
CURRENT SCIENCE—50 YEARS AGO

Agricultural Research in India.*

THE annual report of the Imperial Council of Agricultural Research for the year 1933–34 which has just been published, is a document of absorbing interest, not only because of the large number of special schemes, both scientific and economic, sanctioned by the Council and in progress, but also because of the many more important schemes which are planned or foreshadowed. The large increase in the output of scientific research in Agriculture is an outstanding feature of the progress of scientific research in the country and the Research Council can already claim credit for much of this activity; indications are, as a matter of fact, that it will soon be the greatest single factor tending to the progress of agricultural research, thanks to the liberal grants of money voted by the Central Government for this purpose. The report refers to a temporary cessation of the annual grant owing to financial stringency which has prevented the Council from going forward at the initial pace and which has necessitated the holding up of many a sanctioned scheme. It almost looks as if it was a case of "first come, first served" and that many new schemes had no chance of being considered. A special grant of Rs. 5 lakhs towards the end of the year somewhat improved the situation, though even with this further grant, schemes already approved and costing about Rs. 11 lakhs have had to be kept in abeyance. The list of the schemes already in progress and the amount set apart for each is interesting reading, if at least to show what a vast field remains untouched. Thus out of the 41 schemes in progress, 18 relate to the sugar industry and absorb Rs. 25 lakhs out of a total of about Rs. 45 lakhs. Schemes relating to rice research absorb about Rs. 11 lakhs, and those relating to locust research cost about Rs. 4 lakhs, so that these three subjects alone take up about 90% of the total grant. One need not grudge to the sugar industry which has within the last five years undergone phenomenal development and added largely to the material prosperity of the country as a whole and of the agriculturist in particular, this large measure of help; nor to subjects like rice research and locust

research, the substantial proportion they receive by reason of their great importance, but when one compares the bare 10% of the grants which remains for meeting the needs of the large variety of crops and of much-needed development in both crop and animal husbandry, the anomaly of the situation becomes rather striking, and the necessity for a substantial increase in the grants available assumes additional urgency. It is true that much water has flown under the bridge since the period covered by the report and that money has been voted for a number of new schemes, the most notable among which is the one relating to the important subject of the marketing of agricultural produce and the appointment of a chief marketing officer. Furthermore, the needs of one major crop *viz.*, cotton, are being met largely by the mill industry itself through the cotton cess fund, administered by the Indian Central Cotton Committee; a similar cess assists the lac industry; the sugar industry is also in a manner helping itself through the excise duty now being levied; the report, moreover, refers to a proposal for levying a cess on the export of oil-seeds for affording funds for research on the development of the oil-crushing and allied industries in the country. If this latter proposal should materialise, it will mean that one large group of agricultural produce will be meeting its requirements for funds from its own resources. It should, therefore, be possible for the Government of India to set apart substantial sums for research on other important branches of agriculture. As a matter of fact, some of the schemes already sanctioned, such as the marketing inquiry, will inevitably call for a much larger expenditure before long, as each survey discloses lines for suitable practical action.

The Report refers to the formation of three separate Standing Committees for animal nutrition, cattle-breeding and dairying and also to steps taken for the investigation of important cattle diseases, during the year. The latter certainly demands much greater attention and one can hardly think of a more fruitful field for the Council's help. The livestock industry in the country is already a huge one and as the years go by, is bound to assume still greater importance from the point of view of increasing the earnings of the ryot

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and of improving the nation's food supply; but one of the greatest handicaps to progress is the prevalence of disease which threatens the industry on its present scale itself, while expansion or improvement in respect of breeds whether it be cattle, sheep or poultry is practically out of the question. The veterinary staff in the provinces has neither the time nor the facilities for anything beyond the routine of a general practitioner, and such research facilities as exist at the Muktesar Institute and in some of the Veterinary Colleges and Serum Institutes are disproportionately inadequate for the needs of the country. A Central Institute for this purpose, well-equipped and staffed, is a crying need and forms a legitimate demand upon central revenues. This, of course, does not rule out assistance to the provinces and existing institutions conducting researches such as the present provision of Rs. 2 lakhs for the investigation of tuberculosis and Johne's disease. We wish the scheme of sheep breeding, referred to in the report, took precedence over some others, or, was accorded special treatment and proceeded with, for the possibilities are admittedly great and the subject has been relegated to the background for a very long time. As it is, a sum of Rs. 85,000 is said to have been sanctioned for a scheme which, however, had to be kept in abeyance for want of funds. A beginning is said to have been made in the matter of registration of pedigree stock of dairy and draft cattle; a revised and uniform classification of cattle for purposes of the quinquennial cattle census has been approved by the Advisory Board, which is an improvement on the present form; a recommendation fixing a three years' course with F.Sc. as an entrance qualification in the Veterinary Colleges and a curriculum suitably revised for the course was also approved by the Board, in the Animal Husbandry Section.

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Research on rice occupies the pride of place, judged by the expenditure sanctioned, among the other schemes. It is a comprehensive all-India scheme costing Rs. 11 lakhs, spread over a period of five years. Work, however, seems to have related mainly to the breeding and testing of varieties which most provincial departments are already engaged upon, but the grant is said to have enabled the departments among other things, to widen the range of varieties handled. We may, perhaps, single out the work in Burma for special mention, for it relates to the development of strains of rice suitable for the English and European markets and leading therefore to an expansion in the foreign

trade in rice. The period of five years is too short for the work in view, and we feel certain, that the need for continuing the scheme will have to be faced. While on the subject of foreign markets for Indian produce, we may draw attention to the collection and circulation of information by the Council during the year regarding the quality of the different kinds of produce, notably oil-seeds, which enjoy a preference in the United Kingdom markets under the Ottawa agreement, which will enable them to compete with non-empire produce and will make the preference really operative. We are glad that as an all-India organisation, the Council has been fully alive to the importance of this matter and is closely watching the working of this commercial agreement in the interests of Indian agriculture.

It is rather disappointing that in respect of tobacco where the scope for improvement with a view to meeting the local demand for cigarette tobacco and also producing enough for an export trade is very considerable, the Council could not do more than appointing another committee. We hope this committee's work will lead to practical action very soon, among which we may suggest suitable financial help to provincial departments undertaking the cultivation of the special varieties and the curing and conditioning of the produce according to up-to-date methods.

Among the minor activities of the year, we may refer to the subject of statistical studies in agricultural research and the help afforded by the Council in the training of agricultural officers in these methods. The field trials and the interpretation of the results stand to gain in accuracy and already the effect of the training is noticeable in the studies and publications of many of our experiment stations. The initiation of studies in agricultural meteorology is another important development to the credit of the Council and considerable work has been done especially in correlating crop yields to meteorological data and in the evolving of suitable instruments and of technical methods. Weather Bureaux elsewhere have been of such great assistance to farmers that we can expect our own organisation also to play a similar rôle, provided the staff is strengthened so as to secure co-ordination with the existing meteorological stations in the different parts of the country.

It will be impossible to refer even briefly to all the schemes and other activities of the Council. The oil technology work and the work on the utilisation of molasses at the Harcourt Butler Technological Institute, the work on the utilisation of town refuse and farm waste for manure at the Indian Institute of

Science, potato breeding on the Nilgiris, inquiry into the trade in coconuts and coconut products, locust research, water hyacinth control, dry farming schemes, goat keeping, 'quality' in crop investigations, malting of cholum, fruit research schemes, research on virus diseases, are some of the schemes referred to in the Report. As already indicated, however, nearly all the schemes have been going on only for short periods and some have hardly begun. Moreover the Report

itself, latest as it is, appears to be very incomplete; so rapidly have the activities of the Council been expanding and so many are the new schemes taken up since the period covered by the Report. The Council is gradually approximating in scope and organisation to the Federal Department of Agriculture in the U.S.A., and we have no doubt that the Council will succeed in doing as much for our agriculture as the U.S. Department is doing for the American farmer.

NEWS

DIET AND CRIME

... "The belief that violence and crime are products of improper diet is being promoted by a growing number of individuals. This belief, rejected as unfounded by the consensus of scientifically trained health professionals, appears to be accepted as 'fact' by many educators, probation officers, social workers, criminologists, and legislators. Recently, some correctional facilities, homes for delinquent youths, and even some schools have been pressured to make changes in available foods based on the belief that there is a proven link between diet and criminal behavior. However, a causal relationship between diet and crime

has *not* been demonstrated. And, diet is *not* an important determinant in the incidence of violent behavior. . . . Dietary improvements based on established information are desirable. However, dietary changes based on popular but erroneous beliefs are unjustified and can carry considerable risk to the physical and social health of individuals and society."

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DEATH FROM OBESITY DISPUTED

... "A panel convened by the Natl. Insts of Health [NIH] recently proclaimed obesity a 'killer' disease. . . . According to Paul Ernsberger [Cornell U. Medical Coll], the NIH report is simply wrong. 'Fatness is *not* associated with a higher death rate,' he says. 'In fact, in every given population examined, the thinnest people have the highest death rate.' The new NIH panel 'flatly contradicts' previous reports of the same data, the well-known Framingham Heart Study, he adds. 'The fact is the very fattest women in Framingham had a lower death rate than women who were at their "correct" insurance table weights.' The heaviest Framingham women, ranging from 40% to

172% over the [1959 Metropolitan Life Insurance Co. Height & Weight Table], had lower mortality than both underweight women and women within a few pounds of their 'desirable' weight. The *lowest* death rates, Ernsberger points out, occurred in women who were between 10% and 30% over the insurance tables . . ."

[(Carol Sternhell (New York U.) in *Ms.* 13(11).66-8, 142-6, 154, May 85 [pd 2803]) Reproduced with permission from Press Digest, *Current Contents*®, No. 28, July 15, 1985, p. 14 (Published by the Institute for Scientific Information®, Philadelphia, PA, USA.)]