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JOURNAL OF
AGRARIAN AFFAIRS
Vol. V, No. 3, December 1967
PAUL CAMPUS LOS

## Reports of Discussion Groups at the International Conference of Agricultural Economists Sydney, August 1967

Produced by the University of Oxford Institute of Agrarian Affairs in conjunction with the International Association of Agricultural Economists

Price 10s. 6d. net
OXFORD UNIVERSITY PRESS
LONDON

## GROUP 14. ECONOMIC AND TECHNICAL RESEARCH CO-ORDINATION

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Members of the Group emphasized that resources for research are limited in comparison with the numerous projects available. Usually, sufficient projects within our disciplines can occupy the researchers full time without resorting to co-ordinating effort. It was stressed that the research funds available are often claimed by projects with limited value for confirmed theoretical progress as well as for practical use.

Wrong investment decisions are often made due to insufficient contact and planning co-ordination between the research people. Research men in technical subjects as well as economics working more or less isolated often cannot implement the purpose and scope of their intentions, conclusions and working methods in the most effective way. Double work also has been done due to this isolation and also because the economist has not specified his wants to the technical scientist.

Research men in various technical fields have up to now been working without sufficient consideration to the wide possibilities of applying their findings to justify the demands of maximizing the economic result in different processes of production. In particular, mathematical programming requires complete and accurate data. The use of these tools by the economist has brought with it the awareness of inadequate technical data. The technician must to a larger extent understand the language spoken by the economist and also his intentions; the technician must always keep the economist in mind. At the same time the economist must at an earlier stage try to make clear for the technicians what is most relevant from the economic point of view. Experimental work is not an end in itself but an important link in a work aimed to contribute to economic progress.

For the farmer, co-ordination of research work is essential if he is to continue, in a commercialized environment, to handle more inputs and market more outputs. With increased investments, higher degree of commercialization, etc., there also follow increased possibilities of choosing between various means of production and at the same time between various risks. Improved co-ordination ought to begin at the research level or with the research team.



GROUP 14. ECONOMIC AND TECHNICAL RESEARCH CO-ORDINATION

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The possibilities of co-ordinating economic and technical research are increasing. Investments in research are larger than ever before. The general level of knowledge is improving, making it possible to receive basic data treated more carefully than earlier. The arsenal of tools for research work, including computers, has increased enormously in a few years.

The group discussed in detail whether there are fields of research where, for example, technical research may be carried on without any direct co-ordination with economic research. The conclusion was that there are research fields in which co-ordination is not quite essential. As an example plant improvement was mentioned. Even in that branch, however, a certain degree of co-ordination is needed as economists have the best knowledge concerning those improvements in the plant material which are most urgent from an economic point of view. The need for co-ordination also will be dependent upon natural and institutional conditions. The profitability of an irrigation project may be decided by economists, provided that the investment costs are already known by experiences from other projects of that kind, and that soil scientists are able to supply data on yields of various crops at different inputs of fertilizers, etc. If these coefficients are unknown, however, co-ordination of economic and technical research work will be demanded from a large number of persons in different disciplines.

In order to stimulate co-ordination in research work the Group especially recommends team work groups for planning and carrying through research projects. The persons in the team should represent economics as well as different technical fields concerned and also extension specialists. Thereby it should be possible not only to obtain a better result for the actual project itself, but also a continuous improvement of the team-work between the different disciplines concerned and an increased understanding among technical researchers as to the economic goals.

Co-ordination of economic and technical research should not be confused with interference. To conform to 'real-world' situations, technical information will have to be multi-dimensional and adequate so that functional relationships can be obtained. It would appear, therefore, that co-ordination is inevitable. It is the task of the Agricultural Economist to facilitate this movement both at the administrative and operating levels, bearing in mind the effort and time required for success.