notably the Western region (Maharashtra and Gujarat) both the yield of cane\* and recovery† are high enough and in individual cases could even compete with the world's best. The Committee see no reason why the results obtained in the Western region could not be reproduced by the same methods of cultivation in other parts of the country.*

\* It is understood that the average sugarcane yield of factory farms in Maharashtra is 53.5 tons per acre. Maharashtra Sugar Mills and Godavari plantations are reported to have got as high a yield as 62.5 tons and 64.1 tons per acre this season.

† The recovery percentage for a majority of sugar factories in Maharashtra was above 11% and for some as high as 11.72% and 12.98% in 1959-60.

Need for  
close  
collaboration  
between  
Research  
Institutes.

39. *As the percentage of sugar recovery from sugarcane has a vital bearing on the cost of manufacture of sugar, the Committee would suggest that close and intimate collaboration should be effected between the National Sugar Institute, Kanpur and other institutes dealing with development of sugarcane such as Indian Institute of Sugarcane Research, Lucknow, Sugarcane Breeding Institute, Coimbatore and other institutes functioning under the Indian Central Sugarcane Committee.*

### III. SUGAR INDUSTRY

#### A. Progress made during First and Second Plans

40. The Committee were informed that the installed capacity of the sugar industry at the beginning of the First Five Year Plan was 15 lakh tons of sugar. To meet the increase in demand for sugar after decontrol in 1952, it was decided to raise the installed capacity of the industry to 20 lakh tons of sugar per annum in the First Plan period. On the advice of the Development Council for Sugar Industry, the target of installed capacity was further raised to 25 lakh tons in the Second Plan period. This was considered sufficient to give an average annual production of 22.5 lakh tons—the estimated demand by 1960-61. Provision for an extra capacity of 2.5 lakh tons was made, as it was not always possible to produce upto full capacity due to various reasons. The target of installed capacity envisaged for Third Plan is 35 lakh tons.

Plan Targets of installed capacity.

41. The Committee understand that the following licences have been granted to cover the targets in the first two Plan periods:—

Progress made by end of Second Plan.

	Annual sugar production capacity (lakh tons)
(i) Expansion in 71 existing units	4.02
(ii) Establishment of 53 new factories	6.17
	10.19

The progress made in regard to the establishment of the above mentioned licensed capacity by the end of Second Plan period is given below:—

Particulars	New factories		Expansion		Total capacity (lakh tons)
	No.	Capacity (lakh tons)	No.	Capacity (lakh tons)	
Already gone into production upto 1959-60 season	31	3.55	34	1.84	5.39*
Projects expected to be completed during 1960-61 season	11	1.31	13	0.72	2.03
<b>TOTAL</b>	<b>42</b>	<b>4.86</b>	<b>47</b>	<b>2.56</b>	<b>7.42</b>

\*In addition, 0.38 Lakh tons of capacity has been achieved as part expansion in 13 factories, which will complete their projects in 1960-61 season.

The remaining capacity of 2.77 lakh tons is likely to be established early in the Third Plan period.

Indigenous  
manufacture  
of sugar  
plant.

42. The Committee were informed that the shortfall of 2.77 lakh tons in the targetted additional capacity of sugar industry planned to be installed during the First and Second Plans was due to paucity of foreign exchange required for importing machinery. It was stated that that difficulty was now being overcome by providing foreign exchange for indigenous manufacture of sugar plants, the rate of production being 12 complete plants a year. The sugar plants required foreign exchange to the extent of only 13 to 14 per cent.

*The Committee consider it unfortunate that there has been a shortfall in the additional capacity planned to be raised during the First and Second Plan periods. Now that the plant and machinery are being manufactured indigenously, there should be no difficulty in making good the shortfall in the Third Plan period.*

### B. Expansion during Third Plan

Proposals  
for expansion.

43. As already stated, the target of installed capacity of sugar industry for the Third Plan is 35 lakh tons. The representative of the Ministry stated in evidence that the present overall capacity had actually turned out to be 26 lakh tons. The additional capacity to be licensed for the Third Plan was therefore 9 lakh tons comprising new factories and expansion of existing units. The Committee were informed that a Press Note was issued on the 6th August 1959, inviting applications for the grant of licences for the establishment of new factories and the expansion of existing units to meet the likely increase in consumption of sugar in the Third Plan. It was stated that 152 applications had so far been received—61 for establishment of new factories and 91 for expansion in existing units. Of these, Government had already agreed to grant licences for 20 new factories (14 co-operatives and 6 joint stock companies) and for expansion in 17 units; 5 applications, one for new factory (joint stock) and 4 for expansion in existing units, had been rejected and the remaining applications were being examined in consultation with the State Governments concerned.

Licence  
applications  
to be pro-  
cessed  
expeditiously.

44. The Committee understand that at present it takes about 18 months to obtain a sugar plant after the grant of licence for establishment of a sugar factory. Added to this will be the time necessary for setting up the factory and its going into production. *If the target of sugar production for the Third Plan is to be achieved, it is necessary that applications for grant of licences are processed expeditiously.*

### C. Co-operative Sugar Factories

45. Sugar factories lend themselves well for being developed on co-operative lines. The Committee understand that in the First Five Year Plan no specific provision was made for establishment of co-operative sugar factories in the country but 16 co-operatives were licensed on merits. In the Second Five Year Plan, provision was made for the establishment of 35 co-operative sugar factories, against which 22 were actually licensed.

Progress during First and Second Plans.

46. The comparative position of new co-operative and joint stock factories licensed against the First and Second Plan targets is given below:—

Position of Cooperatives vis-a-vis Joint Stock Companies.

	Number	Actual sugar production capacity (lakh tons)
Co-operative factories . . .	38	4.46
Joint Stock factories . . .	15	1.71
TOTAL . . .	53	6.17

47. It was stated in evidence that out of 38 new co-operative sugar factories licensed in the First and Second Plan periods, 24 co-operatives had gone into production so far. It was explained that this shortfall had arisen mainly because of difficulties of releasing foreign exchange for importing the required machinery. This difficulty has now been largely overcome by developing capacity for indigenous manufacture of sugar plants.

Slow Progress during First and Second Plans.

48. The Committee were informed that in the Draft Outline of the Third Plan, provision had been made for the establishment of 20 co-operative sugar factories each having a daily cane crushing capacity of 1000/1200 tons.

Provision during Third Plan.

49. It was stated in evidence by the representative of the Ministry that the Government policy was that other things being equal, preference would be given to a co-operative over a joint stock company. *The Committee feel that a co-operative, being a joint endeavour of a number of people, could not come up so readily or easily as a joint stock company and*

Cooperatives to be encouraged.

*placing the two on a par is not likely to encourage co-operative development. The Committee would like a more positive approach in the matter so that preference to co-operatives is really effective. There should not be too great a readiness to prefer joint stock companies on the ground that co-operatives were taking time in coming up.*

Central assistance or promotion of co-operatives.

50. The Committee are glad to note that the Central Government provides loan assistance to State Governments to enable them to contribute to the share capital of co-operative sugar factories. Such assistance was so far restricted to Rs. 20 lakhs per factory. In view of the increase in the capital cost of establishing sugar factories, Central assistance is proposed to be given to the extent of Rs. 25 lakhs per factory subject to a matching contribution from members. Further, the Central Government guarantees 50 per cent of the loans given by the Industrial Finance Corporation to individual co-operatives, the other 50 per cent being guaranteed by the State Government concerned.

Location of new sugar factories.

51. The Committee were informed that the main criterion for determining the location of a new sugar factory was the adequate availability of right type of cane. It was explained that applications for grant of licence for establishing new sugar factories were received by the Ministry of Food and Agriculture through the State Governments who forwarded their recommendations along with the applications. These applications were then examined by the Ministry of Food and Agriculture from the point of view of finding out whether there was enough cane, irrigation facilities, etc. Thereafter, each case went before the Licencing Committee, which was under the Ministry of Commerce and Industry, which took a final decision. It was stated that the Government of India tried to accommodate the State Government's views keeping the overall interest of the development of sugar industry in the country. They also tried to meet the demands from all areas to the maximum extent.

*The Committee are of the opinion that the policy for location of new sugar factories needs to be carefully laid down. Both regional considerations and suitability of the particular sites may guide the choice of location.*

#### **D. Payment of compensation to Sugar Factories**

52. The Committee note with regret that payment of compensation to 40 sugar factories in respect of sugar requisitioned from them in 1953-54 is still outstanding. It was stated in evidence that the cases had been outstanding for long as certain legal issues were involved and voluminous.



data had to be collected for determining the cost of production which would determine the price. Of these, 15 cases had since been finalised and others were in the various stages of finalisation.

*The Committee are concerned at the inordinate delay in the finalisation of the cases and recommended that their disposal may be expedited.*

### **E. Development Council for Sugar Industry**

53. The Development Council for Sugar Industry was set up in 1954 under Section 6 of the Industries (Development & Regulation) Act, 1951. The constitution and functions of the Development Council are reproduced in Appendix IV.

Constitution and Functions.

54. The Committee understand that the Development Council normally meets once a year. *The Committee feel that in view of the large number of items of work entrusted to the Council, it would be desirable if it meets more than once a year. To obviate any ambiguity it would be better if the constitution laid down for the Development Council specifically provided for the minimum number of meetings for the body. Such a provision could also with advantage be made in the constitution of similar bodies etc. in the Department.*

Meetings of the Development Council.

## IV. VANASPATI

### A. Introduction

Progress of installed capacity during First and Second Plans.

55. A statement showing the installed capacity of vanaspati factories in production during the First and Second Plan periods is given in Appendix V. It will be seen that the installed capacity of the vanaspati factories in production which was 3.60 lakh tons at the beginning of the First Plan went up to 4.20 lakh tons at the close of the First Plan and to 4.75 lakh tons at the close of the year 1960. There are at present 56 vanaspati factories in the country. However, of these only 43 factories with a total capacity of 4.75 lakh tons are in production while 13 factories with a total production of 0.71 lakh tons are lying idle.

Production and consumption during First and Second Plans.

56. The figures of production, indigenous consumption and export of vanaspati during the First and Second Plan periods are given below:—

(Figures '000 tons)

	Production of Vanaspati	Consumption of Vanaspati	
		Internal consumption	Exports
<i>(a) First Five Year Plan</i>			
1951-52	180.2	176.4	3.1
1952-53	199.3	198.2	2.8
1953-54	200.4	200.6	0.9
1954-55	225.5	216.8	9.4
1955-56	275.6	261.9	13.6
<i>(b) Second Five Year Plan</i>			
1956-57	263.8	252.9	11.1
1957-58	300.1	296.0	2.8
1958-59	299.1	296.5	2.6
1959-60	329.6	324.3	3.0
1960 (upto December)	235.1	233.0	5.6

The Committee were informed by the Ministry that the production of vanaspati was likely to reach 3.50 lakh tons by the end of the Second Plan as against the target of 4 lakh tons and that the production and consumption of vanaspati by the end of the Third Plan were estimated at 4.75 lakh tons per year. As the vanaspati factories would have to meet an estimated demand of 25,000 tons of industrial hard oil, the total demand of hydrogenated oil by the end of the Third Plan was expected to be of the order of 5.00 lakh tons.

### B. Quality Control of Vanaspati

57. Under the Vegetable Oil Products Control Order 1947, all vanaspati manufactured in the country is required to conform to certain specifications which are designed to ensure optimum nutritive value and to enable ready detection of the product if used for adulteration of ghee. For this purpose, 4 vanaspati inspectors have been posted at Delhi, Bombay, Calcutta and Madras. These inspectors visit the factories in their respective zones and collect samples of the vanaspati manufactured in the factories. These samples are analysed at the Vanaspati Laboratory, Delhi. It has been stated that these inspectors also keep a close watch on the hygienic conditions of the factories as also personally verify the records relating to Vitamin 'A', sesame oil, Baudouin Test registers, etc. as a further check on the quality of the product.

Manner in which control exercised.

58. The table below indicates the results of samples of vanaspati collected by the vanaspati inspectors and the action taken against the defaulting factories during the last three years:—

Number of cases detected for breach of control regulations.

Year	Samples		Number of factories to which the failing samples pertained	Action taken
	collected	failed		
1957-58	4,229	22	8	Warned
1958-59	4,032	29	9	„
1959-60	5,030	6	4	3 Warned 1 prosecuted (case in progress)

It will be seen that in respect of 57 samples of vanaspati pertaining to 21 factories which failed to conform to the prescribed specifications during 1957-58 to 1959-60, 20 factories were warned and only one was prosecuted. *The Committee feel that stern action is called for against manufacturers of vanaspati whose samples fail to conform to the prescribed specifications repeatedly so as to act as a deterrent.*

V.M.A. to exercise influence to maintain prescribed specifications.

59. *The Committee would also urge the Vanaspati Manufacturers' Association of India to exercise its influence to see that the member manufacturers do not contravene the prescribed specifications for the manufacture of vanaspati.*

Adulteration of Ghee with Vanaspati.

60. It was stated in evidence before the Committee by the representative of the Vanaspati Manufacturers' Association that there was a gap between the law for prevention of adulteration of ghee with vanaspati and its enforcement inasmuch as Baudouin test was not being enforced for detecting adulteration of ghee and culprits were not being brought to book. *The Committee recommend that suitable steps may be taken for the rigorous enforcement of the law.*

Surreptitious use of Industrial Hard Oil for adulteration.

61. The Committee understand that industrial hard oil does not contain sesame oil in view of its high cost. In this connection, it may be stated that the Report on the Marketing of Ghee and Other Milk Products in India (1957) had observed that "enquiries reveal that in spite of all possible checks, a fair quantity of vanaspati with little or no sesame oil and of a higher melting point is being manufactured surreptitiously for use in the ghee adulteration trade". *The Committee recommend that effective measures may be taken to see that industrial hard oil does not become available for adulteration of ghee.*

Deterioration of Vanaspati.

62. During the course of evidence, the representative of the Vanaspati Manufacturers' Association stated—"If vanaspati is stored for a long time, it becomes stale. It is not fresh in taste." When asked as to what roughly was the time by which it began to deteriorate, the representative stated, "I would say—3 months." He, however, added later, "It is equally efficient but a refined palate can detect it after about 3 months."

Results of researches on stability of vanaspati.

63. The Committee were informed by the Ministry that researches carried out on the stability of vanaspati stored up to 30 weeks as reported in the brochure "Investigations on the Composition and Nutritive Value of Vanaspati" published by the Council of Scientific and Industrial Research in 1952

showed that as measured by peroxide values, vanaspati remained more stable during the test period than raw or refined groundnut oils. No specific findings had, however, been recorded by the authors as to the period after which vanaspati lost its taste or became rancid or unfit for human consumption.

*The Committee suggest that the matter may be investigated in detail. In any case, it would be helpful to the consumers if the dates of manufacture of vanaspati and the date before which it should be used as required to be done in the case of some other articles of consumption indicated suitably on container.*

### C. Colourisation of Vanaspati

64. The Committee understand that the question of colourisation of vanaspati has been under consideration since 1952 but no suitable colouring material has been found so far. The researches for finding a suitable colour are presently being coordinated under the auspices of the Expert Committee appointed by the Ministry of Food and Agriculture on the 10th June, 1960. The Committee has so far held two meetings the first on 21st July 1960 when the specifications required to be satisfied by any colour to be used for colouring vanaspati were fixed, and the lines of research to be undertaken chalked out and the second on 21st December 1960 when the progress of research so far carried out was reviewed. A note furnished by the Ministry in this connection is given in Appendix VI.

*This question has been pending for too long a period. In view of the importance of the matter, the Committee suggest that the research for finding a suitable colouring material for vanaspati may be expedited and completed within the shortest possible time.*

### D. Effect of Vanaspati on Health

65. Taking note of the question of use of vanaspati which has been agitating the minds of the public for the last several years the Committee had urged in para 55 of their 83rd Report that research laboratories and institutes should go into the effects of vanaspati on health and give a conclusive finding. The note furnished to the Committee by the Department on the progress made in research on the effect of consumption of hydrogenated oils on health is reproduced at Appendix VII. It would appear from the note that no definite conclusion has so far been reached on the subject.

The representative of the Vanaspati Manufacturers' Association had stated in evidence before the Committee that

they had sponsored a research scheme at the Indian Institute of Sciences for determining the influence of the dietary fats on the cholesterol content of blood.

*The Committee would urge that research work on the subject may be intensified so as to reach a conclusive finding at an early date.*

### E. Vegetable Oil Products Committees

**Constitu-  
tion and  
functions.**

66. The Committee understand that there are two Vegetable Oil Products Committees, namely, Vegetable Oil Products Advisory Committee and Vegetable Oil Products Technical Committee. The Vegetable Oil Products Advisory Committee consists besides the official Chairman and Secretary, the Chairman and Vice-Chairman of the Vanaspati Manufacturers' Association and four representatives of the vanaspati factories nominated by the Vegetable Oil Products Controller for India on the recommendation of the Vanaspati Manufacturers' Association. The Vegetable Oil Products Technical Committee consists of 4 technical experts from the vanaspati factories recommended by the Vanaspati Manufacturers' Association, three other technical experts and one representative of the Ministry of Health. While the former advises the Vegetable Oil Products Controller for India on all matters other than of a purely technical nature relating to the smooth functioning of vanaspati factories and the development of vanaspati industry in general, the latter advises him on matters of a technical nature relating to quality control over vanaspati and other allied matters.

### F. Miscellaneous

**Delay in  
issue of  
quota of tin  
plate, coal  
etc.**

67. It was represented to the Committee by the Vanaspati Manufacturers' Association of India that there were delays in the issue of quotas of tin plate, coal, chemicals, equipment etc. to the vanaspati manufacturers. *The Committee suggest that the matter may be looked into by the Ministry of Food and Agriculture in conjunction with the Ministry of Commerce and Industry and remedial measures taken.*

**Tin plate for  
vanaspati  
containers.**

68. It was represented to the Committee that the present basis of allotment of tin plate quotas to vanaspati factories on the production of vanaspati during the last quarter of the preceding calendar year was defective inasmuch as the production of factories during the last quarter was often somewhat below average and hence the allotment made on that basis was apt to be inadequate. It was suggested to the Committee that the quota should be related to production of vanaspati for the year as a whole rather than in one quarter. *The Committee suggest that the feasibility of this proposal may be examined by Government.*

69. The Committee understand that there is an incentive scheme for stimulating exports of vanaspati. The scheme which was introduced by the Ministry of Commerce and Industry in October 1959 is mainly intended to off-set the losses reported to be suffered by exporters of vanaspati due to the lower prices for the product prevailing in foreign markets. The scheme provides for the grant of import licences for copra, the quantum of which is so worked out that the profits obtained from the import of copra are sufficient to compensate the losses sustained by the export of vanaspati. Concurrently, import of copra is being allowed to the extent of 109% of the f.o.b. value of vanaspati exported. In addition, imports of chemicals and equipment required by the exporter in the manufacture of vanaspati or related industries, upto 5% f.o.b value of vanaspati exported, are also being allowed as a further incentive.

Scheme for stimulating exports of vanaspati.

70. The Committee learnt that there were sometimes delays in the issue of import licences for copra, equipment etc. earned as a result of export of vanaspati. *They would urge the Government to ensure that licences admissible by way of incentives under the vanaspati export promotion scheme are issued expeditiously.*

Import licences for copra, equipment etc. to be issued expeditiously.

71. Nickel is used as a catalyst in vanaspati. As nickel is a foreign matter, it is desirable that it should not be present in vanaspati to a greater extent than absolutely necessary. The Committee understand that a scheme for experimental work to examine the desirability of prescribing a maximum limit in respect of nickel content of vanaspati was drawn up by a sub-Committee of the Vegetable Oil Products Technical Committee in 1959, but it could not be taken up as there was some difficulty in obtaining the administrative sanction for the expenditure involved in carrying out the research in some of the CSIR Laboratories. It was stated in evidence that the Vegetable Oil Products Technical Committee which was consulted in the matter had since advised that the work might be carried out in the laboratories of three vanaspati factories, and one laboratory of the Directorate of Sugar and Vanaspati. *The Committee suggest that research on this problem may be carried out expeditiously.*

Nickel Catalyst.

72. It was stated in evidence that it had been decided to import as an experimental measure about 4,000 tons of soyabean oil. *The Committee consider that the progress in the matter may be watched and if the results of manufacture of vanaspati out of soyabean oil are promising it may be desirable to encourage the growth of soyabean and production of soyabean oil within the country.*

Soyabean Oil.

# NATIONAL SUGAR INSTITUTE, KANPUR

## A. Introduction

### Historical background.

73. The National Sugar Institute, Kanpur (formerly known as the Indian Institute of Sugar Technology) was established by the Government of India in October 1936. The Sugar Section of the Harcourt Butler Technological Institute, Kanpur, was taken over and suitably enlarged to make it an all India Institute. In March 1945, the Institute was transferred to the administrative control of the Indian Central Sugarcane Committee, New Delhi. Subsequently, the functions of the Indian Central Sugarcane Committee were abridged and the Institute was again taken over by the Government of India, Ministry of Food and Agriculture, from the 1st of January 1954. In April 1957, the name of the Indian Institute of Sugar Technology was changed to "National Sugar Institute" Kanpur.

## B. Functions

74. The main functions of the Institute are to—

- (i) undertake research on (a) problems pertaining to sugar technology, sugar and sugar chemistry and sugar engineering in general and those of Indian sugar factories in particular, and (b) utilisation of the by-products of the sugar industry;
- (ii) give technical advice and assistance to sugar factories with a view to improving their working efficiency and assist other sections of the industry and the Central and State Governments in matters relating to sugar and allied industries;
- (iii) survey factory plants and processes to economise in fuel consumption and increase overall efficiency;
- (iv) provide technical education in all branches of sugar chemistry and technology and provide training in research;
- (v) prepare and issue the Indian sugar standards; and
- (vi) collect, collate and issue technical statistics relating to the industry.



### C. Organisation

75. The National Sugar Institute is a subordinate organisation of the Department of Food, Ministry of Food and Agriculture. It is headed by a Director, who enjoys the powers of a Head of the Department.

76. The Institute is divided into the following main departments:—

- (1) Sugar Technology Department
- (2) Sugar Engineering Department
- (3) Sugar Chemistry Department
- (4) Chemical Engineering Department
- (5) Advisory Department
- (6) Survey and Information Department
- (7) Administrative Department.

An Experimental Sugar Mill of 35 tons per day cane-crushing capacity and a museum are also attached to the Institute. Besides, certain schemes to which reference will be found later are being carried out under the administrative control and guidance of the Director.

77. The National Sugar Institute has an Advisory Board which was constituted in December 1954 for scrutinising the problems of research work and examining the progress of work done at the Institute. It consists of four officials and four non-official members. It was stated in evidence that the Advisory Board met once and, if possible, twice a year. *The Committee consider that it would be desirable if the Board meets twice a year to approve the research programme and to review the progress of work done at the Institute.*

78. It was stated in evidence that at present the Director of the Institute was loaded with routine administrative matters because he did not have a Deputy Director. The Committee were, however, informed that the matter had been gone into recently by a Department Committee dealing with staff requirements and that they had recommended the appointment of a senior administrative officer and some other staff to relieve the Director of routine administrative duties.

*The Committee consider that it is not desirable that the Director should be burdened with routine administrative duties as those are bound to militate against his devoting full attention to technical and research problems. The*

*Committee hope that the Director would be relieved of such routine duties at the earliest.*

**Staff -  
Position.**

79. A statement showing the strength of staff (category-wise), sanctioned as well as actually working during the last four years in the main office of the National Sugar Institute and under the Schemes of the Institute, is given at Appendix VIII.

#### **D. Budget Estimates & Expenditure**

**Budget  
Estimates  
and Expen-  
diture for  
last four  
years.**

80. A statement showing the budget estimates, revised estimates and actual expenditure of the National Sugar Institute for 1956-57, 1957-58, 1958-59 and 1959-60 and budget estimates for 1960-61, is given in Appendix IX.

**Receipts.**

81. The receipts of the Institute for the last four financial years are as follows:—

Year		Rs. in lakhs
1956-57	..	2.78
1957-58	..	3.06
1958-59	..	3.91
1959-60	..	3.67

A provision of Rs. 3.5 lakhs has been made for receipts in the year 1960-61. The receipts are on account of—

- (i) sale of sugar molasses and press mud produced by the Experimental Sugar Factory attached to the Institute;
- (ii) recovery of advisory fees from the sugar factories for the advice tendered to them by the experts of the Institute;
- (iii) the fees recovered from the students by way of tuition, hostel and other miscellaneous types of fees;
- (iv) fee recovered from the factories who have joined the Extension Service Scheme;
- (v) sale of Indian sugar standards sets; and
- (vi) testing of samples, etc. of the various State Governments.

**Contribu-  
tions for  
research.**

82. *As the Institute undertakes research on problems useful to the industry, the Committee suggest that the desirability of securing contributions from the sugar industry for the research activities of the Institute may be considered by the Government as is the common practice in some of the developed countries.*

### E. Activities

83. The activities of the Institute may be broadly classified under the following heads—

- (a) Teaching
- (b) Research
- (c) Technical Advice and Assistance
- (d) Schemes.

#### (a) Teaching

84. Institute runs the following courses of instruction:—

- (1) Ph. D.
- (2) Fellowship
  - (a) Sugar Engineering
  - (b) Sugar Chemistry
  - (c) Sugar Technology
- (3) Associateship in Sugar Technology
- (4) Associateship in Sugar Engineering
- (5) Short Courses
  - (i) Sugar Engineering Sertificate Course
  - (ii) Sugar Boiling Certificate Course
  - (iii) Manufacturing Chemists Certificate Course
  - (iv) Industrial Fermentation and Alcohol Technology Certificate Course.

85. The Committee understand that the question of requirements of technical personnel for sugar industry was gone into by an Expert Committee under the chairmanship of Shri Charat Ram which was set up by the Development Council for Sugar Industry in 1955. The Committee had recommended that five "off-season" courses for training of engineers, chemists, Bench chemists, draughtsmen and boiler foremen be started at the Institute. Against this, only one course meant for manufacturing chemists has been started so far.

It was explained in evidence that the other courses could not be started because of inadequacy of staff, space, laboratory facilities etc. *The Committee consider it unfortunate that there has been inordinate delay in implementing the recommendations made by the Expert Committee as*

long back as 1955. They recommend that "off-season" courses particularly for categories, for which there is dearth of trained personnel, may be started without further avoidable delay.

**(b) Research**

86. Some important problems on which research work has been done in recent years or is being carried out at present in the various laboratories of the Institute are—

- (i) Middle Juice carbonation.
- (ii) Designing of furnace for burning lime stone with bagasse as fuel.
- (iii) Production of Furfural from bagasse.
- (iv) Design of an automatic bagasse weighing equipment.
- (v) Design and testing of automatic continuous cane juice sampling apparatus.
- (vi) Design of a moisture proof Gurd godown.
- (vii) Ion Exchange method of cane juice clarification.
- (viii) Extraction and purification of sugar-cane wax.
- (ix) Studies of polysaccharide.
- (x) Colorimetric method and alkaline potassium ferricyanide method of estimation of reducing matter.
- (xi) Preparations of lactic acid from molasses (by chemical method).
- (xii) Reduction of sugar losses in molasses and bagasse.
- (xiii) Manufacture of fodder yeast.
- (xiv) Treatment of Sugar Factory Effluents.
- (xv) Deterioration of colour of sugar during storage.
- (xvi) Blackening and feathering of tin containers used for fruit canning.

**(c) Technical Advice & Assistance**

87. The Institute renders technical advice and assistance to the sugar industry and Central and State Governments. Technical officers and staff of the Institute are deputed to

the sugar factories on payment of prescribed fees in addition to T. A. and D. A. according to Government rules for rendering advice whenever called for by the factories to investigate their problems on the spot. The following table shows the fees earned from sugar factories and State Governments as a result of technical assistance rendered by the officers of the Institute during 1957-58, 1958-59 and 1959-60:—

Year	Factories	State Governments		Total
		Rs.	Rs.	
1957-58		45,617.50	2,845.00	48,462.50
1958-59		49,979.50	3,325.00	53,304.50
1959-60		47,671.50	977.50	48,649.00
<b>TOTAL</b>		<b>1,43,268.50</b>	<b>7,147.50</b>	<b>1,50,416.00</b>

88. A statement showing the total demands for technical advice and the extent to which it was met during the last three years is given below:—

Percentage of demand for technical advice met.

Season	Total demands for technical advice	Total visits made	Percentage of demand met
1957-58	92	74	80
1958-59	112	92	78
1959-60	71	58	82

*The Committee cannot over-emphasise the importance and necessity of stepping up the technical efficiency of the sugar industry in India to the level of the advanced countries. They recommend that the Government should address themselves to this task and meet fully the demand of the sugar industry for technical advice.*

(d) Schemes

89. The Committee understand that amongst the schemes being implemented by the Institute, the more important ones are—

- (i) Fuel Economy-cum-Extension Service Scheme; and
- (ii) Cane Price Scheme.

Brief particulars of these schemes are given below:

(i) *Fuel Economy-cum-Extension Service Scheme*

90. The Fuel-Economy-cum-Extension Service Scheme envisages complete survey of member factories with a view to study the conditions of machinery, their working and recommend steps for the improvement of overall efficiency to the maximum possible extent. The fee charged per factory is Rs. 5000.

Progress made.

It was stated that though the scheme had been sanctioned in July 1957, the survey work could not be started early for want of technical staff, which was not readily available in the country. It was also stated that the post of Chief Engineer, one post of Senior Technical Officer (Engineering) and two posts of Technical Assistants had been recently filled up. The Committee were informed that the completion of survey of factories would depend upon the number of factories which joined the scheme after paying the fee prescribed for the purpose. The target fixed was 12 to 14 factories per year. So far only 48 factories had shown their willingness to join the scheme out of which fees had been accepted only from 23 factories. The survey work of these 23 factories was likely to be completed within 2 years' time

Revision of fee.

91. The Committee were informed that the estimated cost of service rendered by the Institute to the participating sugar factories under the Fuel Economy-cum Extension Service Scheme was Rs. 20,000/- per factory while the fee charged was only Rs. 5,000/- per factory. The question of revising the fee was under consideration and pending decision in the matter further fees from the sugar factories were not being accepted.

Decision to revise fee to be expedited.

92. It was represented to the Committee by an important Sugar Mills Association that for merely examining the fuel economy in a factory the Institute charged Rs. 5,000/-. The representative of the Ministry stated in evidence that when the idea of the Extension Service Scheme was first evolved, the intention was that special expert advice should be made available to the industry by appointing foreign experts. A fee of Rs. 5,000 per factory was fixed and it was not contemplated that the entire cost of the scheme should be met by the factories. Recently it had been thought that since benefit of the scheme would accrue to individual sugar factories, it should be self-financing. *The Committee are of the opinion that it would be desirable to review the cost of service rendered under this scheme in conjunction with the representatives of the sugar industry, and the financial authorities. They recommend that an early decision may be taken. The need for the decision becomes more urgent as no fees are,*

*being accepted at present on the plea of the matter being under review.*

### (ii) Cane Price Scheme

93. This scheme was started in the year 1956-57 at the instance of the Development Council for Sugar Industry for evolving a system of testing of the quality of cane and making payment of its price on quality basis. It has been concluded that if some changes are made in the system of cane supply, marshalling of cane carts at the gate and system of feeding of cane at the carrier, the system of payment of cane price on quality basis could be adopted by the Indian Sugar factories. Some aspects are under further study in detail. The Committee understand that the scheme is being implemented by one factory in the South and the expenditure on the implementation of the scheme is re-imbursable in full from that factory. As and when the scheme is ripe for implementation by other sugar factories, its full expenditure will in the first instance be met by the Government and thereafter by the industry.

Payment of cane on quality basis.

94. The Committee understand that the scheme is making little progress in the North. *They recommend that concrete steps may be taken to step up the progress of the scheme in the North and its wider adoption throughout the country. The results obtained from this scheme may also furnish valuable data for determining the price liking formula.*

Progress of scheme to be stepped up.

95. The Committee understand that no incentives have been provided to the research staff of the Institute for research work. *They consider that it would be desirable to provide suitable incentives to the research staff.*

Incentives for research work.

### (c) Review of Work

96. The Committee welcome the appointment of the Achievement Audit Committee constituted under the Chairmanship of Prof. M. S. Thacker for inspecting and reporting on the work done by the National Sugar Institute during the last five years. The Report was expected by the end of January 1961.

Achievement Audit Committee.

## F. Miscellaneous

### (a) Experimental Sugar Factory

97. The Experimental Sugar Factory having a crushing capacity of 35 tons of cane per day, which is attached to the Institute, provides practical training to the students of different courses at the Institute and undertakes trial of different research projects and various products used in the Sugar Industry.

Functions.

**Receipts and Expenditure.**

98. The receipts and expenditure of the factory during 1957-58, 1958-59 and 1959-60 and the estimated receipts and expenditure for 1960-61 are given below:—

	1957-58	1958-59	1959-60	1960-61 (Estimates)
	Rs.	Rs.	Rs.	Rs.
Approximate Expenditure .	2,69,737	2,22,075	2,99,687	3,00,000
Approximate Receipts .	1,36,920	1,17,200	2,01,023	2,25,000
Approximate Loss	1,32,817	1,04,875	98,664	75,000

It was stated that the capacity being so small and the machinery too old, it could not be run on a commercial basis. *The Committee cannot understand why the Institute has not been able to replace this old machinery so long and suggest that its early replacement by a modern plant may be considered. The sugar excise yields a substantial amount of Rs. 50 crores and it ought not to be difficult to find the necessary resources for the same. Since the sugar plant is manufactured indigenously it may not even necessitate much of foreign exchange. Meanwhile, the Committee suggest that every effort be made to minimise the loss on running the present factory as far as possible.*

**(b) Regional Research Stations**

99. It was stated in evidence that the question of starting regional research stations under the guidance of the staff of the National Sugar Institute for the study of regional problems was under consideration. It seems to be a step in the right direction. *The Committee consider that the decision in the matter may be expedited.*

**(c) Annual Report**

100. *The Committee was surprised to find that the Annual Reports of the Institute for the years 1956-57 and 1957-58 were published only in 1960 and 1961 respectively. It was explained during evidence that the delay was partly due to want of staff and partly due to printing difficulties. The Committee consider this explanation as inadequate and unsatisfactory.*



*The need for bringing out annual reports in time has been stressed by the Committee often enough. The Committee consider that the Ministry should ensure that the outstanding annual reports are published without delay and that, in future, reports are brought out in time.*

H. C. DASAPPA,  
*Chairman,  
 Estimates Committee.*

NEW DELHI;  
 March 24, 1961. |  
 Chaitra 3, 1883 (Saka). |

## APPENDIX II

(Vide para 4)

*Statement showing sanctioned as well as actual strength of Staff of the Directorates of Sugar and Vanaspathi as on 1st April, 1958, 1959 and 1960.*

S. No.	Designation of post	1st April							
		1958		1959		1960			
		Sanctioned	Actual	Sanctioned	Actual]	Sanctioned	Actual	Sanctioned	Actual
1	2	3	4	5	6	7	8		
<i>Class I</i>									
1	Chief Director . . . . .	1	1	1	1	1	1	1	1
2	O.S.D. . . . .	1	1	1	1	1	1	1	1
3	Processing Engineer . . . . .	1	1	1	1	1	1	1	1
4	Director (ST) . . . . .	1	1	1	1	1	1	1	1
5	Director (SC) . . . . .	..	..	..	..	..	..	..	..
*6	Addl. Processing Engineer . . . . .	..	..	..	..	..	..	..	..
7	Dy. Director . . . . .	4	4	5	4	6	6	6	6

\*The post was sanctioned on 14-4-59 and the sanction expired on 28th February, 1960.

1	2	3	4	5	6	7	8
8	Admn. Officer . . . . .	I	I	I	I	I	I
9	S.O. (Grade II) . . . . .	I	I	I	I	I	I
10	Asstt. Director . . . . .	..	..	3	2	3	3
11	Tech. Officers . . . . .	6	5	6	6	6	6
12	Research Chemist . . . . .	I	I	I	I	I	I

*Class II (Gazetted)*

1	Inspectors . . . . .	8	7	8	8	14	14
2	S. O. (Grade III) . . . . .	5	5	5	5	10	10
3	S.O. (Tech.) . . . . .	I	I	I	I	I	I
4	Jr. Tech. Officer . . . . .	5	4	5	4	5	4

*Class II (Non-Gazetted)*

1	Chemist . . . . .	3	3	3	3	3	3
2	Asstt. (C.S.S.) . . . . .	8	8	8	8	8	8
3	Stenographers . . . . .	4	4	5	3	6	6

*Class III*

1	Asstt. Chemist . . . . .	4	4	4	3	4	4	4
2	Head Draftsman . . . . .	1	1	1	1	1	1	1
3	Tech. Assistant . . . . .	22	22	24	24	41	40	40
4	Accountant . . . . .	2	2	2	2	2	2	2
5	Tech. Assistant (Hindf) . . . . .	1	1	1	1	1	1	1
6	U.D.C. . . . .	18	18	19	18	18	18	18
7	Jr. Tech. Assta. . . . .	7	7	15	15	33	33	33
8	L. D. Clerk . . . . .	48	48	49	48	62	57	57
9	Steno-typist . . . . .	5	5	11	11	12	12	12
10	Computors . . . . .	3	3	8	7	8	8	8
11	Hindi Clerk . . . . .	1	1	1	1	1	1	1
12	Cashier . . . . .	1	1	1	1	1	1	1
13	Tracer . . . . .	..	..	..	..	..	..	..

*Class IV*

1	Lab. Atttdts. . . . .	4	4	4	4	4	4	4
2	Daftary . . . . .	9	9	9	9	14	14	14
3	Jamadar . . . . .	1	1	1	1	1	1	1

	1	2	3	4	5	6	7	8	
4 Peon	.	.	.	.	.	.	.	.	
5 Farash	.	.	.	.	.	.	.	.	
6 Sweeper	.	.	.	.	.	.	.	.	
			34	34	34	34	35	34	
			.	.	.	.	.	.	
			1	1	1	1	1	1	
			2	2	2	2	2	2	
			215	212	243	236	312	304	
			TOTAL						

### APPENDIX III

(Vide para 9)

*Statement showing the visits paid by four Sugar Inspectors to each Sugar Factory in their zones during the years 1957-58, 1958-59 & 1959-60 (Nov.—Oct.)*

Name of Factory	1957-58	1958-59	1959-60
Bihar	(Number of visits)		
1. Lohat . . . . .	2	..	4
2. Hassanpur . . . . .	2	..	3
3. Sakri . . . . .	2	..	4
4. Motihari . . . . .	2	3	6
5. Majhulia . . . . .	..	3	6
6. Chanpatia . . . . .	..	3	6
7. Lauriya . . . . .	..	3	2
8. Righa . . . . .	2	..	6
9. Bagaha . . . . .	2	..	5
10. Narkatiaganj . . . . .	..	1	5
11. Harinagar . . . . .	2	..	4
12. Ryam . . . . .	2	..	4
13. Sugauli . . . . .	2	2	3
14. Smastipur . . . . .	2	..	6
15. Motipur . . . . .	1	2	4
16. Barachakia . . . . .	1	2	5
17. Sitalpore . . . . .	2	1	4
18. New Savan . . . . .	2	1	1
19. Hathua . . . . .	2	..	3
20. Sidhwalia . . . . .	1	..	2
21. Marhowrah . . . . .	1	..	2
22. Sasamusa . . . . .	2	..	2
23. Gopalganj . . . . .	1	4	3
24. Pachrukhi . . . . .	2	..	1
25. Gaya . . . . .	..	1	..

Name of Factory	1957-58	1958-59	1959-60
	(Number of visits)		
26. Bihta . . . . .	I	I	..
27. Dalmianagar . . . . .	I	I	..
28. Warisaliganj . . . . .	..	I	..
<i>Uttar Pradesh</i>			
1. Seorahi . . . . .	I	..	I
2. Purtabpore . . . . .	I	I	2
3. Baitalpur . . . . .	2	I	2
4. Gauribazar . . . . .	I	I	2
5. Deoria . . . . .	2	I	2
6. Sardarnagar . . . . .	2	I	2
7. Diamond . . . . .	I	..	I
8. Ghughli . . . . .	I	I	2
9. Siswabazar . . . . .	I	I	I
10. Captainganj . . . . .	I	..	2
11. Khadda . . . . .	2	I	I
12. Chhitauni . . . . .	I	I	I
13. Lakshmganj . . . . .	2	..	I
14. Ramkola (Pb.) . . . . .	2	..	I
15. Ramkola (M.K.) . . . . .	I	..	I
16. Padrauna . . . . .	I	..	I
17. Kath kuiyan . . . . .	I	..	I
18. Bhatni . . . . .	I	..	2
19. Anandnagar . . . . .	I	I	I
20. Burhwal . . . . .	2	2	2
21. Biswan . . . . .	2	2	I
22. Munderwa . . . . .	2	I	I
23. Basti . . . . .	2	I	I
24. Walterganj . . . . .	2	I	I
25. Babhnan . . . . .	2	I	I
26. Nawabganj . . . . .	2	I	I
27. Balrampur . . . . .	I	I	I
28. Tulsipur . . . . .	I	I	I
29. Jarwal Rd. . . . .	2	I	2
30. Khalilabad . . . . .	3	I	I
31. Hargaon . . . . .	I	2	I
32. Gola . . . . .	I	2	I
33. Pilibhit . . . . .	I	2	I

Name of Factory	1957-58	1958-59	1959-60
	(Number of visits)		
34. Baheri . . . . .	1	2	..
35. Neoli . . . . .	2	..	I
36. Aira . . . . .	2	2	I
37. Kashipur . . . . .	1	2	I
38. Bazpur . . . . .	..	..	I
39. Modinagar . . . . .	3	I	I
40. Mohiuddinpur . . . . .	..	I	I
41. Meerut . . . . .	..	I	I
42. Daurala . . . . .	I	..	I
43. Sakhotitanda . . . . .	..	I	..
44. Mawana . . . . .	..	I	2
45. Khatauli . . . . .	..	I	I
46. Mansurpur . . . . .	2	..	2
47. Rohanakalan . . . . .	2	I	..
48. Deoband . . . . .	I	I	I
49. Saharanpur . . . . .	..	I	I
50. Hardoi . . . . .	I	I	I
51. Maholi . . . . .	I	I	I
52. Bareilly . . . . .	2	I	I
53. Rosa . . . . .	I	I	I
54. Bijnor . . . . .	I	I	I
55. Seohara . . . . .	I	..	2
56. Doiwala . . . . .	I	I	..
57. Dhampur . . . . .	I	I	I
58. Lhaksar . . . . .	..	I	I
59. Amroha . . . . .	I	I	I
60. Rajakasahaspur . . . . .	I	I	2
61. Simbhaoli . . . . .	2	..	I
62. Raza . . . . .	2	2	I
63. Buland . . . . .	2	2	I
64. Bulandshahr . . . . .	1	I	..
65. Iqbalpur . . . . .	2	I	I
66. Ratna . . . . .	2	2	..
67. Barabanki . . . . .	2	I	..
68. Masoda . . . . .	2	2	I
69. Shamli . . . . .	..	I	..
<i>West Bengal</i>			
1. Plassey . . . . .	..	I	..
2. Ahmedpur (Started in 1959-60) . . . . .	..	..	I



Name of Factory	1957-58	1958-59	1959-60
<i>Punjab</i>			
	(Number of visits)		
1. Abdullapur . . . . .	2	..	1
2. Phagwara . . . . .	1	..	1
3. Dhuri . . . . .	..	..	1
4. Rohtak . . . . .	..	1	1
5. Bhogpur . . . . .	2	..	1
6. Panipat . . . . .	2	..	1
<i>Orissa</i>			
1. Rayagada . . . . .	1	1	..
<i>Andhra Pradesh</i>			
1. Samalkot . . . . .	1	..	..
2. Anakapalle . . . . .	1	1	..
3. Darlapudi . . . . .	..	..	..
4. Seethanagaram . . . . .	1	1	..
5. Vuyyuru . . . . .	1	..	..
6. Kirlampudi . . . . .	1	..	..
7. Tanuku (Andhra) . . . . .	1	..	..
8. Shakarnagar (I) . . . . .	3	1	2
9. Shakarnagar (II) . . . . .	3	1	2
10. Challapalle . . . . .	..	..	..
11. Bobilli . . . . .	1	1	..
<i>Maharashtra</i>			
1. Malinagar . . . . .	1	1	2
2. Brihan Mah. . . . .	1	1	2
3. Walchandnagar . . . . .	1	1	2
4. Rayalgaon . . . . .	2	1	2
5. Tilaknagar . . . . .	2	3	2
6. Belapur . . . . .	2	3	2
7. Belvandi . . . . .	2	3	2
8. Sakarwadi . . . . .	4	4	3
9. Lakshmiwadi . . . . .	3	2	2
10. Puntambad . . . . .	3	2	2
11. Phaltan . . . . .	2	2	2
12. Kopergaon . . . . .	2	2	1

Name of Factory	1957-58	1958-59	1959-60
	(Number of visits)		
13. Kolhapur . . . . .	I	2	2
14. Pravaranagar . . . . .	2	3	2
15. Malegaon . . . . .	..	I	2
16. Rahuri . . . . .	2	I	2
17. Karegaon . . . . .	I	3	3
18. Rahata . . . . .	I	..	2
19. Shriram Phaltan . . . . .	I	2	..
20. Sansar . . . . .	I	I	I
21. Cirna* . . . . .	..	..	..
22. Sawali* . . . . .	..	..	2
23. Bhogawati* . . . . .	..	..	2
24. Ichalkaranji* . . . . .	..	..	I
25. Gangapur* . . . . .	..	..	I
26. Kodoli . . . . .	Started in 1959-60.		
<i>Gujarat</i>			
1. Bardoli . . . . .	I	2	2
2. Kodinar* . . . . .	..	..	I
<i>Madhya Pradesh</i>			
1. Dabra . . . . .	3	..	I
2. Jaora . . . . .	I	..	I
3. Mehidpur . . . . .	2	..	I
4. Daulauda . . . . .	I	..	I
5. Sehore . . . . .	I	..	I
<i>Rajasthan</i>			
1. Bhopalsagar . . . . .	I	..	..
2. Sriganganagar . . . . .	I	..	..
3. Bijayanagar . . . . .	I	..	..
<i>Mysore</i>			
1. Hospet . . . . .	I	I	2
2. Munirabad . . . . .	I	I	2
3. Ugar Khurd . . . . .	I	I	2
4. Kampli . . . . .	..	..	I
<i>Assam</i>			
1. Barua Bamungaon* . . . . .	..	..	..

\*Started in 1958-59.

## APPENDIX IV

(Vide Para 53)

### *Constitution and Functions of the Development Council for Sugar Industry*

#### *Constitution*

Consumer Interest	2 M. Ps
Industrial „	4 + 2 nominated by Central Govt.
Trade „	3 Kanpur, Calcutta and Bombay
Labour „	2
Special „	15*
	<hr/>
Total :	28

\*

Joint Secretary.  
National Productivity Council  
Planning Commission  
Director, N.S.I., Kanpur  
Director, I.I.S.R., Lucknow.  
Uttar Pradesh Government  
Bihar Government  
Madras Government  
Bombay Government  
Andhra Government  
Sugar Technologists Association  
Chief Director, Directorate of S. & V.  
Central Food Technological Research Institute, Mysore  
Indian Central Sugarcane Committee  
Commerce and Industry Ministry.

The term of office of the Members is two years.

#### *Functions*

- (i) Recommending targets for production, co-ordinating production programmes and reviewing progress from time to time.
- (ii) Suggesting norms of efficiency with a view to eliminating waste, obtaining maximum production, improving quality and reducing costs.
- (iii) Recommending measures for securing the fuller utilisation of the installed capacity and for improving the working of the industry particularly of the less efficient units.
- (iv) Promoting arrangements for better marketing and helping in the devising of a system of distribution and sale of the produce of the industry which would be satisfactory to the consumer.
- (v) Promoting standardisation of products.
- (vi) Promoting or undertaking inquiry as to materials and equipment and as to methods of production, management and labour utilisation, including the discovery and development of new materials, equipment and methods and of

improvements in those already in use, the assessment of the advantages of different alternatives and the conduct of experimental establishments and of tests on a commercial scale.

- (vii) Promoting the training of persons engaged or proposing to be engaged in the sugar industry and their education in technical or artistic subjects relevant thereto.
- (viii) Promoting the retraining in alternative occupations of personnel engaged in or retrenched from the Industry.
- (ix) Promoting or undertaking scientific and industrial research, research into matters affecting industrial Psychology and research into matters relating to production and to the consumption or use of goods and services supplied by the Industry.
- (x) Promoting improvements and standardisation of accounting and costing methods and practice.
- (xi) Promoting the adoption of measures for increasing the productivity of labour, including measures for securing safer and better working conditions and the provision and improvements of amenities and incentives for workers.
- (xii) Undertaking arrangements for making available to the industry information obtained and for advising on matters with which the Development Council is concerned in the exercise of any of its functions.
- (xiii) Assisting in the distribution of controlled materials and promoting arrangements for obtaining materials for the industry.
- (xiv) Promoting or undertaking the collection and formulation of statistics.
- (xv) Investigating possibilities of decentralising stages and processes of production with a view to encouraging the growth of allied small scale and cottage industries.
- (xvi) Advising on any matters relating to the industry (other than remuneration and condition of employment) as to which the Central Government may request the Development Council to advise and undertaking inquiries for the purpose of enabling the Development Council to advise.
- (xvii) Such other functions as the Central Government may from time to time assign to the Development Council.

**APPENDIX V**

(Vide para 55)

*Statement showing the installed capacity of Vanspasi Factories in production during the First and Second Plan Periods*

(Figures in '000 tons)

Year	At the Com- mencement of the year	Added during the year			Total	Closed down during the year	At the close of the year
		By restarting of closed units	By setting up of new unit	By substantial expansion of existing units			
1951-52	.	.	22.1	..	22.1	11.6	370.7
1952-53	.	.	9.5	..	9.5	45.3	334.9
1953-54	.	.	19.4	..	26.5	3.0	377.7
1954-55	.	.	31.2	7.5	51.9	22.4	407.3
1955-56	.	.	18.1	..	30.1	17.4	420.9

(a) *First Five Year Plan*

(b) *Second Five Year Plans*

1956-57	.	.	.	.	420.0	7.7	4.5	10.8	23.0	6.0	437.0
1957-58	.	.	.	.	437.0	2.7	..	..	2.7	29.1	410.6
1958-59	.	.	.	.	410.6	16.2	..	..	16.2	..	426.8
1959-60	.	.	.	.	426.8	20.4	..	12.4	32.8	7.2	452.4
1960-61	.	.	.	.	452.4	..	..	22.1	22.1	..	474.5

## APPENDIX VI

(Vide para 64)

### *Note on the progress of researches for finding a suitable colour for Vanaspati*

The researches for finding a suitable colour for Vanaspati are presently being coordinated under the auspices of the Expert Committee appointed by this Ministry on 10th June, 1960 which includes the Directors of the CSIR Laboratories at Poona, Lucknow, and Mysore. Dr. Thakur, Dy. Chief Scientific Officer (Army) and Dr. Dastur, Principal, Dairy Science College, Karnal. The Committee has so far held two meetings, the first on 21st July, 1960 when the specifications required to be satisfied by any colour to be used for colouring vanaspati were fixed and the lines of research to be undertaken chalked out; and the second on 21st December, 1960, when the progress of researches so far carried out was reviewed.

The specifications to be satisfied by a suitable colour for Vanaspati, as approved by the Committee, are as under:—

- (i) The colour should be easily soluble in vanaspati.
- (ii) The colour should be pleasing to the eye, e.g. either yellow, orange or pink, and if possible it should, on dilution, retain a shade distinctive from that of the natural tint of ghee.
- (iii) The colour should be preferably of vegetable origin obtained from edible plants alone.
- (iv) The intensity of the colour in the coloured vanaspati should be such that adulteration of ghee therewith should be detectable even at a level of 10%.
- (v) The quantity of the colour required should be small.
- (vi) The addition of the colour should not cause a change in the taste or flavour or keeping quality of vanaspati.
- (vii) The colour should be cheap and easily available in quantity sufficient for the whole annual production of vanaspati (which is presently around 3:50 lakh tons and is expected to rise to around 5:0 lakh tons by the end of 1965-66).
- (viii) The colour should be fast and should not be capable of being easily removed by heating (upto 200°C) either alone or in the presence of moisture or by shaking with easily available materials like fullers, earth, charcoal or washing soda.
- (ix) The colour should be non-toxic when consumed over a period of time and should exert no cumulative effect.

The work so far carried out would indicate that the choice is limited to one or other of the following four colours:—

- (1) Ratanjot root dye.
- (2) Alcohol extract of turmeric.
- (3) Copper chlorophyll and
- (4) A synthetic yellow colour prepared from 4, 4' dihydroxy-2, 6 2' 6' tetra tert—butyl diphenyl methane.

The position in regard to each of these colours is indicated below:—

(1) *Ratanjot root dye:*

The use of this colour has been proposed by Dr. B. Mukerji, Director, Central Drug Research Institute, Lucknow and Dr. N.N. Dastur, Principal, Dairy Science College, Karnal, on the basis of researches carried out by them. The position in this regard is, however, somewhat complicated by the fact that conflicting results in regard to the toxicity of the root-dye have been reported by the Indian Dairy Research Institute, Karnal and the Indian Veterinary Research Institute, Izzatnagar, the dye having been found to be non-toxic at the former laboratory while the latter had reported distinct symptoms of toxicity in rats including degeneration of liver cells as a result of feeding of vanaspati containing ratanjot. There was also the further difficulty that some 14 different botanical varieties of root dyes are being sold in the market under the name of "Ratanjot", which might also account for the divergent results in regard to toxicity reported by the different laboratories.

Dr. Mukerji informed the Committee at its last meeting that chronic toxicity tests on Ratanjot are still in progress at his Institute and that it would take another 7 to 8 months to complete them, though present indications were that it will be found to be non-toxic. Parallel tests were also being carried out in France and Germany, the results of which may be expected within 4 or 5 months.

The Committee decided that further work on the toxicity of ratanjot should be carried out at the CFTRI, Mysore and the IVRI, Izzatnagar on properly identified samples of *Onosma echoides*, Linn and a few other important varieties, as well as on a mixed sample of the roots as marketed. These laboratories should also carry out confirmatory tests in regard to the extent to which Ratanjot fulfils the other requirements to be satisfied by a suitable colour for Vanaspati.

(2) *Alcoholic extract of Turmeric:*

This colour has been proposed by Dr. V. Subrahmanyam, Director, Central Food Technological Research Institute, Mysore who reported to the committee that work carried out at his Institute had shown that the addition of the extract to Vanaspati at a level of 0.04% gave the required tinge, sufficient to detect adulteration at a 10% level. It had also the advantage that in



case of doubt its presence in a suspected sample of ghee could be confirmed by the formation of a bright red colour on addition of lime water.

Researches on the use of this colour are also in progress at the Indian Veterinary Research Institute, Izzatnagar. This Institute has suggested the use of Schlumberger's "Resocyanine" prepared by adding 10 mg solid boric acid and a micro-drop of concentrated hydrochloric acid to 10 cc of an alcohol extract of turmeric, and warming the mixture, when a redish colour is developed which is found to be 5 times more intense than the yellow colour of the original alcohol extract.

The Forest Research Institute & Colleges, Dehra Dun are also carrying out some work on this colour, and have been able to isolate the oil-soluble portion of turmeric.

The use of turmeric as a colouring material for vanaspati is, however, beset with a serious draw-back in that vanaspati coloured with turmeric especially in the dilution at which it might be used to adulterate ghee, would have a colour very similar to that of cow's ghee. In view of this, there is a risk that colourisation of vanaspati with turmeric may actually help to promote adulteration of ghee with vanaspati rather than prevent it, and thus defeat the entire purpose for which the measure is to be introduced. Further, if we had to depend on the lime test for detecting adulteration of ghee with vanaspati containing turmeric, turmeric would then function as just another latent colour similar to the Sesame oil/Baudouin colour already in use, but with the disadvantage that the visible colour imparted by it was very similar to that of cow's ghee.

The Committee was conscious of these difficulties, and in this connection Dr. Subrahmanyan informed the Committee that some attempts were being made at his Institute to modify the colour of turmeric with calcium. The Committee decided to await the results of these experiments. It was also decided that confirmatory tests in regard to the extent to which this colour satisfied the other specifications prescribed for the purpose should also be carried out at the NDRI, Karnal, IVRI, Izzatnagar FRI & C, Dehra Dun with particular reference to the findings reported by Dr. Subrahmanyan.

### 3. *Copper Chlorophyll:*

The use of this green colour which is a copper derivative of chlorophyll has been proposed by Dr. R. Thakur, Dy. Chief Scientific Officer (Army), based on his researches using a commercial sample (imported) containing 17% of copper phaeophytin as active constituent and having a copper content (non-ionic) of 10,000 parts per million (ppm). There is, however, some doubt as to the correct nomenclature applicable to the compound in as much as copper chlorophyll as such contains 6.8% of copper and not 1.0% as in the case of the compound suggested by Dr. Thakur.

There is also considerable divergence of opinion as to the desirability of using this colour in Vanaspati. Dr. Narayanamurthi, President of the FRI & C, Dehra Dun has expressed himself strongly against the use of copper chlorophyll on the ground that copper in

whatever form it may be, is known to have deleterious effects when taken internally; even if incorporated in vanaspati at a level of 0.1% pure copper chlorophyll would impart to the product a copper content of 68 ppm as against the maximum limit of 30 ppm permitted under the PFA Rules. This view has also been endorsed by Dr. Mukerji, Director, CDRI, Lucknow. The Committee has also been advised that if in spite of this it was decided to use this colour, pure copper chlorophyll could be readily prepared indigenously, and that it was not necessary to depend on an imported commercial product for the purpose.

The Committee decided that toxicity tests on the use of the copper chlorophyll compound proposed by Dr. Thakur should be carried out at IVRI, Izzatnagar, CDRI, Lucknow and CFTRI, Mysore; and also that confirmatory tests in regard to the other specifications should be carried out at these laboratories with particular reference to the results reported by Dr. Thakur.

(iv) *Synthetic yellow colour prepared from 4, 4' dihydroxy 2, 6 2' 6' tetra tert-butyl diphenyl methane:*

This compound whose use as a colourising agent for vanaspati has been patented by the National Chemical Laboratory, Poona, has been proposed by the Council of Scientific & Industrial Research. Dr. K. Venkataraman, Director of the National Chemical Laboratory, Poona informed the Committee that acute toxicity tests on the colour show that it is non-toxic but that chronic toxicity studies thereon were currently in progress at the CDRI, Lucknow. He had also sent samples of the same to M/s. Ethyl Corporation, New York, the manufacturers of the diphenyl methane compound from which the colour has been prepared, for carrying out toxicity tests.

The Committee decided to await the results of the toxicity tests of the colour already in progress and also that parallel tests should be carried out at the IVRI, Izzatnagar and at the CFTRI, Mysore as well. It was also decided that confirmatory tests in regard to the extent to which this colour satisfied the other specifications prescribed in this regard should also be carried out at these laboratories.

## APPENDIX VII

(Vide para 65)

*Note on the progress of research on the effect of consumption of Hydrogenated Oils on health.*

The researches so far carried out indicated that excessive consumption of all fats rich in saturated fatty acids, including vanaspati, butter, ghee and coconut oil tend to increase serum cholesterol levels. It has also been shown that besides the amount and type of fat, the mode of taking of the fat also influences serum cholesterol concentration—consumption of a given quantity of fat distributed between the different meals of the day giving rise to a significantly lower serum cholesterol level than when consumed in a concentrated form. Further, increase of serum cholesterol levels can be brought about by a wide variety of factors including certain other dietary constituents like proteins and vitamins.

Although increased serum cholesterol levels have been found in epidemiological studies to be associated with increased incidence of coronary heart disease, there is no definite evidence as to whether it is a causative factor of heart disease or is only one of the symptoms thereof. In fact, the ICMR's latest report on the subject which was received by the Ministry of Food & Agriculture (Directorate of Sugar and Vanaspati) from the Ministry of Health on 20th August, 1960 states that recent experiments carried out at the Nutrition Research Laboratories, Hyderabad on monkeys for a period extending over a year (which is equivalent to 6 to 7 years of human life) which were fed on various fats including butter, ghee and vanaspati at a level of 30 per cent of the diet, have shown that the resultant increase in the serum cholesterol levels of the monkeys occurred within the first 2 months after starting of feeding, and that the cholesterol levels remained constant throughout the rest of the period at the same level thus showing that the increase in serum cholesterol levels was not of a progressive nature. Further, when these animals were sacrificed at the end of the one year period, it was found that none of the animals showed any evidence of atherosclerosis. The conclusion was therefore reached that feeding of fats like vanaspati, butter and ghee to a human subject at 30 per cent level for a period of as much as 6 to 7 years is not attended with the development of atherosclerosis.

The report also states that researches currently in progress are designed to ascertain whether the serum cholesterol level elevating property of hydrogenated vegetable oil can be overcome by the addition of poly-unsaturated fatty acids thereto; and if so, the minimum level of such addition that may be necessary.

### APPENDIX VIII

(Vide para 79)

Staff (Category-wise sanctioned and actually working in the National Sugar Institute, Kanpur during each of the last four financial years

(Main Office).  
1ST APRIL

Sl. No.	Designation of post	1957		1958		1959		1960	
		Staff sanctioned	Staff in position	Staff sanctioned	Staff in position	Staff sanctioned	Staff in position	Staff sanctioned	Staff in position
1	2	3	4	5	6	7	8	9	10
<i>Class I</i>									
1	Director	1	1	1	1	1	1	1	1
2	Professors/Chief Engineer and Technologist (Advisory)	3	2	5	3	5	5	5	5
3	D. & L. O.	..	..	1	1	1	..	1	1
4	Assistant Professor	1	1	..	..	..	..	..	..
5	Asstt. Professor (S.T.O.)	7	7	7	6	7	6	7	7
6	Administrative Officer	1	1	1	1	1	1	1	1
7	Technical Officer	1	1	1	1	1	1	1	1
18	Chemical Engineer	..	..	1	..	1	..	1	1
TOTAL CLASS I		14	13	17	13	17	14	17	17

	1	2	3	4	5	6	7	8	9	10
<i>Class II</i>										
9 J.T.O./C.D. . . . .			9	4	10	10	11	10	11	10

*Class III (Ministerial)*

10 Ministerial Supervisory . . . . .			3	3	3	3	4	4	4	4
11 U.D.C./Sr. Store Keepers/ Cashier . . . . .			12	12	13	13	19	14	19	18
12 C.A./Stenos . . . . .			5	3	5	5	5	4	5	4
13 L.D.C./Telephone Operator/ Diarrist/Hindi Typist . . . . .			23	18	24	22	30	25	30	28

*Technical*

14 Tech./Res. Asstts./Fy. Sup. Chemist B.S.S./Jr. Chemists			18	16	18	13	21	16	21	17
15 Statistical Assistant . . . . .			3	2	3	1	3	2	3	1
16 Draftsman . . . . .			1	1	1	1	1	1	1	1
17 Head Panman . . . . .			4	4	5	4	5	5	5	4
18 Foreman/Asstt. Foreman . . . . .			1	1	1	1	1	1	1	1
19 Fitter/Turner/Welder/E. Mech. . . . .			2	2	2	2	2	2	2	2
20 Asstt. St. Kep./Godown Kep. . . . .			5	5	5	5	5	5	5	5
21 Scientific Assistant . . . . .			3	3	3	3	3	3	3	3
22 Library Assistant . . . . .			1	1	1	1	1	1	1	1
23			1	1	1	1	1	1	1	1



	1	2	3	4	5	6	7	8	9	10
Sr. Technical Officer (Engg.)			..	..	2	..	2	..	2	1
Sr. Technical Officer (S.I.)			..	..	1	1	1	1	1	1
Technical Officer (Instruments)			..	..	1		1	1	1	1
<i>Class II</i>										
Assistant Engineer			1	..	..	..	..	..	..	..
Jr. Technical Officer			..	..	1	1	1	1	1	1
<i>Class III</i>										
Technical Assistant			..	..	4	1	4	1	4	1
Head Draftsman			..	..	2	..	2	..	2	1
Jr. Head Draftsman			1	1	1	1	1	1	1	1
Steno			..	..	3	1	3	1	3	2
L.D.C.			1	1	..	..	..	..	..	..
<i>Class IV</i>										
Lab. Attendant			1	1	4	1	4	1	4	1
Peon			1	1	4	2	4	2	4	2
<i>(b) Cane Price Scheme</i>										
<i>Class I</i>										
Officer on Special Duty			1	1	..	..	..	..	..	..
Sr. Technical Officer			..	..	1	1	2	2	2	2

*Class II*

Chemist Incharge/Jr. Tech. Officer . . . 11 10 7 4 7 6 6 6

*Class III*

Shift Chemist/Mill House Supervisor/Analyst/Recorder/Cane Organiser. . . 70

U.D.C./Steno . . . 1 56 54 31 54 44 45 40  
 Computer . . . 1 1 2 2 2 2 2 2  
 L.D.C./Office Clerk/Cane Clerk . . . 10 8 12 8 12 9 11 9

*Class IV*

Lab. Boy/Errand Boys/Sample Boys/Yard Boys/Relivers 135

Peon . . . 1 135 108 108 108 96 90 90

(c) *Effluent Scheme*

Class III Res. Assistant . . . 1 1 1 1 1 1 1 1  
 Class IV Lab. Attendant . . . 1 1 1 1 1 1 1 1



**APPENDIX IX**  
(Vide para 8o)

(ii) Statement showing Budget Estimates and Actual Expenditure of National Sugar Institute, Kanpur 1956-57, 1957-58, 1958-59 and 1959-60 and Budget Estimates for 1960-61

Sub-Head	YEAR 1956-57					Variations
	Original Estimates	Revised Estimates	Actual Expenditure	Rs.	Rs.	
I	2	3	4	5		
	YEAR 1956-57					
	Rs.	Rs.	Rs.	Rs.	Rs.	
<i>Main Institutes</i>						
1. Pay of Officers	1,71,800.00	1,42,500.00	1,40,606.00	(-)	1,894.00	
2. Pay of Establishment	2,11,500.00	1,67,500.00	1,67,089.00	(-)	411.00	
3. Allowances, Hon. etc.	2,14,000.00	1,83,000.00	1,83,344.00	(+)	344.00	
4. Other charges	4,00,000.00	4,70,000.00	4,67,683.00	(-)	2,317.00	
<b>TOTAL</b>	<b>9,97,300.00</b>	<b>9,63,000.00</b>	<b>9,58,722.00</b>	(-)	<b>4,278.00</b>	
	YEAR 1957-58					
1. Pay of Officers	1,99,000.00	1,63,430.00	1,45,204.00	(-)	18,226.00	
2. Pay of Establishment	1,80,000.00	1,53,100.00	1,52,914.00	(-)	186.00	

3. Allowances & Honoraria etc.	1,98,000.00	1,96,700.00	1,95,780.00	(- )920.00
4. Other charges	4,30,000.00	5,37,300.00	5,37,051.00	(- )249.00
<b>TOTAL</b>	<b>10,07,000.00</b>	<b>10,50,530.00</b>	<b>10,30,949.00</b>	<b>(- )19,581.00</b>

**YEAR 1958-59**

<i>Main Institute</i>				
1. Pay of Officers	2,21,700.00	2,07,300.00	2,10,262.00	(+ )2,962.00
2. Pay of Establishment	1,85,000.00	1,71,300.00	1,71,244.00	(- )56.00
3. Allowances & Hon. etc.	2,00,000.00	2,40,000.00	2,38,086.00	(- )1,914.00
4. Other charges	4,80,000.00	5,88,000.00	5,36,379.00	(- )51,621.00
<b>TOTAL</b>	<b>11,86,700.00</b>	<b>12,06,600.00</b>	<b>11,55,971.00</b>	<b>(- )50,629.00</b>

**YEAR 1959-60**

1. Pay of Officers	2,33,000.00	2,10,000.00	2,14,400.00	(+ )4,400.00
2. Pay of Establishment	2,16,000.00	1,79,000.00	1,79,062.00	(+ )62.00
3. Allowances & Hon. etc.	2,55,500.00	2,53,100.00	2,45,005.00	(- )8,095.00
4. Other charges	5,50,000.00	6,00,000.00	5,68,527.00	(- )31,473.00
<b>TOTAL</b>	<b>12,54,500.00</b>	<b>12,42,100.00</b>	<b>12,06,994.00</b>	<b>(- )35,106.00</b>

	1	2	3	4	5
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## YEAR 1956-57

*Fuel Economy-cum-Extension Service Scheme*

1. Pay of Officers	.	.	.	17,282.00	} (+)337.00
2. Pay of Establishment	.	.	.	3,624.00	
3. Allowances, Hon. etc.	.	.	.	10,842.00	
4. Other charges	.	.	.	3,589.90	
TOTAL	.	2,50,000.00	35,000.00	35,337.00	(+)337.00

## YEAR 1957-58

1. Pay of Officers	.	.	.	7,202.00	} (-)1,330.00
2. Pay of Establishment	.	.	.	4,416.00	
3. Allowances & Hon. etc.	.	.	24,000.00	9,029.00	
4. Other charges	.	.	.	2,023.00	
TOTAL	.	2,00,000.00	24,000.00	22,670.00	(-)1,330.00

## YEAR 1958-59

1. Pay of Officers	.	.	.	15,101.00	} (-)16,818.00
2. Pay of Establishment	.	.	.	4,558.00	
3. Allowances & Hon. etc.	.	.	63,000.00	12,875.00	
4. Other Charges	.	.	.	13,648.00	
TOTAL	.	2,20,000.00	63,000.00	46,182.00	(-)16,818.00

	YEAR 1959-60							
1. Pay of Officers	.	.	.	.	80,000.00	37,000.00	36,718.00	(- )282.00
2. Pay of Establishment	.	.	.	.	30,000.00	6,800.00	6,652.00	(- )148.00
3. Allowances & Hon. etc.	.	.	.	.	90,000.00	36,300.00	30,630.00	(- )5,670.00
4. Other Charges	.	.	.	.	1,15,000.00	11,500.00	9,703.00	(- )1,797.00
<b>TOTAL</b>	.	.	.	.	3,15,000.00	91,600.00	83,703.00	(- )7,897.00

## YEAR #1956-57

*Payment on cane price on quality basis*

	YEAR 1957-58							
1. Pay of Officers	.	.	.	.	80,000.00	1,06,000.00	1,04,500.00	(- )1,500.00
2. Pay of Establishment	.	.	.	.				
3. Allowances & Hon. etc.	.	.	.	.				
4. Other Charges	.	.	.	.				
<b>TOTAL</b>	.	.	.	.	80,000.00	1,06,000.00	1,04,500.00	(- )1,500.00

\*This scheme commenced working since January 1957 but no separate expenditure incurred during this financial year and the expenditure was met from the main budget of the institute.



3. Allowances, Hon. etc.	.	.	.	.	.
4. Other Charges	.	.	.	.	.
<b>TOTAL</b>	.	.	.	.	.

YEAR 1957-58

1. Pay of Officers	.	.	.	.	.
2. Pay of Establishment	.	.	.	.	.
3. Allowances, Hon. etc.	.	.	.	.	.
4. Other Charges	.	.	.	.	.
<b>TOTAL</b>	.	.	.	.	.

} Not in existence.

YEAR 1958-59

1. Pay of Officers	.	.	.	.	.
2. Pay of Establishment	.	.	.	.	.
3. Allowances, Hon. etc.	.	.	.	.	.
4. Other Charges	.	.	.	.	.
<b>TOTAL</b>	.	.	.	.	.

} 10,000'00      8,300'00      1,956'00      (-)96'00  
} 1,655'00      4,785'00      8,396'00      (-)96'00

1 2 3 4 5

	YEAR 1959-60	Rs.	Rs.	Rs.
1. Pay of Officers	..	..	..	..
2. Pay of Establishment	2,500.00	2,270.00	2,265.00	(-) 5.00
3. Allowances, Hon. etc.	4,400.00	2,470.00	2,154.00	(-) 316.00
4. Other Charges	3,600.00	2,800.00	2,473.00	(-) 327.00
<b>TOTAL</b>	<b>10,500.00</b>	<b>7,540.00</b>	<b>6,892.00</b>	<b>(-) 648.00</b>

(ii) *Estimates and actual expenditure during each of last four financial years (1956-57) to (1959-60) with reasons for variations (for modernisation and construction of Institute Building)*

Sub-Head	Original Estimates		Revised Estimates		Actual Expenditure		Variations	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>1956-57</b>								
71—Capital outlay—Modernisation & procurement of special apparatus	3,00,000.00	1,00,000.00	1,00,000.00	71,000.00	(-) 29,000.00			
<b>1957-58</b>								
71—Capital outlay—Modernisation	2,60,000.00	2,60,000.00	2,60,000.00	2,53,769.00	(-) 6,231.00			
<b>1958-59</b>								
71—Capital outlay—Modernisation	1,80,000.00	1,80,000.00	1,80,000.00	1,72,705.00	(-) 7,295.00			
<b>1959-60</b>								
71—Capital outlay—Modernisation Rs. 25,000.00 and Construction of Institute Building Rs. 7,00,000.00	7,25,000.00	10,25,000.00	10,25,000.00	12,00,219.00	(+) 1,75,219.00			

*Budget Estimates for 1960-61*

(Rs. in lakhs)

1. Pay and Allowances . . . . .	12.60
2. Fuel Economy-cum-Extension Service Scheme . . . . .	2.17
3. Paymnt of Cane Price on Quality basis . . . . .	..
4. Effluent Scheme . . . . .	0.07
5. Capital outlay on schemes on modernisation and construction of Institute building . . . . .	13.00
TOTAL . . . . .	<u>24.84</u>



## APPENDIX X

### *Summary of Recommendations/Conclusions*

Sl. No.	Reference to para No.	Summary of recommendations/conclusions.
1	2	3
1	4	The Committee learnt with concern that the strength of the Directorate had not been reviewed by the special Reorganisation Unit or by any other body since its inception in 1954. Even with the increase in the activities of the Directorate, the Committee do not consider that such a large increase in staff was justified. A detailed review is bound to bring to notice scope for economy.
2	5	The Committee recommend that Government may employ the internal economy unit, which is understood to be functioning in the Department of Food, to review the organisation from time to time with a view to effecting rationalisation and reduction in staff as also improving efficiency.
3	6	The Committee suggest that the number of tiers of supervisory levels obtaining in the Directorate may be reduced and that level jumping may also be resorted to in respect of matters which require attention at higher levels.
4	7	The Committee suggest that it may be examined whether the Coordination Section and Export/Parliament/Policy section which do not appear to have sufficient work-load could be combined into one Section.
5	8	It seems to the Committee that there is avoidable duplication of effort between the Directorate of Sugar and Vanaspati on the one hand and the National Sugar Institute on the other inasmuch as one of the functions of the Cooperation Section of the Directorate and the National Sugar Institute is to render assistance to sugar factories in operation with a view to improving their efficiency. The Committee consider that this is a matter which deserves examination.
6	10	The Committee are of the view that it may be better if the two sets of inspectors are combined and utilised

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for both types of work. The Government should ensure that each sugar factory is inspected by the inspectors at least once a year, if not more often. This may also result in saving both time and expenditure on travelling.

- 7 12 (i) The Committee are surprised to note that 3 Technical Assistants and 2 Junior Technical Assistants have been provided in the Typing and Despatch Section. There seems to be hardly any justification for staff qualified in accounts or statistics being put on routine and non-technical work of this nature. They cannot help concluding that the provision of Technical and Junior Technical Assistants has not been determined on any rational basis.
- (ii) The Committee are also of the view that the designation of Technical/Junior Technical Assistant for persons employed on non-technical work is wrong and misleading and needs to be revised to something more apt and therefore suggest that the feasibility of progressively replacing such Technical Assistants and Junior Technical Assistants in the Directorate by Upper Division Clerks and Lower Division Clerks respectively may be examined.
- 8 13 The Committee find that several Sections of the Directorate are provided each with one daftri and one peon. The Committee consider this provision as excessive and recommend that the strength of Class IV staff may be reduced by adjustment on the basis of 1 daftri and 1 peon for two Sections. In this connection, the Committee would like to draw attention of the Ministry to recommendation made on the subject in para 24 of their 76h Report on the Ministry of Scientific Research and Cultural Affairs—Part I (C.S.I.R.).
- 9 14 The Committee feel that as the office of the Chief Director (Sugar and Vanaspati) is situated at Delhi and the work relating to the National Sugar Institute is only of administrative nature, there may not be adequate justification for employing 1 Under Secretary, 2 Section Officers, 8 Assistants 1 Upper Division clerk and 8 Lower Division Clerks in the Ministry on Sugar and Vanaspati work. They suggest that the position in this respect may be carefully reviewed by the Ministry with a view to effecting economy.

1	2	3
10	15	The Committee suggest that the question of providing sufficient and more convenient accommodation to the Directorate may be taken up without delay.
11	19	The Committee consider it important that an assesment is made early of the cost of production of sugarcane in different areas in order to fix the minimum price of sugarcane to be paid to the producers having regard to the provisions of clause 3(1) of the Sugarcane (Control) Order 1955.
12	21	The Committee suggest that the Tariff Commission may be requested to expedite the submission of the Report as much as possible.
13	22	The Committee feel that the example of Maharashtra and Gujarat where the sugar factories are able to pay a higher price for sugarcane than the statutory price is worth emulating by sugar factories in other regions.
14	25	The Committee do not see adequate justification for allowing rebate in excise duty to sugar factories which are comparatively new for, in their case, the benefit would have seemingly been gained under fortuitous circumstances at the expense of the public exchequer. The Committee suggest that the matter may be carefully reviewed.
15	29	The Committee suggest that the question of relaxing controls on sugar may be expeditiously examined. They would, however, like to emphasise that if a decision is taken to relax the controls, careful watch may be kept on its repercussions to ensure that no scare about shortage of sugar is again created in the market.
16	30	The Committee recommend that it may be ensured tha releases of sugar are made at regular intervals so as not to cause inconvenience to the sugar factories.
17	31	The Committee recommend that the reasons for the sugar quotas not being lifted by the allottees in time or in full may be gone into.
18	32	The Committee hope that it will be possible to evolve an arrangement whereby there is no attempt on the part of State Governments to make profits on the sale of an essential commodity like sugar.

1	2	3
19	33	The Committee suggest that in view of improvement in the production of sugar, the need for continuing f.o.r. destination price scheme particularly in the case of Kanpur, which is situated in the sugar producing area, may be examined.
20	34	The Committee recommend that the efforts made to explore the possibilities of exporting sugar to U.S.A. and other foreign countries may be pursued vigorously.
21	36	The desirability of bringing down the price of sugar in India to the price obtaining in international market is important not only from the point of view of exporting sugar but also for the purposes of making possible increase in the export of fruit preservatives where sugar is an important raw material. India is already becoming surplus in its sugar and with the many irrigational projects the prospects are indeed bright for the sugar industry. The surpluses are going to be quite large. It would be difficult to prevent the farmers from resorting to a commercial crop like sugar along with the foodgrains. In such circumstances, the need for approximating the indigenous price of sugar to that in the international market cannot be over-emphasised.
22	37	The Committee would urge the Government to indicate to the industry the various ways of bringing about approximation in price between Indian and International prices of sugar.
23	38	Though the average of yield of cane as well as the average of recovery per cent is low in India as a whole, it has to be noted that in certain parts of India notably the Western region (Maharashtra and Gujarat) both the yield of cane and recovery are high enough and in individual cases could even compete with the world's best. The Committee see no reason why the results obtained in the Western region could not be reproduced by the same methods of cultivation in other parts of the country.
24	39	As the percentage of sugar recovery from sugarcane has a vital bearing on the cost of manufacture of sugar, the Committee would suggest that close and intimate collaboration should be effected between the National Sugar Institute, Kanpur and other institutes dealing with development of sugarcane such as Indian Institute of Sugarcane Research, Lucknow, Sugarcane

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1	2	3
		Breeding Institute, Coimbatore and other institutes functioning under the Indian Central Sugarcane Committee.
25	42	The Committee consider it unfortunate that there has been a shortfall in the additional capacity of sugar industry planned to be raised during the First and Second Plan periods. Now that the plant and machinery are being manufactured indigenously, there should be no difficulty in making good the shortfall in the Third Plan period.
26	44	If the target of sugar production for the Third Plan is to be achieved, it is necessary that applications for grant of licences are processed expeditiously.
27	49	The Committee feel that a co-operative, being a joint endeavour of a number of people, could not come up so readily or easily as a joint stock company and placing the two on a par is not likely to encourage co-operative development. The Committee would like a more positive approach in the matter so that preference to co-operatives is really effective. There should not be too great a readiness to prefer joint stock companies on the ground that co-operatives were taking time in coming up.
28	51	The Committee are of the opinion that the policy for location of new sugar factories needs to be carefully laid down. Both regional considerations and suitability of the particular sites may guide the choice of location.
29	52	The Committee are concerned at the inordinate delay in the finalisation of the cases relating to payment of compensation to 40 sugar factories in respect of sugar requisitioned from them in 1953-54. and recommend that their disposal may be expedited.
30	54	The Committee feel that in view of the large number of items of work entrusted to the Development Council, it would be desirable if it meets more than once a year. To obviate any ambiguity, it would be better if the constitution laid down for the Development Council specifically provided for the minimum number of meetings for the body. Such a provision could also with advantage be made in the constitution of similar bodies etc. in the Department.

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1	2	3
31	58	The Committee feel that stern action is called for against manufacturers of vanaspati whose samples fail to conform to the prescribed specifications repeatedly so as to act as a deterrent.
32	59	The Committee would also urge the Vanaspati Manufacturers' Association of India to exercise its influence to see that the member manufacturers do not contravene the prescribed specifications for the manufacture of vanaspati.
33	60	There is stated to be a gap between the law for prevention of adulteration of ghee with vanaspati and its enforcement inasmuch as Baudouin test is not being enforced for detecting adulteration of ghee and culprits were not being brought to book. The Committee recommend that suitable steps may be taken for the rigorous enforcement of the law.
34	61	The Committee recommend that effective measures may be taken to see that industrial hard oil does not become available for adulteration of ghee.
35	63	The Committee suggest that the problem of stability of vanaspati may be investigated in detail. In any case, it would be helpful to the consumers if the dates of manufacture of vanaspati and the date before which it should be used as required to be done in the case of some other articles of consumption indicated suitably on container.
36	64	In view of the importance of the matter, the Committee suggest that the research for finding a suitable colouring material for vanaspati may be expedited and completed with the shortest possible time.
37	65	The Committee would urge that research work on the subject of effect of vanaspati on health may be intensified so as to reach a conclusive finding at an early date.
38	67	The Committee suggest that the matter relating to the alleged delays in the issue of quotas of tin plate, coal, chemicals, equipment etc. to the vanaspati manufacturers may be looked into by the Ministry of Food and Agriculture in conjunction with the Ministry of Commerce & Industry and remedial measures taken.

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1	2	3
39	68	The Committee suggest that the feasibility of the proposal to relate the quota of tin plate which is allotted to vanaspati factories, to the production of vanaspati for the year as a whole rather than in one quarter may be examined by Government.
40	70	The Committee would urge the Government to ensure that licences admissible by way of incentives under the vanaspati export promotion scheme are issued expeditiously.
41	71	The Committee suggest that research on the problem of prescribing a maximum limit in respect of nickel content of vanaspati may be carried out expeditiously.
42	72	The Committee consider that the progress in the matter of production of vanaspati from soyabean oil may be watched and if the results of manufacture of vanaspati out of soyabean oil are promising it may be desirable to encourage the growth of soyabean and production of soyabean oil within the country.
43	77	The Committee consider that it would be desirable if the Advisory Board of the National Sugar Institute meets twice a year to approve the research programme and to review the progress of work done at the Institute.
44	78	The Committee consider that it is not desirable that the Director should be burdened with routine administrative duties as those are bound to militate against his devoting full attention to technical and research problems. The Committee hope that the Director would be relieved of such routine duties at the earliest.
45	82	As the National Sugar Institute undertakes research on problems useful to the industry, the Committee suggest that the desirability of securing contributions from the sugar industry for the research activities of the Institute may be considered by the Government as is the common practice in some of the developed countries.
46	85	The Committee consider it unfortunate that there has been inordinate delay in implementing the recommendations made by the Expert Committee as long back as 1955, regarding the starting of five "off-season" courses at the National Sugar Institute. They recommend that "off-season" courses particularly for

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categories, for which there is dearth of trained personnel, may be started without further avoidable delay.

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| 47 | 88 | The Committee cannot over-emphasise the importance and necessity of stepping up the technical efficiency of the sugar industry in India to the level of the advanced countries. They recommend that the Government should address themselves to this task and meet fully the demand of the sugar industry for technical advice.  |
| 48 | 92 | The Committee are of the opinion that it would be desirable to review the cost of service rendered under the Fuel Economy- <i>cum</i> -Extension Service Scheme in conjunction with the representatives of the sugar industry and the financial authorities. They recommend that an early decision may be taken. The need for the decision becomes more urgent as no fees are being accepted at present on the plea of the matter being under review.  |
| 49 | 94 | The Committee recommend that concrete steps may be taken to step up the progress of the Cane Price Scheme in the North and its wider adoption throughout the country. The results obtained from this scheme may also furnish valuable data for determining the price linking formula.  |
| 50 | 95 | The Committee consider that it would be desirable to provide suitable incentives to the research staff of the National Sugar Institute.  |
| 51 | 98 | The Committee cannot understand why the National Sugar Institute has not been able to replace the old machinery of the Experimental Sugar Factory so long and suggest that its early replacement by a modern plant may be considered. The sugar excise yields a substantial amount of Rs. 50 crores and it ought not to be difficult to find the necessary resources for the same. Since the sugar plant is manufactured indigenously it may not even necessitate much of foreign exchange. Meanwhile, the Committee suggest that every effort may be made to minimise the loss on running the present factory as far as possible. |
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1	2	3
52	99	The Committee consider that the decision on the question of starting regional research stations under the guidance of the staff of the National Sugar Institute for the study of regional problems may be expedited.
53	100	The Committee consider that the Ministry should ensure that the outstanding annual reports of the National Sugar Institute are published without delay and that, in future, reports are brought out in time.

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## APPENDIX XI

### *Analysis of recommendations contained in the Report*

#### I. CLASSIFICATION OF RECOMMENDATIONS

##### A. Recommendations for improving organisation and working

S. Nos. 2, 3, 5, 6, 7, 10, 11, 12, 15, 16, 18, 19, 20, 24, 25,  
26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40,  
41, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52 and 53 = 42

##### B. Recommendations for effecting economy

S. Nos. 1, 4, 8, 9, and 15 . . . . . = 5

##### C. Miscellaneous

S. Nos. 13, 21, 22, 23, 32, and 42 . . . . . = 6

#### II. ANALYSIS OF THE MORE IMPORTANT RECOMMENDATIONS DIRECTED TOWARDS ECONOMY

Sl. No.	No. as per summ- ary of re- commen- dation	Particulars
1	2	3
1	1	A detailed review of the strength of staff of the Directorate of Sugar and Vanaspati may be made to effect economy.
2	4	It may be examined whether the Co-ordination Section and Export/Parliament/Policy Section which do not appear to have sufficient work-load could be combined into one Section.
3	8	The strength of Class IV staff is excessive and may be reduced on the basis of one daftri and one peon for two Sections.

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1	2	3
4	9	There does not appear to be adequate justification for employing 1 Under Secretary, 2 Section Officers, 8 Assistant & 1 Upper Division Clerk and 8 Lower Division Clerks in the Ministry for Sugar and Vanaspati work. The position in this respect may be carefully reviewed by the Ministry with a view to effecting economy.
5	14	There does not appear to be adequate justification for allowing rebate in excise duty to sugar factories which are comparatively new for, in their case, the benefit would have seemingly been gained under fortuitous circumstances at the expense of the public exchequer. The matter may be carefully reviewed.

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