



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

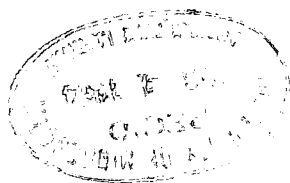
AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**INTERNATIONAL
JOURNAL OF
AGRARIAN AFFAIRS**

Vol. I, No. 2, October 1947

**The Changes of Eight
Years in Agricultural
Economics**



Price 5s. 0d. net

OXFORD UNIVERSITY PRESS

LONDON: GEOFFREY CUMBERLEGE

By SUDHIR SEN

Secretary of the Damodar Valley Project, Works, Mines, and Power Department of the Government of India, New Delhi

AGRICULTURAL ECONOMICS IN INDIA—RECENT DEVELOPMENTS IN RESEARCH AND EDUCATION

THE interest hitherto taken in India in the field of research and studies in agricultural economics has been far from commensurate with the predominantly agricultural character of her economy. The reasons for this anomaly are, however, not far to seek. Agriculture in India, as has been rightly said, is pursued primarily as a mode of living rather than as a type of business. The average cultivator tills his small scattered holdings with the traditional wooden plough and grows, with little or no manure, whatever crops he can, depending all the time on a notoriously unreliable monsoon for his water-supply. No wonder that the question of profit and loss does not as a rule enter his calculations. Where business accounting is so conspicuously lacking, scientific study of agricultural economic problems loses much of its main driving force since at best its value tends to remain academic. Moreover, economic research and study in this field grows in importance as and when agriculture itself is caught in the dynamics of development along modern lines. In a country like India such a dynamic phase can really begin only when the state vigorously undertakes to carry out basic development projects for providing ampler irrigation facilities, improving communications, controlling flood and malaria, and fostering industries which create new markets for agricultural products and new avenues of employment for a part of the population which now over-burden agriculture. Meanwhile, lack of adequate and reliable data has been an additional reason why professional economists have hitherto paid far less attention to agriculture than to other spheres of India's economic life. As a measure of the general lack of interest in agricultural economics mention may be made of the fact that dependable figures for cost of agricultural production are not available at present except for a few small and isolated tracts. The truth is that agricultural economics in India has long been a neglected subject because her agriculture itself, until comparatively recent times, languished in a state of stagnation.

Indifference to agricultural economics is clearly indicated by the very small number of institutions which now provide facilities for studying the subject or for conducting practical research in this field.

At present there are only five agricultural colleges in India, namely, at Lyallpur in the Punjab, at Allahabad and Cawnpore in the United Provinces, at Sabour in Bihar, and at Dacca in Bengal. In addition ten more colleges now make some kind of provision to teach agriculture along with other subjects. It is also proposed to start three new agricultural colleges respectively at Aligarh, Hyderabad, and Delhi. In none of the existing colleges, however, is agricultural economics taught except in a very general and abstract way. This seems to be true even of the Lyallpur Agricultural College, to which goes the credit for having first introduced anything like a full degree course in agriculture, and also of the Allahabad Agricultural College which for undergraduate training now ranks high among India's agricultural colleges. Bengal long lacked what may rightly be called an agricultural college. It is only in the last two or three years that the agricultural research institute at Dacca has been expanded to provide facilities for undergraduate training in agriculture, though as yet little or no provision has been made for teaching agricultural economics. The activities of the Calcutta University in this field did not go beyond opening, a few years before the war, an agricultural research farm at Barrackpore, about twenty miles north of Calcutta, where work had to be suspended owing to the war.

As regards practical research work in the field of agricultural economics, mention may be made, in the first instance, of the Punjab Board of Economic Inquiry, a semi-official body which was set up soon after the First World War, with the object of studying economic problems from a practical angle, especially those directly affecting the well-being of the province. From the outset the Board undertook researches in rural economics including agriculture. For example, for years it has been compiling and maintaining continuous data on the cost of production of both irrigated and rain-fed crops at selected centres of the province. These cost-of-production data are undoubtedly among the best that are at all available in India. The fact that the Punjab has made greater headway in developing her agriculture and also taken keener interest in agricultural economics than the rest of India has, no doubt, been due primarily to the fact that she was the first province in India to benefit from the execution of large-scale irrigation projects. This, incidentally, seems to bear out the truth of what has been hinted above, namely, that interest in agriculture, including its economic aspects, is conditioned by the degree of state enterprise in carrying out basic development projects.

An attempt was made in the later thirties to set up a Board of Economic Inquiry in Bengal, consisting of a few officials of the provincial government and some university professors. The Bengal Board did not do much by way of primary research work with the result that the few studies it published on subjects selected at random (e.g. consolidation of agricultural holdings in Bengal, development of fisheries in Bengal, Bengal's long-term rice supply position and economic conditions in a few isolated districts of the province) either just records the views expressed by the members at Board meetings or are mainly summaries of information culled from miscellaneous official sources. Just before the war the Board initiated the compilation of data on the cost of agricultural production at a few selected villages of the province, but the work was abandoned after a short while. For the last few years the Board has been out of action altogether.

The Gokhale Institute of Economics and Politics at Poona has carried out some interesting and useful socio-economic surveys under the able guidance of Prof. D. R. Gadgil. Some of these surveys are directly related to agricultural economics, e.g. a survey of agricultural holdings and farm accounts in a taluka, a compendium on the legislative action taken by pre-war provincial governments to deal with the question of rural indebtedness. Some work has also been done by the University of Lucknow under the guidance of Prof. Radhakamal Mukherjee. There are other universities which from time to time interested themselves in the investigation of specific problems. For example, the post-graduate Economics Department of the Calcutta University initiated, in the early stages of the war, an inquiry into the general position of Bengal in regard to food supply with special emphasis on the Calcutta market for food-stuffs, a subject which within a couple of years was destined to overshadow all others in the province. In general it may be remarked that the research work done by universities in agricultural economics has been mostly desultory, being the outcome of short-lived interest in some isolated subjects.

The Institute of Rural Reconstruction at Sriniketan has for a long time had an economist attached to it, whose main task is to investigate the economic problems of a dozen villages known as the Intensive Area of Sriniketan. From time to time the Economic Research Section of the Institute published studies, especially on questions connected with the production and marketing of rice, which is the mainstay of the local population. In *Land and its Problems*, published in 1942, an attempt was made to give a comprehensive picture of the agricultural

problems of the area on the basis of data compiled through a house-to-house survey covering approximately 500 families. Since then an attempt is being made to collect and maintain continuous data on all important aspects of local agriculture, e.g. year-to-year fluctuation in crop acreages and yields, progress made in the excavation of irrigation tanks and the results achieved, cost of production of rice and other crops, local prices of agricultural products, estimated turn-over from local rice mills, and exports of rice by rail from the area. Though economic research at Sriniketan admits of further improvement and expansion in several directions, the Institute has already done useful work in studying agricultural economic problems of its own region. In a vast country like India, with wide differences in conditions prevailing in different parts, there is an unquestionable need for such regional studies through appropriate research organizations.

An important step in the organization of research and of an exchange of ideas on an all-India basis was the formation of the Indian Society of Agricultural Economics in January 1939. Thanks to the initiative taken by Mr. L. K. Elmhirst, who was then in India on a short visit, some officials and professional economists, specially interested in agricultural problems, were invited to meet at an informal gathering in Old Delhi Secretariat, where Mr. Elmhirst broached the proposal for constituting the Society. Such a society could, in his view, serve two very useful purposes. It could, like agricultural economics societies in other countries, stimulate interest in this particular field of study, help in keeping agricultural economists in contact with one another, and provide a platform for discussion of important problems and a fruitful exchange of ideas. In addition, this society would, as he hoped, associate itself with the International Conference of Agricultural Economics and members would regularly attend Conferences where India had hitherto been very poorly represented. As a result of this proposal, which was heartily welcomed by all those present, the first Indian Society of Agricultural Economics soon came into existence.

During the first two or three years of its existence progress was not satisfactory. The number of members remained small, the Society lacked even a permanent office, and its activities hardly went beyond holding a three-day conference every year. Since 1942, however, there has been a substantial improvement, thanks to the efforts of Sir Manilal Nanavati, ex-Deputy Governor of the Reserve Bank of India, who has been the President of the Society now for four years. The number of members is now in the neighbourhood of 200, its

financial position, too, has improved, while it now has a permanent office in Bombay. Its publications are, however, still few. Apart from the proceedings of its annual conferences it brought out a volume on the Economic Conditions of Rural India under the joint authorship of Sir Manilal Nanavati and Prof. Anjaria, President and Hon. Secretary respectively, while it is just starting a quarterly journal. As regards research work, a comprehensive study of the land-tenure systems prevailing in different parts of India has been under preparation for some time. The Society is also trying to establish Research Branches in the more important provinces to investigate problems on a regional basis, though efforts in this direction have not yet borne much tangible results. At its last two annual conferences held respectively at Naini (Allahabad) and Benares, the members were fortunate enough to hear stimulating inaugural addresses from Mr. L. K. Elmhirst and Prof. Hall who had come out to India as short-term Advisers to the Bengal Government.

The above survey, though somewhat hurried, underlines the inadequacy of research work in agricultural economics at present carried on by educational institutions including agricultural colleges and by other research organizations. Yet it would be doing less than justice if this account were regarded as a full measure of the progress made or the interest taken in this field. The truth is that this country has so far lacked almost completely that body of trained professional agricultural economists which in western countries would conduct researches from universities, agricultural colleges, public or semi-public research organizations, or even in an individual capacity, not to speak of men like Warren who combined practical farming, research, and teaching to an extent rare even in the West. Economists in India have hitherto been what may be called 'general' economists, though some of them in very recent times have been devoting increasing attention to agricultural problems and might therefore well prove to be forerunners of more specialized agricultural economists. In the meanwhile it was inevitable that a large part of the economic analysis of agricultural problems should be carried on by the government either within the administrative departments concerned or through various committees and commissions appointed by the government from time to time to investigate and report on specific subjects. No account of the activities in the field of agricultural economics in India will therefore be complete unless it takes into consideration, however broadly, the work done by the government.

The annual reports published by various administrative departments on agriculture, forestry, fisheries, co-operation, and rural indebtedness often include some analysis relevant to agricultural economics. The same is true of land settlement reports and, to some extent, even of 'District Gazetteers'. In addition, attempts are made from time to time to study such subjects as are, at a given moment, considered to have some special significance for the department or the government concerned, e.g. development of fisheries, fish marketing, the incidence of water hyacinth in Bengal. Such official studies in agricultural economics are, however, mostly carried out by people without the requisite technical training and experience so that they can hardly be expected to go beyond the standard of an intelligent layman's analysis.

The work done by committees and commissions is generally of a higher order, though their reports again, being intended for the wider public, cannot be expected to conform entirely to the specialized taste of the professional economist. During the last fifteen years, particularly when the provincial governments formed under the 1935 constitution were in office, a large number of committees and commissions were appointed in different parts of the country to investigate problems directly bearing on agricultural economics. It is no exaggeration to say that a fairly respectable library on the subject could be built up if all these official publications were carefully brought together. (Incidentally, there is a real need for such a library in different parts of the country, though unfortunately it would at present be difficult to find even one equipped with all relevant publications of the central, provincial, and state governments.) By way of illustration mention may be made of the fact that in Bengal alone half a dozen important committees and commissions, appointed by the provincial government, have submitted their reports within the last fifteen years, none of which can be ignored by the agricultural economist.

The Jute Inquiry Committee (First and Second), the Paddy Inquiry Committee, the Land Revenue Commission, the Forest Committee for Western Bengal, and the Bengal Administration Inquiry Committee.

The growing official and public interest in agriculture, which has been noticeable since the thirties, has been due in no small measure to the publication of the *Report of the Royal Commission on Agriculture* in 1928, which in many respects constitutes a definite landmark in the history of agriculture and agricultural research in India. The *Report*

provided a more comprehensive survey of the entire field than any other official document previously published. More important than its detailed recommendations on specific questions, on which one may not always see eye to eye, was the emphasis laid by the Commission on the role the state must play in India in the interest of her agricultural progress. As a direct result of its recommendations two important organizations were set up under the central government: the Imperial Council of Agricultural Research and an Agricultural Marketing Department under an Adviser.

The primary object of the I.C.A.R., which was constituted in 1929, was to promote, guide, and co-ordinate agricultural, including veterinary, research in India and to link it with agricultural research in other parts of the world. Recently its functions have been widened to include, in addition to research and education in the agricultural sciences, the application of the results of research to field practice. Its present programme therefore covers a wide field ranging from crop breeding (to evolve better strains of rice, wheat, pulses and millets, oilseeds, and potatoes), fruit research, pest control, animal breeding and nutrition, poultry research, dairy research, apiculture, various scientific problems connected with the production and marketing of fish, eggs, wool, hides, and skins, experiments in improved agronomic practices, soil surveys, and erosion control, to such subjects as the multiplication of improved seeds, mixed farming experiments, development of India's fruit trade, and crop-cutting tests to ascertain with greater accuracy the per acre output of crops. At times the I.C.A.R. also initiated investigations on subjects more directly bearing on agricultural economics, e.g. field researches, completed just before the war, on the cost of cultivation of rice and cotton in the more important tracts of India.

The Agricultural Marketing Department of the Government of India has published a series of comprehensive surveys covering all important aspects of the marketing of India's major agricultural products. Soon after the creating of this central department the provinces and some of the important states set up, in their turn, agricultural marketing departments in their respective areas so that for some years past there has been in existence an intensive marketing organization covering the entire country. The provincial organizations not only fully co-operate with the central department in carrying out essential all-India surveys, but frequently undertake independent surveys in subjects in which the provinces happen to be specially interested. Thanks to the work done by the central and provincial marketing

staff in India, more satisfactory progress has hitherto been made in the study of marketing problems than perhaps in the study of any other aspects of her agricultural economy.

It should also be added here that the Indian Central Jute Committee, the Indian Central Cotton Committee, and other similar bodies set up by the government have sometimes an economic research section attached to them for studying the economic aspects (e.g. production, marketing, supply and demand position, fluctuations in stocks and prices) of the particular commodity.

Though interest in agriculture was growing, especially since the publication of the Royal Commission's Report and the setting up of the I.C.A.R., it is only in the last few years that there has been a sufficiently deep and widespread appreciation of the fact that comprehensive measures for agricultural development cannot be safely postponed any longer. Of the factors which have been instrumental in bringing about this welcome change in outlook, the most important has been what was at first a neck-and-neck, but since the thirties an increasingly losing, race between India's food and population. Some people, like Dr. Voelcker in his memorable report on the *Improvement of Agriculture in India* published as early as 1893, had no doubt expressed genuine concern over the disturbing implications of a stagnant agricultural economy in a country with a rapidly growing population. But several decades had to pass before the problem of India's food supply began to attract anything like the amount of public attention it deserved. The last war has in this respect served as a stern eye-opener. Cut off from the rest of the world India found herself, especially after the fall of Burma, thrown back entirely upon her own food resources. By making it impossible for her to draw conveniently upon outside supplies, as in pre-war days, to meet a deficit in food at home, World War II threw into clear relief the fact that the growth of India's population had now outstripped her food production and thus revealed, in a challenging fashion, that food was now her economic problem no. 1.

In two important respects agricultural economics as a subject of study benefited from war-time developments. The attempt to grapple with the immediate problems in food supply and distribution called for careful economic analysis in many directions while the long-term agricultural planning undertaken in connexion with the preparation of post-war reconstruction schemes necessarily involved a considerable amount of research and study.

For proper food administration it was essential to assess, as accurately as possible, the supply and requirement of each food grain not only in the country as a whole, but also in each province and state, and even smaller administrative units. This imparted a new significance to agricultural statistics, particularly to the figures for the acreage and yield of all major food crops. The necessity of price control involved inquiries into such questions as what would be a fair price to the grower and therefore into his cost of production as well as his cost of living. The grow-more-food campaign, launched on the analogy of other countries, though not with the same intensity, called for surveys of waste lands, irrigation possibilities from minor works which could be developed in the short period, crop planning involving reduction in the area under commercial crops like cotton and jute in order to increase the area under wheat and paddy, also inquiries into the economics of artificial manuring, particularly with subsidized sulphate of ammonia. The inflation and soaring food prices coming so soon after the slump of the thirties made the question of long-term stabilization of food prices a live subject for discussion. The acute shortage of fish, milk, meat, eggs, and vegetables in Bengal, as also in other parts of India, made it necessary to analyse various economic questions connected with their production, marketing, and distribution.

The question of improving the quality of India's agricultural statistics has attracted considerable attention since the beginning of the food crisis. It has been generally admitted that in the temporarily settled areas the acreage statistics compiled by the village *patwaris* (i.e. accountant) are almost as accurate as similar statistics anywhere else in the world. The figures for per acre yield and therefore for total crop output are, however, far from reliable, both being as a rule seriously underestimated. The position in permanently settled areas (i.e. in Bengal, Bihar, Assam, and parts of Orissa and the United Provinces) is still worse because here not only the yields, but also the acreage figures, are completely unreliable. As permanent settlement dispensed with the need for employing subordinate revenue staff like *patwaris*, the village *chowkidar* (i.e. policeman) has been utilized in these areas, mainly in the interest of economy, as the primary crop reporting agent, though he has proved completely unfit for this additional function. A long and lively debate has taken place during the last few years over the relative merits and demerits of complete enumeration versus the random sampling method for improving the reliability of agricultural statistics. That per acre yield can and must be ascertained only through proper

sample surveys was, of course, admitted by both sides. The real difference of opinion arose in regard to the method to be followed for collecting acreage statistics in the permanently settled areas where, except when the settlement operations spread over a long time (for example, it took forty years to complete these operations in Bengal), no complete enumeration had ever taken place, so that the 'universe' itself was still unknown. The general consensus of opinion now is that the sampling method would not be appropriate in such conditions. Bihar, Assam, and Orissa have already initiated the collection of acreage statistics through complete enumeration. For a time Bengal also tried this method, though through a somewhat improvised organization, side by side with sample surveys, but has since discontinued it. Meanwhile the I.C.A.R. has set up a competent statistical section which is now engaged in evolving better methods for crop-cutting tests in order to improve the figures for crop output. It may be hoped that with the completion of the statistical work now undertaken by the Centre as well as the provinces under permanent settlement, reasonably dependable crop statistics will be available, which will correspondingly widen the scope for fruitful analysis by the agricultural economist.

Under the general scheme of post-war reconstruction planning the Government of India constituted what is known as the Policy Committee on Agriculture, Forestry, and Fisheries, which in its turn set up half a dozen sub-committees to deal with different aspects of future agricultural development, viz. fish, milk, land utilization, rural finance, stabilization of prices, and marketing. Some of these sub-committees have already submitted their reports while others have their reports under preparation. As part of the post-war reconstruction planning, a report on the future forestry development has been drawn up by the Inspector General of Forestry. Lastly, a Co-operative Planning Committee arising out of a conference of Registrars of Co-operative Societies is now engaged in investigating problems connected with the co-operative organization in this country. Two other publications of the Government of India (viz. *Technological Possibilities of Agricultural Development in India* and the I.C.A.R. Memorandum on the *Development of Agriculture and Animal Husbandry*, both of which preceded the work of the Policy Sub-Committees referred to above) really form an important part of the central plans for future agricultural development. Lastly, the Report of the last Famine Inquiry Commission, which dealt with the short- and long-term problem of India's food

supply, must be given a prominent place among the recent official publications on agricultural economics.

Following the Centre's lead, provinces and some of the important states set up their own organizations for drawing up reconstruction plans, as a result of which provincial and state plans dealing with different aspects of agriculture are now either under preparation or have already been prepared.

By way of completing the picture a reference might be made to the National Planning Committee which was set up in 1938 and functioned for a couple of years, but had to suspend its work owing to the abnormal conditions created by war. Some of the sub-committees of the N.P.C. prepared useful reports on subjects relating to agricultural economics (e.g. the Sub-Committee on Rural Marketing and Finance). The question of reviving the N.P.C. is now under consideration.

The reconstruction plans referred to above often include a good deal of what to the professional economist might appear as generalities not adequately based on, or supplemented by, the survey of necessary factual data. Nevertheless, no one interested in India's agricultural economics can ignore them, not only because they contain material not readily available otherwise, but also because they indicate the directions in which one must look for further facts and improvement in analysis. Nor should it be overlooked that the discussions which have been taking place all over the country in various committees and sub-committees on agricultural questions, while themselves the result of an intensification of interest in agricultural economics, are in the end bound to give a further stimulus to the study of this subject.

As was to be expected, this broadening of official interest in agricultural questions has led to an increasing association of trained economists and statisticians with the administration, quite a number of whom are now serving directly under the central and provincial governments. No less significant is the fact that, under the recently adopted policy of the government to award a liberal number of fellowships for education abroad, particularly in technical subjects, some have been awarded to persons desiring to study agricultural economics in foreign universities.

In this context a reference must also be made to the schemes which are now being prepared by the Government of India for the unified development of rivers on the lines of the T.V.A. experiment. From a long-term point of view these schemes are fraught with far-reaching possibilities for an all-round economic development including agricul-

ture and therefore also for agricultural economics. For example, under the Damodar Development Scheme it is proposed to erect eight dams which, in addition to complete flood control, will provide sufficient water for servicing about 80,000 acres with perennial irrigation and for producing electricity which, together with the output from supplementary thermal stations, would amount to 30,000 kw. It is also considered feasible to make the river navigable over a distance of about 150 miles from its mouth. In a perennially irrigated area correct land use, which forms an integral part of the T.V.A. approach, will lead to inquiries into rotation of crops, mixed farming, manuring, reafforestation, processing of raw materials, and a host of other questions which at every step will call for the aid of the agricultural economist. Growth of large-scale farming will, no doubt, have to wait till adequate solutions have been found, above all, for the problems of agricultural overpopulation as well as of land tenure. The new avenues of employment which should result from a programme of unified resource development may, however, find at least a partial answer to the former question, thereby creating more favourable conditions for tackling the latter. In any case, with water and power within such easy reach, the adoption of large-scale mechanized farming, even if on a limited scale, is a reasonable possibility, especially as the valley contains some extensive tracts of waste-lands which could be brought under cultivation without difficulty when its water resources have been fully developed. Thus as a long-term result of the river-development schemes both agriculture and agricultural economics in India may be expected to conform more and more to the broad pattern which has long been familiar in western countries.

Even for the more immediate future the outlook seems reassuring. Agricultural economics is no doubt still in its infancy in India, as will appear from the not too high proportion of strictly scientific content in the majority of contemporary studies, as well as in most of the current discussions on the subject. It may, however, be safely predicted that the keen interest in agriculture, now visible all over the country, will in due course be projected into agricultural economics as well. As agricultural development gets under way on a sufficiently broad front, the need for specialized analysis of its economic aspects will be increasingly obvious. In other words, the stage now seems clearly set for the early emergence of the fully fledged agricultural economist in India.