Centre for Agricultural Strategy

Agricultural and food research – who benefits?

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A summary of the discussion

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The questions after each paper and the general discussion showed that the main conference theme 'Who benefits from agricultural research?' had engendered several other, often controversial, topics some of which might well be made the subject of future conferences. This summary is, therefore, set out in terms of these topics rather than in the order of conference papers.

THE EVALUATION OF RESEARCH BENEFITS

Several speakers emphasised that evaluations based solely on improvements in agricultural productivity were too narrow. For example, consumers now had available new food products and products of better quality. Apart from this, the public good rarely entered these cost-benefit calculations and some felt that this aspect was also completely lacking in existing institutional structures for UK agricultural research, to the public detriment. (It was, however, pointed out that some research, eg on tobacco, which at first sight might seem anti-social, was merely using the tobacco plant as a convenient model in experimentation.)

As to research costs, account should be taken of the innovatory efforts of farmers themselves; the system was much more complex than a simple linear flow from research to commercial benefits. The point was also made that the sector that disseminated scientific information was under-valued by scientists; it was claimed that much research is unnecessarily duplicated because scientists are not aware of what is being done elsewhere.

Stephen Biggs (University of East Anglia) obtained some support for the idea that, because of this complexity, an attempt should be made to discover by what means scientists in the past had been led to do the right research given that they faced an uncertain future and could not accurately have

foreseen the conditions under which their research would be implemented. Martin Upton (University of Reading and EPARD) suggested that scientists actually had had a narrow objective namely that of finding ways to increase productivity, output per hectare of crops or output per animal. Conventional economic wisdom was that a new technology is neither output-increasing nor cost-saving in its own right; it is the conditions under which it is implemented that determine which effect prevails and whether the research will be successful in practice.

FUTURE SUPPORT OF AGRICULTURAL RESEARCH IN THE UK

Concern was exrpessed that, with 1992 imminent, past successes in improving agricultural productivity might not be repeated because of the severe cuts being made of 'near-market' research; the crucial issue was not who pays for such research but that it is actually undertaken. Given the doubtful validity of the concept of 'near-market' research, it was to be hoped that it would cease to be applied as a research criterion.

Peter Bunyan (ADAS: Director General) took a more optimistic view. Whilst cuts in research funding were unwelcome, they only amounted to roughly £30m in £250m so that there was still public funding of agricultural research in the UK on a large scale. If the UK research sector had, perhaps, been investigated and re-organised too much in the recent past, a period of relative calm and stability should now ensue, with MAFF committed to strategic research in support of the industry. To that end, they had set up a structure in the new Priorities Board designed to bring together industry and government to try to ensure that there is a coherent research programme and that the research the government funds is taken up by industry. It will take time to see how well this works, but there is no reason to be pessimistic as to the outcome.

SOCIAL SCIENCES IN AGRICULTURAL RESEARCH

Colin Thirtle (University of Reading) asked whether agricultural research in the UK was behind that of the US, indeed of many countries, in lacking an input from the social sciences, eg economics. In reply, it was noted that the latest Report on Food and Agriculture to the Secretary of Agriculture in the US had defined six priority areas (sustainable agriculture, including reduced use of chemicals; water quality; animal welfare; food; biotechnology; and the impact of social change on rural communities) that actually matched AFRC priorities. The science in AFRC institutes, although otherwise highly multi-disciplinary, did not directly involve economists but an economic dimension was provided by the ESRC, by MAFF, and through collaborative projects with outside agencies; this seemed appropriate for a Research Council carrying out a substantial proportion of basic research. It might be that the traditional institutional arrangments for research in the UK should

be changed but there was no convincing evidence that UK agricultural research had been less productive than US agricultural research.

RESEARCH POLICY AND INTENSIVE PRODUCTION

Susan Millington (Elm Farm Research Centre, Newbury) asked why, given agreed priorities on the quality of food and of the environment, together with the problem of food surpluses in Europe, was not more attention paid to organic farming? So far, the R&D input to organic farming had been a tiny fraction of that on intensive methods.

Conflicting views emerged in the discussion. One was that intensive farming methods were unacceptable to the public who, moreover, did not wish to see agricultural production concentrated on less and less land with eg the loss of hill farms. This inferred that future research should be aimed exclusively at non-intensive methods.

The contrary view was that organic products are the luxury of a minority; the world simply could not feed itself without intensive farming methods. In the UK, it could be expected that some 90% of production would continue to use intensive methods. Hence, whilst basic research is relevant to both kinds of production, applied research and development would have to continue to concentrate, if not exclusively, on intensive production.

David Harvey (University of Newcastle-upon-Tyne) suggested that economic analysis was required. On the free-market model, the release of substantial areas of land that a concentration on intensive production implies is not going to happen because (apart from minor use for building or golf-courses) there is nothing else for the land to do, hence the vast majority of it will remain in agriculture. It is unrealistic to suppose that little bits of this land will be farmed intensively and the rest laid waste. The only way that could happen is by a centrally-planned dirigiste policy that dictated what is produced and where. It would thus be dangerous to base the strategy for our main research service on a mistaken view of what will happen in the future and steps should be taken to see that, as elsewhere in the world, economists become an integral part of that service.

Scientists had not yet grasped the economic reality that other industries, such as coal-mining, faced with over-production, as agriculture now is, in reducing output had released those resources, capital and labour, that had something better to do elsewhere in the economy. The situation is different with the land resource in UK agriculture because there is no alternative use for land, hence capital and labour will leave agriculture but not land. Indeed, were land to be released from agriculture, he himself would hasten to acquire some at virtually zero cost and would then grow something on it and hope to make a bit of money!

Others questioned this interpretation but the issue was left unresolved. It was also suggested that the history of UK agriculture demonstrates that marked shifts in the geographical distribution of agricultural production

have always occurred, hence future research might well be directed towards finding alternative uses for land.

UK RESEARCH IN A WORLD CONTEXT

It was pointed out that UK research already had many links with Europe not only in exchange of scientists but also through collaborative research. Thus some 6% of the budget of the Institute for Food Research came from EEC sources.

The larger question was that of feeding the world's population. Whilst ISNAR was active in seeking a compromise between those who wished to protect the environment as a first priority and those who looked to higher agricultural productivity, this was only one of many issues that had to be resolved. Some of the problems are within developing countries, for example some did not have a viable national research effort or the rate of adoption of innovations by farmers was too low due to low or even negative marginal returns to labour. Other problems, however, are in the developed world; for example, there is too little funding of relevant research, such, it was claimed, as introducing nitrogen-fixation into crops that cannot at present fix nitrogen.

No detailed material was provided on how UK agricultural research contributes to the developing countries, but it appeared to be, if modest in level of expenditure, at least not lacking in this respect.