



مركز الإحصاء
STATISTICS CENTRE

Methodology

**Plants
Statistics**

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1. Overview

1.1. Introduction

Plants statistics is one of the pioneering projects carried out by the Statistics Center Abu Dhabi.

Statistics Center – Abu Dhabi (SCAD) is the official authority for publishing data and statistics on agricultural indicators in Abu Dhabi, including those pertaining to plants. However, unlike some other datasets published by SCAD, agricultural statistics are not based on surveys conducted by SCAD itself, rather they are based on secondary data sources from other Abu Dhabi government entities. These data are collated by the relevant organizations and shared with SCAD for collation into annual reports for agricultural topics, including plants.

1.2. Concepts and definitions

The Dictionary of Terminology used by SCAD, published on SCAD's website, provides a list of the terms and concepts used in plants statistics, giving definitions of the terms and relevant international references.

1.3. Abu Dhabi special considerations

It should be noted that Abu Dhabi is an emirate and one of 7 emirates in UAE, and data collected is limited to Abu Dhabi emirate. However, since the administrative sources used for collating data pertinent to plants statistics also operate at the emirate level, this should not be a factor which compromises data quality.

1.4. Classifications and standards applied

The classification of agricultural data is based upon the international definitions and classifications adopted in this respect and issued by the Food and Agriculture Organization of the United Nations under the "World Program for the Census of Agriculture 2020"¹. It corresponds to the Agricultural Statistics and Classifications issued by the Federal Competitiveness and Statistics Centre².

1.5. Available breakdown

SCAD publishes a broad range of indicators relevant to the plant's statistics, with coverage across different geographical definition.

Number of plant holdings (Annual data)

1. By district
2. Area Category
3. Operating holdings
4. Soil Salinity

Area of plant holdings (Annual data)

1. By district
2. Area Category
3. Operating holdings

¹ See <http://www.fao.org/3/CA1963EN/ca1963en.pdf>

² See <http://methods.fcsa.gov.ae/Forms/IntlGuides/IntlGuides.aspx>

4. Land uses
5. Soil Salinity

Number of fruitful trees (Annual data)

1. By district
2. Types of trees

Fruitful trees harvesting area (Annual data)

1. By district
2. Types of trees

Number of forest trees (Annual data)

1. By district
2. Types of trees

Forest trees areas (Annual data)

1. By district
2. Types of trees

Quantity of dates (Annual data)

1. By district

Value of dates (Annual data)

1. By district

Field crops area (Annual data)

1. By district
2. Crop type
3. Planting method

Vegetables crops harvesting area (Annual data)

1. By district
2. Crop type
3. Planting method

Agricultural crops production quantity (Annual data)

1. By district
2. Crop type
3. Planting method

Agricultural crops production value (Annual data)

1. By district
2. Crop type
3. Planting method

Greenhouse (protected) (Annual data)

1. By district
2. Operating and non-operating

Irrigated area (Annual data)

1. By district
2. Irrigation system type

Agricultural producer price index (Annual data)

1. Crop type

Number of agricultural wells (Annual data)

1. By district
2. Average well depth

Value of loans granted to farmers (Annual data)

1. By district

Used pesticides quantity (Annual data)

1. By district
2. Pesticide type

Used pesticides value (Annual data)

1. By district
2. Pesticide type

Number of workers at plant holdings (Annual data)

1. By district

Number of plant holdings (farms) covered by government support (Annual data)

1. By district

Area of plant holdings (farms) covered by government support (Annual data)

1. By district

Total of Foreign trade of agricultural commodities value (Annual data)

1. Imports value
2. Exports value
3. Re-exported value

Total fertilizers' Foreign trade quantity (Annual data)

1. Imports quantity
2. Exports quantity
3. Re-exported quantity

Total fertilizers Foreign trade value (Annual data)

1. Imports value
2. Exports value
3. Re-exported value

Total pesticides' Foreign trade value (Annual data)

1. Imports value
2. Exports value
3. Re-exported value

Number of imported food shipments (Annual data)

1. Port type

1.6. Importance and objectives of the indicator

Plants statistics seek to provide data on the production of different agricultural plant types - field crops, vegetables and fruits. This includes volumes of production, land areas used for these purposes (including

by type, e.g. greenhouse, irrigation coverage), numbers of plant holdings, number of wells, and the use of pesticides. Data on plants statistics support scientific research in the agricultural sector, help policy and decision markets develop future plans for the advancement of the plants activity, and promote the concept and understanding of food security.

2. Indicator information

2.1. Geographical coverage

Geographical coverage of plants statistics includes emirate-level data, as well as data pertaining to Abu Dhabi, Al Ain, and Al-Dhafra regions.

2.2. Statistical population

All farms and agricultural enterprises growing plants and producing related products are the statistical population for the plant's statistics reports. This is achieved through the use of administrative records from government agencies in the Emirate of Abu Dhabi.

2.3. Periodicity

Plants statistics are published annually.

2.4. Timeliness

Plants statistics reports are published with ten months from the reference period – specifically October in the year following the reference period.

2.5. Units

A range of units are used in the Plants statistics reports, including gross plant production and productivity statistics as per the harvest type etc. These include donums for areas, tons for quantities, dirhams for price values.

2.6. Reference period

The reference period for Plants Statistics varies by indicator. For indicators related to crop production, the reference period is a crop year, which may or may not coincide with the calendar year (e.g. planting may occur in one calendar year and harvesting in the next – both should be considered part of the same crop year). For series relating to land areas under cultivation or numbers of trees, the reference period is the given point in the year for which relevant administrative data are collated.

3. Methodology

3.1. Alignment to international standards

The compilation and publication of Plants statistics by SCAD follows as far as possible best practice as recommended by international organizations such as the Food and Agricultural Organization (FAO). The

plants statistics are compiled from a range of administrative data sources, including Abu Dhabi Agriculture and Food Safety Authority, Environment Agency, and Department of Municipalities and Transport.

3.2. Data sources

The plants statistics relies on both survey data as well as administrative sources (e.g. from other ministries and registers).

3.2.1 Survey data

The plants statistics is based on administrative data only.

3.2.2 Administrative data

The plants statistics are compiled from a range of administrative data sources, including Abu Dhabi Agriculture and Food Safety Authority, Environment Authority Abu Dhabi, Department of Municipalities and Transport, and the ALFOAH company. Data are received in aggregated tables from the administrative sources for the respective variables.

3.3. Data validation and editing

3.3.1 Data validation

Data are edited after applying the comparison rules to the relevant tables, verifying that all required data are complete and comprehensive, comparing them with time series, compensating for the missing values and reviewing the deviating ones, measuring the quantitative and supreme difference between the variable value listed under the administrative records for the actual period and the variable value of the previous periods, and verifying that the data are logical.

3.3.2 Missing data adjustments

Upon receipt of the data tables from administrative sources, SCAD checks for missing data, and as appropriate verifies the reasons for the missing data with the administrative sources. In cases where it is appropriate to estimate a value for the missing data a variety of approaches can be taken – including the administrative entity gathering more information, a joint discussion between SCAD and the administrative department on the best approach, and SCAD undertaking a statistical-based estimation. Where a statistical method is used missing values are imputed using previous cycles and related indicators, plus other internal and external indicators.

3.4. Data processing

Agricultural indicators are identified by performing calculations or using the aggregation method upon the available data, re-classifying, and publishing them.

3.4.1. Linking different datasets

Different datasets from a range of administrative sources are combined to compile the plants statistics. Data is collated via a range of email, official letters, and electronic links.

3.4.2. Sample weighting

Weighting is not applicable to the production of plants statistics.

3.4.3. Statistical calculation method

Plants indicators are identified by performing calculations or using the appropriate aggregation method upon the available data, re-classifying, and publishing them.

3.4.4. Seasonal adjustment

Seasonally adjusted estimates are not produced for this publication.

3.4.5. Chain linking

Chain linking is not applied to this production.

4. Special cases

The plants statistics do not present special cases of indicators.

5. Outputs and quality

5.1 Dissemination and accessibility

Data are disseminated in SCAD official website and available in Excel and PDF on annual basis.

5.2. Length of available dataset

Data on plants production are available to 2009.

5.3. Methodology changes

The methodology for producing plant statistics is reviewed to comply with requirements

5.4. Data coherence and comparability

Data are comparable to previous years.

5.5. Data accuracy and potential sources of errors

Potential for error arises in the compilation of the data provided by administrative bodies. SCAD undertakes the validation checks described in section 3.3 to identify and address any potential errors in indicator calculation.

5.6. Revision policy

No revisions are made to previous years' data.

5.7. Limitations of dataset

No limitations of datasets are applicable for this publication.

6. Institutional environment

Statistics Centre – Abu Dhabi (SCAD), as the competent government entity in charge of organizing statistical activities in the emirate, plays a pivotal role in supporting decision-makers, and policymakers in Abu Dhabi. The statistical activities in the emirate are organized by SCAD, with its strategic partners in the Statistical System of Abu Dhabi. The Law entrusts SCAD with the task of developing and organizing statistical in Abu Dhabi Emirate.

7. Glossary

Plant Holdings:

Plant holdings with vegetable crops, field crops, fruit trees, or all of them, that meet the holding criteria (in terms of the minimum size).

Area of Plant Holdings:

The area of plant holdings includes all the agricultural holdings managed by the holder, regardless of location or legal form of the holding. They do not include the agricultural lands owned by the holder or one of his household members, as well as those leased to others. On the other hand, agricultural lands that are not owned by the holder but are rented by third parties are included in plant holdings dedicated to agricultural use.

Number of Fruit Trees:

The number of fruit trees, which are considered permanent crops that do not need to be planted annually.

Fruit Trees Area:

Area cultivated with fruit trees, which are considered permanent crops that do not require annual planting.

Number of Forest Trees:

Number of (permanent) forest trees with a height is 5 meters or more (or less than 5 meters in the Emirate of Abu Dhabi), with a crown coverage of more than 10% including the planted forest trees and naturally induced trees.

Forest Trees Area:

Crop Area of (permanent) forest trees which height is 5 meters or more (or less than 5 meters in the Emirate of Abu Dhabi) with a crown coverage of more than 10%, including both wild and exotic forest trees and naturally induced trees.

Field Trees Area:

Crop Area of short-lived field crops with a life cycle is less than a year, in which such crops are planted and harvested, and their produced quantity is collected in less than a year.

Vegetables Crops Area:

Harvesting area of vegetable crops planted using the exposed and covered planting method and used for planting crops with a life cycle is less than a year.

Agricultural Crops Production Quantity:

Quantity of agricultural crops including the produced quantity of field crops, produced quantity of trees harvests, and produced quantity of vegetables crops.

Agricultural Crops Production Value:

The value of the produced crops, including the value of field crops, value of trees harvests, and value of vegetables crops.

Operating and non-Operating Protected Greenhouses Number:

Number of productive and non-productive protected houses **Greenhouses**, those covered by a glass, fiberglass, plastic, or any other material to protect plants from external factors, diseases, and pests, being houses that can be used for planting permanent and temporary crops. This method is frequently used in the planning vegetables and protected flowers. Some **Greenhouses** may be operating while some others are not.

Operating and non-Operating Protected Houses Area:

Area of productive and non-productive protected **Greenhouses**, those covered by a glass, fiberglass, plastic, or any other material to protect plants from external factors, diseases, and pests, being **Greenhouses** that may be used for planting permanent and temporary crops. This method is frequently used in terms of planning vegetables and protected flowers. Some **Greenhouses** may be operating while some others are not.

Total Irrigated Area:

Irrigated area of land that has been purposefully supplied with water, other than rain in order to improve crops' production and increase the area of pasture.

Agricultural producers price index:

Adjusted number of prices adopted by agricultural producers in the Emirate of Abu Dhabi, which serves indicator for calculating the average variables pertaining to agricultural products in a given year in comparison with another year known as the baseline year.

Number of Agricultural Wells:

Number of agricultural wells whose water is used for irrigating plants, as well as wells used for agricultural production purposes. These wells do not include those used for purposes other than agricultural purposes, such as drinking water wells, among others.

Value of Loans granted to Farmers:

Value of loans granted to farmers based on the type of service or support provided, such as the irrigation systems used in agricultural holdings, among other things.

Quantity of Pesticides Used:

Quantity of chemical pesticides used, which are chemicals used for combatting agricultural and plant diseases and pests, as well as the damage that may occur during the transportation, storage, and marketing of agricultural products.

Used Pesticides Value:

Value of chemical pesticides used for combatting agricultural and plant diseases and pests, as well as the damage that may occur during the transportation, storage, and marketing of agricultural products.

Number of workers at agricultural holdings (Farms):

Number of workers employed (or employed) in agricultural holdings (farms) during the reference year.

Number of plant holdings (farms) covered by government support:

Number of agricultural holdings (farms) covered by government subsidy, according to the service type, such as irrigation networks, among other services.

Area of plant holdings (farms) covered by government support:

Area of agricultural holdings (farms) encompassed by government support, as per the service type, such as irrigation networks, among other services.

Total Value of Agricultural goods and foods foreign trade:

Total value of agricultural goods and foods entering through the customs ports of the Emirate of Abu Dhabi, total value of locally produced agricultural goods and foods or those using local resources in terms of their production and exported through the Emirate's ports, and the total value of re-exported and imported agricultural goods and foods entering through the customs and economic zones, and that are then re-exported.

Total quantity of Agricultural goods and foods foreign trade:

Total quantity of fertilizers entering through the customs ports of the Emirate of Abu Dhabi, total quantity of locally produced fertilizers or those using local resources in terms of their production and exported through the Emirate's ports, and the total quantity of re-exported and imported fertilizers entering through the customs and economic zones, and that are then re-exported.

Total quantity of foreign trade in fertilizers:

Total quantity of fertilizers entering through the customs ports of the Emirate of Abu Dhabi, total value of locally produced fertilizers or those using local resources in terms of their production and exported

through the Emirate's ports, and the total value of re-exported and imported fertilizers entering through the customs and economic zones, and that are then re-exported.

Total Value of Agricultural pesticides foreign trade:

Total value of pesticides (materials used for protecting plants and animals from diseases and pests) entering through the customs ports of the Emirate of Abu Dhabi, total value of locally produced pesticides or those using local resources in terms of their production and exported through the Emirate's ports, and the total value of re-exported and imported pesticides entering through the customs and economic zones, and that are then re-exported.



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