

Senegal - Annual Agricultural Survey 2022-2023

Directorate of Analysis, Forecasting and Agricultural Statistics

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Identification

SURVEY ID NUMBER

SEN_2022-2023_AAS_v01_EN_M_v01_A_OCS

TITLE

Annual Agricultural Survey 2022-2023

COUNTRY

Name	Country code
Senegal	SEN

STUDY TYPE

Agricultural Survey [ag/oth]

SERIES INFORMATION

The Annual Agricultural Survey is a sample survey carried out during the main agricultural season in Senegal (July of year n to June of year n+1) with the primary objective of providing information on main rain-fed agricultural production in Senegal. The adoption of the modular approach of the AGRIS method, since the 2017-2018 agricultural campaign, has improved the coverage of the survey by taking into account non-rainfed activities (livestock, horticulture, fishing/aquaculture and agroforestry) of agricultural households and the integration of the technical, economic, environmental and social dimensions of agricultural holdings. In addition to the basic module, which collects data on production and input use on an annual basis, thematic modules are planned on a three-yearly rotation.

ABSTRACT

The agricultural survey in its current form covers all regions of the country and all 45 departments of Senegal. The agricultural survey is an annual statistical operation whose general objective is to estimate the level of the main agricultural output of family-type agricultural holdings. It also provides information on the physical characteristics of cultivated plots (geo-location, area) and major investments made in them (agricultural inputs, cultivation operations, soil management and restoration). The main indicators relate to yield levels, areas sown, production and means of production.

Following a modular approach, the 2022-2023 edition of the annual agricultural survey is characterized by the integration of the MEA module (Machines, Equipment and other Agricultural Assets). In addition, the basic module of the 50x2030 questionnaire allows the collection of data for the calculation of SDG 5.a.1.

KIND OF DATA

Sample survey data [ssd]

UNIT OF ANALYSIS

Households and agricultural plots

Scope

NOTES

The description of scope includes:

- Socio-demographic characteristics of agricultural households
- Characteristics of agricultural holdings
- Agricultural production methods
- Household farming activities
- Use of agricultural inputs and equipment
- Production and use of plant crops
- Livestock breeding
- Agricultural labor
- Fishing and aquaculture
- Agroforestry
- Production-related shocks
- Subsidies, loans and transfers
- Average labor productivity (SDG 2.3.1) and average income of small agricultural producers (SDG 2.3.2)

- Property rights over land particularly women (SDG 5.a.1)

Coverage

GEOGRAPHIC COVERAGE

The annual agricultural survey covers all 45 departments of Senegal. However, for reasons related to anonymization, the variable "Department" has been replaced by the variable "Agroecological Zone" which constitutes groupings in relation to the departments. The variable "Region" remains in the anonymized version of the data.

UNIVERSE

The agricultural survey covers all households and plots in the 45 departments of Senegal.

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Directorate of Analysis, Forecasting and Agricultural Statistics	Ministry of Agriculture, Rural Development and Food Sovereignty

PRODUCERS

Name	Affiliation	Role
Food and Agriculture Organization of the United Nations	United Nations	Technical support
Research and Planning Unit	Ministry of Livestock and Animal Production	Support in the development of the questionnaire
National Agency for Statistics and Demography	Ministry of Economy, Finance and Planning	Participation in training
Directorate of Horticulture	Ministry of Agriculture, Rural Development and Food Sovereignty	Participation in training
Directorate of rural development and modernisation	Ministry of Agriculture, Rural Development and Food Sovereignty	Participation in training

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
Government of Senegal	GoS	Funding of staff and collection material
50x2030 Initiative (www.50x2030.org)	50x2030	Technical and Financial Assistance

Sampling

SAMPLING PROCEDURE

The AAS was built on a two-stage survey, with census districts (CDs) as primary units (PUs) and agricultural households as secondary units (SUs), as defined during the general census of population and l'Habitat, de l'Agriculture et de l'Élevage (RGPHAE) of 2013. In line with the broadening of the scope of the survey recommended by the AGRIS approach, from this campaign onwards the sample design incorporated a first-stage stratification, induced by the second-stage stratification, to better reflect the various agricultural activities and improve the efficiency of the estimates. The choice of a first-degree stratification induced by that of the second degree, although less efficient than an independent first-degree stratification, was guided by the constraint of non-existence of relevant variables of interest in the sampling frame of the RGPHAE to discriminate against the CDs. The stratification took into account the relative importance of the main agricultural activities (in terms of household size) identified during the 2013 RGPHAE, namely rainfed agriculture, livestock and horticulture.

Thus, four strata were formed as follows:

- the "rainfed only" stratum which groups together all the households practicing only rainfed crops;
- the "livestock only" stratum for households that practice animal husbandry only;
- the "Horticulture and other crops" stratum, which includes households that mainly practice horticulture and secondarily other crops (forestry, fruit growing, etc.);
- the "Rainfed-livestock" stratum made up of households that practice both rainfed agriculture and livestock breeding.

The size of the sample of agricultural households to be surveyed was calculated by department (area of study) by setting a relative error of 10% on the variable of interest. The distribution of the sample of each department in the strata was made using the Bankier method (1988) developed in the methodological guide to the main sampling frame practices (pp. 79-81) of the Global Strategy for Agricultural and Rural Statistics (GSARS).

At the national level, the total theoretical sample is equal to 7,450 households, spread over 1,460 physical CDs, with 5 households per CD. At the end of the enumeration operation carried out in the physical sample CDs, adjustments were made to take into account the actual updated size of the CDs, which led to a final size of 7,378 households, or 1,382 CDs.

DEVIATIONS FROM THE SAMPLE DESIGN

Compared to the survey plan, adjustments were made based on the response rate at each phase.

RESPONSE RATE

First phase: sample of 7378 households, including 6360 surveyed, i.e. a coverage rate of 86%.

Second phase: sample of 7218 households, including 6,834 surveyed, i.e. a coverage rate of 95%.

WEIGHTING

Weight_men: Weighting of households (Phase 1)

Weight_menP2: Weighting of households (Phase 2)

Data Collection

DATES OF DATA COLLECTION

Start	End
2022-09-08	2023-02-28
2023-03-26	2023-06-17

DATA COLLECTION MODE

Computer Assisted Personal Interview [capi]

DATA COLLECTION NOTES

At regional level, the 14 Regional Rural Development Directors (DRDR) and the regional supervisors (the statistics officer at DRDR level) are responsible for:

- supervising the selection of interviewers and refresher sessions;
- receiving and distributing survey materials (training aids, tablets, questionnaire supplements, fuel, etc.);
- facilitating the centralisation of equipment (tablets, chargers, etc.) at regional level at the end of operations;
- supervising the consolidation of the data collected (verification, consistency, etc.);
- informing the regional and national authorities about the implementation of the operations.

At departmental level (SDDR), there are 45 departmental supervisors (Heads of Department) for all the departments, who:

- assist the regional supervisor in his tasks ;
- supervise the preparation and implementation of the survey plan;
- carry out the assignment of RDs and households;
- facilitate the checking and correction of data;
- save data (files) on a computer;
- participate in the consolidation of data at regional level;
- ensure the proper management of equipment.

The 45 departmental supervisors are responsible for:

- assisting the departmental supervisor in his or her tasks;
- implementing the survey plan;
- monitoring collection operations in the field;

- making corrective proposals on collection operations (observation points, collection system, etc.).

The 168 surveyors are responsible for:

- informing the local authorities of the operation;
- identifying the household to be surveyed, with the support of the local authority;
- administering the various questionnaires;
- submitting the questionnaires to the controller for approval;
- approaching the controller to check, correct and back up the data (back up on the controller's/supervisor's computer on each occasion to prevent data loss).

Questionnaires

QUESTIONNAIRES

The first questionnaire collected information on census and characteristics of agricultural household plots. The second questionnaire collected information on agricultural production, machinery, equipment and agricultural productivity.

Access policy

CONTACTS

Name	Affiliation	Email	URL
Directorate of Analysis, Forecasting and Agricultural Statistics	Ministry of Agricultural and Rural Development		Link
Sylvie Dasylva	Directorate of Agricultural Analysis, Forecasting and Statistics	sylvie_da_sylva@yahoo.fr	Link

CONFIDENTIALITY

Microdata from the Annual Agricultural Survey are confidential. They are anonymized to preserve the confidentiality of the identity of the respondents.

ACCESS CONDITIONS

The requesting service or organization must undertake to respect the following conditions:

1. The user must comply with the provisions of Articles 6 and 7 Chapter 2 Section 2 of Senegalese Law No. 2004.21 on the organization of statistical activities which obliges any person handling individual data, collected by the services and organizations under the national statistical system, to ensure the anonymity of the natural or legal persons concerned by the survey, and to use such data only for the purpose of disseminating or publishing aggregated statistical results.
2. The user is fully responsible for his conclusions or studies drawn from this data and in this, the responsibility of the DAPSA can not be engaged in any way whatsoever.
3. The data must not be copied or transmitted to other persons or organizations, directly or indirectly, without the prior written consent of DAPSA.
4. Any publication written using data from the DAPSA must include the following statement "Source: Survey X*, Year N*, Direction de l'Analyse, de la Prévision et des Statistiques agricoles (DAPSA) of the Republic of Senegal, www.dapsa.gouv.sn"
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*: X being the full name of the survey followed by its acronym in parentheses, example "Annual Agricultural Survey (EAA)". N being the year of the survey, example "2002".

CITATION REQUIREMENTS

(a) English version:

Source: Annual agricultural survey (AAS), 2022-2023, Directorate of Analysis, Forecasting and Agricultural Statistics (DAPSA) of the Republic of Senegal

(b) French version:

Source: Enquête agricole annuelle (EAA), 2022-2023, Direction de l'Analyse, de la Prévision et des Statistiques Agricoles

(DAPSA) de la République du Sénégal

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DISCLAIMER

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Metadata production

DDI DOCUMENT ID

DDI_SEN_2022-2023_AAS_v01_EN_M_v01_A_OCS_FAO

PRODUCERS

Name	Abbreviation	Affiliation	Role
Statistics Division	ESS	Food and Agriculture Organization	Adaptation of metadata for FAM
Directorate of Agricultural Analysis, Forecasting and Statistics	DAPSA	Ministry of Agriculture and Rural Development	Study documentation

DDI DOCUMENT VERSION

SEN_2022-2023_AAS_v01_EN_M_v01_A_OCS_v01

Data Dictionary

Data file	Cases	Variables
Matériel manuel Ce fichier de données contient des informations sur le matériel manuel détenu ou utilisé par les ménages agricoles. Les types de matériel ciblés sont : <ul style="list-style-type: none"> - Kadiandou - Hilaire - Houe manuelle (Daba,...) - Pulvérisateur manuel - Presse à huile manuelle - Faucille - hache-paille - Arrosoirs - Râteau - Pelle - Brouette - Fourche - Transplantoir - Plantoir - Machette (Jassi) 	19703	20
Membre Phase1 Ce fichier de données contient des informations sur les caractéristiques sociodémographiques des membres de ménages agricoles (sexe, âge (en années révolues), niveau scolaire, alphabétisation, formation professionnelle en agriculture et en élevage, etc.). Ces données ont été collectées lors de la première phase de l'enquête.	62100	15
Equipement tracté par animal Ce fichier de données contient des informations sur les équipements de traction animale détenue ou utilisée par les ménages agricoles. Les types d'équipements ciblés sont : <ul style="list-style-type: none"> - Charrette asine - Charrette équine - Charrette bovine - Semoir - Houe occidentale - Houe sine - Charrue - Butteur - Arara 	11387	40
Production fruitière Ce fichier de données contient des informations sur la production des cultures fruitières au cours des douze derniers mois. Les principales productions ciblées sont les suivantes : <ul style="list-style-type: none"> - Mangues - Bananes - Citron - Orange - Autres fruits - Papayes - Noix d'acajou - Pomme d'acajou 	1398	94

Machines motorisées

Ce fichier de données contient des informations sur le matériel motorisé détenu ou utilisé par les ménages agricoles. Les types de matériel ciblés sont :

- GMP (Motopompe, Pompes à eau)
- Kits d'irrigation goutte à goutte/Aspersion
- Pulvérisateurs et autres dispositifs d'irrigation
- Billonneuse
- Motoculteur
- presse à huile mécanique
- Batteuse
- Autres équipements mécaniques
- Poudreuse
- Décortiqueuse
- Moissonneuse batteuse
- Tracteur
- Charrue à disque ou soc
- Epandeur
- Faucheuses de foin/récolteuses de fourrage
- Nettoyeur de grain
- Trieuses et calibreuses
- Moulin à grains
- Offsete
- Egraineuse maïs

1063 33

Parcelles agricoles

Ce fichier contient les informations relatives aux parcelles agricoles. Ces informations portent sur le type des parcelles, la superficie utilisée, les caractéristiques des intrants (semences, engrais), etc.

14114 280

Menage Phase2

Ce fichier contient les informations relatives aux ménages agricoles collectées lors de la phase 2 de l'enquête agricole, notamment les chocs, les stratégies d'adaptation. le financement des activités agricoles, la production, les services payés.

6834 329

Production aquacole

Ce fichier contient des informations sur la fréquence de production durant la période de pêche de l'exploitation agricole, la quantité de la production vendue et le montant total tiré de la vente au cours de l'année. Les espèces sont les suivantes :

- Poissons
- Crustacés/mollusques

30 11

Stockage des animaux

Ce fichier de données contient des informations sur les types de stockage utilisés pour les animaux :

- enclos/bergerie/pocherie ou autre lieu de logement du bétail
- poulailler ou autre lieu de logement de la volaille
- entreposage de machines et équipements liés au bétail
- stockage d'aliments pour les animaux ou de produits vétérinaires
- espace ouvert en dehors du village
- autres

4995 7

Stockage de la récolte

Ce fichier contient des informations sur le stockage selon les types de produits récoltés :

- céréales
- racines et tubercules
- fruits et Légumes
- usage mixte (céréales, racines, fruits et autres)
- légumineuses

4115 16

Animaux en lactation

Ce fichier de données contient des informations sur la lactation des animaux pour les espèces suivantes :

- Vaches
- Brebies
- Chèvres

624 28

Ces données ont été collectées lors de la deuxième phase de l'enquête.

Cheptel

Ce fichier de données contient des informations sur le cheptel et leurs principales caractéristiques

17533 115

Equipements pour élevage

Ce fichier de données contient des informations sur les matériels de production animale :

- Machines à traire/Equipement de traite
- Incubateurs/couveuse et Chauffage radiant
- Autres équipements pour les productions animales
- Séparateurs de crème
- Mangeoire
- Abreuvoir

3244 45

Ces données ont été collectées lors de la deuxième phase de l'enquête.

Membre Phase 2

Ce fichier de données contient des informations sur les membres du ménage (sexe, âge, lien parenté avec le chef de ménage, etc.). Ces données ont été collectées lors de la deuxième phase de l'enquête.

68313 15

Production oeufs

Ce fichier de données contient des informations sur la production d'oeufs des ovipares (poules et autres volailles). Ces données ont été collectées lors de la deuxième phase de l'enquête.

619 9

produits de la cueillette

Ce fichier de données contient des informations sur les produits de cueillette :

- Bois de chauffage
- Charbon de bois
- Bois d'oeuvre
- Pain de singe (Bouye)
- Soumpe (balanites senegalensis)
- Madde (saba senegalensis)
- Tolle (Landolphia heudeloti)
- Oule (Parkia biglobosa)
- Sideem (zuzuphus mauritania)
- Huile de palme
- Nebneb (Acacia andosonii)
- Kaad (faidherbia albida)
- Nébédaye (Moringa)
- Dimb (Cordyla pinnata)
- Kinkéliba (Combretum)
- Nguère (Nguera Senegalensis)
- Laalo (feuille de baobab)
- Cola
- Autres produits de cueillette

4610 24

Ces données ont été collectées lors de la deuxième phase de l'enquête.

Production laitière

Ce fichier de données contient des informations sur la production de lait. Ces données ont été collectées lors de la deuxième phase de l'enquête.

218 13

Production maraichère

Ce fichier de données contient des informations sur la production irriguée:

- Aubergine
- Béréf
- Bissap irrigué
- Diakhatou
- Gombo
- Patate Douce
- Piment
- Riz irrigué
- Tomate cerise
- Tomate industrielle
- Choux
- Oignon
- Pomme de terre
- Carotte
- Courge
- Haricot vert
- Melon
- Concombre
- Oignon vert
- Navet
- Persil
- Laitue
- Poivron
- Plantes aromatiques
- Mais irrigué
- Sorgho irrigué
- Arachide irrigué
- Pastèque irrigué
- Niébé irrigué

1276 144

Ces données ont été collectées lors de la deuxième phase de l'enquête.

Menage Phase1

Ce fichier contient des informations relatives aux ménages agricoles collectées lors de la phase 1 de l'enquête.

6355 38

Production pluviale

Ce fichier contient des informations sur les productions végétales, les superficies récoltées, les quantités perdues, les raisons des pertes et les différentes utilisations.

Les productions agricoles concernent les spéculations suivantes :

- Arachide
- Béréf
- Bissap
- Coton
- Fonio
- Gombo
- Maïs
- Manioc
- Mil
- Niébé
- Pastèque
- Riz pluvial
- Sésame
- Sorgho
- Vouandzou
- Djabéré

10494 139

Intrants agricoles

Ce fichier contient des informations sur les types d'intrant (Urée, NPK, Autres Engrais, Fumier, Insecticides, Herbicides, Fongicides et bactéricides, Autre pesticide) utilisés, les quantités achetées et les sources.

4801 12

Production de poissons

Ce fichier de données contient des informations sur la production et la vente de poissons (Poissons d'eau douce, Poissons de mer et Crustacés/Mollusques).

161 16

Stockage autres produits

Ce fichier contient des informations relatives au régime foncier (propriété, en location, copropriété, emprunté) et le type d'entreposage :

- Transformation des récoltes (préparation pour le marché, etc	1584	7
- Stockage des produits phytosanitaires		
- Entreposage des engrais		
- Entreposage de machines et d'équipement liés aux cultures		
- Autres fins (préciser)		
