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## THE DIVISION OF ECONOMICS AND MARKETS

(A.J. du Plessis, Chief of Division)

### Introduction

The Division of Economics and Markets was established in 1925 in the Department of Agriculture. During 1958, with the division of the old Department into two separate Departments, namely that of Agricultural Technical Services and Agricultural Economics and Marketing, the Division was incorporated with the latter Department.

With the establishment of the new Department, the Division was also relieved of some of its former functions. The grading, inspection and market intelligence services, which since their inception had resorted under the Division, were formed into a separate Division, namely the Division of Commodity Services; while some of its more technical-administrative functions were taken over by the newly-formed Directorate of Economic Services of the Department. This arrangement enables the Division to concentrate on its assigned tasks, namely research in the field of agricultural economics and the rendering of information services.

In recent years, with improvement in the manpower position, the research aspect in particular could be given much more attention. In fact, ever since the establishment of the Division, a shortage of trained professional staff has always been one of the major obstacles encountered. With the ceasing of hostilities in 1945, in particular, the Division actually had to start afresh with a depleted staff, while new manpower units had to be trained again.

It stands to reason that, with the resumption and extension of research work, the information services could also be greatly improved and extended, because wider and more accurate facts and figures became available.

These information services, therefore, form an integral part of the activities of the Division. Information and statistical data are continually being furnished in the form of articles, publications, memoranda, notes for speeches, replies to congress resolutions, information specially compiled for commissions or committees of enquiry, and in numerous replies to requests from official as well as private instances.

## Present organisation

The Division's staff consists at present of the following posts: A Chief and Assistant Chief, three principal professionals, three senior professionals, 11 professional officers and 24 assistant professionals. In January, 1961 these posts had all been filled. At present, however, eight vacancies again exist, resulting from resignations and transfers to other posts within the Department and to other Departments. Moreover, three professional officers are at present at universities in the U.S.A. with scholarships in advanced study.

Apart from these posts in the Division, similar posts for agricultural economists have of late been created at the various Regional Offices of the Department of Agricultural Technical Services, while additional posts in this respect are foreshadowed. To date the following regional posts have been approved: Two principal professionals, three senior professionals, four professional officers and 10 assistant professionals.

By agreement between the two departments of agriculture, a preliminary arrangement has been made whereby all these posts will be placed on the establishment of the Division of Economics and Markets, while the latter will be largely responsible for the posting of officers at the regions, depending on improvement in the staff position. Considering the large number of vacancies, it has been possible during the past few years to post only three officers to the regions; of these, however, two have now resigned.

The policy at present is to keep professional officers for research work together at the Division, instead of dispersing them to the regions. This allows the sending out of these officers in teams on research projects in the regions. Projects can thus be completed with expedition. This is, of course, an important factor in any agricultural economic research work. With this end in view, the Division is also best equipped with all the additional facilities (such as an I.B.M. analysing unit and a team of women assistants with calculating machines) for speedy handling of the data. Similar facilities do not as yet exist at any of the regional offices.

In this way, despite a very limited staff, it has been possible for the Division to undertake a fair number of research projects already, as is indicated below; and could it thus also best serve the various regions.

### Present activities

The most important activities of the Division can be classified as follows:-

- o Research in farm management and farm-enterprise planning.
- o Research in marketing and distribution.
- o Statistical research and statistical services.

### Farm management surveys

Until recent years these surveys were, with few exceptions, mainly confined to the more intensive grain and dairy regions; and then with the objective mostly to obtain cost figures required for price determining purposes. In recent years, however, it has been possible to undertake farm management surveys in more regions and also with a wider purpose. This includes determination of the farm organisation in the region concerned; analysis of the factors contributing towards greater efficiency, and thus greater profitability, of the farm; and to determine the general financial position of farmers. Obviously the results obtained through these surveys are of particular value to the two agricultural departments, as well as to farmers in the regions concerned.

Thus farm management surveys have been undertaken during the past two years in the Eastern Cape region, three irrigation regions, two grain regions in the Western Cape Province, as well as in the cattle ranching regions of the Northern Cape Province (Molopo) and the Transvaal Bushveld .

These farm management surveys are made on the basis of agro-economic regions; that is, regions more or less homogeneous as regards physico-biological factors such as topography, rainfall, climate, soil types, vegetation, pests and diseases. This classification of the country into agro-economic regions (11 major regions and 144 sub-regions) is a comprehensive task, commenced with by the Division in 1936, in collaboration with officers from other technical Divisions. Owing to the outbreak of the war, this work had temporarily to be suspended, but it was resumed in 1946 and could only recently be completed.

The importance of this agro-economic survey lies in the



fact that it is of a permanent nature, in view of the fact that it is largely based on physico-biological factors - which remain unchanged regardless of developments in other fields. These regions constitute at present the basis of all research work in farm management and farm-enterprise planning. It also enhances the value of research findings, in view of the fact that these have a wider application in an entire agro-economic region.

Apart from such previously planned farm management surveys, special surveys have also to be undertaken from time to time in some area or other, where, for example, a state of emergency in farming arises. The purpose of such surveys is to determine the basic causes of such a state of emergency and the extent thereof, in order to make recommendations to the Department regarding measures to be taken to alleviate the position or to find a solution to the problem. Such special surveys have been undertaken during the past few years in the Eastern Free State, the Fish River area of the Eastern Cape, and recently also in the north-western Karoo regions.

Furthermore, special surveys are also undertaken at times in order to furnish the Department of Agricultural Economics and Marketing or other Departments with information in respect of some or other specific farming enterprise. Surveys undertaken in this connection during the past few years have included the economics of broilers, for the Department of Agricultural Technical Services; the cost of production of sugar cane at the Pongola irrigation settlement, for the Department of Lands; and the costs and problems connected with the cultivation of Phormium tenax, for an inter-departmental fibres committee.

### Farm-enterprise planning

The economic aspects of farm-enterprise planning have emerged particularly in recent years. It is known that agricultural output has shown phenomenal increases during the past two decades, and especially in postwar years - resulting in surpluses in many instances which could only be disposed of on overseas markets. This expansion in production could only be achieved and maintained through substantial increases in cash expenses - in respect of both capital and operating costs. This resulted in agriculture becoming much more vulnerable to physical as well as economic setbacks.

The declining tendency in world agricultural prices during recent years, and the necessity for a downward adjustment of

domestic prices in many instances, caused farmers to experience increasing financial strain. It has also become obvious that higher producers' prices no longer offer a feasible solution to the farmer as regards his present financial position. What is now envisaged is total rationalisation of farming systems, aiming at the most efficient application of the factors of production (with resulting lower unit costs), taking into consideration the conservation of natural resources. This is what farm-enterprise planning has in view.

Briefly, it entails the integration of both physical and economic factors, in order ultimately to achieve the ends referred to. Farm planning, on the other hand, as applied under the Soil Conservation Act of 1946, mainly aims at the most efficient application of physical-hydrological factors. Appreciable progress has already been made in this respect since the promulgation of the Act. An article appears elsewhere in this issue describing in more detail all aspects covered by the term "farm-enterprise planning", as against "farm planning".

Farm-enterprise planning, as described above, is however a relatively new concept in South African agriculture; and farmers consequently stand in dire need of guidance, particularly as regards the economic aspects thereof. Farmers are, however, realising more and more the absolute necessity thereof in order to organise their farms on a sound basis. As a result, the number calling for economic guidance in this respect is increasing

But economic guidance must always be carefully considered. It should be preceded by thorough research into all aspects of farm-enterprise planning; it is to this new field of research that the Division has paid special attention since 1958.

Farm management surveys supply the basis for research in respect of methodology and the practical application of farm-enterprise planning. Any research project on farm-enterprise planning must be preceded by a thorough farm management survey of all aspects of farming in the region concerned. From the group of farmers visited during the survey, and with the aid of data collected, a smaller number of farmers is recruited; that is, farmers who are willing to co-operate with the Division in a research project on farm-enterprise planning. These farmers undertake to keep certain records in respect of their farming business; the data are then collected regularly once a year, analysed and efficiency standards calculated. With this end

in view, the Division has devised a special farm-record book, with the assistance of some outstanding farmers. This record book enables the farmer to make the required entries with minimum effort and time. The results obtained from analysing these data constitute the basis for guidance to the co-operating farmers; the information is also conveyed to a wider field by means of farmers' days, radio talks, written articles, etc., as well as by extension officers. All activities in respect of extension work are planned and executed in close co-operation with the Department of Agricultural Technical Services and the extension officers concerned in a particular district.

A start was made by the Division in 1958 with research projects in the Bethal and Grootvlei sub-regions of the Transvaal Highveld and in the Eastern Free State (Senekal district). Subsequently research projects have also been started in the following regions: Natal - dairy farms; Transvaal Bushveld and Molopo area - cattle farming; Western Cape Province - wheat regions; Eastern Cape region (Elliot/Maclear area) - cattle and sheep farming; Western Transvaal - maize farming; and Vaalharts/Riet River - irrigation settlements.

About 250 co-operating farmers are at present involved in these projects, while the services of extension officers have also been incorporated, because dissemination of research findings to farmers ultimately rests with these officers. In order better to qualify extension officers for this task, their education being mainly of a technical nature, special courses in agricultural economic principles are planned for them, while they are also closely linked in the research projects on farm-enterprise planning.

The progress made in farm-enterprise planning, in the relatively short period of three years, has been above expectations. A great deal of information has already been obtained from research findings, and valuable experience has been gained; while some farmers have already achieved appreciable success in the practical application thereof. But all this is merely the beginning of a new era in the rationalisation of farming; a great task in this respect still awaits the officers concerned.

#### Marketing and distribution research

Although a scheme for the improvement of inland markets was commenced with by the Division in 1936, this was mainly



aimed at improvement in the quality of perishable farm produce and at instituting a marketing intelligence service. Very little attention could be given to actual research in respect of marketing and distribution, due to staff shortage. It has only been in recent years that a start could be made by the Division with research in respect of the marketing and distribution of fruits and vegetables.

This is, however, largely a new field of research in South Africa, and practically the only guide that officers have in this respect is overseas literature on methodology. This is, however, in most cases not applicable to local conditions; with the result that officers have to devote a great deal of time to developing their own methodology. Nevertheless, various research projects have already been completed, while others receive attention. Some of the more important of these are the following:-

1. Calculations of seasonal fluctuations in prices and offerings of various kinds of fruits and vegetables on the three main municipal markets in the country, namely Johannesburg, Cape Town and Durban. The results are contained in two publications.
2. Comparison between retail and market prices of three kinds of vegetables on three municipal markets. A report has already been published.
3. A study in connection with certain aspects of the retail distribution of fruits and vegetables in Pretoria. The report will shortly be ready for publication.
4. A study of the origin of three important kinds of vegetables. This is an analysis of marketing data, in order to determine the production areas, periods of marketing and the main marketing centres of these vegetables.
5. A study to determine the principal factors affecting prices realised by producers for green beans.

#### Statistical research and services

The various activities in this respect can briefly be classified as follows:-

1. Collection of agricultural statistics and the compilation

of statistical series. Agricultural statistics are regularly extracted from many sources (including statistics originating from the Division's own research work and other activities). These data are then compiled in statistical series, including indices of prices of agricultural commodities and farming requisites.

These statistics serve as a basis for further regular statistical calculations for which the Division is responsible, as well as for special calculations which must be made from time to time for some specific purpose. The furnishing of statistical information, in compiled and uncompiled form, constitutes a further important function of the Division - not only to Government departments but also to semi-Government and other institutions, as well as to members of the public. The Division has become known as one of the most important sources of agricultural statistics in the country, and requests for statistical information are continually increasing.

Many of these statistical series (on production, prices and price indices, imports and exports, consumption, etc.) are contained in a publication "An Abstract of Agricultural Statistics", which has been compiled by the Division and which is being supplemented from time to time by a new edition containing the latest data. Some of these series (especially price tables of fruits and vegetables, indices of producers' prices and prices of farming requisites) appear regularly in the Division's monthly bulletin "Crops and Markets". Recently the Division also completed a work, which will appear shortly, viz. "Handbook for Agricultural Statistics". This publication contains statistical series for as far back as 1910 and has been compiled from agricultural census reports, trade and shipping reports, as well as from other sources.

2. Adjustment of cost figures. Annual estimates of production costs of maize, wheat and industrial milk are being made for purposes of price determination. These estimates are made on the basis of adjusting the results obtained in cost of production surveys, by means of cost indices, to the anticipated cost levels of the season for which producers' prices have to be determined.

3. Calculations in respect of the agricultural sector in the National Accounts. The Division is responsible for all calculations in respect of the agricultural sector in the compilation of National Accounts. These calculations are at present

being made on a quarterly as well as an annual basis, and submitted to the Bureau of Census and Statistics and to the Reserve Bank, where they are incorporated in the calculations for the other sectors of the economy. The following calculations in this respect are at present regularly computed:-

- (a) Gross and net value of agricultural production;
- (b) index of physical volume of agricultural production;
- (c) gross and net capital formation in agriculture; and
- (d) consumer expenditure on foodstuffs.

Mention must also be made in this connection of the "Food Balance Sheet", which is regularly compiled by the Division for purposes, inter alia, of submission to the Food and Agriculture Organisation in Rome. This contains a calculation of consumption of all food commodities, on a global as well as a per capita basis, and further converted to per capita consumption figures in terms of calories, proteins and fats.

4. Crop-estimating service. Crop estimates in respect of the most important crops are regularly being made. These crop estimates have become of increasing importance in recent years to the Department as well as the control boards concerned, in view of the fact that the sales policy in respect of a commodity for the season involved is largely based on these estimates. For this purpose the Division has improved its crop-estimating service appreciably, while it is also being extended continually to include more commodities. These crop estimates are also of particular value in respect of the various calculations described above, in view of the fact that they are available at an early date, while final production figures become available much later.

#### CONCLUSION

This then embodies the main functions and activities of the Division of Economics and Markets at present. Since its inception, the Division had been closely associated with most important developments in the agricultural industry, while of its officers, in individual capacity, have been rendering important contributions from time to time in respect of new schools of thought and in the formulation of policy.

With the Division, under the new Department, relieved of some of its former functions and activities, the prospects are

that it would be in a position to intensify its research work, as well as to extend and improve its information services. An important determining factor in the near future would, of course, be professional staff.

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We never really want to catch up with out potentialities. We hope that advancement in technical and social knowledge will keep an ever higher potential in advance of us. At any point in time, however, we hope to be moving in the direction of closing the gap between our present circumstances and our immediate opportunities. That is, we hope to transfer resources among uses in such a way that the economy will approach adjustment with respect to production possibilities at any point in time. One of our major resource allocation problems at all times, however, is that of deciding how to use our resources so as to keep our production potential continuously moving outward at a rapid rate.

- C.E. Bishop, North Carolina State College.

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The paramount agricultural problem of our time is that of depressed farm incomes in a period of rapid economic development and high levels of employment. Excess productive capacity, generated by output-increasing technology and inelastic markets, continues to create chronic, price-depressing surpluses which tend to transfer to others the benefits of agriculture's increasing efficiency. Yet the farmer has no choice. If he is going to stay in this competitive business of farming, he needs to adopt the techniques that will help him maintain his income by reducing unit costs or increasing his volume of business - even though ultimately these same innovations intensify the woes of agriculture by adding still more to troublesome surpluses.

- H.L. Stewart, Agricultural Research Station,  
U.S.D.A.

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