

**ESTIMATES COMMITTEE  
1964-65**

**SEVENTY-FIFTH REPORT  
(THIRD LOK SABHA)**

**MINISTRY OF FOOD & AGRICULTURE  
(Department of Agriculture)**

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**



**LOK SABHA SECRETARIAT  
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## ESTIMATES COMMITTEE

(1964-65)

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24. Shri Bishwanath Roy

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\*Elected w.e.f. 18th September, 1964, vice Shri Lalit Sen ceased to be a member of the Committee on his appointment as a Parliamentary Secretary.

(iv)

25. Shri P. G. Sen
26. Shri Prakash Vir Shastri
27. Shri H. Siddananjappa
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29. Shri R. Umanath
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**SECRETARIAT**

Shri Avtar Singh Rikhy—*Deputy Secretary.*  
Shri B. K. Mukherjee—*Under Secretary.*

## INTRODUCTION

1. the Chairman, Estimates Committee having been authorised by the Committee to submit the report on their behalf, present this Seventy-Fifth Report on the Ministry of Food and Agriculture (Department of Agriculture)—Indian Council of Agricultural Research.

2. It would be recalled that 11 years back, the Estimates Committee (1953-54) had examined the estimates of the Ministry of Food and Agriculture and presented the Sixth-Report (November, 1953) which *inter alia* dealt with Indian Council of Agricultural Research. Action taken by Government on the recommendations contained in the above Report was examined by the Estimates Committee (1956-57) who presented the Fifty-Second Report on the subject.

3. The Committee took evidence of the representatives of the Ministry of Food and Agriculture (Department of Agriculture) on the 28th and 30th November, 1964. The Committee wish to express their thanks to the Vice-President of the Indian Council of Agricultural Research [*Ex-officio* Special Secretary, Ministry of Food and Agriculture (Department of Agriculture)], Secretary, Indian Council of Agricultural Research and other officers of the Ministry and the Council for placing before them the material and information they wanted in connection with the examination of the Indian Council of Agricultural Research.

4. The Report was considered and adopted by the Committee on the 3rd March, 1965

5. A statement showing the analysis of recommendations contained in the Report is also appended to the Report (Appendix VII).

NEW DELHI;  
April 2, 1965.  
Chaitra 12, 1887 (Saka).

ARUN CHANDRA GUHA.  
Chairman.  
Estimates Committee.

## CHAPTER I

### INTRODUCTORY

#### A. *Historical Background*

In ancient India, agriculture developed considerably. The society and the State were taking proper care about it. There are references of care and attention to agriculture in the Vedas and in Charaka, Susruta, Parasara, Kashyapa, etc. Even agricultural sciences, including animal husbandry and veterinary, social classification, etc., developed in those times. Gradually, by about the 10th century, exploitation of the farmers by the State or small chieftains or by local jagirdars became more or less common. In the earlier period of the British rule, this condition continued rather in an aggravated form, as in addition to the State, landlords and money lenders also appeared on the scene for the exploitation of the farmers.

2. Until about 150 years ago, the condition of Indian agriculture was in a very disorganised state. The elementary necessities of agriculture in the form of finance, water, and proper care and preservation of the soil, etc., were all neglected. Agriculture in those days could hardly serve its purpose, i.e., of feeding the people and of giving a standard of living to the farmers; and famine became almost a regular feature. Till the enormity of famines became too obvious, the Government did not give any attention to the development of agriculture.

3. The frequent out-breaks of famines turned governmental attention in this direction and led to the creation in 1871 of the composite central Department of Revenue, Agriculture and Commerce, which continued until 1879. The Famine Commission of 1880 stressed in its recommendations the urgency of establishing, at the Centre and in the different Provinces of India, departments for the development of agriculture in the country. This recommendation was partly implemented in 1881 when the Imperial Department of Agriculture, headed by a Secretary was brought into being. Soon afterwards, in 1882, steps were

taken for the formation of the provincial departments of agriculture.

4. In 1889, the British Royal Agricultural Society sent Dr. J. A. Voelcker to study Indian agriculture. He has indicated in his Report that "Certain it is that I, at least, have never seen a more perfect picture of careful cultivation, combined with hard labour, perseverance, and fertility of resource than I have seen at many of the halting places in my tour".

5. During Dr. Voelcker's visit, in 1890 an agricultural conference was held at Simla and certain recommendations were made. As a result, an agricultural chemist to the Government of India was appointed that year. In 1901, an Inspector General of Agriculture and a mycologist were appointed, and in 1903 an entomologist was added. At about the same time a donation of £30,000 by Henry Phipps of Chicago was used to found the Imperial Agricultural Research Institute at Pusa (Bihar). In 1904 the Indian Co-operative Societies Act was passed with a view to provide co-operative credit, in 1905 the central and provincial Departments of Agriculture were expanded and in 1906 the Indian Agricultural Service was constituted.

6. After 1919, various constitutional changes took place in India. As a result of those constitutional changes, the Government of India divested themselves, excepting to a very limited extent, of all powers of superintendence, direction and control over the administration of an agricultural and veterinary subjects. Though the administration of Central Agencies and Institutions for research and for professional and technical training was retained as a Central subject, no specific provision was made for coordinating the work of these Institutions with that of similar Institutions in the States (then Provinces). The State Departments, in all important matters of agricultural and veterinary research, were thus left without the stimulus of a Central Organisation to guide and coordinate their policy. Apprehension was, therefore, expressed by some that, due to this lack of coordination in the fields of agricultural and veterinary research, continued cooperation between the Centre and the States might be lost in this important and vital field. A Royal Commission on Agriculture in India was accordingly appointed in 1928 to enquire into the agricultural set up and rural economy of the country.

7. The Royal Commission made an exhaustive report on research, marketing, financial credit and rural welfare. One of its main recommendations was that an Imperial Council of Agricultural Research should be established. The Commission concluded that however efficient an organisation might be built up for demonstration and propaganda, it can not achieve a full measure of success unless it was based on research.

8. As a result of the above recommendation made by the Royal Commission, an Imperial Council of Agricultural Research was established in 1929. Since its inception, the Council has been the agency to promote, guide and coordinate agricultural, animal husbandry and veterinary research throughout India. The name of the Council was changed from the Imperial Council of Agricultural Research to the Indian Council of Agricultural Research in June, 1947.

9. The Council is registered under the Registration of Societies Act, 1860.

10. The Council is expected to provide leadership in formulating agricultural research policy, to influence research done in different States and Institutes, and to offer advice. It also **sponsors research** designed to strengthen research programmes in the country, and for that purpose provides financial help for a large number of research projects in Government Institutes (both Centre and State), in Universities and also in recognised private Institutes.

11. In February, 1952, an Indian Council of Agricultural Education (since replaced by the Board of Agricultural Education) was set up under the aegis of the Council with a view to coordinate agricultural education (including education in animal husbandry and dairying) and to achieve a uniform standard of agricultural education in the country.

## B. Functions

12. The main objects of the Council as laid down in Article 2 of its memorandum of Association (Appendix I) are:

(a) to undertake, aid, promote, and coordinate agricultural and animal husbandry education. research

and its application in practice, development and marketing in India.

- (b) to act as a clearing house of information not only in regard to research but also in regard to agricultural and veterinary matters generally.
- (c) to establish and maintain a research and reference library with reading and writing rooms and to furnish the same with books, reviews, magazines, newspapers and other publications.

### C. Funds

13. The Council influences research by financing research schemes on agriculture, animal husbandry and allied subjects in conjunction with the Central and State Governments and Administrations of the Union Territories and at the Central and State Research Institutions, Universities and Private Institutions. The funds required for financing the activities of the Council are derived mainly from the proceeds of the cess levied at the rate of one half of one per cent *ad valorem* under the provisions of the Agricultural Produce Cess Act, 1940 on the export of certain agricultural commodities listed in the schedule to the Act. Special grants are also given to the Council by the Government of India for financing specific schemes.

14. The income of the Council from the various sources for the last three years has been as follows:

	1961-62	1962-63	1963-64
	Rs.	Rs.	Rs.
(i) Receipts from agricultural produce Cess . . . . .	52,03,755	63,04,663	65,28,737
(ii) Grants from Government of India . . . . .	41,11,904	55,38,097	42,62,632
(iii) Grants from other sources . . . . .	63,917	1,13,373	22,582
<b>TOTAL . . . . .</b>	<b>93,79,576</b>	<b>1,19,56,133</b>	<b>1,08,13,951</b>

## CHAPTER II

### ORGANISATIONAL SET-UP

#### A. Composition

15. The Management of all the affairs and funds of the Council vests in its Governing Body which mainly consists of the Ministers in charge of Agriculture, Animal Husbandry and Veterinary Services in the States and some representatives of the Parliament on the Council. The Union Minister of Food and Agriculture is the President of the Governing Body.

In the discharge of its functions, the Governing Body is assisted by the following Committees and Boards:

1. Standing Finance Committee.
2. Board of Agricultural Research.
3. Board of Animal Husbandry Research.
4. Board of Agricultural Development and Marketing.
5. Board of Agricultural Education.
6. Scientific Committees.
7. Commodity Committees.

**Standing Finance Committee.**—The Committee has been constituted under the provisions of the Agricultural Produce Cess Act, 1940 (27 of 1940). It is composed of the Secretary to the Government of India in the Ministry of Food and Agriculture (Department of Agriculture), the Vice-President and the Financial Adviser of the Council, two eminent scientists from the Universities and five members elected by the Governing Body from amongst its own members, one of whom is a representative of the Parliament on that Body and the other an agriculturist.

**Boards.**—The Boards of Agricultural Research, Animal Husbandry Research, Agricultural Development and Marketing, and Education advise the Governing Body in respect of all matters pertaining to research, education,

development and marketing in the fields of agriculture, animal husbandry and allied subjects. The Vice-President of the Council is the Chairman of all the four Boards.

**Scientific Committees.**—There are at present 16 Scientific Committees of the Council. These Committees assist the four Boards mentioned above in the discharge of their functions. The Scientific Committees consist of specialists in the agricultural, animal husbandry and allied sciences. An eminent scientist is the Chairman of each Committee. The schemes/projects are scrutinised by these Committees from their respective scientific and technical points of view before these are submitted to the Boards concerned. The functions of these Committees are given in Appendix II.

**Commodity Committees.**—There are at present six Commodity Committees of the Council. These Committees assist the Board of Agricultural Research and the Board of Agricultural Development and Marketing in the discharge of their functions. Each of these Committees consist of officials and non-officials (representatives of growers, producers and other trade interests). The functions of these Committees are given in Appendix III.

**Recognised Institutions.**—All Institutions engaged in research work in the sphere of agriculture, animal husbandry, forestry, fisheries or other allied subjects and maintained by the Central or the State Governments or affiliated to any of the recognised Indian Universities for post-graduate research are the recognised institutions for the purposes of the Council. The Governing Body may, on application and after such enquiry as it may think necessary, accord recognition to any other Institution engaged in research in the sphere of agriculture, animal husbandry, forestry, fisheries or other allied subjects.

#### B. Secretariat

16. The Secretariat of the Council is an Attached Office of the Ministry of Food and Agriculture (Department of Agriculture). The Principal Administrative Officer of the Council is its Vice-President who has the status of an ex-officio Additional Secretary to the Government of India in the Ministry of Food and Agriculture (Department of

**Agriculture).** At present, however, the post of Vice-President, is in abeyance and Special Secretary to the Government in the Ministry of Food and Agriculture (Department of Agriculture) also functions as Vice President of the Council. He is assisted by a Secretary and an Additional Secretary, who have also got the ex-officio status of Deputy Secretary to the Government of India.

17. In terms of the constitution of the Council, the expenditure on the Secretariat of the Council including the pay and allowances of the Vice-President is incurred by the Government direct from funds provided under the grant for the Ministry of Food and Agriculture (Department of Agriculture). However, similar Secretariat posts have also been created by the Council and the expenditure thereon is met out of its Research Funds. The table below shows the sanctioned strength of the staff on the Government side and on the Research side (Non-Government side) of the Council as on 1st April, 1961:

Staff financed from Government Funds and Research Funds of the Council

Serial No.	Nomenclature of the Post	Sanctioned strength	
		Government Side	Research Side
1	Vice-President	..	..
2	Secretary	1	..
3	Additional Secretary	1	..
4	Under Secretary	8	..
5	Administrative Officer	..	1
6	Section Officers	26	8
7	Assistants	55	51
8	Accountants	2	1
9	Hindi Translator	..	1
10	Hindi Assistant	..	1
11	Stenographers	20	14
12	Steno-typists	7	14
13	Cashier	1	1
14	Upper Division Clerks	26	31
15	Lower Division Clerks	94	104
16	Factories (including Selection Grade)	20 + 3	22
17	Jr. Gestetner Operator	..	1
18	Jamadars	3	..
19	Peons	70	59
20	Chowkidars	..	9
21	Parash	1	14
22	Head Packer	..	1
23	Packers	..	12
24	Malis	..	3
25	Sweepers	2	16

18. The figures of expenditure incurred by the Government of India on the Secretariat of the Council and the expenditure on similar posts incurred by the Council from its Research Funds during the two years 1962-63 and 1963-64 are as follows:

	Expenditure incurred by Government of India	Expenditure met from the Research Funds of the Council
(In lakhs of Rupees)		
1962-63	.	20.18
1963-64	.	20.98

19. The Committee have been informed, during evidence, that the original direction of Government, when the Council was constituted was that the Secretariat would be provided entirely by Government. In practice, this was found difficult to follow. In the intervening years, some non-gazetted staff was appointed and paid for from the Research Funds of the Council, because the Government could not make the necessary number of men available and the work was suffering.

20. The Committee have also been informed that the staff appointed by the Council are not entitled to all the privileges enjoyed by the staff appointed by the Government as for example pension benefits, etc.

*The Committee regret to note that considerable research funds of the Council have been diverted towards meeting the expenditure on the staff appointed by it. The Committee consider undesirable the creation of two sets of staff with different conditions and terms of service—one on the Government side and the other on the Council side—for manning the Secretariat of the Council. The Committee recommend that Government should examine this question in all its aspects and take suitable remedial measures.*

#### C. Reorganisation of the Council

21. The First Indo-American Team (1954) after examining the activities and responsibilities of the Council, thought that its leadership in co-ordinating agricultural research was ineffective and visualised "the development of Council

into a well-rounded staff of specialists in the major problem fields to serve as a senior Council of special consultants or advisers under the Vice-President of the Council". They also recommended a closer working relationship between the Council and the Central Research Institutes in which the latter would function as the operating wing of the Council. The Second Indo-American Team (1960), realizing the prevalent diversity of research responsibilities, reiterated the recommendations of the First Team in even stronger terms. They recommended that, in the interest of consolidating the central agricultural research programme and assuring adequate co-ordination, all central research institutes and Commodity Committees should be brought under the full technical and administrative control of the Council.

22. The Agriculture Research Review Team (1964) have recommended that "the Indian Council of Agricultural Research as now constituted be abolished and that a new Council with additional duties and responsibilities be authorised by the Government of India. We fully recognise that Indian Council of Agricultural Research is an old established organisation commanding both national and international prestige. Nevertheless we believe that drastic change is necessary if agricultural research in India is to make its maximum contribution to the nation's food problems. We do not believe that changing the name of an existing agency has any value by itself; but our proposal incorporates many additional functions and responsibilities not associated with the name of Indian Council of Agricultural Research. Therefore, we ask for serious consideration to be given to our proposal to set up a new organisation and call it the Council for Agricultural and Food Research (C.A.F.R.)."

23. The functions of the Council for Agricultural and Food Research (C.A.F.R.) as envisaged by the Agricultural Research Review Team are enumerated below:

(i) Assume full technical and administrative control of all Central Agricultural Research Institutes, all existing Commodity Committees including the Central Sugarcane Committee and certain other research organizations in the fields of Botany and Zoology, Fisheries, Forestry, and Food

Processing which are now financed by the Government of India through various channels.

- (ii) Make block grants to States for the strengthening of research in selected agricultural research institutes or universities in the States.
- (iii) Make *ad hoc* grants for short duration projects in universities and elsewhere.
- (iv) Maintain a staff of specialist scientific advisers of different disciplines and see that their services are effectively utilized.
- (v) Establish additional research centres as and when they may be found necessary to fill gaps in the overall programme.
- (vi) Provide scholarships and training grants to ensure an adequate supply of highly-trained research workers in agriculture and the basic sciences as related to agriculture.
- (vii) Organize seminars or group discussions on special problems, and provide expenses and other facilities to ensure contacts between technical staffs, especially the younger research workers.
- (viii) Finance the travelling of research workers abroad for attending scientific conferences and visiting laboratories where outstanding work in their subjects is being done.
- (ix) Act as a clearing house for information and arrange for the prompt publication of the results of research.
- (x) Take any other steps that may be desirable to improve the efficiency and standard of research and ensure that the country gets the kind of agricultural research it needs.

24. The Committee have been informed that the above recommendation of the Agricultural Research Review Team has been examined by Government in consultation with a panel of scientists and experienced administrators drawn from the States as well as the Centre. It has been stated that "while it is essential to have a central authority for administering a national programme of research, it is,

however, not proposed at this stage to change the name of the Council. Under the existing set-up, the Council cannot establish its own Research Institutions. Its schemes are, therefore, mainly executed at the Central and State Research Institutions, Universities etc. It has only a tenuous control over research programmes in the leading research institutions like the Indian Agricultural Research Institute, Indian Veterinary Research Institute, National Dairy Research Institute, Central Rice Research Institute, etc. The Government of India feel that the Council is in an ideal position to establish and maintain Institutes and Laboratories of adequate size and calibre to undertake basic research. It is, therefore, proposed to bring under the Council all research institutions named above and the others which are run departmentally."

*While the Committee are glad to note that Government intend to bring under the Council all the Central research institutes and the others which are run departmentally, they suggest that care should be taken to ensure that the autonomy of the Central research institutes in so far as direction and initiative of research programmes are concerned is adequately safeguarded consistently with the overall national programme to be formulated by the Council.*

## CHAPTER III

### RESEARCH SCHEMES

25. During 1963-64, the Council sanctioned continuance of 96 current schemes at a cost Rs. 48.96 lakhs to the Council. Additional Grants amounting to Rs. 0.31 lakhs were also given for 4 current schemes. During the period 58 schemes terminated and 29 new schemes of research were sanctioned in the field of agriculture, animal husbandry and allied subjects at a total cost of Rs. 12.31 lakhs to the Council.

#### **A. Plan Development Schemes and Research Schemes**

26. The information furnished to the Committee reveals that the Council deals with the following types of schemes:

- (1) Plan and Non-Plan Schemes financed directly out of grants from the Government of India; and
- (2) Research Schemes sanctioned out of research funds of the Council.

The Committee have been informed that the Council as a Registered Society is not concerned with the schemes under category (1) above. However, schemes falling under this category are being handled by Indian Council of Agricultural Research as part of the Secretariat of the Ministry of Food and Agriculture.

27. The names of the research schemes which are the concern of the Council and the Plan Development Schemes which are not the concern of the Council are given at Appendix IV to this Report.

#### **B. Stages through which Schemes have to pass**

28. Projects/Schemes are required to be submitted by the State Governments, universities etc. to the Council by the end of December, every year. These are scrutinised by the Secretariat of the Council during the months of January to March and then placed before the Scientific Committees and Commodity Committees of the Council for considera-

tion from their respective scientific, technical and commodity points of view at their meetings normally held in April-May. Thereafter, these are considered by the Research Boards concerned at their meetings held in July every year in the light of the recommendations of these Committees. The schemes that are recommended by the Boards for execution are examined by the Standing Finance Committee of the Council from the financial points of view and finally approved by the Governing Body at their meetings held normally in August every year. Thereafter, necessary sanctions for the implementation of the schemes are conveyed to the authorities concerned on the basis of the estimates approved by the Governing Body. The funds are remitted on receipt of demands from the respective authorities after the schemes have been started. Generally 8 to 9 months are taken in the processing of a scheme before financial sanction is accorded.

29. The Committee have been informed that the Council intends to ask the State Governments not to send schemes just before the meeting of the Scientific Committees, but keep on sending them throughout the year, so that, as they come they can be placed before the Scientific Committees which meet twice a year. In this way the Council hope to shorten the time-lag between the receipt of a scheme and its approval by Governing Body.

30. The new schemes are sanctioned with effect from 1st April of the next financial year and the sanctions are generally issued within a period of two to three months after the meeting of the Governing Body. The sanctions for the extension proposals in respect of current schemes are also issued, within the same period.

31. According to the Schedule of Terms and Conditions governing the grants from the Council, the State Governments, universities etc. are required to start the new schemes within a period of two years from their effective dates of sanction. The sanctions in respect of the schemes which are not started within that period are withdrawn.

32. In this connection, the Agricultural Research Review Team have observed that "as much as two years may elapse between the planning of a project and its activation." It has been admitted during evidence that that is possible because there may be something technically wrong with the schemes and some correspondence may have to be

done to get that corrected. It has also been admitted that there are many schemes which have not been started even one or two years after the date of the communication of financial sanction, because the State Governments have not made arrangements for land, staff etc. or because the Public Service Commission has not selected the staff.

*The Committee would stress the need for reducing the time-lag of nearly one year in the receipt of a scheme and communication of its financial sanction. The Committee also view with concern the inordinate delay in activation of a scheme by the concerned institutes, universities, etc. The Committee suggest that Government may review the procedure for processing research schemes so as to minimize the delay in their activation.*

#### **C. Team work by scientists on a particular scheme.**

33. The Committee understand that the trend in research work in other advance countries is that a team of scientists works as a whole on a problem instead of an individual working on it. It has been suggested to the Committee that "we should think in terms of strengthening the team workers by adding a person rather than strengthening the specific area of specialisation, by adding workers."

34. The Committee have been informed during evidence that the team-work approach has been introduced in India in co-ordinated research projects like hybrid maize, hybrid jowar, etc. which require the co-operation of several scientists. Even if a scheme is not directly sponsored or entirely financed by the Council, it is ensured that there is a team of agronomists, plant breeders and plant pathologists working together on all aspects of a particular project.

*The Committee note the steps taken by the Government in this regard and would suggest further strengthening of the team-work approach.*

#### **D. Desirability of giving block grants**

35. The Agricultural Research Review Team have observed that, "We found widespread objections to the present grant system on several grounds. First, that it is slow in operation and that as much as two years may elapse between the planning of a project and its activation. Se-

condly, that it does not permit the employment of permanent staff. Thirdly, that it prejudices the agricultural authorities in the State. The last objection is based on the common arrangement under which Indian Council of Agricultural Research pays a part of the cost of the project and the State the other part. We were told that some States are reluctant to sanction any research project, however urgent, unless it has been approved by Indian Council of Agricultural Research, which assures them of a contribution towards the cost". The Team suggested that "financial assistance by the Centre to the States should be less by way of *ad hoc* grants of limited duration and more by sustained long-term financing, permitting the development of long-term programmes. Block Grants should be made available on an annual basis, but for a five-year period in the first instance, with authority to carry over savings in the earlier years of quinquennium to the later years."

36. At present funds in respect of the schemes which are executed at the State research institutes are remitted to the State Governments. Funds for the schemes which are executed at the universities are remitted to them direct. The projects are inspected by the Technical Officers of the Council. The Annual Progress Reports of these projects are scrutinised by the relevant Scientific Committees of the Council and they, in the event of a scheme not progressing satisfactorily, recommend its improvement or termination depending on the progress of the scheme and facilities available for proper conduct of research.

37. The Committee have been informed that the question of giving block grants for research is under the consideration of the Government. The idea of giving block grants is that instead of sanctioning funds on project basis, the funds should be sanctioned on the basis of long term programmes. Whenever there is an eminent scientist assisting in a particular field or in a University, he may be asked on what particular problem he would like to do some research work and to give an estimate of the equipment and the staff that he would require for the purpose. Then funds will be given on block grant basis for five years without having to renew the sanction every year. The scientist will only give an annual programme of work. Such block grants will ensure continuity of work and tenure of staff over a longer period.

While the Committee welcome the proposal of giving block grants for long term projects, they would stress the need for periodical evaluation and inspection of the projects at regular intervals to ensure that grants are gainfully utilized. The Committee would also like the Government to examine whether budgetary procedures could not be simplified.

#### *E. Co-ordination at various levels*

38. In the present stage of development, the country can ill afford duplication or overlapping of research efforts either in the Central or State spheres. The prime need of the day is to achieve co-ordination and a balanced integrated approach to the problems of regional or national importance. The Agricultural Research Review Team have observed "On several occasions we saw research along parallel lines being done at stations situated only a few miles apart but under different authorities, and found no co-ordination between the programmes".

39. It has been admitted before the Committee during evidence that "It is a fact that excepting for research which is carried on under the grants given by the Indian Council of Agricultural Research, we have no knowledge of the research programmes of State Governments. They do not come to us and so we do not know." It is doubtful "whether the State Governments themselves know what research is being done at various institutions. There must be a fair amount of duplication going on." It has also been stated before the Committee that "a lot of difficulties arise out of our federal structure and the fact that agriculture is a State subject. This is inevitable to the extent that we cannot afford to ensure that all research will be carried on only with funds given by the Government of India. If we could do that, then perhaps we could co-ordinate it effectively. But because the States out of their own revenues also carry on research, co-ordination has to be done on a kind of organisational and administrative basis. It has to be a matter of voluntary co-operation."

40. To overcome the difficulties in the way of co-ordination, the Agricultural Research Review Team have suggested the establishment of a Central Office where all information about what is going on all over the country

should be collected. In the States, State Research Boards as recommended by the Joint Indo-American Team on Agricultural Education, Research and Extension should be set up.

41. The Committee have also been informed that State Research Boards/Committees have been set up so far in Bihar, West Bengal, Madhya Pradesh, Madras, Maharashtra, Kerala, Mysore, Uttar Pradesh, Orissa and Rajasthan and Goa. Andhra Pradesh and Punjab have also agreed to set up Research Board/Committees.

The Committee feel that enough attention has not been given by Government to ensure co-ordination between Centre and States and between States and States in the research programmes. They regret to note that even Research Boards have not been set up in all the States. The Committee would stress the need of bringing about effective co-ordination and would strongly recommend that Research Boards should be set up in all the States so as to eliminate duplication and overlapping in the research programmes.

The Committee would also like Government to chalk out suitable pattern and norms for setting up of Research Boards and issue necessary directions to the States so that there is uniformity in the organisational set-up of these Boards.

#### **F. Completion of a Scheme within the stipulated time**

42. The Committee have been informed that ordinarily no schemes are entertained for more than five years but in some very complicated schemes, viz., schemes relating to eradication of virus diseases, even this period may not be adequate for bringing out the desired results. In such cases the period may be extended to ten years. It has been stated that in some horticultural schemes the period extends to as many as forty years.

43. Asked about the check exercised by the Council on the progress of the schemes, the Committee have been informed that the Principal Investigator, who works on a particular scheme, is required to send annual progress report of the scheme from which it is judged how far he is keeping to the programme. If there are short-comings

they are pointed out to him. If the instructions are not complied with, the sanction is withdrawn and future funds are stopped.

The Committee feel that it is quite important to ensure that a particular scheme is completed within the stipulated time and would like the Government to further strengthen the measures taken in this regard.

The Committee would also like the Government to examine the feasibility of working out the economics of those schemes which extend to ten years or more at suitable intervals to find out whether the results achieved are commensurate with the expenditure.

## CHAPTER IV

### AGRICULTURAL EDUCATION

44. To bring about a rapid increase in the food production in India, it is necessary to re-examine the existing pattern of agricultural education in India. The pattern of education from primary grades to the university level has to be so organised that it can make a positive contribution towards increasing food production. This means that the country has to produce specialists who are saturated with first-hand contact with Indian agriculture and know it through and through in its most intimate make up and elements.

#### *A. Board of Agricultural Education*

45. As stated in para 11, the Indian Council of Agricultural Education (since replaced by the Board of Agricultural Education) was set up under the aegis of the Council with a view to coordinating agricultural education (including education in animal husbandry and dairying) and achieving a uniform standard of agricultural education to meet the growing requirements of the country in 1952.

46. The Board of Agricultural Education can play an important role in evolving an effective agricultural educational programme, in which all institutions where agriculture is a part of the curriculum have to be fitted into an educational pattern with definite objectives.

#### *B. Requirements of Agricultural and Allied Personnel*

47. The problem of Agricultural Education has to be studied in conjunction with the total requirements of agricultural graduates for the Fourth Plan period and the extent to which this requirement is likely to be met during the Third Plan period. The total requirements of agricultural graduates, including post-graduates, have been estimated by the Working Group on Agricultural Personnel, Education and Training, to be 31,700 for the Fourth Plan. The bulk of these requirements is contributed by

the additional demand for agricultural extension officers in each community development block. It has been proposed by the Working Group that all blocks should have 5 agricultural extension officers by the end of the Fourth Plan period.

The total out-turn of agricultural graduates in the Fourth Plan is estimated to be of the order of 25,000. Thus there is a gap of about 6,700 between demand and supply.

48. In addition, the total demand for veterinary and animal husbandry personnel has been estimated to be 5,620 during the Fourth Plan period. These estimates include requirements of community development blocks, veterinary hospitals and dispensaries, and special programmes of development of cattle, sheep, poultry and other animals.

The total out-turn of veterinary graduates in the Fourth Plan is expected to be 5,160. Thus there is gap of about 460 between demand and supply.

49. The total requirements of agricultural personnel Third Plan were estimated as follows:

Agricultural Graduates—20,000

Veterinary Graduates—6,800.

50. To meet these requirements and the requirements of the Fourth Plan referred to above, it was thought necessary to provide facilities for an annual intake of about 6,200 students during the Third Plan as against the intake of 5,800 students at the end of Second Plan. It was tentatively proposed to start five more Agricultural Colleges one each in Andhra Pradesh, Madhya Pradesh, Punjab, Himachal Pradesh and Madras for which necessary provision had been made by the State Governments concerned in their Third Five Year Plans. Against these, six new Colleges have been started as shown below:

Andhra Pradesh	1
Madhya Pradesh	2
Punjab	1
Himachal Pradesh	1
Maharashtra	1

In addition, a number of private colleges have sprung up in Uttar Pradesh and Rajasthan. As a result, the annual intake of students at present is about 8,000. However, the expansion in agricultural colleges has been unplanned and has created the problems of regional imbalances, low standard of education etc. which have been discussed in the succeeding paragraphs.

### C. Expansion in Agricultural Education

51. Since 1951, the annual intake in agricultural and veterinary colleges has increased progressively by over 700%. The expansion of agricultural and veterinary education from 1951-52 to 1962-63 has been as follows:—

	Period			
	1951-52	1955-56	1960-61	1962-63
<b>1. Agricultural Graduates</b>				
(a) No. of Institutions	19	30	53	62
(b) Intake	1,060	1,989	5,634	7,483
(c) Out-turn	N.A.	886	20,90	2,912
<b>2. Veterinary Graduates</b>				
(a) No. of Institutions	8	14	17	18
(b) Intake	414	1,269	1,301	1,219
(c) Out-turn	N.A.	268	831	988

52. This expansion has, however, by no means been uniform all over the country. A substantial portion (250%) of this expansion has taken place within the last five years by doubling the number of institutions, and most of this expansion has taken place in one State viz. Uttar Pradesh, where the number of institutions increased from 7 in 1957 to 24 in 1962, and the annual intake from 638 in 1957 to 3,069 in 1962.

53. These regional imbalances in the development of agricultural education facilities are giving rise to regional surpluses and shortages. For example, at the end of Third Plan, there will be a surplus of 2,490 graduates in Uttar Pradesh 356 in Bihar, 141 in Madhya Pradesh and 100

in Assam. On the other hand, there would be a shortage of 2,233 in Madras, 648 in Orissa, 540 in Andhra Pradesh, 289 in West Bengal and 266 in Mysore.

**The Committee would strongly stress the need for vigorous steps to be taken in the Fourth Plan period to correct the regional imbalances in the development of agricultural education facilities by suitably regulating the opening of new agricultural colleges and the intake capacity of existing agricultural colleges according to the actual requirements in different States.**

#### **D. Facilities at Agricultural Institutions**

54. The Committee would also like to refer to another important problem, viz. ensuring that the agricultural institutions are adequately staffed and equipped. The Committee have been informed that most of agricultural institutions in Uttar Pradesh are inadequately staffed and lack facilities such as farm land, farm equipment and buildings. Some of the Agricultural colleges have not even got a 30-acre farm for practical training whereas each such college with 400 to 450 students should have a farm of not less than 100 acres. The Committee have also been informed that the Universities are partly responsible for this problem as they affiliate and give recognition to such colleges.

55. The Committee understand that the question of unplanned expansion of agricultural education in Uttar Pradesh was taken up by the Ministry of Food and Agriculture and the Directorate of Manpower in 1960 and 'an Inspection Team' has since been appointed with representatives of the State Government, Indian Council of Agricultural Research, University Grants Commission and the Universities concerned to look into the suitability of agricultural colleges from the point of view of adequacy of equipment, staff and other facilities.

The University Grants Commission have also appointed a Reviewing Committee to look into the entire question of maintaining and upgrading the standard of agricultural education in the country.

**The Committee suggest that suitable corrective measures may be taken by Government to improve the standard of education in the agricultural colleges in general**

and private agricultural colleges in particular so that the quality of agricultural education in the country does not suffer and that there is no scaling down of the standard of education in any of the Indian Universities. It should also be ensured that the agricultural colleges have adequate farm lands attached to them.

The Committee further recommend that Government may take suitable steps to achieve uniformity of standard and curriculum in the agricultural colleges and universities.

#### E. Agricultural Universities

56. The view that agricultural universities have a special contribution to make towards the development of agriculture has been urged in a series of expert reports on agricultural education. It is pointed out that if India's agriculture is to be raised to levels comparable with those of advanced countries, agricultural education of the traditional type, which is not sufficiently linked with research and extension will not be adequate in relation to the complex and changing problems of the vast body of cultivators, most of them operating very small holdings. The agricultural university seeks to bring together a number of related fields of study, such as, agriculture, animal husbandry, veterinary science, dairying, basic sciences and humanities. The underlying concept is that the responsibility of the agricultural university extends beyond teaching to applied as well as fundamental research in agriculture and involves special obligations towards cultivators in the area served by the university, in particular, to discuss their problems by working with them, transmit the results of research, and bring teaching, research and extension into an integrated view of agriculture and agricultural education.

57. At present the agricultural universities exist in Punjab, Uttar Pradesh, Rajasthan, Mysore, Madhya Pradesh, Andhra Pradesh and Orissa. The agricultural university in Rajasthan has been converted into a multifaculty university, affiliating all colleges situated at Udaipur with predominantly agriculture bias and renamed Udaipur University.

58. However, the growth and development of the agricultural universities has to be carefully regulated. The goals to be achieved by each such university should form the basis for its planning because agricultural universities provide the most favourable scientific atmosphere where the scientists can develop their talents and ideas freely. The attention of the Committee has been drawn to the following recommendation made by the Second Joint Indo-American Team on Agricultural Education, Research and Extension:

**"That assistance to establish an agricultural university should not be granted unless there is adherence to basic principles such as (i) autonomous status, (ii) location of agricultural, veterinary/animal husbandry, home science, technological and science colleges on the same campus, (iii) integration of teaching by offering courses in any of these institutions to provide a composite course, and (iv) integration of education, research and extension."**

*The Committee agree with the above recommendation made by the Second Joint Indo-American Team on Agricultural Education, Research and Extension. They hope that the Reviewing Committee appointed by the University Grants Commission would also go into the working of agricultural universities with a view to suggest lines for further development and growth in keeping with the objective of such universities.*

*The Committee would also suggest that Government may examine whether needs of agricultural education can be better or at least as well served by having Faculties of Agriculture in other universities.*

#### **F. Uniformity in Degree Courses**

59. The duration of agricultural degree course in universities varies from 2 years to 5 years. The Indian Council of Agricultural Education had recommended the adoption of a uniform 4 years course after higher secondary. However, this recommendation has not been accepted by

all the universities and the Government have not been able to introduce uniformity in the duration of degree course.

*The Committee recommend that efforts should be made to make the duration of the agricultural degree courses uniform in all the universities.*

#### G. Contact with Scientific Talent in Universities

60. The Committee have been informed during evidence that fairly close contacts with the non-agricultural universities and science faculties particularly botany and chemistry are being maintained to attract scientific talent available there for agricultural education. These universities and science faculties have their representatives on the Scientific Committees of the Council and the agricultural scientists go to the non-agricultural universities to lecture on scientific subjects. However, the Agricultural Research Review Team have observed in this connection that "we were particularly disturbed by learning that in practically all teaching institutions, with the notable exception of the Indian Agricultural Research Institute, entry to post-graduate courses is confined to agricultural graduates. We cannot too strongly urge that good graduates in pure sciences, especially Botany, Chemistry and Zoology, should be not merely allowed but positively encouraged to take higher degrees in agricultural sciences. Conversely, some of the best qualified graduates in agriculture should be enabled and encouraged to continue their education in pure science departments. We feel that agricultural research in India is losing much through an almost complete absence of contact and liaison with the scientific talent available for research training in the established (non-agricultural) universities."

*The Committee are in agreement with the views of the Agricultural Research Review Team and stress the need for maintaining close contact with universities to attract scientific talent available there for agricultural education.*

### H. Vocational Agricultural Schools of Manjri Type\*

61. It has been estimated that over 60 per cent of the rural youth break away from schools after the 7th or 8th standard while about 80 per cent break away after the 10th standard. The First Joint Indo-American Team had recommended as early as in 1954 that vocational agricultural schools of Manjri type should be established in large numbers. Accordingly, under the Third Plan, it had been proposed to establish 30 schools of this type and to have ultimately one school for each district. The Second Joint Indo-American Team on Agricultural Education, Research and Extension, observed that "the Government of India contemplates the establishment of one hundred vocational agricultural schools of Manjri type. The goal should be to have one such school for each district. To achieve this goal and to ensure the necessary number of entrants, the Government should provide for payment of stipends adequate to cover the students expenses at school."

62. The Committee have been informed that the number of Manjri type of schools started so far is as follows:

Name of State/Union Territories	No. of Schools
1. Andhra Pradesh . . .	2
2. Tripura . . .	2
3. Himachal Pradesh . . .	2
4. Goa . . .	1
5. Uttar Pradesh . . .	9
6. Mysore . . .	6
7. Manipur . . .	1
8. Gujarat . . .	13
9. Madras . . .	11
<b>TOTAL</b>	<b>47</b>

\*The original Manjri School was started by the Government of Bombay in Manjri, Poona District, in 1947, with a view to providing opportunities to farmers to have their sons trained in scientific agriculture. The course of study covers a period of two years. Instruction is provided in vernacular languages. In order to obtain a comprehensive knowledge of Agriculture and Animal Husbandry, pupils have to perform all operations on the farm, in the dairy and in the poultry yard. The emphasis is on practical exercises. The minimum standard for admission is a Certificate of VII Vernacular Standard. Preference is given to sons of farmers. No tuition fees are charged and lodging is free. The students prepare their own food and manage the mess under guidance of school authorities. Candidates seeking admission are selected by a Selection Committee.

No schools have been started in Punjab, Kerala, Madhya Pradesh, Rajasthan, Assam, West Bengal, Bihar, Nagaland, Pondicherry, Laccadives, Andamans and Delhi. Information from other States/Union Territories is not available with the Government.

*The Committee regret to note that even upto the fourth year of the Third Plan, very insignificant progress has been achieved in the setting up of Manjri type of schools. The Committee would strongly recommend that early steps should be taken to estcblish one Manjri type school in each district and to provide stivends adequate to cover the students' expenses at the school.*

## CHAPTER V

### EXTENSION

#### A. Objective

63. The objective of extension is to bring to the people of India, especially the rural people, the results of research and improved farm and home practices through all available educational means and to encourage their application.

64. To achieve the above objective, the extension personnel should be well conversant on one hand with the latest researches that are going on in various research institutes and on the other hand with the problems of the cultivators so that they can pass them on to the research institutes for solution.

#### B. Co-ordination

65. The Committee, during evidence, have been informed that the Central research institutes have no regular contacts with the extension personnel in the States. It is difficult for the Central research institutes to keep in touch with all extension personnel in the States. The State Research Institutes could do this much better. The extension personnel of States can visit the State research Institutes in the neighbourhood and find out what are the latest results of research and then take them to the cultivators. They should acquaint themselves with the problems of the cultivators and take them to the research institutes for solution. This is a two-way traffic which should be established between the cultivators and research institutes through the medium of the extension workers. This is an ideal situation which has not yet been achieved.

66. The Committee have also been informed that sufficient travel budget is placed at the disposal of the central research institutes to enable the research staff to spend some time in the field and observe problems at close range. The research staff travel to the sub-stations also, which are spread all over India, and in that connection,

they also contact the cultivators round those sub-stations and look at the success the cultivators are having with various varieties of agricultural crops released. However, the Committee note that the sub-stations are few in number and do not cover the whole country.

67. Some of the research institutes have also Informal Advisory Committees on which cultivators are represented. The institutes have one or two blocks attached to them. Blocks have also been attached to most of the State institutes and educational institutions engaged in research work so that the research workers get an opportunity to work in the field and appreciate the problems facing the cultivators.

*The Committee are convinced that close contacts between the Central research institutes and State research institutes, extension personnel and the research institutes, extension personnel and cultivators, and cultivators and research institutes will go a long way in evolving improved agricultural practices and thereby increasing the agricultural production in the country. The Committee would stress that Government should take concerted measures to achieve this objective.*

### C. Extension Wings for Educational Institutions

68. The necessity of providing some training in extension methods to the agricultural students at college level has increasingly been felt. In order to enable those students who propose to take up extension as career after graduation, special courses in extension methods should be provided in the curricula of the College. It will be worthwhile to provide an extension section or department in agricultural colleges.

69. The Second Joint Indo-American Team on Agricultural Education, Research and Extension have observed in this connection that "few agricultural colleges are now equipped to assume direct responsibility for extension work. The aim should be to build up extension activities at educational institutions so that ultimately the responsibility may be transferred from State Agricultural Departments to agricultural colleges and rural universities."

70. The Committee, during evidence, have been informed that most of the agricultural colleges an extension wing has been attached now. The students are taught extension methodology in those wings and then arrangements are made for them to go and do the extension work in a block attached to the college. It has also been suggested that agricultural universities should provide refresher courses for the extension experts and extension graduates only.

*The Committee need hardly stress the desirability of providing special courses in extension methods to those students who propose to take up extension as career after graduation. They suggest that the extension wings attached to the various agricultural colleges should further be strengthened and education in extension methods designed on a realistic basis.*

**D. Desirability of making it obligatory for students to do extension work before they are awarded degrees.**

71. During evidence, the Committee have been informed that it is not compulsory for agricultural students studying in agricultural colleges, universities or research institutes to spend a prescribed minimum period doing extension work before they are awarded degrees although its need has been realised by the Indian Council of Agricultural Education. It has been stated that there are some practical difficulties in this regard.

*The Committee note that unlike industries where it is possible for an engineering graduate to get attached to a factory for practical training, there is hardly any comparatively progressive agricultural farm to which an agricultural graduate can be attached. The Committee also note that there naturally is a tendency among agricultural graduates to try for administrative jobs instead of turning to cultivation with the result that agriculture is hardly benefited by their education. The Committee would suggest that these peculiar features of Indian Agriculture should be carefully studied by the Board of Agricultural Education, with a view to devise remedial measures. In this context, the Committee would like the authorities to consider whether it should be made obligatory for an agricultural student to spend a prescribed minimum period doing extension work before he is awarded degree. The*

Committee also feel that there is an imperative need for imparting intensive practical training to the actual tillers of the soil and their children in improved agricultural practices. They suggest that a suitable programme for imparting training to agriculturists may be devised in consultation with State Governments and arrangements made to impart such training on block basis, if not in the villages themselves.

#### E. Field Days

72. During evidence, the Committee have been informed that field-days for the cultivators are held practically in every Central research institute. They are also held in several colleges and research institutes in the States. They are held when the principal crops in a region are ready. Exhibitions, certain amount of extension work and lectures are arranged.

73. The duration of each field day varies from 3 to 4 days.

74. The main object of these field-days is to demonstrate to the farmers the advantages accruing out of improved techniques of farm practices. The cultivators have profited a lot from the field days because they learn about new things, they look at new tools, new types of seeds etc.

The Committee realise the imperative need of bringing to the notice of the cultivators the results of researches carried on in the agricultural research institutes. They feel that field days can play a very useful role in this regard. The Committee are, however, doubtful if field days of 3 to 4 days duration can be of any real use. They would strongly recommended that the field days should be adequately extended.

#### F. Agricultural Films

75. During 1963-64, six instructional films on agricultural subjects were produced. Fifty per cent of the cost of production of agricultural instructional films including the cost of dubbing is borne by the Council. The remaining 50 per cent expenditure is incurred from the grant-in-aid received from the Government under the scheme for the production of such films.

76. The Committee note that out of the sum of Rs. 2,00,000 earmarked for the year 1964-65 for the production of these films, Rs. 88,000 have been provided for pay and allowances of the staff employed in the Films Division in Bombay and the Council. The technical staff is under the administrative control of the Ministry of Information and Broadcasting.

*The rationale of the arrangements by which 50% of the expenditure incurred on the production of the agricultural films is borne by the Council while the remaining 50% is borne by Government from its own funds is not clear. The Committee would suggest that, as audio-visual publicity and field publicity are important functions of the Ministry of Information and Broadcasting, the question of meeting the entire expenditure from Government resources may be considered.*

## CHAPTER VI

### SCIENTIFIC PERSONNEL

77. The country suffers from an acute shortage of experienced agricultural officers who possess vision, initiative and drive. This is partly due to the fact that the best students are attracted to careers in administration, medicine, engineering or other professions. Generally students who fail to secure admission in medical, engineering or science colleges, as a last resort, turn to agricultural colleges. Among the students admitted to the agricultural colleges, there may be a few who have passed in higher divisions, the remainder are generally third divisioners. It is obvious that strong agricultural departments cannot be built up with third class human material. In order therefore, to attract the best scientific talent available in the country to agriculture, drastic revision of salary scales and other conditions of service so as to bring them at par with those provided in other branches of science and technology is called for.

78. In the succeeding paragraphs, the Committee have tried to enumerate the reasons for the scientific talent staying away from agriculture and have suggested some remedial measures to improve the situation

#### A. Large number of temporary posts

79. A very large number of temporary posts exist in various research institutes. The Agricultural Administration Committee (1958) observed in their Report that "In some States posts sanctioned after 1932 have not yet been added to the cadres of the services, with the result that from 30 per cent to 80 per cent of the posts are still temporary in State Departments. The pensionary rights of agricultural workers are adversely affected by the temporary nature of posts in the State Departments and in Indian Council of Agricultural Research and Commodity Committee Schemes".

80. The uncertainty of career prospects in agricultural research, due to large number of temporary posts, tends to be further aggravated by the temporary nature of grants made by the Council, Commodity Committee, or made under Government Plan Schemes, under which much of the research in some States is done. The Agricultural Research Review Team have observed in this connection that "We feel that temporary grants are too often being given where continuous support is required for development of long term programmes, and that the system is unsatisfactory from the point of view of the temporary employee who tends to become preoccupied with the search for an established post to the detriment of his research."

*The Committee have been informed that Government intend to adopt the system of block grants, where there is a long term research, instead of giving temporary grants on a project basis, so that the staff will know that they will continuously be employed on a particular project. Nevertheless, the Committee would like Government to examine the question of temporary nature of posts in all its aspects and devise some ways and means of restoring confidence in the staff so that they can devote themselves fully to their research work.*

#### **B. Delays in recruitment of staff**

81. All technical recruitment is done through formal channels. The Agricultural Universities and the Commodity Committees recruit through Selection Committees and Centre and State recruitment to gazetted posts is done through prescribed Civil Service system. The Director of a Central research institute or State Department of Agriculture may sit with the Public Service Commission as an adviser where posts in his organisation are to be filled.

82. Dissatisfaction with the recruitment of scientists by the Public Service Commissions arises from two causes. First is the delay in filling vacancies. From the time the vacancy arises until all the formalities have been gone through and a candidate has been appointed, there may be a time lag of a full year or more. This aspect has been highlighted in the Report of the Union Public Service Commission (1963-64) wherein the Commission has enumerated the cases where the offer of employment was delayed

by Government. Secondly, the system does not always ensure the selection of the best qualified candidates for particular posts. In the present days of narrow specialisation in many branches of science, different candidates even within the same discipline (e.g., biochemistry, genetics, etc.) may have a sufficiently specialised training and experience to make one much more suitable than another for a specific post, though the difference will only be apparent to a scientist.

83. It has been represented to the Committee that in terms of time that is consumed in making the selection and the appointment, there will be a great saving if some individual has the authority to choose and select the staff.

*The Committee feel that in view of the imperative need for intensifying research to increase agricultural production, there should be no avoidable delay in filling the posts of agricultural scientists in the research institutes. The Committee would suggest that Government may review the position in conjunction with the Union Public Service Commission so as to speed up recruitment.*

*The Committee would also suggest that Government may consider the desirability of having a panel of specialists for various disciplines who may be given greater latitude and initiative in association with the Union Public Service Commission in the matter of selecting scientific personnel, particularly to ensure quality and to avoid delay.*

### C. Low Scales of Pay

84. The principal handicap from which the agricultural services are suffering from is the low scales of pay. It is a well-known fact that the scales of pay of the agricultural services are much less as compared to those of the general administrative services, and even of other technical services, such as Engineering, Medical, Education etc. To remedy the situation, the principle of parity between the technical services and the administrative services is to be accepted and it is essential that the technical services be paid at rates at par with other services.

85. In this connection the Committee note the following observation made by the Joint Indo-American Team on

### **Agricultural Research and Education:—**

"The disparity between salaries of scientists of teachers in agriculture and administrative positions is unrealistic and results in a downgrading of scientific stature in India. Research and education are creative forces that provide new wealth for the country, both through the development of material goods and the enrichment of an enlightened population. The ablest minds trained in India's Colleges and Universities should be channelled into this highly productive technical research and education activity. This does not happen in the present circumstances, wherein the greatest opportunities for personal welfare lie in the acquisition of a position in the Government Administrative Services. A disproportionate share of India's intellectual competence is thus decanted off into the administrative field. While such services are important, it is unfortunate that the different in salary and financial opportunity is such that many of those who might be more interested in following a scientific or technical professional career are lost to this field."

86. Then, in most of the States, levels of pay are below those of Central employees. Salaries in agricultural universities and in State Agricultural Departments vary from State to State. Salaries for agricultural research personnel are too low to satisfy the present staff or to attract the most capable individuals to the service.

87. The Committee have been informed that the Government are considering proposals for increasing the pay scales of agricultural scientists and bringing them to the level of pay scales of the personnel of the Council of Scientific and Industrial Research.

*The Committee would urge that due steps may be taken by Government to revise the conditions of service and pay scales of technical staff working in the agricultural institutes to bring them at par with those prevailing in the Council of Scientific and Industrial Research or Atomic Energy Establishment.*

*The Committee would also suggest that the question of reclassifying the scientific personnel into categories A, B, C, D research workers etc. as prevalent in the Council Of Scientific And Industrial Research instead of the existing nomenclatures of Class I, II and III may be considered.*

#### **D. Chances of promotion**

88. The chances of promotion to higher posts or higher scales are also much less. A research officer cannot be promoted from one class to the next solely on grounds of competence and experience. Before he can be promoted there has to be a vacancy in the higher scales. Then he has to take his chance of being selected along with others before a Selection Committee. The system encourages mobility of research worker from one institute to another, or even sometimes from one specialisation to another, in order to improve his financial condition.

89. The promotions on basis of seniority further aggravate the problem. A research worker who is a specialist in a certain discipline may be transferred to a high level position in another discipline for which he is not especially qualified, but to which he is considered entitled on the basis of seniority.

90. Therefore, along with the problem of providing sufficient number of chances of promotion, the problem of ensuring that competent and experienced workers should remain in the same line of research arises. The Agricultural Review Team in this connection have observed that "the necessary continuity of effort could be achieved by putting every properly qualified officer on a time-scale rising (with efficiency bars at intervals) to a certain maximum which should be reached by all competent officers but attained quicker by outstanding workers than by those of less brilliance in performance."

91. The Committee have been informed during evidence that "This is a question of running a long scale. There was a Committee in U.K., called the Committee on Management and Control of Research and Development, which came to the conclusion that this was not a proper thing. In fact, in U.K., where there was a long scale, all the scientists pleaded that that scale should be broken up into shorter scales so that those who were doing outstanding work could get a

jump from one scale to another without going through all the yearly stages. So, the young scientist does not like that kind of restriction where he goes on a long scale drawing annual increments".

*The Committee would stress the need for increasing the chances of promotions for the staff working in the Central as well as State research institutes and would recommend that necessary steps be taken in this regard.*

#### *E. Incentives for Meritorious Work*

92. The Committee note that in so far as the Indian Agricultural Research Institute, Central Potato Research Institute and the Central Rice Research Institute are concerned, a scheme of Merit Promotions and Advance Increments was sanctioned with effect from 21st September, 1959 (in the case of Indian Agricultural Research Institute) and from 19th April, 1961 in the case of other Institutes to extend recognition to individuals on accomplishment of meritorious research work.

93. Detailed instructions issued to the above institutes by Government governing the scheme of Merit Promotions and Advance Increments may be seen at Appendix V.

94. The Committee have been informed during evidence that the scheme has not been applied to the other Institutes under the Ministry of Food and Agriculture. It does not exist in the State research Institutes also. Under this scheme if a worker has done outstanding work, then an independent Committee of Scientists, who are not connected with the research institute assess all his scientific work and recommend whether he should be given a merit promotion or improvement on the scale immediately above the one which he is enjoying at the time. If the work does not come to that high standard but still is of significance, then advance increments are given on the recommendations of the Committee. Then there are prizes such as Rafi Ahmed Kidwai Memorial Prize of Rs. 5,000 for scientific research inventions, discoveries etc. in certain fields and prizes of Rs. 2,000 and Rs. 1,000 each to outstanding manufacturers of agricultural implements, etc.

*The Committee would like the Government to examine the feasibility of extending the Scheme for Merit Promotion and Advance Increments to all the Central and State research institutes, universities etc.*

**F. Credit to the Scientist who actually does the work**

95. In many cases a young scientist does not always receive full credit for his work but has to share the authorship with the administrative superiors in the institute. It is one of the perennial maladies in the science that often senior research workers wish to put their names on something which they have not done. There have been many instances in the research institutes where the junior scientist's name does not appear at all and the whole credit goes to the senior scientist although the work has actually been done by the junior scientist alone. The Government have received certain complaints in this regard as well.

*The Committee note that Government have issued instructions to the effect that a scientist who is not qualified in a particular discipline should not put his name on a paper which is written by junior scientists belonging to a different discipline. The Committee do not consider these instructions to be adequate. They are convinced that the undesirable practice of senior scientists substituting their names on papers written by junior scientists needs to be firmly checked. The Committee would suggest that comprehensive instructions should be issued on the subject so that a young scientist is given every encouragement to publish worthwhile papers in his own name.*

*The Committee would also suggest that Government may consider the question of having a panel of eminent scientists to advise about any appeal preferred by a scientist against non-publication of his scientific paper*

**G. Appointment to the Posts of Directors**

96. The Committee understand that the question of selection for appointment to senior scientific posts has been considered in the recent past by the Committee on Administration and the Scientific Advisory Committee to the Cabinet. The Seventh Report of Organisation and Methods Division of the Ministry of Home Affairs states inter-

else that "The Committee on Administration agreed with the views of the Scientific Advisory Committee to the Cabinet that suitable selection committees with which outside scientists are associated should make recommendations for appointments to senior scientific posts such as Heads of Research Institutions etc., and that in scientific organisations there should be scientific posts in the higher salary scales involving relatively little administrative or executive work, to which eminent scientists can be appointed irrespective of the fact whether those scientists hold top executive posts or not. This would avoid frustration among scientists who may not be suitable for appointment as Heads of Organisations but are otherwise outstanding in their own fields."

*The Committee would suggest that the rules for appointment to the posts of Directors of Agricultural Research Institutes may be reviewed in the light of above decision of the Government; care, however, being taken to see that the existence of vacancy is suitably publicised.*

#### H. Overseas Training

97. A large number of students are going overseas for post-graduate training, some deputed by Government on their own, some sponsored by Government under the various foreign aid programmes and others without support except their personal sources. An appreciable number of these students do not return to India. Even those who return, the agricultural research does not get full benefit from their studies, largely because their training is not oriented to the needs of India.

98. It has been represented to the Committee that Government should re-think the policy of deputing scientists for training abroad. The Agricultural Research Review Team (1964) have observed in this connection that "Greater care should be taken in selection of individuals officially sponsored for foreign training; and the sponsoring authority should explain to the training institution receiving the student abroad, the nature of the positions that will be open to him on his return, taking into account the disciplines and subjects in which the shortage of qualified men is most acute in India. Those under sponsorship should be expected to return after training, and the

foreign university training them should be fully aware of the conditions of their award."

*The Committee stress the need for examining the position regarding deputation of students and scientists abroad for training in all its aspects and would like the Government to devise ways and means by which full benefit could be drawn from the studies made by such students and scientists.*

### I. Retired Scientists

99. The Committee have been informed during evidence that there is a scheme for utilisation of services of retired scientists in the fields of agriculture, animal husbandry and allied sciences but it is not functioning very well. The quality of work done by them in some cases is not very good.

100. The scheme started functioning during the year 1960-61 and now there are 15 retired scientists. The amount spent in 1962-63 was Rs. 35,803 and in 1963-64 Rs. 95,797 on them.

101. The retired scientists have not been asked to suggest any concrete measures or a crash programme to meet the present emergency conditions in food production.

*In view of the fact that the scheme for utilisation of services of retired scientists has not been functioning very well, the Committee feel that the scheme should be examined in all its aspects to find ways and means for improving it.*

## CHAPTER VII

### PUBLICATIONS

102. One of the objectives of the Council is to act as a clearing house of information not only in regard to research but in regard to agricultural and veterinary matters generally. It is important that all research work that is sound and satisfactory ought to be made known to the cultivators as well as other scientists. In pursuance of the above objective, the Council is bringing out eleven journals and a lot of other scientific publications.

#### *A. Publications/Journals brought out by the Council*

103. In 1963-64, 39 publications—32 in English and 7 in Hindi—were brought out by the Council and another 49 publications were under print. Manuscripts of 60 publications were being processed and manuscripts of 169 publications were awaited from the authors.

104. So far as journals are concerned, the Council is bringing out the following eleven journals at present:

Title	Language	Periodicity
<i>Popular Journals</i>		
1. Indian Farming	English	Monthly
2. Indian Horticulture	English	Quarterly
3. Indian Livestock	English	Quarterly
4. Kheti	Hindi	Monthly
5. Pashupalan	Hindi	Quarterly
<i>Scientific Journals</i>		
6. Indian Journal of Agricultural Science	English	Quarterly
7. Indian Journals of Veterinary Science & Animal Husbandry	English	Quarterly
8. Agricultural Research	English	Quarterly
9. Indian Potato Journal	English	Half-Yearly
10. Rice News Teller	English	Quarterly
11. Statistical News Letter	English	Quarterly (Supplied free)

The popular journals are meant for the benefit of the educated farmers, students and extension workers, and the scientific journals are technical and meant for the scientists, research workers etc.

#### B. Quality of the Material Published

105. It is doubtful whether the existence of such a large number of journals and other publications is either necessary or desirable. The Agricultural Research Review Team in this connection have observed "we did not find evidence of any urgent need to multiply outlets for scientific information and would deprecate any tendency to increase the output of writings that are neither of a high scientific standard nor sufficiently simple, to be read by the non-scientists."

*The Committee would suggest that the Publications Committee of the Council may carefully examine the question of multiplication of outlets for scientific information in relation to their usefulness and cost of production. It may also be examined which of the journals could be combined or discontinued or the time-interval in their publication increased by converting the monthly journals into quarterlies and the quarterlies into half-yearlies, so as to avoid wasteful expenditure.*

#### C. Publications in Regional Languages

106. At present no publications in regional languages are brought out by the Council. The plea taken by the Council is that it is a Central Organisation and the languages of the Government of India are Hindi and English.

*The Committee would suggest that the question of bringing out publications in regional languages may be taken up by the Council with the State Governments.*

#### D. Costly Publications

107. The value of the unsold costly publications priced at Rs. 10 and above per copy as on 31st March, 1964 was Rs. 3.41 lakhs. Some of these publications which had been in stock for more than 4 years constituted 41 per cent to 86 per cent of the total number of copies printed. During evidence the Committee have been informed that 2575 (All) LS—4.

the sale price of the publications, which are four or more than four years old, has been reduced by 40 per cent to increase their sale. The Council intends to reduce the price of these publications further next year if they can not be sold this year.

*The Committee would urge that these publications should not be allowed to remain accumulated for indefinite period and ways and means should be found of putting them to use by selling at a reduced price or by distributing them to universities, research institutes, agricultural colleges, etc. who are interested in the subject. The Committee consider that if proper care is exercised in assessing the demand for publications, particularly costly publications, the Council would not find itself burdened with unsold publications.*

#### E. Proforma Accounts

108. No Proforma Accounts in respect of periodicals/journals published by the Council have been prepared so far, although a decision to maintain accounts of publications on commercial lines had been taken by the Governing Body as early as in August, 1961. The Audit has also taken objection to this and the Governing Body has now decided that proforma accounts should be prepared in future.

*The Committee recommend that early steps should be taken to maintain proforma accounts by the Council.*

#### F. Library

109. The Council maintains a library which is situated in Krishi Bhavan. The maintenance cost of the library during the last three years has been as follows:

1962-63—Rs. 72,500.

1963-64—Rs. 61,900.

1964-65—Rs. 47,420.

(Till December, 1964).

110. In 1963-64 over 3,500 readers visited the library and the number of publications issued on loan was about 3,900.

111. Evaluation of the Library was made by Dr. R. R. Shaw, Professor of Scientific Management and Library Science, Rutgers University, U.S.A. assisted by Dr. D. D. Krishna Rao, Librarian of the Council in 1957. Dr. Shaw has observed in his Report that "there appeared to be a practically unanimous consensus among the teachers and research people visited that there is urgent need for improvement of the availability of book and periodical literature for teaching and research programmes.....". He has further observed that "since Indian Council of Agricultural Research is the overall body responsible for development of all agricultural services in India, it is assumed that primary responsibility will rest in Indian Council of Agricultural Research for implementation of any programme for improvement of agricultural and veterinary library, bibliographical and publication services".

112. The Committee are informed that financial assistance is given by the Council to other research institutes to have their own Libraries. Central Research Institutes have their own budgets for libraries. However, agricultural universities are given grants to build up libraries. Inter-Library loan facilities are extended to other libraries in the country.

*The Committee suggest that steps should be taken to further improve the library facilities and to make arrangements to issue books especially to those research scholars who are working in the isolated sub-stations.*

## CHAPTER VIII

### BUDGETTING

#### A. Over Budgeting

113. The actual expenditure during the year 1963-64 was Rs. 108.61 lakhs as against the Budget Provision of Rs. 151.56 lakhs, resulting in a saving of 28 per cent as compared to the saving of 42 per cent during 1962-63. This saving is mainly due to the fact that no expenditure was incurred on 185 schemes for which provision had been made and that the expenditure on another 3 schemes was less than 5 per cent of the budgeted amounts.

114. During evidence, the Committee have been informed that there is considerable improvement now in the situation as only small amount is provided in the first year for a scheme. Now the budgeting is more realistic.

*The Committee are concerned to note that there was over-budgeting during the year 1963-64 to the tune of 28 per cent. They suggest that steps should be taken to avoid over-budgeting in future as much as possible.*

#### B. Utilization Certificates and Assets

115. The Committee note that in respect of grants paid to the States, institutions, universities etc., utilization certificates for Rs. 160.14 lakhs as on 31st December, 1964 are still awaited. The details of the pending utilization certificates are as follows:—

States/Institution	Amount	No. of audit Certificates Outstanding
1. States	1,27,35,812.62	
2. Central Institutions, Semi-Government Institutions and Ajmer-Merwar	23,41,887.07	154
3. Universities	6,35,862.82	100
4. Private institutions	2,97,806.49	41
<b>GRAND TOTAL</b>	<b>1,60,14,369.00</b>	<b>1477</b>

116. The Committee also note that some of the pending utilization certificates are almost 20 years old.

*The Committee regret to observe that a large number of utilization certificates have been allowed to remain pending for an unduly long period. The Committee would suggest that measures to clear the arrears should be intensified. The Committee would like to impress that a time-limit should be laid down for clearance of these arrears. They would also suggest that a time-limit may be specified in the Schedule of Terms and Conditions governing the grants so that utilization certificates are submitted without delay.*

117. The Committee would also like to draw attention of the Government to another aspect namely, the delay in intimation of the residuary assets which are left over on the termination of a scheme. The Audit Report for 1963-64 *inter alia* states that "In respect of 130 schemes completed during 1961-62 to 1963-64 the value of assets left over is yet to be recovered from State Governments/ Grantee Institutions. The value of such assets in 4 cases is Rs. 46,145; the information in respect of the other 126 cases is awaited from the grantees."

118. The Committee have been informed that the Council keep open the account of the grantee institution till the value of the residuary assets is adjusted.

*The Committee would suggest that the Council may prescribe that along with the utilization certificates, the institute, university etc., should furnish simultaneously information about the residuary assets also so that the Council need not keep the accounts open for an indefinite period.*

### C. Balance Sheet

119. The Council does not prepare any balance sheet of the assets such as buildings, investment etc., and liabilities such as Reserve Funds, etc. although the desirability of preparing a balance sheet had been pointed out by Audit as early as in 1958. It was stated by the Council in 1960 that the form of the balance sheet would be ascertained from other autonomous bodies, but the matter is stated to be still under consideration.

120. During evidence, the Committee have been informed that the Council does not carry commercial activities, it carries only research activities and therefore, it is difficult to prepare a balance sheet.

*The Committee feel that even though the Council does not carry on any commercial activities, balance sheet should be prepared as desired by Audit in consonance with the relevant rules and regulations.*

## CHAPTER IX

### CONCLUSION

121. As has been stated earlier in this Report, the Indian Council of Agricultural Research is expected to provide leadership in formulating agricultural research policy, to influence research done in different States, universities, institutes etc. and to offer advice in matters relating thereto. The Council has no doubt made a significant contribution to the development of agricultural research in the country. However, the Council, in its present shape, has rather a limited control as a co-ordinating body. Firstly, there are several institutions in the country dealing with agricultural research, with which the Council has no direct contact. Secondly, the number and scope of the schemes received for financial help have increased so enormously in recent years that to exert effective supervision over all of them, becomes a formidable proposition. This aspect of the matter needs to be looked into.

There is also need for providing for close and effective co-ordination between education, research and extension work so that these can contribute effectively towards increased agricultural production to meet the country's growing requirements.

Again, there is need for ensuring that agricultural courses suited to the country's practical requirements are evolved and that facilities for agricultural education developed in all parts of the country to avoid regional imbalances.

The Committee would suggest that Government should review the position comprehensively and define the role which the Indian Council of Agricultural Research in collaboration with the agricultural research institutions is expected to perform in the context of all the requirements of the situation, and particularly the paramount importance which the problem of increasing agricultural production has now assumed. The Committee also suggest that the Government should take appropriate steps to ensure that the Council can more effectively discharge its func-

tions as a co-ordinating body. The Committee hope that all this would be done early so that the Council could, in the light of Government decisions in this regard, prepare detailed schemes in time for implementation in the Fourth Plan.

122. The Committee would like to refer to one aspect which has a bearing on the question of increasing our food production and which does not seem to have attracted attention so far, viz., making arable land free from the threats of natural disasters such as flood, drought etc. The Committee understand that as a result of comprehensive measures taken in some countries in South-East Asia, it has been possible to free about 40 to 50 per cent of arable land from the threat of natural disasters. The Committee consider that there are promising possibilities in this field and would suggest that the Ministry of Food and Agriculture, Indian Council of Agricultural Research, Ministry of Community Development and Co-operation and the Ministry of Irrigation and Power, should draw up in consultation with the Planning Commission and the State Governments, a comprehensive programme in this direction for execution in the Fourth Plan.

123. In conclusion, the Committee should like to observe that the existing food situation in the country, constituting a challenge as it does, also offers an opportunity in no less measure. We are not lacking in the resources needed for making us self-sufficient in the matter of food and the researches in our Agricultural Research Institutes have already yielded results, which can go a long way to achieve the object in view if they are widely applied in the field. While the Committee consider that vigorous and intensified efforts should be made in the field of research, they would like to particularly stress the fact that the key to success lies, more than any thing else, in ensuring that extension work keeps reasonable pace with the progress of research. It may be desirable also to have some effective liaison between the agricultural research institutions and the extension department.

NEW DELHI;

April 2, 1965

Chaitra 12, 1887 (Saka).

ARUN CHANDRA GUHA.

Chairman,  
Estimates Committee.

## APPENDIX I

(Vide Para 12 of the Report)

### *Memorandum of Association of Indian Council of Agricultural Research*

1. The name of the Society is the Indian Council of Agricultural Research.

2. The objects for which the Indian Council of Agricultural Research is established are:—

- (a) To undertake, aid, promote, and co-ordinate agricultural and animal husbandry education, research and its application in practice, development and marketing in India and its Protectorates and any other areas in or in relation to which the Government of India has and exercises any jurisdiction by treaty, agreement, grant, usage, sufferance or other lawful means by all means calculated to increase scientific knowledge of the subjects and to secure its adoption in every day practice.
- (b) To act as a clearing house of information not only in regard to research but also in regard to agricultural and veterinary matters generally.
- (c) For the purpose of the Society to draw and accept and make and endorse discount and negotiate Government of India and other promissory notes, bills of exchange, cheques or other negotiable instruments.
- (d) To invest the funds of, or money entrusted to, the Society upon such securities or in such manner as may from time to time be determined to sell by the Governing Body and from time to time to sell or transpose such investments.
- (e) To purchase, take on lease accept as a gift or otherwise acquire, any land or building, wherever situate in India which may be necessary or convenient for the society.
- (f) To construct or alter any building which may be necessary for the Society.

- (g) To sell, lease, exchange and otherwise transfer all or any portion of the properties of the Society.
- (h) To establish and maintain a research and reference library in pursuance of the objects of the Society with reading and writing rooms and to furnish the same with books, reviews, magazines, newspapers and other publications.
- (i) To do all other such things as the Society may consider necessary, incidental or conducive to the attainment of the above objects.

3. The Governing Body of the Society shall be the body constituted to be the Governing Body under the Rules and Regulations of the said Society and the first members of the said Governing Body shall be—

\* \* \* \* \*

4. The income and property of the Society, however, derived, shall be applied towards the promotion of the objects thereof as set forth in this Memorandum of Association subject nevertheless in respect of the expenditure of grants made by the Government of India to such limitations as the Government of India may from time to time impose. No portion of the income and property of the Society shall be paid or transferred, directly or indirectly by way of dividends, bonus or otherwise howsoever by way of profit to the persons who at any time are or have been members of the Society or to any of them, or to any persons claiming through them or any of them, provided that nothing herein contained shall prevent the payment in good faith of remuneration of any member thereof or other person in return for any service rendered to the Society.

5. If, on the winding up or dissolution of the Society, there shall remain, after the satisfaction of all its debts and liabilities, any property whatsoever the same shall not be paid to, or distributed among, the members of the Society or any of them but shall be dealt with in such manner as the Government of India may determine.

## APPENDIX II

[Vide para 15(v) of the Report]

### *Functions of the Scientific Committees of the Indian Council of Agricultural Research*

The functions of the Scientific Committees of the Council other than those on the Animal Husbandry side, unless otherwise laid down by the Governing Body in the case of a particular Committee, shall be as follows:—

- (1) To examine and assess from technical and scientific points of view the following:—
  - (a) Schemes,
  - (b) programmes of technical work, and
  - (c) progress reports, including annual and final reports.
- (2) To suggest:—
  - (a) priorities for the schemes;
  - (b) institutions or centres where the research work may be taken up.
  - (c) co-ordinated programme of research, and
  - (d) model schemes of research.
- (3) To advise on the following:—
  - (a) Problems on which research work needs to be:—
    - (i) undertaken or
    - (ii) intensified,
  - (b) results which require to be:—
    - (i) tested in pilot projects or
    - (ii) passed on to the Extension Workers for adoption by the farmers,
  - (c) closure of schemes which are not working satisfactorily or have reached a stage where further work is not necessary, and

- (d) such problems as may be placed before them.
- (4) To suggest measures or co-ordination and to avoid duplication of efforts.
- (5) To advise on all such matters as may be referred to them.

The functions of the Scientific Committee of the Council on the **Animal Husbandry** side, unless otherwise laid down by Governing Body in the case of a particular Committee, shall be as follows:—

- (1) To examine and assess from technical and Scientific points of view the following:—
  - (a) Schemes
  - (b) programmes of technical work and
  - (c) Progress reports including annual and final reports.
- (2) To suggest:—
  - (a) Priorities for the schemes,
  - (b) institutions or centres where the research work may be taken up,
  - (c) co-ordinated programmes of research, and
  - (d) model schemes of research.
- (3) To advise on the following:—
  - (a) Problems on which research work needs to be
    - (i) undertaken or
    - (ii) intensified.
  - (b) Results which require to be:—
    - (i) tested in pilot projects or
    - (ii) passed on to Extension Workers for adoption by farmers.
  - (c) closure of schemes which are not working satisfactorily or have reached a stage where further work is not necessary.
  - (d) such problems as may be placed before them.
- (4) To suggest measures for co-ordination and to avoid duplication of efforts.

- (5) To make recommendations in respect of matters requiring further research.
- (6) To review periodically problems pertaining to production, grading, preservation, transportation, marketing, and utilisation.
- (7) To make recommendations, for improving production, marketing, preservation, and utilisation of Commodities.
- (8) To advise on such matters as may be referred to them.

## APPENDIX III

[*Vide* para 15 (vi) of the Report]

### *Functions of the Commodity Committee*

The functions of the each of the Commodity Committees of the Council, unless otherwise determined by the Governing Body, shall be as follows:—

- (1) To make recommendations in respect of matters requiring further research.
- (2) To review periodically problems pertaining to production, grading, preservation, transportation, marketing and utilisation.
- (3) To make recommendations for improving production, marketing, preservation and utilisation of commodities.
- (4) To advise on such other matters as may be referred to them.

## APPENDIX-IV

(*Vide* para. 27 of the Report)

### *A. Schemes which are the concern of the Indian Council of Agricultural Research*

1. Co-ordinated Agronomic Experiments.
2. Weed Control Scheme.
3. Wheat Rust Control Scheme.
4. Co-ordinated Maize Breeding Scheme.
5. Financial Assistance to Agri-Horticultural Societies.
6. Establishment of National Hortorium.
7. (i) Pilot investigation for collection of statistical data on yield and extent of cardamom cultivation and practices adopted in its cultivation.  
(ii) Pilot investigation for collection of statistical data on yield and extent of cashewnut cultivation and practices adopted in its cultivation.
8. Survey of fertilizer and manuring practices.
9. Study of feeding and rearing practices of sheep and wool.
10. Cost of production of sheep and wool.
11. Scheme for pilot sample survey for the study of yield and cultivation practices of fruit crops.
12. Scheme for pilot sample survey for the Study of yield and cultivation practices of vegetable crops in Maharashtra.
13. Study of poultry practices and production of sheep and wool.
14. Crop Insurance.
15. Scheme for ascertaining the cost of milk production.
16. Incidence of pests and diseases on crops.
17. National Index of Field Experiments.
18. Study of milk yield breeds and management practices of bovines.
19. Obtaining estimates of Agricultural production at Block level.
20. Additional Facilities at I.C.A.R.

21. Installation of Punch-Card Equipment at I.A.R.S.
22. Local cost of foreign Experts. Experts for the Research programme of I.A.R.S.
23. Co-ordinated cattle sterility Scheme.
24. Cross breeding of cattle.
25. Sheep and Wool improvement on regional basis.
26. Camel breeding in Rajasthan.
27. Co-ordinated scheme to study the economics of specialised dairy farming under various conditions.
28. Selective Breeding and grading up of cattle.
29. Comparative value of grading up with Sindhi and Cross Breeding with Jersey for increased milk production (Kerala and Himachal Pradesh).
30. Project for Intensification of Regional Research on Cotton, Oilseeds and Millets (PIRRCOM).
31. Central Artificial Insemination Centre, Bangalore.
32. Award of Merit-cum-means Scholarships for under-graduate studies in Agriculture, Home Science, Agricultural Engineering, Animal Husbandry and Dairying Schemes.
33. Production of Agricultural Instructional films.

**B. Plan Development Schemes which are not the concern of Indian Council of Agricultural Research.**

1. Central Sheep and Wool Research Institute—with two sub-stations.
2. Establishment of Jersey Breeding Farms.
3. Establishment of Equine Breeding Farms.
4. Extension of registration to the important breeding tracts and formation of breed societies.
5. Progeny testing of bulls for the systematic development of village cattle.
6. Regional Animal Nutrition Research Station.
7. Hill Cattle Development.
8. Sheep and Wool Production Training Centre, Poona.
9. Rinderpest Vaccine Production Centres, Vaccination Stations and Immune Belts.
10. Fertilizer Demonstration and Training.

11. Pilot Projects and Demonstrations in Improved Agricultural Practices.
12. Scheme for the establishment of Research, Testing and Training Centres in Improved Agricultural Implements.
13. National Seeds Corporation.
14. Development of Fruit Production.
15. Training of Gardeners.
16. Establishment of Progeny Orchard-cum-Nurseries.
17. Establishment of Garden Colonies.
18. Establishment of Agricultural Universities in States.
19. Aid to private Agricultural Colleges.
20. Refresher Courses for the benefit of Agricultural Teachers.
21. Refresher Courses for the benefit of Veterinary Teachers.
22. Intensification of Research on tuber crops.

## APPENDIX V

(Vide para. 93 of the Report)

*Detailed Instructions issued to the Central Research Institutes governing the Scheme of Merit Promotions and Advance Increments.*

1. Copy of letter No. 21-226/58-Instt. I, dated 17th/21st September, 1959 from the Ministry of Food and Agriculture (Dept. of Agriculture) New Delhi, to the Director, I.A.R.I., New Delhi.

**SUBJECT:** *Introduction of the Scheme of Merit promotions and advance increments to Scientific Workers at the Indian Agricultural Research Institute, New Delhi.*

With reference to the correspondence resting with your D.O. No. PA/8/59/20, dated the 6th March, 1959, on the above subject, I am directed to convey the sanction of the President, for a period of one year, to the implementation of the scheme of Merit Promotions and Advance Increments to scientific workers employed at the Indian Agricultural Research Institute on the following terms and conditions:—

### **Merit Promotions**

- (i) Such promotions will be restricted to persons who have done work of outstanding merit in service at Indian Agricultural Research Institute.
- (ii) Such promotions will be limited to one grade above the grade in which an officer is employed at the time of making promotions.
- (iii) Such promotions will be limited to Gazetted Officers and the total number of officers promoted on this basis at any one time will be limited to five per cent of the total number of gazetted officers.
- (iv) The number of persons who may be promoted in a year will be limited to 25 per cent of the total number referred to in (iii) above. The year will be taken as a calendar year for this purpose.

- (v) On promotion to the higher grade a supernumerary post will be created for the person and lower post from which he was promoted will be kept vacant till his absorption in the normal manner in the higher grade.
- (vi) A person promoted under this scheme will be absorbed in vacancy arising in the higher grade subsequent to such promotion provided he would normally be eligible for appointment against such a vacancy.
- (vii) The selection will be made by a Departmental Promotion Committee constituted for the purpose.

#### ***Advance Increment***

- (i) Advance increments may be given to persons of the grade of Research Assistant and above who have done work of special merit and deserve special encouragement at the I.A.R.I.
- (ii) The number of advance increments to any one person will be limited to a maximum of three.
- (iii) Not more than two advance increments at a time will be given to any individual drawing a pay of Rs. 1.000 or more p.m.
- (iv) Normally a period of two clear years must elapse between the dates of grant of advance increments on two successive occasions to the same person.
- (v) Advance increments should be limited to 2 per cent. of the total number of the scientific personnel of the grade of Research Assistant and upwards on an overall basis in any one year, the year being reckoned as a calendar year.
- (vi) A report of cases in which this power is exercised will be sent to this Ministry twice a year in March and September.
- (vii) The D.I.C. constituted for recommending merit promotions, vide clause (vii) under the heading Merit Promotions will also be entrusted with the work of recommending advance Increments.

**2. The Merit Promotions as well as Advance Increments may be sanctioned by the Director, Indian Agricultural Research Institute on**

the recommendations of the D.I.C. in the cases for which the Director is the appointing authority. In other cases the sanction will be issued by this Ministry.

3. The Scheme will be subject to review after a year.
4. The expenditure involved should be met from within the sanctioned budget grant of the Institute.

COPY OF LETTER No. 21-226/58-INSTT. I DATED THE 22ND AUGUST, 1960—FROM THE MINISTRY OF FOOD AND AGRICULTURE (DEPARTMENT OF AGRICULTURE) NEW DELHI, TO THE DIRECTOR, I.A.R.I., NEW DELHI.

**SUBJECT:** *Introduction of the Scheme of merit promotions and advance increments to Scientific Workers at the Indian Agricultural Research Institute, New Delhi.*

I am directed to refer to this Ministry letter No. 21-226/58-Instt. I, dated 17/21, September, 1959, on the above subject and to say that item V under the heading *Advance Increments* may be amended to read as follows:—

“V-Advance increments should be limited to 5 per cent. of the total number of the Scientific personnel of the grade of Research Assistants and upwards on an overall basis in any one year, the year being reckoned as of a calendar year”.

2. It has also been decided that the scheme of advance increments will not apply in those cases where special pays are at present admissible on the acquisition by the officers concerned of high post-graduate degrees.

3. I am further to add that the scheme as envisaged in the orders quoted in para 1 above should be backed by an objective and efficient system of annual reporting. In order to assess the quality of scientific personnel at all levels a system should be followed whereby an annual report is written by each scientist of his own work. The opinion of at least two scientists upto two levels above the scientists concerned under whom he is working should then be recorded on his report (This is not a substitute for the annual confidential report, but is an assessment of the work done by an individual).

Copy of the letter No. 718/59-Instt. II, dated 19th April, 1961 from Shri R. M. L. Vaish, Under Secretary, Min. of Food & Agri. (Department of Agriculture) New Delhi to the Director, Central Rice Research Institute, Cuttack and the Director, Central Potato Research Institute, Simla and copy endorsed to the Ministry of Finance etc. etc.

**SUBJECT:** *Introduction of the scheme of merit promotions and Advance Increments to scientific workers at the Central Rice Research Institute, Cuttack/Central Potato Research Institute, Simla.*

I am directed to convey the sanction of the President to the implementation of a scheme of "Merit Promotion and Advance Increments" to scientific workers engaged in research work of high order at the Central Rice Research Institute, Cuttack/Central Potato Research Institute, Simla on the following terms and conditions:—

**Merit Promotions:—**

- (i) Such promotions will be restricted to persons who have done work of outstanding merit in the service at the Central Rice Research Institute/Central Potato Research Institute.
- (ii) Such promotions will be limited to one grade above the grade in which an officer is employed at the time of making promotions.
- (iii) Such promotions will be limited to Gazetted Officers and the total number of officers promoted on this basis at any one time shall be done at each of the above Institutes.
- (iv) On promotion to the higher grade a supernumerary post will be created for the person and the lower post from which he was promoted will be kept vacant till his absorption in the normal manner in the higher grade.
- (v) When a Senior Class I Officer in the scale of Rs. 700-1250 per mensem is given merit promotion, the merit promotion post should be created in the next higher scale of Rs. 1300—1600 per mensem.
- (vi) A person promoted under this scheme will be absorbed in the vacancy arising in the higher grade subsequent to

such promotion provided he would normally be eligible for appointment against such a vacancy.

- (vii) No merit promotion will be given, if there is no person who has done really outstanding work.
- (viii) The selection will be made by a High Level Selection Board which would also include member from outside the Department in which promotions are made, the Board meeting once or twice a year as necessary.

*Advance Increments:*

- (i) Advance increments may be given to persons of the grade of research Assistants and above not considered so outstanding as to be given merit promotions but who are at the same time considered fit for encouragement.
- (ii) The number of advance increments will be limited to a maximum of three.
- (iii) Not more than two advance increments at a time will be given to any individual drawing a pay of Rs. 1000 - or more per mensem.
- (iv) Normally a period of two clear years must elapse between the dates of grant of advance increments on two successive occasions to the same person.
- (v) Normally increments should be limited to five per cent of the total number of scientific personnel of the grade of Research Assistants and upwards on an overall basis in any one year, the year being reckoned as a calendar year.
- (vi) The Scheme of advance increment will not apply in those cases where special pays are at present admissible on acquisition by the officers concerned of high post-graduate degrees.
- (vii) A report of cases in which this power is exercised will be sent to this Ministry twice a year in March and September.
- (viii) The Selection Board constituted for recommending Merit promotions vide clause (VIII) under the heading 'Merit Promotion' will also be entrusted with the work of recommending advance increments.

2. The Merit Promotions as well as Advance Increments may be sanctioned by the Director on the recommendations of the Selection Board in the cases for which he is the appointing authority. In other cases the Secretary to this Department will sanction the 'Merit Promotions' and 'Advance Increments on the basis of the recommendations of the Selection Board and Director.

3. I am to add that the scheme of 'Merit Promotions' and 'Advance Increments' detailed above should be backed by an objective and efficient system of annual reporting. In order to assess the quality of scientific personnel at all levels a system should be followed whereas an annual report is written by each scientist of his own work. The opinion of at least two scientists upto two levels above the scientist concerned under whom he is working should then be recorded on his report. (This is not a substitute for annual confidential report, but is an assessment of the work done by the individual).

4. The expenditure involved should be met from within the sanctioned grant of the Institute concerned. A list of posts to which the above scheme is applicable is enclosed herewith.

**ANNEXURE TO LETTER NO. 7-86/59-INSTT. II, DATED 19TH  
APRIL, 1961**

***List of posts included in the Merit Promotion and Advance Incre-  
ments Scheme***

**CENTRAL RICE RESEARCH INSTITUTE, CUTTACK  
CLASS I (SENIOR)**

**Geneticist and Botanist.**

**Agronomist.**

**Mycologist.**

**Entomologist.**

**CLASS I (JUNIOR)**

**Agronomist**

**Plant Physiologist.**

**Plant Pathologist.**

**Agril. Entomologist.**

**Agril. Chemist.**

**Cytologist.**

**Research Officer in Plant Pathology.**

**Research Officer in Entomology.**

**Officer Incharge Saline Sub-Station.**

**Research Officer in Agronomy.**

**Agricultural Engineer.**

**Soil Chemist.**

**CLASS II**

**Assistant Botanist.**

**Statistician.**

**Farm Superintendent.**

**Assistant Botanist, Jeypore Botanical Survey Scheme.**

**Field Officer, Indian Council of Agril. Research Scheme.**

**CLASS II (NON-GAZETTED)**

**Research Assistant.**

**CLASS III (RESEARCH ASSISTANT)**  
**Research Assistant.**

**CENTRAL POTATO RESEARCH INSTITUTE, SIMLA**

**CLASS I (SENIOR)**

**Botanist**

**Plant Breeder.**

**CLASS I (JUNIOR)**

**Cytogeneticist.**

**Virus Pathologist.**

**Agronomist.**

**Plant Physiologist**

**Seed Development Officer.**

**Bacteriologist.**

**CLASS II**

**Assistant Botanist.**

**Plant Pathologist**

**Agril. Entomologist.**

**Agril. Chemist.**

**Agril. Engineer.**

**Assistant Geneticist.**

**Statistician.**

**CLASS II (NON-GAZETTED)**

**Research Assistant.**

**CLASS III**

**Research Assistant.**

## APPENDIX VI

*Statement showing the summary of Conclusions/Recommendations of the Estimates Committee contained in the Report.*

Serial No.	Reference to Para No. in the Report	Summary of Conclusions   Recommendations
1	2	3
1	20	The Committee regret to note that considerable research funds of the Council have been diverted towards meeting the expenditure on the staff appointed by it. The Committee consider undesirable the creation of two sets of staff with different conditions and terms of service—one on the Government side and the other on the Council side—for manning the Secretariat of the Council. The Committee recommend that Government should examine this question in all its aspects and take suitable remedial measures.
2	24	While the Committee are glad to note that Government intend to bring under the Council all the Central research institutes and the others which are run departmentally, they suggest that care should be taken to ensure that the autonomy of the Central research institutes in so far as direction and initiative of research programmes are concerned is adequately safeguarded consistently with the overall national programme to be formulated by the Council.
3	32	The Committee would stress the need for reducing the time-lag of nearly one year in the receipt of a scheme and communication of its financial sanction. The Committee also view with concern the inordinate delay in activation of a scheme by the concerned institutes, universities, etc. The Committee suggest that Government may review the procedure for processing research schemes so as to minimize the delay in their activation.
4	34	The Committee note the steps taken by the Government to encourage team work approach and would suggest that it should be further strengthened.

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5 37 While the Committee welcome the proposal of giving block grants for long term projects, they would stress the need for periodical evaluation and inspection of the projects at regular intervals to ensure that grants are being gainfully utilized. The Committee would also like the Government to examine whether budgetary procedures could not be simplified.

6 41 The Committee feel that enough attention has not been given by Government to ensure co-ordination between Centre and States and between States and States in the research programmes. They regret to note that even Research Boards have not been set up in all the States. The Committee would stress the need of bringing about effective co-ordination and would strongly recommend that Research Boards should be set up in all the States so as to eliminate duplication and overlapping in the research programmes.

The Committee would also like Government to chalk out suitable pattern and norms for setting up of Research Boards and issue necessary directions to the States so that there is uniformity in the organisational set-up of these Boards.

7 43 The Committee feel that it is quite important to ensure that a particular scheme is completed within the stipulated time and would like the Government to further strengthen the measures taken in this regard.

The Committee would also like the Government to examine the feasibility of working out the economics of those schemes which extend to ten years or more at suitable intervals to find out whether the results achieved are commensurate with the expenditure.

8 53 The Committee would strongly stress the need for vigorous steps to be taken in the Fourth Plan period to correct the regional imbalances in the development of agricultural education facilities by suitably regulating the opening of new agricultural colleges and the intake capacity of existing agricultural colleges according to the actual requirements in different States.

9 55 The Committee suggest that suitable corrective measures may be taken by Government to improve the standard of education in the agricultural colleges in general and private agricultural colleges in particular so that the quality of agricultural education in the country does not suffer and that there is no scaling

down of the standard of education in any of the Indian Universities. It should also be ensured that the agricultural colleges have adequate farm lands attached to them.

The Committee further recommend that Government may take suitable steps to achieve uniformity of standard and curriculum in the agricultural colleges and universities.

10 58 The Committee agree with the recommendation made by the Second Joint Indo-American Team on Agricultural Education, Research and Extension about the establishment of agricultural universities. They hope that the Reviewing Committee appointed by the University Grants Commission would also go into the working of agricultural universities with a view to suggest lines for further development and growth in keeping with the objective of such universities.

11 59 The Committee would also suggest that Government may examine whether needs of agricultural education can be better or at least as well served by having Faculties of Agriculture in other universities.

12 60 The Committee recommend that efforts should be made to make the duration of the agricultural degree courses uniform in all the universities.

13 62 The Committee are in agreement with the views of the Agricultural Review Team and stress the need for maintaining close contact with universities to attract scientific talent available there for agricultural education.

14 67 The Committee regret to note that even upto the fourth year of the Third Plan, very insignificant progress has been achieved in the setting up of Manjri type of schools. The Committee would strongly recommend that early steps should be taken to establish one Manjri type school in each district and to provide stipends adequate to cover the students' expenses at the school.

14 67 The Committee are convinced that close contacts between the Central research institutes and State research institutes, extension personnel and the research institutes, extension personnel and cultivators, and cultivators and research institutes will go a long way in evolving improved agricultural practices and thereby increasing the agricultural production in

the country. The Committee would stress that Government should take concerted measures to achieve this objective.

15 70 The Committee need hardly stress the desirability of providing special courses in extension methods to those students who propose to take up extension as career after graduation. They suggest that the extension wings attached to the various agricultural colleges should further be strengthened and education in extension methods designed on a realistic basis.

16 71 The Committee note that unlike industries where it is possible for an engineering graduate to get attached to a factory for practical training, there is hardly any comparatively progressive agricultural farm to which an agricultural graduate can be attached. The Committee also note that there naturally is a tendency among agricultural graduates to try for administrative jobs instead of turning to cultivation with the result that agriculture is hardly benefited by their education. The Committee would suggest that these peculiar features of the Indian Agriculture should be carefully studied, by the Board of Agricultural Education, with a view to devise remedial measures. In this context, the Committee would like the authorities to consider whether it should be made obligatory for an agricultural student to spend a prescribed minimum period doing extension work before he is awarded degree. The Committee also feel that there is an imperative need for imparting intensive practical training to the actual tillers of the soil and their children in improved agricultural practices. They suggest that a suitable programme for imparting training to agriculturists may be devised in consultation with State Governments and arrangements made to impart such training in block basis, if not in the villages themselves.

17 74 The Committee realise the imperative need of bringing to the notice of the cultivators the results of researches carried on in the agricultural research institutes. They feel that field days can play a very useful role in this regard. The Committee are, however, doubtful if field days of 3 to 4 days duration can be of any real use. They would strongly recommend that the field days should be adequately extended.

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18 76 The rationale of the arrangements by which 50% of the expenditure incurred on the production of the agricultural films is borne by the Council while the remaining 50% is borne by Government from its own funds is not clear. The Committee would suggest that, as audio-visual publicity and field publicity are important functions of the Ministry of Information and Broadcasting, the question of meeting the entire expenditure from Government resources may be considered.

19 80 The Committee have been informed that Government intend to adopt the system of block grants, where there is a long term research, instead of giving temporary grants on a project basis, so that the staff will know that they will continuously be employed on a particular project. Nevertheless, the Committee would like Government to examine the question of temporary nature of posts in all its aspects and devise some ways and means of restoring confidence in the staff so that they can devote themselves fully to their research work.

20 83 The Committee feel that in view of the imperative need for intensifying research to increase agricultural production, there should be no avoidable delay in filling the posts of agricultural scientists in the research institutes. The Committee would suggest that Government may review the position in conjunction with the Union Public Service Commission so as to speed up recruitment.

The Committee would also suggest that Government may consider the desirability of having a panel of specialists for various disciplines who may be given greater latitude and initiative in association with the Union Public Service Commission in the matter of selecting scientific personnel, particularly to ensure quality and to avoid delay.

21 87 The Committee would urge that due steps may be taken by Government to revise the conditions of service and pay scales of technical staff working in the agricultural institutes to bring them at par with those prevailing in the Council of Scientific and Industrial Research or Atomic Energy Establishment.

The Committee would also suggest that the question of reclassifying the scientific personnel into categories

A, B, C, D research workers etc. as prevalent in the Council of Scientific and Industrial Research instead of the existing nomenclatures of Class I, II and III may be considered.

22 91 The Committee would stress the need for increasing the chances of promotions for the staff working in the Central as well as State research institutes and would recommend that necessary steps be taken in this regard.

23 94 The Committee would like the Government to examine the feasibility of extending the Scheme for Merit Promotion and Advance Increments to all the Central and state research institutes, universities etc.

24 95 The Committee note that Government have issued instructions to the effect that scientist who is not qualified in a particular discipline should not put his name on a paper which is written by Junior scientists belonging to a different discipline. The Committee do not consider these instructions to be adequate. They are convinced that the undesirable practice of senior scientists substituting their names on papers written by Junior scientists needs to be firmly checked. The Committee would suggest that comprehensive instructions should be issued on the subject so that a young scientist is given every encouragement to publish worthwhile papers in his own name.

The Committee would also suggest that Government may consider the question of having a panel of eminent scientists to advise about any appeal preferred by a scientist against non-publication of his scientific paper.

25 96 The Committee would suggest that the rules for appointment to the posts of Directors of Agricultural Research Institutes may be reviewed in the light of decision of the Government, care, however, being taken to see that the existence of vacancy is suitably publicised.

26 97 The Committee stress the need for examining the position regarding deputation of students and scientists abroad for training in all its aspects and would like the Government to devise ways and means by which full benefit could be drawn from the studies made by such students and scientists.

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27 101 In view of the fact that the scheme for utilization of services of retired scientists has not been functioning very well, the Committee feel that the scheme should be examined in all its aspects to find ways and means for improving it.

28 105 The Committee would suggest that the Publications Committee of the Council may carefully examine the question of multiplication of outlets for scientific information in relation to their usefulness and cost of production. It may also be examined, which of the journals could be combined or discontinued or the time-interval in their publication increased by converting the monthly journals into quarterlies and the quarterlies into half-yearlies so as to avoid wasteful expenditure.

29 106 The Committee would suggest that the question of bringing out publications in regional languages may be taken up by the Council with the State Governments.

30 107 The Committee would urge that publications should not be allowed to remain accumulated for indefinite period and ways and means should be found of putting them to use by selling at a reduced price or by distributing them to universities, research institutes, agricultural colleges, etc. who are interested in the subject. The Committee consider that if proper care is exercised in assessing the demand for publications, particularly costly publications the Council would not find itself burdened with unsold publications.

31 108 The Committee recommend that early steps should be taken to maintain proforma accounts by the Council.

32 112 The Committee suggest that steps should be taken to further improve the library facilities and to make arrangements to issue books especially to those research scholars who are working in the isolated sub-stations.

33 114 The Committee are concerned to note that there was over-budgeting during the year 1963-64 to the tune of 28%. They suggest that steps should be taken to avoid over-budgeting in future as much as possible.

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34	116	The Committee regret to observe that a large number of utilization certificates have been allowed to remain pending for an unduly long period. The Committee would suggest that measures to clear the arrears should be intensified. The Committee would like to impress that a time-limit should be laid down for clearance of these arrears. They would also suggest that a time-limit may be specified in the Schedule of Terms and Conditions governing the grants so that the utilization certificates are submitted without delay.
35	118	The Committee would suggest that the Council may prescribe that along with the utilization certificates, the institute, university etc. should furnish simultaneously information about the residuary assets also so that the Council need not keep the accounts open for an indefinite period.
36	120	The Committee feel that even though the Council does not carry on any commercial activities, balance sheet should be prepared as desired by Audit in consonance with the relevant rules and regulations.
37	121	The Committee would suggest that Government should review the position comprehensively and define the role which the Indian Council of Agricultural Research in collaboration with the agricultural research institutions is expected to perform in the context of all the requirements of the situation, and particularly the paramount importance which the problem of increasing agricultural production has now assumed. The Committee also suggest that the Government should take appropriate steps to ensure that the Council can more effectively discharge its functions as a co-ordinating body. The Committee hope that all this would be done early so that the Council could, in the light of Government decisions in this regard, prepare detailed schemes in time for implementation in the Fourth Plan.
38	122	The Committee consider that there are promising possibilities in the field of making arable land free from the threats of natural disasters such as floods, drought etc. and would suggest that the Ministry of Food and Agriculture, Indian Council of Agricultural Research, Ministry of Community Development and Co-operation and the Ministry of Irrigation

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and Power, should draw up in consultation with the Planning Commission and the State Governments, a comprehensive programme in this direction for execution in the Fourth Plan.

39      123      While the Committee consider that vigorous and intensified efforts should be made in the field of research, they would like to particularly stress the fact that the key to success lies, more than any thing else, in ensuring that extension work keeps reasonable pace with the progress of research. It may be desirable also to have some effective liaison between the agricultural research institutions and the extension department.

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## APPENDIX VII

*Analysis of Conclusions/Recommendations contained in the Report*

### I. CLASSIFICATION OF RECOMMENDATIONS

A. *Recommendations for improving the Organisation and working :*

Serial Nos. 2, 3, 6, 8, 9, 10, 11, 14 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 27, 31, 34, 35, 36, 37, 38 and 39.

B. *Recommendations for effecting economy :*

Serial Nos. 1, 5, 7, 18, 28, 30 and 33.

C. *Miscellaneous Recommendations :*

Serial Nos. 4, 12, 13, 26, 29 and 32.

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

Serial No. as per Summary of Recommendations (Appendix VI)	Particulars
1	Suitable remedial measures should be taken against the creation of two sets of staff—one on the Government side and the other on the Council side—for manning the Secretariat of the Council.
5	Long term project should be periodically evaluated and inspected to ensure that grants are gainfully utilized.
7	Completion of a scheme within the stipulated time should be ensured.
18	The entire expenditure on the production of agricultural films should be met from Government resources.
28	Publications Committee of the Council should examine which of the Journals could be combined or discontinued or the time-interval in their publication increased.
30	The demand for publications should be carefully assessed before placing the print order.
33	Over-budgeting should be avoided as much as possible.

