ECONOMICS IN HORTICULTURE

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General Editor: Professor L. Broadbent, University of Bath

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This series of texts has been designed for students on courses in horticulture at the Higher National Certificate or Diploma level, but care has been taken to ensure that they are neither too specialised for lower-level courses, nor too superficial for university work.

All the contributors to the series have had experience in both the horticultural industry and education. Consequently, the books have a strong practical flavour which should reinforce their value as textbooks and also make them of interest to a wide audience, including growers and farmers, extension officers, research workers and workers in the agrochemical, marketing and allied industries, and the many gardeners who are interested in the science behind their hobby.

The authors are all British but they have illustrated their books with examples drawn from many countries. As a result the texts should be of value to English-speaking students of horticulture throughout the world.

frontispiece

A scene in Smithfield Market, Birmingham, England.

ECONOMICS IN HORTICULTURE

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ENGLISH LANGUAGE BOOK SOCIETY
and
MACMILLAN EDUCATION

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CONTENTS

Acknowledgements	viii
Introduction	ix
1 THE NATIONAL ECONOMY	1
1.1 The Gross National Product	1
1.2 Agriculture and economic growth	3
1.3 Case study illustrations of horticulture in the national economy	7
2 PRICE	16
2.1 Demand	18
2.2 Supply	29
2.3 Interaction of demand and supply	31
3 MARKETING	36
3.1 The markets	42
3.2 Grower organisations	46
3.3 Retailing	49
4 PRODUCTION	53
4.1 The firm	53
4.2 Input output relationships	55
4.3 Risk and uncertainty	62
5 RESOURCES	69
5.1 Capital	69
5.2 Land	77
5.3 Labour	81
6 ORGANISING PRODUCTION	87
6.1 The behaviour of costs	87
6.2 Determining the quantity of resources to use	93
6.3 Determining which product or crop to grow	99
6.4 Planning techniques	101
7 LOCATION	106
7.1 Intranational trade	106
7.2 International trade	108
7.3 Case studies of location	113
8 POLICY	118
8.1 Producer incomes	118
8.2 The mechanisms of government policies	121
8.3 Case studies of horticultural policy	124
Appendixes	129
Further reading	131
Index	133

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INTRODUCTION

The word economy has two Greek roots referring to household or estate management. Economics has been generally in use only since the early part of this century. In more recent years it has broadened in scope and today encompasses many specialist disciplines. Economics is concerned with the exchange of goods and services between people and the organisation of scarce resources. This definition clearly needs elaboration.

Returning to the older household management root can provide us with a very simplified example. The urban housewife of today has a limited income to spend organising her budget so that the family is fed, clothed and maintained. She allocates her scarce resources between these competitive uses of her money to gain the greatest satisfaction possible. Food and heating may well have priorities and thereafter she may have a scale of preferences towards the more luxury types of consumption such as recreation and holidays. In just the same way as she allocates her scarce resources so does the Government in organising its annual budget and so does the horticultural producer in organising his spending. Our housewife may gain satisfaction from her spending by the sight of a happy contented family. Benefits accruing from Government expenditure are much more intangible and difficult to quantify. The grower has more positive benefits in terms of moneys coming from the sale of produce in a market. This is his source of moneys for further expenditure and his own family maintenance. The Government may raise its moneys by taxation on land, imports and incomes of the population. Our housewife's income will have been derived from her own or her husband's work. In reality of course the husband might be employed by the Government as a civil servant. He may pay taxes to the Government on his income. His wife may buy produce from the grower, who in turn is also a consumer and taxpayer, but in addition may well receive assistance from Government expenditure.

Exchange

In our example we can identify logically and conveniently distinct parts of the exchange economy. The grower is concerned with production of crops using the resources of land, capital and labour. In the exchange economy he sends his produce to consumers, many living in urban centres geographically removed from his holding. The process of transferring products from the point of production to the consumer is called *marketing*. The grower's organisation of production and marketing, usually with profits as a goal, is called *management*. Central Government

concerned with the smooth running and strength of the national economy may need to influence this exchange system to improve its overall efficiency. It may for example introduce a wage restraint or income tax in order to manipulate consumers' incomes; the grower may receive grant aid or tax concessions and by these means a national *policy* is adopted towards a particular economic end. Stimulation of exports, retarding of imports, expansion of particular forms of production or consumption may be chosen. The professional economist is concerned with the efficient use of resources at individual, business and national level; as an observer of consumer and producer activities and of the effects of Government policies he carries out an *economic analysis*. He may construct simple graphic or more complex mathematical models of particular situations from which he tries to understand past situations and to predict with reasonable certainty future results from given actions.

Money is the basis and common exchange medium in our example and it is in markets that this exchange occurs. It is here that consumers make their desires known and values are determined for the goods or services exchanged. Even in our very simple example there are clearly many more people involved than the three central figures. The whole population of the country and if international trading is included, of the world, are involved in economic exchange. Man is a social animal and society comprises a wide genetic spectrum of races and of behavioural pattern to given stimuli. Economics is concerned with the behaviour of people in allocating their scarce resources — it is a social science.

Economics and social sciences

The social sciences include such disciplines as sociology, anthropology, geography and psychology; subjects less familiar to the student of horticulture who more commonly finds himself associated with the natural sciences. This is particularly true of the horticultural colleges and university departments. In common with all sciences measurement features prominently in social investigations. The objects concerned in this measurement and the units used are perhaps the earliest stumbling block encountered by the student new to the subject. Once these new concepts have been mastered there are some similarities of approach to other sciences and much is common sense. One cannot do better at this stage than to quote the well known economist Colin Clark who in a recent book called *Starvation and Plenty* says:—

'So much of economics consists of statements which are obvious as soon as one comes to look at them but which for various reasons seem to escape the notice of active statesmen and of learned professors.'

The economist in particular does face some rather different problems. It is very difficult for him to carry out a controlled experiment in the same manner as one might for example investigate the effects of temperature on photosynthesis in plant physiology. He relies on observations, theories and

conclusions drawn from statistical records of the past. Value judgements inevitably feature prominently. The student must learn early on to distinguish between fact and opinion and appraise them in relation to the current state of knowledge. As a young subject its theories are not highly developed and capable of proof; mathematical tools as aids to the expression of new concepts are a comparatively recent addition.

A student new to economics will soon discover that it is an opinionated subject. Everyone knows something about money, trade, taxation and will offer advice to the exchequer on the running of the economy. Even professional economists disagree on their methods of analysis and interpretations of situations. There is an old joke, often attributed to Keynes, that if you take any six economists you have seven opinions. Inevitably perhaps there may commonly be a large gap between theoretical analysis and reality. Having to live through the implementation of a treatment prescribed by an economist has been an unhappy experience for more than one individual.

Agricultural economics and horticulture

Agricultural economics has evolved as a separate study largely within this century. This has probably come about because its origins were often in institutions concerned with husbandry aspects of agriculture. The study of the business management aspects of these husbandries has gradually led to deeper investigations of the economics of agriculture. Today agricultural economics has its own learned societies nationally and internationally and is an established discipline in universities.

Studies of the economics of horticulture have always been regarded in the past as simply part of agricultural economics. Often horticulture has found itself something of a 'cinderella' in this respect. The producers of goods for relatively luxury consumption, such as flowers, fruits and vegetables, have not commanded the same attention as producers of bulk carbohydrates and more recently animal proteins. Not surprisingly this is reflected in a dearth of statistical and documented information about many horticultural crops and situations. In the past twenty years however there has been some improvement in the situation and one of the most encouraging signs has been the establishment of a clearly viable sub-group of the International Society for Horticultural Science to study horticultural economics.

Horticulture defined

In lecturing to his own students the author defines horticulture as that part of agriculture concerned with the production of relatively high value crops, not including those for bulk carbohydrate production or the extraction of chemicals or for animal production. This is a negative definition in that it delineates a residue of crops relevant to United Kingdom horticulture. In another climate other crops may be regarded as

horticultural and others seen as simply part of agriculture. Even in the UK vegetable crops and even nursery stock are being grown to an increasing extent on large farms having agricultural crops as well in terms of the definition above. Fruit growing has always featured in mixed farm cropping. In these situations the economist cannot escape consideration of agricultural crops if he is investigating the business economy.

A further problem of the use of the word horticulture is its equation in the minds of many of the general public with gardening. Horticulture is a sophisticated technology and education of the general public to this effect is still necessary. It is a professional and commercial, not amateur, occupation and in this book as the title implies we are concerned solely with commercial horticulture.

Even commercial horticulture today can be sub-divided into specialist disciplines. The two broad categories of crop production and amenity (including nursery stock) are usually recognised. The latter category is different in that it is concerned with creating an effect. A display or amenity planting is only achieved at cost and it may even help to 'sell' a resort or town to tourists but it is not sold itself. Nursery stock production is a unique area of horticulture as well. Although its products are marketed they are not sold in the same manner as most fruit, vegetables and flowers. Most nursery stock producers are able to determine the price of their products themselves. This does not mean that they can charge what they like because they are still in competition with other nursery stock producers. In this respect they are more akin to producers in other non-agricultural industries.

This book is concerned with economics in commercial crop production. It may be that we need a new word to describe this type of horticulture but any new word would have to achieve international acceptance.

Economics in horticulture

Horticultural technology is related to many other disciplines of both the arts and sciences. Economics with its roots in the social sciences broadens its outlook considerably for it is truly inter-disciplinary and international. Furthermore the comparative youth of horticultural economics as a study means that it is still possible to achieve originality from seemingly quite elementary investigations.

The writer of a textbook cannot hope to mirror all the opinions of economists in an introductory text. It is intended here to lift the veil surrounding economics in horticulture. It is hoped that the reader or student or grower or adviser or even other economists might find encouragement to delve further into the literature of general economics. It can only be beneficial for horticulturists to become more familiar with the social sciences and for them to try to understand the particular characteristics of the industry. A reference list for suggested further

reading is included at the end of this book. It must be stressed however that economics is a dynamic science. The economic situation is undergoing continual change. The serious student should try to relate daily news bulletins and their contents to his knowledge of economics.

Ideally this broad spectrum subject ought to be read with the chapters in parallel. Inevitably however one chapter has to follow another: the cyclic arrangement of chapter headings seemed to the author the next best solution. Thus we start with the overall national economy and conclude at national level again in considering governmental policies. In between we gradually focus down on the individual grower and his business.