
CURRENT SCIENCE 50 YEARS AGO

AGRICULTURAL RESEARCH IN INDIA*

[Scientific Reports of the Imperial Agricultural Institute, New Delhi, including the Report of the Sugar-cane Expert, Coimbatore, for the year ending June 1936]

THE report of the Imperial Agricultural Institute, New Delhi, is the record of another year's work under the difficult conditions caused by the last disastrous earthquake in Bihar and by the preoccupation of the staff in connection with the shifting of the Institute to Delhi. Much of the research and experimental work had to be suspended and the actual work has related only to the completion of those already on hand. Though therefore much restricted in volume, the work and results reported continue to be of much scientific and practical interest. In the Chemical Section the effect of sunlight and ultraviolet light on nitrification in soils, both acid and alkaline in reaction, was further studied and the results showed no evidence of nitrification at all. We may perhaps take it that this definitely disproves the claims made to the contrary by Prof. Dhar. The study of acid soils and their amelioration was continued and as a result the use of a mixture of calcium and sodium carbonate is advised in preference to either of them applied singly, the former incidentally being a less expensive method in practice. Knowing the deleterious action of sodium carbonates on the physical condition of soils, one is generally chary of resorting to the use of such salts, and we should, for this reason, like to see further work on the subject. Large scale experiments on green manuring with sann hemp have confirmed previous observations and show that the crop could be grown for a longer period and made use of for a double purpose, the tops for greenmanuring and the stems for fibre-making and that this method is quite as good as if the whole plants were incorporated in the soil for manure.

In the section on Crops, wheat breeding occupies the pride of place the aim being chiefly to evolve types resistant to cereal rusts; a separate section was created for this work in the year and some promising crosses have already been produced and selected for further work on breeding. The older varieties of Pusa fame have continued to be popular and large

quantities of seed have been supplied, in fact the demand is said to have been more than could be met by the Institute. Attention is drawn to the striking differences in the malting quality of one and the same type of barley when grown in different tracts, which one would think was only in accordance with the general belief in the influence of soil composition and manuring on 'quality' in barley. Work on potato breeding was commenced in the year and a number of Indian and Foreign varieties including varieties from Central and South America were studied; likewise a large number of seedlings were successfully raised and a good many crosses also effected. We may look forward to important results in the evolving of high-yielding and disease-resistant types, a desideratum which has seriously kept back the popularisation of this valuable food crop.

The Sugarcane Station, Coimbatore, maintained its high level of research both of practical value and scientific interest. The station was able to release for trial during the year a few types of canes combining earliness with good tonnage. The sorghum sugarcane hybrids have been, it is reported, found disappointing as regards earliness which was the characteristic about which high hopes were entertained. The problem is however to be attacked on a wider basis, we are told. The breeding of thick canes has also been attended with much success; the new types Co 419 and Co 421 have done very well, and on the Padagaon Station Co 419 gave a higher yield than the famous P.O.J. 2878. A very noteworthy result has been the production of bud sports by the simple process of bruising and damaging the eyebuds of the seed setts; we wonder if the method will succeed with a large percentage of buds and again likewise with other varieties also, which has been achieved in the variety Co 213. Cytogenetic studies which form a new feature of the work in the station established the genuineness of the sugarcane sorghum crosses about which apparently there was doubt. The development of a suitable technique in this work occupied particular attention in the year.

In the section on Plant Diseases and Pests we may

* Published in *Curr. Sci.*, Vol. 5, 1937, pp. 609.

specially draw attention to the study of the bionomics of the parasites of sugarcane pyrilla, as the result of which the periodical removal of the leaf-sheaths of affected cane is suggested as a measure of some relief. The work on the mosaic of sugarcane in the Mycological Section is of absorbing interest and will well repay study. This baffling disease is being examined from various angles including serological studies. The reactions and behaviour of the virus under a number of conditions are reported and the interesting observation made that the infectivity appears to be associated with chlorophyll, as filtrates remain active only as long as the green colour persists. We are led to hope that before long much light will be thrown on the different aspects of this difficult problem.

It is gratifying to read that the famous Pusa herd of dairy cattle has not only maintained its high standard but has even excelled past performance, the milk yield average having increased from 19.1 lbs. in the last year to 21.2 lbs. in the year under report. The herd is now being moved into its original home and it will be interesting to watch its reaction to this, its home coming after such a long period.

The chief event of the year is the transfer of the Institute to its new home in Delhi. This marks a new epoch in its history and we note that all the different sections commence work in their new sphere with greatly added facilities for research. On the threshold of this new era we offer to this great and beneficent institution our best wishes for a long career of practical usefulness and scientific distinction.

ANNOUNCEMENT

THE FIRST INDIAN FISHERIES FORUM

The Indian Branch of the Asian Fisheries Society has programmed to hold the First Indian Fisheries Forum at Mangalore from 6th to 10th December, 1987 to bring together scientists engaged in research, extension, education, development and industry in the fisheries sector from all over the country. The primary objective of the Forum is to take stock of the existing situation in different fisheries sectors and to formulate recommendations for follow-up action by the various concerned agencies.

Several technical sessions will be held. The topics covered are: Aquaculture; Fishery Biology and Population Dynamics; Fishery Hydrography (Oceanography, Marine Biology and Limnology); Fish Processing Technology, Fishery Engineering, Fishery Economics and Statistics, Fisheries Education and Training, Aquatic Pollution, Fisheries Extension and Information Service.

Original research papers on the above subjects are invited. Each paper shall normally be limited to 8 to 10 typed pages of double spacing on quarto size bond paper in duplicate. References cited must

follow the pattern adopted by the journal 'Aquaculture'.

Authors are requested to send abstracts of their papers in duplicate by 15th July 1987, along with the participation intimation form duly filled in. Each abstract should not exceed 250 words.

Ten awards will be given to young scientists of below 35 years of age as on 1.12.1987, on the basis of the merit of their papers and the method of presentation in the Forum. The intending competitors for these awards are required to intimate their desire to that effect while sending the abstracts of their papers. Only the sole author or the first author presenting the paper will be eligible for the award. Each awardee will receive a citation and a cash award.

Paper presented during the Forum will be published after necessary review by about the middle of 1988.

For details please contact: The Secretary, Asian Fisheries Society, Indian Branch, C/o College of Fisheries, Mathsyanagar, Mangalore 575 002.
