Initial achievements of FAO’s AGRISurvey programme in Senegal

Background

The AGRISurvey Programme supports countries to strengthen their national system of agricultural surveys with the aim of enhancing evidence-based policy making in the agricultural sector.

The programme complements the efforts and resources of partner countries for the implementation of their Strategic Plans on Agricultural Statistics supporting the collection and dissemination of survey data.

The AGRISurvey Programme approach is based on a system of farm surveys that is synchronized with the Agricultural Census and operates over a ten-year cycle to provide a regular flow of quality data. It envisages a core production questionnaire for yearly data collection and rotating questionnaires, administered less frequently, which consider the social, economic, and environmental characteristics of the agricultural holdings.

The Senegal annual agricultural survey (Enquete Annuelle Agricole - EAA) is the main source of agricultural statistics in Senegal and is carried out by the Senegalese Directorate of Analysis, Forecasting and Agricultural Statistics (DAPSA). It estimates the production of the most important rain-fed crops produced by agricultural households, using the crop-cutting method. It also provides information on the physical characteristics of cultivated plots (geo location, area) and major investments made (agricultural inputs, cultural operations, soil management and restoration). Structural data, such as agricultural equipment, agricultural income, agricultural risks and adaptation strategies, are also collected once every three years. The EAA covers the entire country and generates representative production estimates for 14 regions and 42 agricultural departments of Senegal.

Since 2017, FAO has been providing technical and financial assistance to the Government of Senegal to expand the Enquete Annuelle Agricole using the AGRISurvey methodology.
Main operational activities under AGRISurvey

FAO and DAPSA joined forces in putting into practice the AGRISurvey approach starting with the 2017–2018 EAA.

A consensual roadmap was established to guide the implementation of the activities of the 2017–2018 agricultural campaign, in partnership with different stakeholders, including the Prime Ministry, DAPSA, l’Agence Nationale de la Statistique et de la Démographie (ANSD), and other national bodies related to the agricultural sector.

The roadmap laid out the main activities for the preparation and implementation of the AGRISurvey programme in Senegal. The partners established an institutional framework endorsed by the Government to ensure the technical and operational supervision of all the activities and agreed on a timetable for the implementation of AGRISurvey rotating modules over the 2017–2021 period.

The scope of the EAA was extended to include the core production questionnaire, as envisaged in the AGRISurvey approach, particularly with regard to the livestock and agricultural production at households’ level. The initial phase focused on strengthening DAPSA’s technical and operational capacities in the implementation of the AGRISurvey approach, including capacity-building activities on the AGRISurvey methodology and on the use of the CAPI (Computer-Assisted Personal Interviewing) platform Survey Solutions for data collection and management, a free and user-friendly platform which will replace a more costly tool used so far.

In addition, FAO and DAPSA conducted a pilot survey of the extended EAA-AGRISurvey, integrating the rotating economic module, which provides data related to the economic aspects of the agricultural holding, based on the CAPI platform Survey Solutions.

A survey on local measurement units was implemented at household’s level to have conversion factors to switch from production declared by households in local units, to production in standard units.

Regarding operational capacities building, the programme provided equipment for mobile data collection (GPS, laptops, Wi-Fi modems, motorcycles), office equipment (video projectors) and statistical software. In addition, motorcycles were provided to facilitate the field work of the enumerators.

Future activities are being designed in order to support the completion of the 2018–2019 survey that includes the economy module, as well as to encompass capacity-building activities in the preparation and dissemination of both aggregated results and micro data from the survey, using Open Data principles.

Initial technical achievements

The first round of implementation of AGRISurvey programme in Senegal allowed the following improvements in conducting the EAA:

Institutional Capacity building

Through the support provided by the project, DAPSA received technical assistance to strengthen planning capacity for the survey activities and effective monitoring. Technical workshops on AGRISurvey approach and trainings on Survey Solutions empowered national stakeholders. These activities are aimed at building national ownership on the programme to allow the country to progressively take over the financial and technical responsibilities related to the implementation of a survey system based on the AGRISurvey approach.

The Institutional framework chaired by the Prime Ministry, through the National Council of Statistics, was put in place to ensure better coordination and enhance the synergies between the Ministry of agriculture and other stakeholders of the national statistical system.
Broader scope

The implementation of the AGRISurvey approach has strengthened the thematic coverage of the EAA 2017–2018 by reinforcing the sections related to farm’s livestock and workforce, as well as introducing a section on scoping strategies. The EAA 2018–2019 basic questionnaire was also enriched by the integration of other agricultural activities such as fisheries, aquaculture, and agroforestry, as well as by the integration of some specific questions about the farm’s economy (costs of inputs and value of production) based on the AGRISurvey rotating economy module.

Data precision and accuracy

In terms of data precision, the improvement is not yet significant at the department level compared to the previous survey, because of the use of the same sampling plan. Nevertheless, several indicators were now calculated with parameters of dispersion and precision (confidence intervals, coefficients of variation). In some cases, means tests were conducted to determine the significance of certain differences observed between groups.

For the 2018 survey, the use of a more user-friendly and costless CAPI platform (Survey Solutions) will guarantee a better data quality and accuracy. In addition, the renewing of the sampling plan scheduled from the 2019–2020 survey should lead to a better data precision.

Improved data access and dissemination

The collection of more detailed data allowed to compute and analyze the following AGRIS indicators for EAA 2017–2018:

- the average labor productivity (SDG 2.3.1);
- the degree of concentration of the crops plots;
- the index of female entrepreneurship;
- the generational replacement index.

The figure below shows the SDG 2.3.1 related households farms labor productivity by classes of areas planted. It clearly shows that labor productivity is lower among the holdings cultivating less land denoting an extensive agriculture.

With regard to data dissemination, FAO and DAPSA organized a national workshop to present the results of the 2017–2018 survey. The detailed report of this survey is available online through DAPSA’s website (www.dapsa.gouv.sn/sites/default/files/publications/Rapport_EAA_06.09.17_0.pdf).

The second phase of AGRISurvey implementation envisages to develop an open agricultural statistics policy. This will significantly improve the dissemination and access of survey’s data and anonymized micro data.
The AGRISurvey programme provides support to countries for strengthening their agricultural survey system with the aim of producing and disseminating sound and comprehensive statistics on a regular basis to allow evidence-based policy making.

Cost effectiveness

The rotating nature of AGRISurvey combined with the use of CAPI platform (Survey Solutions) for data collection, is expected to reduce the recurrent costs in the medium and long term.

Use of ICT

The forthcoming adoption of Survey Solutions platform for the next EAA (2018–2019), combined with the current use of GPS for plots areas measurement, will contribute to collect better quality and timely data.

The equipment for data collection and analysis (laptops, Wi-Fi modems) provided by the project also contributed to reinforce DAPSA’s capacity in the use of ICT.

Next steps

In summary, the first round of AGRISurvey implementation in Senegal has improved the process of collecting and processing, analyzing and disseminating data from the EAA through the implementation of capacity building activities both at technical, organizational and institutional levels.

The upcoming round of the project will strengthen the gains of the first phase by enlarging the EAA questionnaire and integrating the economy module.

The use of the CAPI platform (Survey Solutions) will lead to a faster and cost-effective data collection process.

Further improvements will be put in place through the update of the sampling plan to better cover other agricultural activities (livestock, horticulture, irrigation, etc.) and include non-households farms. Finally, a special emphasis will be given to the technical capacity building activities, mainly in data processing and microdata dissemination.

The implementation of AGRISurvey entails a long-term process. To achieve the sustainability and allow the country to take over the full implementation, the project has to adapt to the country’s absorption capacity. In addition, some aspects, related, for example, to cost reduction and data quality and accuracy, may take some time to show positive impacts.

AGRISurvey

Agricultural Integrated Surveys Programme

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