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.*

Vol XLI
No. 4

ISSN 0019-5014

CONFERENCE NUMBER

INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

PART II
OCTOBER-DECEMBER
1986

INDIAN SOCIETY OF AGRICULTURAL ECONOMICS, BOMBAY

SUMMARIES

LEVELS OF AND CONSTRAINTS TO THE ADOPTION OF IMPROVED DRYLAND FARMING TECHNOLOGY

Y. V. R. Reddy, B. K. Rastogi, V. Annamalai and M. Sudha*

A study on adoption levels and constraints in the adoption of improved dryland farming technology was carried out during 1976-77 to 1979-80 under World Bank-financed Agro-Economic Scheme. The study focusses on the adoption levels of four components of dryland technology (improved seed, fertiliser application, pesticide use and improved weeding) covering 5,225 farmers from 16 different agro-climatic regions and growing more than dozen crops, fairly representative of agricultural crops in India. The percentage of farmers who adopted the four components of crop technology was worked out. The adoption of technology by the farmers varied from location to location for the same crop and also from crop to crop within the location. The adoption of improved seed and interculturing/weeding was mostly accepted by the farmers, whereas the adoption of fertiliser application and pesticides use—costly cash inputs—was low. The farmers did not cover the complete dryland area with technology and therefore the extent of adoption of improved technology was also worked out. The adoption was more in the case of *rabi* sorghum, wheat and commercial crops (groundnut, castor and cotton) compared to other crops. The constraints identified in the adoption of technology were (*i*) high cost of inputs, (*ii*) shortage of capital, (*iii*) lack of knowledge of improved practices, (*iv*) fear of loss due to failure of rains, (*v*) non-availability of inputs at appropriate time, etc. Generally, economic factors overshadowed the technological and biological factors. The constraints for high productivity in dryland could be eliminated through remunerative price policies, liberal sanction of loans by the banks, proper crop insurance schemes for dryland crops (where instability in production is a common characteristic feature) and better and effective extension agencies/services.

AN ECONOMIC EVALUATION OF AGRICULTURAL EXTENSION SERVICES IN GUJARAT STATE

J. I. Patel and A. S. Charan†

The present paper attempts to study the significance of extension programmes and to find out the regional variations in the marginal contribution of extension services to increased agricultural production. To examine the

* Central Research Institute for Dryland Agriculture, Santhoshnagar, Hyderabad (Andhra Pradesh).

† Assistant Research Scientist and Professor, respectively, Department of Economics, South Gujarat University, Surat (Gujarat).

objectives, the production function with five independent variables was used. The State was divided into two parts according to productivity, *i.e.*, high productivity areas and low productivity areas. The study was conducted covering the years 1977-78 to 1979-80. The required information and data were collected from secondary sources of information. The coefficients of determination worked to 0.953 for the high productivity areas during 1979-80 and 0.999 for the low productivity areas during 1978-79. The b values of agricultural production with respect to extension investment were negative being —0.052 and —0.082 in 1977-78 and 1978-79 respectively and positive, being 0.003 in 1979-80 in the high productivity areas. In the low productivity areas, the elasticities of extension services were —0.003 in 1977-78, 0.060 in 1978-79 and —0.312 in 1979-80, indicating that the effect of extension services is not uniform from year to year. The marginal profitability of extension education was found to be Rs. —4.24 in 1977-78, Rs. —6.72 in 1978-79 and Re. 0.12 in 1979-80 in the high productivity districts. In the low productivity districts, it was found to be Re. —0.09, Rs. 2.11 and Rs. —7.47 during 1977-78, 1978-79 and 1979-80 respectively.

THE ECONOMIC EFFICIENCY OF FARMERS GROWING HIGH-YIELDING, IRRIGATED COTTON IN INDIA

G. Subramaniyan*

The economic efficiency of large and small farmer groups producing MCU-5 and LRA-5166 varieties of cotton in Madurai district in Tamil Nadu was studied using Lau-Yotopoulos profit function along with the four input demand equations relating to labour, fertiliser, pesticides and bullock pair. The profit function was estimated simultaneously with input demand equations by using Zellner's seemingly unrelated regression. The study revealed that the large farmers are relatively economically more efficient than the small farmers in the study area. This may be due to the reason that the large farmers have an advantage over the small farmers in their access to information on modern technology, credit and inputs. It may also be attributed to the existing agrarian policies and structures. This implies that small farmers can also be made equally economically efficient through the provision of easy credit and inputs along with better agricultural information and extension services. Both the small and large farmers producing the two varieties of cotton are found to be profit maximisers. This finding is highly relevant, as cotton is one of the important commercial crops produced mainly with a profit motive. A significant difference in efficiency is observed between the two farmer groups with regard to labour use. Both the small and large farmers are found to be price inefficient.

* Reader in Econometrics, Department of Economics, Madurai Kamaraj University, Madurai.

EVALUATION OF EXTENSION STRATEGY IN IMPROVEMENT IN YIELD OF PADDY

S. V. Supe, V. D. Galgalikar, B. D. Bhole and N. A. Gadre†

In this paper, an attempt has been made to evaluate the role of the extension activities in the development of agriculture through their effect on the yield level of paddy in Bhandara and Chandrapur districts of Maharashtra. The communication behaviour, comprehension and attitude of the paddy growers towards improved package of practices in paddy cultivation including area under high-yielding (HYV) and improved varieties were considered as proxies for the impact of extension activities. The study is based on a sample of 240 paddy growers spread over ten villages from the area. The data pertain to 1984-85 season. Paddy covers more than 70 per cent of the gross cropped area in this region. The results of the study indicated that (*i*) the farmers are not aware of recent HYVs of paddy and, therefore, they are not in a position to comprehend the varieties and their improved package of practices; and (*ii*) the attitude of farmers towards HYVs is not favourable and hence most of them (about 65 per cent) adopted local varieties. This may be due to lack of conviction about the superiority of these varieties. It is, therefore, suggested that extension activities need to be re-organised so that communication of information is improved.

A PROBE INTO INPUT SUPPLY AND MARKETING SYSTEM WITH SPECIAL EMPHASIS ON EQUITY AND DEVELOPMENT

K. Sain,* and G. Mallik*

The main objectives of this study are, firstly, to examine the rationale of the existing system of input supply in India with particular accent on a selected area in West Bengal. This involves estimates of relative potentialities of key farm inputs in contributing towards enhanced yield and towards more equitous distribution of additional income generated in the process. Secondly, to examine the comparative merits of using different major inputs in the cultivation of principal crops and in different agro-climatic regions with a view to convincing ourselves how far a rational re-distribution of resources between these crops and regions is warranted for desired distribution of its fruits. Thirdly, to examine the nature of returns to scale obtaining for different economic groups of farmers in different agro-climatic regions on the basis of use of both traditional and modern factors. Finally, to consider the existing sys-

† Head, Department of Agricultural Extension, Head, and Assistant Professors, respectively, Department of Agricultural Economics and Statistics, Punjabrao Krishi Vidyapeeth, Akola (Maharashtra).

* Professor of Agricultural Economics and Research Associate, respectively, Department of Agricultural Economics, Bidhan Chandra Krishi Viswavidyalaya, Kalyani, Nadia, West Bengal.

tem of marketing of farm inputs and to make some suggestions for strengthening this system for attaining optimum economic welfare. The methodology of research involves mainly collection and analysis of primary data by SRSWOR method from 120 operating households belonging to four size-groups, namely, (*i*) marginal farms (0.01-1.00 ha.), (*ii*) small farms (1.01-2.00 ha.), (*iii*) medium farms (2.01-4.00 ha.) and (*iv*) large farms (4.01 ha. and above). The area of this investigation covers Burdwan, Bankura and Nadia districts. The year of investigation was 1.6.84 to 31.5.85. Personal investigation of the sample farmers was done during the period of the next year. To reinforce the findings from primary data, relevant secondary sources were consulted. It was observed that the major farm inputs in use still remained potentially productive in varying degrees in different agro-climatic regions, for different crops and for different farm size-groups. Secondly, the modern and light farm inputs were relatively more productive than the traditional and primitive inputs and had greater scope for enhancing per hectare yield. Thirdly, returns to scale were increasing in cases where irrigation facilities were available, where HYV crops and cash crops were grown. Fourthly, the greater existing scope for more productive investment in light and improved varieties of farm inputs involving biological, chemical and mechanical innovations in farming within the reach of the marginal and small farms indicated opportunities for making the distribution of farm inputs, especially, of improved farm inputs, more equitous in the years to come. However, the distribution of farm investment remained still inequitous. Finally, the system of supply of farm inputs remained as yet undeveloped and obnoxious. It is suggested that a sincere effort is needed at all levels, official and non-official, to bring about a rational re-allocation of farm inputs through proper development and regulation of the farm input supply and marketing systems with a view to achieving greater equity with development in future.