



الهيئة العامة للإحصاء  
General Authority for Statistics

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# Metadata Report of Agricultural Production Statistics

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V-2.0

Quality Management

Last update: 05.02.2023



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## 1. Contact

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1.2. Contact organization unit	Environment, Agriculture and Energy Statistics Department
1.3. Contact person function	Director of Environment, Agriculture and Energy Statistics Department
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1.5. Contact email address	<a href="mailto:info@stats.gov.sa">info@stats.gov.sa</a>
1.6. Contact phone number	920020081

## 2. Metadata Update

2.1. Metadata last update	14/05/2023
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## 3. Statistical Presentation

3.1. Data description
<p>The Agricultural Production Statistics presents recent data on agricultural production (both vegetable and animal) such as providing data on cultivated areas, quantities of production and quantities sold and their value according to each crop group. It also provides data on numbers and production of livestock, birds, and poultry at the level of administrative regions in Saudi Arabia, in addition to a number of relevant data.</p>



The Agricultural Production Statistics is a statistics depends on a survey conducted to collect data on the main characteristics as following:

1. Grain and fodder production.
2. Exposed and protected vegetable production.
3. Production of permanent trees and palm trees.
4. Livestock numbers.

The data is further used to estimate:

1. The cultivated area, quantity of production, sold production and its value for field crops (grains and fodder) and exposed vegetables by the type of crop and agricultural season.
2. The cultivated area, number of greenhouses, quantity of production, sold production and its value for protected vegetable crops, and protected cut flowers by the type of crop.
3. The total number of palm trees, production quantities of dates, sold production and its value and the number of fruitful ones by the type of palm tree.
4. The total numbers and quantities of production, sold production and its value for permanent trees, except for palm trees, and the number of fruitful ones by type.
5. Number of livestock (sheep, goats, camels and cows) in terms of type, breed, age group and sex.
6. The number of domestic poultry by type and the number of eggs produced from domestic poultry.
7. The amount of production of beehives by type of hive.

### 3.2. Classification system

The following classifications are applied in Agricultural Production Statistics:

- **National classification of economic activities (ISIC4):**

The statistical classification based on the International Standard of Industrial Classification of All Economic Activities (ISIC4) is used to describe productive activities of an establishment.

- **Saudi Standard Classification of professions (ISCO\_08):**

A statistical classification based on the International Classification (ISCO\_08) that provides a system for the classification and compilation of professional information obtained through



censuses and statistical surveys, as well as administrative records. This classification is used in agricultural production in order to classify employees based on their professions.

- **National Code of Countries and Nationalities (3166 ISO – codes Country):**

A statistical classification based on the international standard (ISO 3166\_Country codes), which is a standard issued by the International Organization for Standardization (ISO of the UN), and this classification gives numeric and literal codes for the world's (248) countries, based on the classification of countries. The classification is used in the agricultural production to classify Saudi or non-Saudi individuals.

The classifications are available on the GASTAT's website: [www.stats.gov.sa](http://www.stats.gov.sa)

### 3.3. Sector coverage

Agricultural Production Statistics covers agricultural economic sectors.

### 3.4. Statistical concepts and definitions

Terminologies and concepts of the Agricultural Production Statistics:

- **Holding:** It is an economic unit of agricultural production, in both crops and livestock, under single management, comprising all kept livestock and all land used totally or partially for agricultural production purposes regardless of ownership, legal form or area. The holding may be run by one single person or by a household. It also may be run jointly by two or more individuals or households. Such management may be undertaken by a juridical person such as a corporation, cooperative, government agency, etc. The land of the holding may consist of one or more parcels under one name, on the condition that the parcels shall share the same means of production, such as workforce or agricultural machinery and equipment. The association may be obvious and visible to be considered one economic unit.
- **Holding Type:** There are two types of holdings:
  1. **Traditional holding(unregulated):** It is the most common type of agricultural holding in the Kingdom. Traditional holdings do not require previous approval or licenses from concerned authorities, and their production activities may be crops based, livestock based, or both.
  2. **Specialized holding(regulated):** This type of holding includes the preapproved holdings (projects) that have acquired licenses from the concerned authorities after submitting technical and economic studies for the establishment of such holdings,



whether they are holdings specialized in crops, livestock, poultry or fishery production, or projects that mainly adopt modern unconventional irrigation methods, the use of agricultural mechanization and modern technology in agricultural production and specialization in production with regard to open or protected agriculture, raising cows to produce milk or fattening calves, sheep and poultry.

- **Main Activity of the Holding:** The main activity of a holding is the prevailing activity carried out by the holding, which is consistent with its economic revenues, such that it represents more than 50% of the annual income of that holding.

For the purposes of this agricultural census, the main activities of holdings have been divided into five categories:

1. **Crop Holding:** A holding in which the agricultural activity represents more than 50% of its annual income during an agricultural year, depending on various permanent and temporary winter and summer crops.
  2. **Livestock Holding:** A holding in which the livestock activity represents more than 50% of its annual income during an agricultural year, depending on various types of animal resources and livestock farmed on the holding (lamb, sheep, camel, cow, riding and draught animals) and on beehives.
  3. **Poultry Holding:** A holding in which the poultry production activity represents more than 50% of its annual income during an agricultural year, depending on various types of poultry (boiler chicken, laying chicken, parent chicken, grandparent chicken, free range chicken, other birds such as ostrich, duck, goose, or quail). Rabbits are also considered poultry.
  4. **Fish Holding:** A holding in which fish production activity represents more than 50% of its annual income during an agricultural year, depending on the farming and aquaculture of fish in internal ponds such as farms dedicated to fish or shrimp production.
  5. **Mixed Holding:** When the activity at the holding is mixed and none of its components represent more than 50% of the holding's annual income during an agricultural year, provided that the holding practices three or more different activities from the following crops, livestock, poultry, or fish activities, and that each component represents less than 50% of the holding's activity.
- **Agricultural Year:** For the purposes of agricultural surveys, the crop production agricultural year starts on (1/3/2017) and ends on (28/2/2018), corresponding to (3/6/1438 - 12/6/1439 AH).



For the holdings' livestock and poultry statistics, however, (31/12/2017), corresponding to (13/4/1439 AH, counts as the reference day).

- **Agricultural Season:** The agricultural season is divided into two main types, namely:
  1. **Winter Season:** Winter crops are grown during this season, and their production cycle is less than a year. Crops are usually planted between: November and the end of December, and are harvested by March each year, whether the crops are cultivated in open fields, or under evergreen crops like fruit trees. Some examples of winter season crops include: (onions, garlic, carrots, peas, cauliflower, celery, arugula, spinach, lettuce, and radish ...).
  2. **Summer Season:** Summer crops are grown during this season, and their production cycle is less than a year. Crops are usually planted during: March, April, and May, and are harvested during: August and September of each year, whether in open fields or under evergreen crops. Examples of summer season crops include: (watermelon, melon, tomato, cucumber, eggplant, okra, pumpkin, mallow, and beans...).
- **Harvested Area:** The actual area of crop production. In the case of sequential cropping on the same land within the same year, the area is recorded as many times as it is cultivated to yield the total harvested area.
- **Open Field Agriculture:** Cultivating fields with crops without protection from weather conditions.
- **Protected Agriculture:** The cultivation of crops in greenhouses (areas covered in glass, plastic, or another material) to protect them from weather conditions, such as light, temperatures, air, and humidity. This creates a favorable environment for different kinds of plants to grow throughout the year. This method is usually used for cultivating vegetables and cutting flowers.

The following are different types of greenhouses:

1. **Regular plastic:** Made from single or air-inflated double polyethylene, this is the most widespread type of greenhouse, and lasts for one year.
2. **Air-conditioned plastic:** The only difference between this type and the regular plastic greenhouses is that it is equipped with artificial air-conditioning.
3. **Glass:** As a covering material, glass allows good light transmission (88%) and lasts the longest among greenhouse types.
4. **Fiberglass:** Also called glass-reinforced plastic (GRP), it is made from plastic, glass fibers and a binding material. It is more durable and lasts longer than plastic houses.
5. **Other types:** Greenhouses made from other materials.



- **Agricultural Production:** The plant production of an agricultural holding, such as crops, vegetables, and evergreen trees; as well as all animal and livestock production. It includes grains, fodder, open-field and protected vegetables, cut flowers, fruits (including dates), as well as sheep, goat, cow, and camel count; milk and dairy products, number of boiler chicken, table eggs, chicks, hatchery eggs, fish, ostrich and quail eggs and meat, and amount of rabbit meat and honey, in addition to secondary products, such as organic fertilizers and ostrich feathers and skin.
- **Cropping System:** The method used in growing crops, which is one of 3 types:
  1. **Monocropping:** Cultivating a single type of crop in an area designated for that crop alone, for example growing only tomatoes or cucumbers.
  2. **Intercropping:** Planting crops under evergreen trees in part or all of the field. The temporary crop proportion is recorded separately, while the total evergreen crop proportion counts as the total area.
  3. **Sequential cropping:** Growing two crops in the same field, one after the other in the same year. The area of each crop is recorded separately while planting or growing them. Therefore, an area would be recorded twice if two different crops are grown in it in the same year. It is worth noting that sequential cropping should not be confused with sequential harvest of the same crop, where the area is recorded only once.
- **Sold production:**

Production supplied to the market by the farmer and sold for a price, which forms a part of the total production after deducting self-consumed, lost and damaged produce, including crops and plant and animal products. Endowments and produce gifted to someone other than the holder's family falls within this category.

### 3.5. Statistical unit

The statistical unit in Agricultural Production Statistics is " the agricultural holdings".

### 3.6. Statistical population

The statistical populations of Agricultural Production Statistics are all the agricultural holdings according to the 13 administrative regions in Saudi Arabia.



### 3.7. Reference area

The survey sample is a representative sample for Saudi Arabia's 13 administrative regions.

### 3.8. Time coverage

the data is covered from 2017, 2018, and 2021.

### 3.9. Base period

Not applicable.

## 4. Unit of measure

Most results measure number in tons, such as: production quantities, while most of the areas were measured in dunums.

## 5. Reference period

References period to the variables or dataset as following:

The data of the Agricultural Production Statistics in terms of agricultural production and numbers of livestock and poultry are as follows:

- Agricultural production starts from (March 1) and ends on (February 28 of the following year).
- The numbers of livestock and poultry, and it is counted on (December 31) for the reference year.



## 6. Confidentiality

### 6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential, and must be used by GASTAT only for statistical purposes. Therefore, the data are protected in the data servers of the Authority.

### 6.2. Confidentiality - data treatment

Data were displayed in appropriate tables to facilitate its summarization, comprehension, and results extraction. Also, to compare data with other data and extract statistical meanings for the study community. It is also easier to check tables without the need to see the original questionnaire, which usually include data like names and addresses of individuals, names of data providers, which violates data confidentiality of statistical data.

“Anonymity of data” is one of the most important procedures. To keep data confidential, GASTAT removed information on individual persons, households, or business entities such a way that the respondent cannot be identified either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

## 7. Release policy

### 7.1. Release calendar

The Agricultural Production Statistics results are bound by a release calendar.

### 7.2. Release calendar access

Available on the: <https://www.stats.gov.sa/en/future-releases>



### 7.3. User access

One of GASTAT's objectives is to meet its clients' needs better, so it immediately provides them with the bulletin's results once the Agricultural Production Statistics publication is published. It also receives questions and inquiries of the clients about the Bulletin and its results through various communication channels, such as:

- GASTAT's official website [www.stats.gov.sa](http://www.stats.gov.sa)
- GASTAT's official e-mail address [info@stats.gov.sa](mailto:info@stats.gov.sa)
- Client Support's e-mail address [cs@stats.gov.sa](mailto:cs@stats.gov.sa)
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone (92002008).

## 8. Frequency of dissemination

Annual.

## 9. Accessibility and clarity

### 9.1. News release

The announcements for each publication are available on release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT in the link <https://www.stats.gov.sa/en/news>.

### 9.2. Publications

GASTAT issues Agricultural Production Statistics publications and reports on a regular basis within a pre-prepared publishing plan and installed on GASTAT's website. GASTAT is keen to publish its publications in a manner that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, metadata, methodology, and used questionnaires) in both English and Arabic.



The Agricultural Production Survey publications are available on the [Agricultural Production Statistics | General Authority for Statistics \(stats.gov.sa\)](https://stats.gov.sa)

### 9.3. On-line database

Not applicable.

### 9.4. Micro-data access

Not applicable.

### 9.5. Other

Not available.

### 9.6. Documentation on methodology

The Agricultural Production Statistics Framework:

The classification of the raw data of the agricultural production statistics was based on the classification and coding inputs that were made during the data collection process. They were classified according to the World Program for Agricultural Statistics 2020 from the Food and Agriculture Organization of the United Nations (FAO).

### 9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.



## 10. Quality management

### 10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.

### 10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

## 11. Relevance

### 11.1. User needs

Internal GASTAT's users, which make use of Agricultural Production Statistics data, include:

- National accounts statistics.

External users who make significant use of Agricultural Production Statistics data include, but is not limited to:

- Governmental entities.
- Regional and International Organizations.
- Research institutions.
- Media.
- Individuals.

The disseminated key variables that mostly used by key users:

Ministry of Environment, Water, and Agriculture	All of the data
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General Food Security Authority	Grain crop production data
Agricultural Development Fund	All of the data
National Center for Plants and Dates	Palm tree production data
Food and Agriculture Organization	All of the data

### 11.2. User satisfaction

Not available.

### 11.3. Completeness

Agricultural Production Statistics data are based on field agricultural surveys to provide comprehensive information on agricultural production data in Saudi Arabia.

## 12. Accuracy and reliability

### 12.1. Overall accuracy

The data collected is improved through the researchers, that have been selected according to a set of practical and objective criteria and training program related to the field of work.

The electronic data collection form of the Agricultural Production Statistics' questionnaire includes alert, prevention rules and correction rules during the data collection process in order to improve data quality.

Overall, the data is checked with previous years to identify any significant changes in the data. The internal consistency of the data is checked before it is finalized. The links between variables are checked and coherence between different data series is confirmed.



## 13. Timeliness and punctuality

### 13.1. Timeliness

GASTAT uses the Special Data Dissemination Standard (SDDS) issued by the International Monetary Fund. According to this Standard, all statistics agencies are required to publish data on an annual basis, and with a delay of not more than one quarter (180 days) after the end of the reference period. If the data are from different source, they may be published in a different frequency.

### 13.2. Punctuality

Publication takes place in accordance with published release dates for Agricultural Production Statistics on the GASTAT webpage. The data are available at the expected time, as scheduled the release calendar, If the publication delayed the reasons would be provided.

## 14. Coherence and comparability

### 14.1. Comparability - geographical

Data are fully comparable geographically.

### 14.2. Comparability - over time

Data are fully comparable over time.

### 14.3. Coherence- cross domain

Not applicable.



<b>14.3.1. Coherence - sub annual and annual statistics</b>
Not applicable.
<b>14.3.2. Coherence- National Accounts</b>
Not applicable.
<b>14.4. Coherence - internal</b>
Agricultural Production Statistics estimates for a given reference period have full internal coherence, as they are all based on the same corpus of microdata, and they are calculated using the same estimation methods.

## 15. Resources used

Description	Total
Total staff (GASTAT's staff, researchers)	692
Number of surveyed holdings	20,957
Total days of data collection period (end date - start date)	30
Average conducted interviewer per day (during data collection)	699

## 16. Data revision

<b>16.1. Data revision - policy</b>
Not applicable, only final results will be published.
<b>16.2. Data revision - practice</b>
Not applicable, only final results will be published.



## 17. Statistical processing

### 17.1. Source data

- **Main source of** Agricultural Production Statistics is Agricultural Production Survey: Data are collected from a sample of agricultural holdings.

The archived sample size is around **20,957** agricultural holdings.

The disseminated key variables of administrative data are:

1. The cultivated area, quantity of production, sold production and its value for field crops (grains and fodder) and exposed vegetables by the type of crop and agricultural season.
2. The cultivated area, number of greenhouses, quantity of production, sold production and its value for protected vegetable crops, and protected cut flowers by the type of crop.
3. The total number of palm trees, production quantities of dates, sold production and its value and the number of fruitful ones by the type of palm tree.
4. The total numbers and quantities of production, sold production and its value for permanent trees, except for palm trees, and the number of fruitful ones by type.
5. Number of livestock (sheep, goats, camels and cows) in terms of type, breed, age group and sex.
6. The number of domestic poultry by type and the number of eggs produced from domestic poultry.
7. The amount of production of beehives by type of hive.

### 17.2. Frequency of data collection



Annual.

### 17.3. Data collection

The Agricultural Production Statistics data collection is carried out through a survey implemented by GASTAT annually through Computer-Assisted Personal Interviews (CAPI).

### 17.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data of the publication's current year are compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to the data processing and tabulation to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in Environment, Agriculture and Energy Statistics Department through modern technologies and software designed for this purpose.

### 17.5. Data compilation

#### **Data Coding**

In the Agricultural Production Survey, interviewers collect from respondents, a detailed description of each field. This information is then coded in-house by an automated process, which is reviewed by a small-dedicated team of coding experts using a series of consistency checks.

#### **Data Editing**

Specialists of (Statistical dept. name) Department have processed and analyzed data in this stage, and this step was based on the following measures:

- Sort and arrange data in groups or different categories in a serial order.
- Summarize detailed data into main points or main data.
- Linking between many parts of data and make them connected.
- Process incomplete or missing data.
- Process illogical data.
- Converting data into statistically significant data.
- Organize, display, and interpret data.



### **Imputation (for Non-Response or Incomplete Data Sets)**

The method of statistical inference is used to compensate for missing values using some simple mathematical operations such as “averages”.

### **Extrapolation and weighting**

After processing the data collected from the responding holdings, survey weights were generated to produce indicators tables by following two main steps in creating survey weights:

- Adjustment of non-response
- Calibration weight

## 17.6. Adjustment

Not applicable, only final results will be published.

## 18. Comment