South African Farmers' Needs of Agricultural Data

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ABSTRACT

Data on agriculture are required by decision-makers, including farmers, to solve problems and make business decisions. The needs of decision-makers have changed over time. Since information systems are designed to aid decision-makers, their needs should be determined. A mail survey among farmers indicated that they are chiefly interested in information regarding producer prices, prices of field crop inputs and statistics on imports and exports of livestock products. There is also interest in employment data and statistics on economic, institutional and infrastructural matters.

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1 INTRODUCTION

It is generally accepted that farmers, like all other business people, become increasingly dependent on data and information for the functioning of their businesses in a globalising, increasingly information based economy and society. This is true, irrespective of whether information or data is needed for long-, medium- or short-term decision-making. However, different types of data are needed for different types of decisions and for different decision-making terms.

In most countries that have succeeded to achieve rapid technical progress and growth in agriculture, the socialisation of agricultural research and extension has been deliberately employed as an instrument to modernise agriculture (Hayami & Ruttan, 1985: 87). Governments have also accumulated data and processed information, both for purposes of their own policy formation and for informing entrepreneurs about the nature of their environment. This has been done with respect to all economic sectors, including agriculture. However, despite the long history of government involvement in agriculture and acknowledgement of the

need for accurate and valid data, there is a lack of documented evidence on the actual requirements of those who *need* agricultural data (Barnard, 1979: 74; Russel, 1983: 40).

2   THE AGRICULTURAL INFORMATION SYSTEM

2.1   Terminology

The terms data and information are often used interchangeably. However, they refer to two different, although closely related concepts.

The common but confused vocabulary which erroneously equates data with information fails to distinguish between the different steps in the process by which data and information are produced (Bonnen, 1975: 754). The terms data and information are discussed first.

Data are a symbolic representation of concepts, quantities which are the direct product of measurement or counting (Bonnen, 1975: 754). Larson and Narain (1998: 3) define data as given facts about a place, person or thing, for example, the production or price of a commodity. However, in real statistical terms, output, prices or inter-industry flows are certainly not independent of the statistical operations involved in their measurement. These data are constructed by means of statistical measures that are operationally meaningful through various levels of aggregation, valuation, basic units or counts and weighting schemes that are determined against a theoretical background and with some analytical aim in mind. Data on agriculture can be classified as market or structural data (Just, 1983: 872-81). Market data consists of data on price, acreage, production, livestock numbers, stocks, consumption and exports, while structural data include data on income, employment, productivity, nutrition and distribution of resources.

Information however involves more than data. It usually combines data from various collection processes and subject matters, always within some analytical interpretation (Bonnen, 1975: 755); it results from modelling, formatting, organising or converting data in a way that increases the level of knowledge and its usefulness for the user (Burch *et al.*, 1974: 4 cited in De Waal & Van Zyl, 1991: 284). Information is data endowed with relevance and purpose. Converting data into information requires knowledge (Drucker, 1990: 202, 203). Information can be technical, commercial (including marketing information), social and cultural and also legal information (Aina, 1995: 1-11).

2.2   The Agricultural Information System

An agricultural information system is a logical configuration of significant information for problem solving and decision-making in agriculture (Eisgruber, 1967: 1541-52). The system is a product of some basic process of enquiry which classifies and gives meaning to data (Barnard, 1975: 294); data only become information after the required analysis and interpretation are made by the decision-makers (Riemenschneider & Bonnen, 1979: 149) or by analysts for use by decision-makers.

An appropriately designed information system should therefore reduce uncertainty and manage undesired consequences (Bonnen, 1975: 759; FAO, 1986: 4, 5) and aid in the interpretation of the complexity of agriculture (FAO, 1986:4). Vlasin *et al.* (1975: 900-09) specify three purposes of data and information systems, namely (1) reacting to past problems and planning for present concerns, (2) responding to predicted future scenarios and planning towards the future and (3) planning for and creating a desired future. The information system contains three elements: (1) a data system, (2) an information system which includes the analytical capability necessary to transform data into information and (3) the decision-makers.

2.2.1   *The data system*

Every data system involves an attempt to represent reality by describing empirical phenomena in some system of categories usually in quantified form (Bonnen, 1975: 755; Riemenschneider & Bonnen, 1979: 147). Since reality appears infinitely complex and is not reality grasped by the human mind, it is necessary first to break down phenomena into a set of categories or classes that lend themselves to measurement.   Data are the result of counting or measurement. This presupposes a concept. Concepts are abstract and cannot be measured directly.   Operational definitions are then devised to represent the concepts, and these are measurable.

2.2.2   *The information system*

Data are rarely directly used in the raw form by decision-makers (Bonnen, 1975: 760; Eisgruber, 1967: 1543; Drucker, 1990: 202). Data must be transformed into information before it has much utility; information processing systems are therefore necessary (Riemenschneider & Bonnen, 1979: 149). Beside the production of data, the system involves the analysis and interpretation of the data in some purposeful decision or problem solving context.   Data are transformed by intervening acts of interpretation, that is, through statistical and economic analysis, policy and political evaluation etc., to place them in the

context of specific problem and thus make the data meaningful to a particular decision-maker. An information system should include not only a data system but also the analytical and other means necessary to interpret the data (Bonnen, 1975: 760). Any theory of information must have a multidisciplinary perspective to be useful in understanding information systems (Eisgruber, 1967: 1541-43).

2.2.3 *The decision-makers*

Information systems in agriculture are designed to help public and private decision-makers make decisions designed to solve problems that arise at the farm, firm, industry or national economy level (Riemenschneider & Bonnen, 1979: 150). The goals and values of the decision-makers must impact on the design of the information system, since these goals and values provide insight into the nature of the problem on which the system focuses. Therefore, the objectives of an information system should be viewed in the context of decision-making (Barnard, 1979: 75), problem solution (Eisgruber, 1967: 1544; Barnard, 1979: 76) and knowledge (Gardner, 1975: 895 and Juster, 1973: 139-40). In order to achieve these objectives, the system needs to take into account the entire range of economic, social and other information at the household, firm, local, regional, national and even international level (Eisgruber, 1967: 1540). However, information designed for farm policy decisions by government policy-makers would differ from information used by a farmer in the day-to-day operation of a farm business; there are different categories of decision-making (Riemenschneider & Bonnen, 1979: 152).

2.3 The Supply of Agricultural Data

Primary data (also called raw, basic or unprocessed data) spring from three main sources: experimental sources, farms and a miscellany of other organisations related to the agricultural sector, such as government departments, markets, marketing boards and commercial firms (Barnard, 1975: 291). Data are obtained either by experimental or non-experimental means (Barnard, 1975: 303). The former rely heavily on testing relationships between phenomena by eliminating or controlling as many extraneous variables as possible, and apply mainly to natural and biological science. By contrast, the latter depend largely on various forms of censuses and surveys (Barnard, 1975: 304; USDA, 1987: 7 and FAO, 1986: 4) and farm account projects (Plaunt, 1967: 1529).

2.4 Agricultural Data in South Africa

This paper deals with only non-experimental means of data collection. The collection of market data on South African agriculture began in 1915 with a

system of monthly crop and livestock reports by the Department of Agriculture. Structural and market data on agriculture were included in the population census of 1904 and the agricultural and population census of 1911. The data sources were initially samples of evenly distributed farmers in various districts and reports of livestock inspectors and other officials of the Department. Later in the early 1920s, the districts were divided as far as practicable into small areas of four farms, with one farmer being appointed as a crop respondent (Department of Agriculture, 1922: 1-3). The crop respondent had to complete a monthly report, which normally included livestock and crop conditions. This report was forwarded to the Magistrate of that district where it was processed, scrutinised, weighted and averaged before transmission to Pretoria. Since the system depended on the farmers as a source of data, the Government in return had to keep the farmers well informed with related information that was in turn estimated from the data the farmers supplied. The estimates were subsequently validated by agricultural censuses and surveys, conducted by the Department of Census (Department of Agriculture, 1907-1927).

The late 1930s and 1940s were characterised by the establishment of control boards, which regulated the marketing of the most important agricultural products in South Africa. Statutory measures (Article 52 of the Marketing Act) enabled marketing boards to collect data by means of compulsory returns. These data supplied by the marketing boards, came to be regarded as reliable sources by decision-makers. As a result, the system of crop and livestock reports was reduced to only forecasts and final estimates of summer and winter field crops, and estimates of livestock numbers. Agricultural censuses and surveys were valuable sources of structural as well as benchmark data for crop forecasts and livestock number estimates. However, problems were encountered with the inconsistency of definitions (Nieuwoudt, 1973: 20), the discrepancies between census data and other official data sources (Groenewald, 1989: 90) as well as delayed publishing dates.

The deregulation of marketing in the 1990s was characterised by the disbandment of marketing boards, resulting in a decrease and in some cases, the discontinuation of the supply of administrative data (Willemse, 1996: 3). For some products like grain and oilseeds, cotton, deciduous, citrus, dried and canned fruit, lucerne, wool, mohair, milk and meat, alternative organisations were established under the Marketing of Agriculture Products Act of 1996 to continue with the collection of agricultural data (National Agricultural Marketing Council, 1998). However, these organisations still rely on compulsory or in some cases on voluntarily returns for the collection of data. Budgetary constraints also led the Central Statistical Service (now Statistics South Africa) to postpone the agricultural census planned for 1998. A dearth of available data relative to needs may be expected in the future.

2.5   Users of Agriculture Data

Anyone who is in business with a profit objective – without which no business is
sustainable – has to identify existing and potential markets, the requirements and
rules of these markets and prices that can be realised on these markets. The
same principle still applies although much of agricultural information is
subsidised and provided to the user free of charge (Metcalfe, 1989: 114). The
most meaningful classification of users of agricultural data appears to be one as
policy-makers, researchers, agricultural service industries, farmers and extension
offices (Aina, 1995: 1-11; Plaunt, 1967: 1531; Russel, 1983: 45-6). Farmers
represent both the beginning and the end of the data-and-information chain.
Seen from the perspective of management theory, one would expect farmers to
demand both technical and marketing information.   This information, if
required, will dictate the nature and extent of raw data requirements.   The
remainder of this paper will be devoted to an attempt to determine the data and
information needs felt by farmers in South Africa. Only if these needs, together
with those of the other user groups are satisfied, will the official data collection
and dissemination branches of officialdom be able to claim success in meeting
their main task.

3   RESEARCH APPROACH

Mail surveys were used to determine the needs of three categories of agricultural
data users: Agribusinesses, researchers and farmers. The rest of this article
discusses the results obtained from the farmers. Mail surveys have previously
been used to determine agricultural data needs in other countries too, for
example, the USA (Ebling & Ahlgren, 1954: 1226-39; Blanch, 1955: 1038-46;
American Agricultural Economics Association Committee on Economic
Statistics, 1972: 1072) and New Zealand (New Zealand, 1998: 10).   Some
studies were also done in South Africa by the Bureau of Financial Analysis of
the University of Pretoria (1990) regarding fresh product markets, the
Department of Agriculture (1992) and, on a more limited scale, the South
African Agricultural Union (Du Toit, 1999).

Since there is no complete list of the farming population, a sampling frame as
described by Scheaffer et al., (1990: 111-20) was constructed. Addresses were
obtained from the Decidious Producer Trust, the National Crop Estimates
Committee and some other organisations which supplied addresses conditional
on anonymity. A total number of 17 300 addresses was thus obtained. Farmers
were, for this purpose, stratified into three main groups, namely producers of
field crops, horticultural products and livestock. In an effort to obtain 100
sampling units for each of the three main groups, and assuming a response of 50

per cent, it was decided to include 600 farmers in the sample. The systematic sampling method was used. The questionnaires consisted of four sections. Firstly an *introduction,* containing questions on characteristics of the sampling units. The second section was concerned with the *need for current statistics.* It contained questions on the priority and frequency of need of statistics pertaining to field crops, horticulture and livestock. Questions were also asked concerning forecasts, sources and types of decision for which statistics are needed. A third section of the questionnaire was concerned with the *need for basic statistics.* The question type was similar to that of the second section. A fourth section was concerned only with *statistics supplied by the National Department of Agriculture;* these results are not discussed in this paper.

4   RESULTS

4.1   Introduction

From the 600 questionnaires sent out, 105 were received back. Of these, 99 were used in the analysis. Taking into account 17 undelivered questionnaires, this means a response rate of 18 per cent. Farmers in general tend to have a low response rate to questionnaires and although the response rate is disappointing, it is still acceptable. It does, however, also indicate low interest in statistical data. Of the 99 respondents, 42.7 per cent were older than 50 years, 34.4 per cent between 41 and 50 years and the remaining 22.9 per cent younger than 40 years. The majority, 63.5 per cent, had had more than 12 years of school education (including tertiary education such as diplomas or degrees); the remaining had had between 7 and 12 years school education. Full-time farmers represented 89.6 per cent of the respondents.

4.2   The Need for Current Statistics

4.2.1   *Field crops*

The need for current statistics on field crops is summarised in Table 1. Producers' prices and prices of production inputs are indicated by 60 per cent and more of the respondents as very important. Utilisation of products and area planted to perennial crops are desired by fewer than 30 per cent of the respondents. The statistics needed are mostly yearly, while statistics on stock of products, volume of production and consumption are needed quarterly. Prices of production inputs and quantity of import and exports are needed monthly while producer prices are needed weekly. The need for producer prices on a weekly basis could be due to both volatile prices and the readily availability of

prices of maize, wheat and sunflower on the South African Future Exchange (SAFEX).

The statistics, on average, are mostly wanted on the national level (61.8 per cent of the respondents). In order of importance, statistics are wanted for maize, wheat, sunflower, soybeans and dry beans.

Table 1   The need for current statistics by farmers – Field crops

Item	Priority	Frequency			
	Very important	Yearly	Quarterly	Monthly	Weekly
Producer prices	69.2%	20.0%	14.5%	21.8%	**43.6%**
Prices of production inputs	61.5%	28.3%	26.4%	**34.0%**	11.3%
Cost of production	58.8%	**34.6%**	26.9%	30.8%	7.7%
Quantity of imports and exports	55.1%	18.2%	20.0%	**38.2%**	23.6%
Yield forecasts	47.7%	**38.5%**	25.0%	28.8%	7.7%
Stocks of products	47.7%	17.6%	**41.2%**	31.4%	9.8%
Volume of production	46.9%	34.6%	**34.6%**	23.1%	7.7%
Area planted to annual crops	44.6%	28.8%	28.8%	**36.5%**	5.8%
Consumer prices of products	43.1%	20.8%	30.2%	22.6%	26.4%
Value of imports and exports	43.1%	28.3%	**28.3%**	22.6%	20.8%
Area harvested estimates	35.4%	**52.9%**	13.7%	25.5%	7.8%
Consumption of products	32.3%	35.8%	**37.7%**	22.6%	3.8%
Area planted to perennial crops	26.2%	**50.0%**	34.8%	10.9%	4.3%
Utilisation of products	24.6%	**36.0%**	40.0%	22.0%	2.0%

4.2.2 Horticulture

The listed results (see Table 2) indicate that 65.5 per cent of the respondents regard producer prices as very important. Utilisation of products and area planted to annual crops seem not as important, with only 24.1 and 26.7 per cent of the respondents, respectively, regarding these as very important. The statistics wanted are mostly yearly; however, consumption and utilisation of products are wanted quarterly, stocks of products and quantity of import and

export are needed monthly and producer and consumer prices of products weekly.

The statistics, on average, are mostly needed on the national level (50.3 per cent of the respondents) while statistics on a provincial level are desired by 23.1 per cent of the respondents. The statistics needed are for deciduous and other summer fruits, viticulture, citrus and subtropical fruits and vegetables.

Table 2   The need for current statistics by farmers – Horticulture

Item	Priority	Frequency			
	Very important	Yearly	Quarterly	Monthly	Weekly
Producer prices	65.5%	27.6%	20.7%	20.7%	**31.0%**
Volume of production	51.7%	**40.7%**	18.5%	29.6%	11.2%
Stocks of products	51.7%	11.5%	26.9%	**34.6%**	27.0%
Consumer prices of products	48.3%	25.9%	14.8%	29.6%	**29.7%**
Cost of production	48.3%	**40.7%**	25.3%	22.5%	11.5%
Yield forecasts	44.8%	**55.6%**	25.9%	7.4%	11.1%
Prices of production inputs	44.8%	**37.0%**	25.9%	25.9%	11.2%
Consumption of products	44.6%	22.2%	**33.3%**	29.6%	14.9%
Area planted to perennial crops	41.4%	**62.1%**	20.7%	17.2%	0.0%
Quantity of imports and exports	41.4%	32.1%	17.9%	**32.1%**	17.9%
Area harvested estimates	34.5%	**59.3%**	18.5%	18.5%	3.7%
Value of imports and exports	31.0%	**44.0%**	12.0%	32.0%	12.0%
Area planted to perennial crops	26.7%	**52.2%**	13.0%	30.4%	4.4%
Utilisation of products	24.1%	**34.6%**	**34.6%**	23.1%	7.7%

4.2.3 *Livestock*

The need for current statistics of livestock is shown in Table 3. Producer prices and quantity of imports and exports are indicated by 60 per cent and more of the respondents as very important. Herd composition, number of animal in feedlots, utilisation of products, and farm slaughter volumes appear to be less important; fewer than 30 per cent of the respondents classified these as very important. Mostly monthly statistics are needed, while producer prices are needed on a weekly basis.

Statistics are mostly needed on the national level (by 74.4 per cent of the respondents). Statistics on provincial level are needed by 25.8 per cent of the respondents. The products for which the statistics are needed are, in order of importance, cattle and calves, sheep and goats, dairy (including fresh milk), pigs and wool.

Table 3   The need for current statistics by farmers – Livestock

Item	Priority	Frequency			
	Very important	Yearly	Quarterly	Monthly	Weekly
Producer prices	73.2%	11.9%	20.9%	22.4%	**44.8%**
Quantity of imports and exports	63.4%	10.9%	26.6%	**32.8%**	29.7%
Consumer prices of products	54.9%	14.1%	25.0%	**31.0%**	29.9%
Cost of production	51.2%	20.3%	**32.8%**	28.0%	18.9%
Prices of production inputs	48.8%	20.3%	29.7%	**29.9%**	20.1$
Value of imports and exports	46.3%	14.5%	27.4%	**37.1%**	21.0%
Livestock numbers by category	41.6%	**47.6%**	25.4%	20.5%	6.5%
Consumption of products	41.5%	17.7%	30.0%	**37.8%**	14.5%
Abattoir slaughter volumes	36.6%	25.0%	20.0%	**33.3%**	21.7%
Farm slaughter volumes	24.4%	**33.3%**	21.1%	29.7%	15.9%
Utilisation of products	24.4%	**32.2%**	**32.2%**	27.1%	8.5%
Number of animals in feedlots	23.2%	32.8%	19.7%	**41.0%**	6.5%
Herd composition	23.2%	**56.7%**	25.0%	16.7%	1.6%

4.2.4 *General*

Of the 99 farmers, 89.5 per cent need forecasts. The products for which the forecasts are needed are maize, cattle and calves, sheep and goats, as well as deciduous citrus fruits. Most farmers indicated that they would like to have the data one month after the date of collection (45.6 per cent of the respondents), 26.7 per cent of the respondents would settle for 3 months after the date, while 22.2 per cent of the respondents would be satisfied if they received them after 6 months. Sources of statistics include mainly *Landbouweekblad*, the Internet and also agents and marketers. Farmers indicated their level of confidence in these sources to be between average and good. Decisions made with the aid of statistics include planning, production and marketing. The level of the accuracy required by the respondents are 90 per cent (50.6 per cent of the respondents), 80 per cent (33.3 per cent) and 70 per cent (16.1 per cent of the respondents).

4.3   The Need for Basic Statistics

Basic statistics are next discussed according to the needs of employment, economic and institutional or infrastructural issues. Questions were also asked about statistics on particulars of farmers and basic household matters; however, respondents indicated a very low need for those statistics, which are therefore not discussed further here. The results related to the need for basic statistics on employment are listed in Table 4. It appears that none of these statistics is regarded as very important by 60 per cent or more; salary or wage rate and remuneration of employees are regarded as very important by over 40 per cent of the respondents. Number of regular and family workers do not seem to be regarded as important. The statistics are needed yearly.

Table 4   The need for basic statistics by farmers – Employment

Item	Priority	Frequency			
	Very important	10 Yearly	5 Yearly	2 Yearly	Yearly
Salary or wage rate	44.9%	6.6%	6.6%	22.4%	**64.4%**
Remuneration of employees	42.7%	8.0%	6.7%	20.0%	**65.3%**
Number of unemployed workers	33.7%	8.8%	20.6%	20.6%	**50.0%**
Number of family workers	28.1%	10.1%	21.7%	21.7%	**46.5%**
Number of regular workers	24.7%	11.1%	20.8%	19.4%	**48.7%**

The need for economic statistics are listed in Table 5. Income from farm activities and value of land are indicated by respectively 53.6 per cent and 52.3 per cent of the respondents as very important. Non-farm expenditure, household expenditure pattern, income from non-farm activities and rent payments do not seem to be regarded as important. The statistics are needed yearly.

The results of the need for institutional and infrastructural matters are listed in Table 6. Methods of marketing is indicated by 50.6 per cent of the respondents as very important. The methods of irrigation, area under irrigation, quantity of land purchased or sold, capital structure, sources of water supply, level of mechanisation and land utilisation do not seem to be regarded as important. The statistics are needed yearly.

Table 5   The need for basic statistics by farmers – Economics

Item	Priority	Frequency			
	Very important	10 Yearly	5 Yearly	2 Yearly	Yearly
Income from farm activities	53.6%	7.7%	3.8%	23.1%	**65.4%**
Value of land	52.3%	5.2%	10.4%	20.8%	**63.6%**
Amount of farming debt	45.5%	6.8%	9.6%	20.5%	**63.1%**
Interest payments	40.9%	8.6%	8.6%	22.8%	**60.0%**
Intermediate production expenses	33.0%	8.3%	6.9%	27.9%	**56.9%**
Rent payments	29.5%	11.8%	13.2%	20.6%	**54.4%**
Income from non-farm activities	21.6%	18.8%	13.0%	26.1%	**42.1%**
Household expenditure pattern	17.0%	18.8%	9.4%	32.7%	**39.1%**
Non-farm expenditure	14.8%	18.8%	12.5%	**34.3%**	**34.4%**

The statistics are mostly needed on a magisterial district level (35 per cent of the respondents). Statistics are also needed on a national level (32.6 per cent of the respondents).

Of the respondents, 46.9 per cent indicated that they need statistics for the commercial sector, while 2.5 per cent indicated a need for the developing sector. The majority, 50.6 per cent, indicated that they need the statistics for both the commercial and developing sectors. Respondents indicated that they mostly need the statistics 6 months after the date of the collection of the data (31.8 per cent of the respondents). Among the respondents some indicated that they need the statistics only 1 and 2 years after the date of collection.

The sources of the statistics are mainly media publications, farmer associations and agents. The level of confidence in the sources is between average and good. Decisions that farmers make with the aid of these statistics include planning, marketing, management and business viability. The level of accuracy needed is between 80 per cent (44.1 per cent of the respondents) and 90 per cent (42 per cent of the respondents).

Table 6   **The need for basic statistics by farmers – Institutional or infrastructural**

Item	Priority	Frequency			
	Very important	10 Yearly	5 Yearly	2 Yearly	Yearly
Methods of marketing	50.6%	2.8%	12.7%	25.4%	**59.1%**
Access to credit and finance	40.9%	4.2%	11.3%	21.1%	**63.4%**
Access to training and development	36.0%	6.9%	15.3%	26.4%	**51.4%**
Access to government support	32.6%	7.0%	16.9%	22.5%	**53.6%**
Fertiliser or chemical usage	31.5%	7.5%	17.6%	32.4%	**42.5%**
Pesticides usage	31.5%	7.4%	19.1%	29.4%	**44.1%**
Land utilisation	27.0%	11.8%	17.6%	29.4%	**41.2%**
Level of mechanisation	27.0%	7.2%	29.0%	23.2%	**40.6%**
Sources of water supply	27.0%	9.0%	26.9%	23.9%	**40.2%**
Capital structure	23.9%	7.2%	23.2%	30.4%	**39.2%**
Quantity of land purchased or sold	22.5%	9.0%	19.4%	26.9%	**44.7%**
Area under irrigation	16.9%	8.5%	31.0%	25.4%	**35.1%**
Methods of irrigation	16.9%	10.3%	29.4%	25.0%	**35.3%**

5   CONCLUSION

As mentioned above, the low response rate to the questionnaire survey is an indication of a lack of interest in agricultural statistics by many farmers. This conclusion may to some degree be ameliorated by the apparent satisfaction derived by some respondents from statistics appearing in a popular farming magazine (*Landbouweekblad*). It is remarkable that the majority of farmers who did respond have had more than high school education. This would suggest that it is mostly the more advanced farmer-operator who feels he can utilise statistics for decision-making. Many of these farmers are likely to belong to the innovator and early-adopter farmer categories.

The respondents in this study showed interest mainly in information regarding producer prices of farm products, prices of inputs for field crop production and in the case of livestock products, statistics on imports and exports. They are also interested in data on employment, economic, institutional and infrastructure matters.

It would be in South Africa's interest to supply to agricultural entrepreneurs the kind of statistics and business information they feel a need for. Perhaps this survey can be of use to providers of such information.

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