

Lessons learned from the 2002 Census of Commercial Agriculture

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The success of any census depends on the planning, monitoring and evaluation of the project. For smooth execution of these phases, support and buy-in from important stakeholders, including government, organized agriculture, academic institutions, individual farmers and agri-business is vital. Political stability and the democratic state of the country are also crucial.

The paper discusses the lessons learned from the 2002 Census of Commercial Agriculture conducted in South Africa. The content look onto the challenges encountered on setting the population frame, the instrument/tool, data collection and analysis. The conclusion notes the importance of identifying the needs and the available resources for running a smooth census.

Needs analysis

The decision to conduct the Census of Commercial Agriculture 2002 was done based on a requested by the national Department of Agriculture. Other stakeholders and role players in the sector, like other data producers including the national Departments of Water Affairs and Forestry; Environmental Affairs and Tourism; users and suppliers were not informed and involved on time. Departments and other producers of agricultural statistics were working in isolation in producing their own statistics. There was not sufficient time to do the planning, but due to the fact that the last census was conducted in 1993 and there has been a lack of agricultural statistics data for benchmarking and a need to evaluate the current situation in the agricultural sector arose. The information collected was based on size of the land, production, financial statistics, employment statistics and personal details.

Frame

The census was called the Census of Commercial Agriculture because its coverage included farming units that were registered for Value Added Tax (VAT). The measure of size used was the annual turnover of businesses. These mostly dealt with the formal agricultural sector. Businesses classified under the agricultural sector include, farming units, forestry, fishing and agricultural services. The area of focus for the census was only the farming. At the time the census was planned, Statistics South Africa (Stats SA) was busy with the processes of improving the business frame. The frame was not

integrated with other administrative sources to come out with a fully representative agricultural frame. Furthermore, the frame was not maintained and updated on businesses that have been liquidated, closed, sold or merged. Thus the coverage was not fully representative of the industry. Approximately, 60% of the businesses registered onto the frame were registered by bookkeepers/accountants/auditors using their contact details. The frame included enterprises that were classified for business in farming, forestry, hunting, fishing and agricultural services. The aim of the census was to focus onto the farming enterprises (primary agriculture). Table A, shows the businesses that were registered under agriculture before the census was conducted and after the census was conducted (*businesses that were active in 2002*).

Table A – Agricultural businesses units registered for VAT

Stratum/Size group	Range	Number of units	Active units during 2002
1	R4mill>	3 003	2 330
2	R2mill> and < R4mill	3 526	3 041
3	R1mill > and < R2mill	5 986	5 214
4	R300K > and < R1mill	13 757	11 805
5	< R300K	54 446	23 428
Total		80 718	45 818

The enterprises were stratified according to the Small Business Act of 1996 cut-off points using the turnover as a measure of size. Furthermore, these were enterprises that were active and birthed. According to Table B, 42% of the enterprises registered under agriculture were inactive due to zero contribution caused by being pensioners, just acquired the land, or other reasons.

Table B – Breakdown of units that were not usable during the census

Reason of inactivity	Number of units
Zero contribution (e.g. pensioners)	24 521
Included in other	3 539
Outside scope	3 475
Closed down	2 193
Liquidated	674
Dormant	325
Incomplete questionnaire	129
Sold/Merged/Take-over	34
Outside borders	7
Name change	3
Total	34 900

The tool/instrument used

The questionnaire that was used was prepared as a tool that would be used to capture data manually on a keyboard rather than scanning. Because, 80% of the commercial farmers were Afrikaans speaking, the bulk of the questionnaires had to be printed using the Afrikaans version. The questionnaire contained variables in all different type of farming activities, regardless of what the farmer is farming upon, whether it's a field crop, horticulture, animal or a mixed farmer. Most of the questions were asking information about financial statistics, employment statistics and land use. To cater for needs of various stakeholders, an advisory committee meeting was held to get input from various roleplayers, which resulted on the overloading of the questionnaire.

Data collection

Questionnaires were dispatched via post to the different destinations where it was anticipated that farmers will complete and return the questionnaire in an included self stamped return envelope. Due to the low response, follow-ups were made via the telephone, facsimile, email and through personal visits. The insufficient publicity drive added to the poor response rate. Furthermore, political instability, crime, minimum wages bill also had influence. Collection was done over a period of more than 12 months. Most of the resources were utilised on cleaning the frame rather than collecting the actual farming data. Lack of the people who were able to speak and read Afrikaans also added to the existing problems. The response rate was fairly good on large enterprises as reflected in Table C.

Table C – Response rate according to stratum

Stratum/Size group	Number of units	% Response rate
1	2 330	94,4
2	3 041	69,5
3	5 214	57,0
4	11 805	51,6
5	23 428	65,6
Total	45 818	62,7

Data processing and imputation

Data was, checked, edited and captured as the questionnaires were received. There were consistency errors test that were built within the capturing systems. These were used to balance between variables, in particular comparison between products and financial variables. The capturing system was designed through Visual Basic System. Non-responding units were taken care of by using the annual turnover that was used as the farming income. For other financial variables, ratio imputation method was used. The challenges were experience when it came to imputation of the size of the land (hectares) and production variables. The method that was recommended due to the unavailability of historical data at the same level was the nearest neighbour. But because the time it took to run the census was beyond two years and the users were thirsty for the data. A decision was taken to rather publish the size of the land and production as is, without aggregating it.

Lessons learned from the census

- Planning for the census is vital as early as the previous census is conducted;
- Availability of resources, financial and human (skilled expertise) is crucial;
- Political climate and crime have an influence in conducting the census;
- Other similar projects/surveys conducted over the same population have an impact on the census;
- Overloading of the questionnaire affects the response rate;
- Need for non-commercial farming data was reflected by the non availability of data for GDP estimation of forestry and fishing sub sectors;
- Clear concept and definitions not properly covered affects are important for good participation by respondents;
- Uncertainty regarding funding;
- Inclusion of questions related to small scale farming;
- Not sufficient involvement of data producers, users and suppliers on a continuous basis;

- Involving other stakeholders in a national agricultural system is important for the success of the census.

Conclusion

- Designing a strategy on a national agricultural statistics system in conjunction with other role players in the sector;
- Using standard concepts and definitions nationally;
- Focusing on collection of financial and employment statistics when conducting annual surveys;
- Strategy on the coverage of the secondary economy;
- Measuring of the sector to withstand bio-fuel needs against food security;
- Formulation of an Advisory Committee on a permanent basis;
- Conducting a national Workshop on Agricultural Statistics;
- Keeping track of international best practice;
- Advance planning and research work.