
Introductory remarks

G. W. Cooke

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Introductory remarks

BY G. W. COOKE, F.R.S.
Agricultural Research Council, London

The history of British agriculture since 1940 is the story of a very successful farming revolution which still continues. In the 10 years from 1965 to 1975, production from our farms, valued at constant prices, increased by about a quarter; the people engaged in farming decreased by a third; and labour productivity increased by a half. We now produce nearly two thirds of all the products of temperate agriculture which we consume in Britain; the comparable figure for pre-war days was probably no more than half of the food produced for smaller populations of people and livestock. All of this has been done with a diminishing area of farm land. Annually about 0.2 % of agricultural land is diverted to other uses, but output per unit area has increased by 3 % a year over much of the period since 1945. The net result is that the *proportion* of home produced food has risen annually by 0.5 to 1.0 %. Not only have crop yields increased but we have more stock on our farms. From 1946 to 1970 numbers of cattle increased by 40 %; we had four times as many pigs, twice as many hens, and numbers of sheep increased too. Because we grow so much more animal feed crops in this country, the feeding stuffs imported are no more now than 20 years ago, and indeed no more than we imported 40 years ago. Three times as much cereals are produced as in pre-war days, and twice as much sugar from beet; potatoes yield 60 % more, but from less land than was previously used.

How have these changes been achieved? The greatest change, visible to all, has been that mechanization has vastly increased, machines replacing horses *and* men. But equally important has been the full application on our farms of the results of research. Both our crops and our livestock are genetically improved, they are nourished more fully and more efficiently, and are managed in more productive and efficient farming systems. The pests and diseases of both plants and animals are controlled much more effectively than in the period before 1940.

These rapid changes in management, and in the application of science and engineering to farming, have been made possible by the close contact of the National Agricultural Advisory Service (N.A.A.S.) (now the Agricultural Development and Advisory Service (A.D.A.S.)) with both research workers and farmers. N.A.A.S. tested the results of research on their own experimental stations and passed on the results as advice to farmers who were increasingly receptive as a result of better education. Now in many branches of agriculture, farmers are impatient for the next round of improvements resulting from research and development, realizing that their prosperity, and possibly their survival, depends on technological improvements.

This meeting is an occasion for taking stock. The organizers think we should stop for a moment to check the present position and future course. The discussions presented are on questions critical for the future of British farming:

(1) Are we growing the crops and livestock best suited to the potentials of land and climate and to the needs of the nation?

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(2) Are the practices adopted in today's intensive agriculture damaging our soil because we use

(i) fertilizers instead of organic manures?

(ii) heavier and faster machines?

(iii) chemicals for weed and pest control?

(3) Can we cheapen the costly inputs to intensive mechanized farming?

(4) Can we avoid waste of resources and products, and make more use of by-products?

(5) Can we get nearer, *in practice*, to the known potentials of our farming systems? A few farmers do achieve high yields from crops and stock but the average achievement in crop production, and in many branches of animal production, is no more than half of proven potential.

(6) Finally, the future objectives are clear to us. They must be to produce more crop and livestock products, without damage to soil or environment, at prices the consumer will pay for the quality desired. How can our capacity to achieve these objectives be safeguarded by new research designed to raise the potentials of British farming even further?