



الهيئة العامة للإحصاء
General Authority for Statistics

Publication of Agricultural Holdings Survey

2018

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Introduction

Council of Ministers' Resolution No. 211 dated 13/1/1437 Hijri granted the General Authority for Statistics (GASTAT) the authority to conduct surveys on economic, social, residential, and agricultural issues in the Kingdom and to regularly publish its findings. Based on this prerogative, GASTAT established programs and census operations that seek to provide a large statistical database that covers all areas, including agricultural statistics.

Therefore, the Agricultural Holdings Survey 2018 is considered one of the first surveys concerning agricultural activities issued by GASTAT as part of a series of agricultural surveys implemented in parallel. GASTAT had completed its first agricultural census in 2014/2015 and is aware of the importance of agricultural activities and their impact on food security.

The Agricultural Holdings Survey is one of several regular surveys implemented every three years to provide an up-to-date agricultural census database that covers key characteristics for agricultural holdings such as number, area, legal status, holding type, data on agricultural laborers, and other important information.

GASTAT would like to thank all those who contributed to these efforts, from government partners to data providers at agricultural holdings. Their collaboration has greatly contributed to the publication of this publication .

For the purpose of improving the contents of this publication and developing future publications, GASTAT hopes to receive your comments and suggestions by email on agriculture@stats.gov.sa.

God is the Arbiter of Success

General Authority for Statistics

Data Sources for the Agricultural Holdings Publication :

The Agricultural Holdings Publication depends for its data on a field survey conducted by GASTAT for the first time in 2018. The survey falls under the category of “agricultural statistics” and collects data through a representative sample of holding visits spread out across all administrative regions in the Kingdom of Saudi Arabia, and an electronic form containing multiple questions. Estimates and indicators regarding agricultural holdings and holders in the Kingdom are consequently obtained.

Objectives:

- 1- Supporting decision makers, policy makers, researchers, and parties interested in comprehensive and updated statistics on agricultural holdings in the Kingdom.
- 2- Building an updated agricultural census database to be used for the collection of agricultural resources, and consequently to provide a series of data on agricultural activities related to holdings and holders in the Kingdom.
- 3- Providing updated statistics on:
 - Holders (e.g. age, gender, nationality, main occupation, education)
 - Agricultural holding (e.g. area, legal status, main purpose of production, holding type, main activity)
 - Number of members in the holder’s household, whether living inside or outside the holding.
 - Agricultural laborers by age, gender, nationality, and financial compensation.
 - Main source of irrigation, number of wells, and the energy used for irrigation.
 - Methods of disposing of waste and carcasses.

Agricultural Holdings Publication Terms and Concepts:

1- **Holding:**

A holding is an economic unit of agricultural production, both plant and animal-based, with a single source of management. It includes all the animals in the holding and all the lands used fully or partially for agricultural production regardless of ownership, legal description, or area. The holding may be run by one person alone or by a household that includes two people, two households, or more. The holding's management has a legal personality similar to a company, cooperative, government agency, or other. The holding's land may consist of one part or several parts that fall under the same name provided that all parts of the holding share common production resources such as laborers, machines, and agricultural equipment and that the joint resources are clear and express so that all parts can be considered one economic unit.

2- **Holder:**

The holder is a natural person or a legal person (company or government body) who administratively controls the operation and investment of the agricultural holding. He makes key decisions regarding the use of available resources and is in charge of technical and economic responsibilities related to the holding. He may handle all responsibilities directly or may assign them to other managers in exchange for a fee. If two or more members of the same household manage the same holding, the head of the household is considered the holder.

3- **Main Occupation of the Holder:**

It is the main job executed by the holder and to which most ordinary work hours are dedicated. It is one of two occupations:

1. **Agriculture:** When the holder dedicates more than 50% of his working hours a year to agricultural work.
 2. **Non-agriculture:** When the holder dedicates more than 50% of his working hours a year to non-agricultural work.
-

4- **Holder's Education:**

The holder's level of education is considered to be the latest qualification he obtained successfully.

5- **Total Area of the Holding:**

It is the area covering all parts of the holding combined, including owned areas, areas leased from third parties, and any area owned by the holder through other distribution rights. It excludes any area owned by the holder that is already leased to third parties. The total area of the holding includes farmed lands, lands occupied with a farmhouse, animal shelters, squares, and roads and is measured in Dunam (1,000 m²).

6- **Owned Area:**

The plot of land owned by the holder through a title deed, common instrument, or ministerial resolution and for which the holder can define the nature of use.

7- **Leased Area:**

(in exchange for money or a share of the production): It is a plot of land leased by the holder from third parties for a set period using different lease types and arrangements, whether through a fixed lease in exchange for a monetary sum or a proportional lease in exchange for a share of the production or both.

8- **Type of Holding:**

There are two types of holdings:

1. **Traditional (not regulated):** 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 plant-based, animal-based, or both.
 2. **Specialized (regulated):** This type of holding includes preapproved holdings (projects) that have acquired a license from the concerned authorities after submitting technical and economic studies. These holdings may be specialized in plant-based production, animal-based production, poultry farming, or fish farming. They may also be projects
-

that primarily adopt modern and non-traditional techniques for agricultural production and that specialize in open field or greenhouse cultivation, dairy farming, or fattening farms for cattle, sheep, or poultry.

9- Legal Status of the Holder:

The holder's legal status can be one of the following: individual, establishment, company, partnership, government entity, cooperative, etc. They are defined as follows:

1. **Individual:** It is the common status found in traditional holdings where the holder is one person or one household where all members of the household work together to conduct agricultural operations and produce goods.
 2. **Establishment:** It is the status chosen by holders who want to invest their holdings in the form of a single establishment with a set regulation, an officially recognized legal name registered at official entities, and a commercial registration.
 3. **Company:** It is the term used to indicate a legal status that is officially registered under a legal name according to the Kingdom's Companies Law. The holding's capital is owned by a number of individuals or entities that all form a private company, regardless of the type (partnership, joint stock, limited partnership, limited liability, etc.)
 4. **Partnership:** It indicates a form of partnership concluded between two people or more to manage, fund, and invest in a holding. One of the partners may be a work partner and the other a funding partner whereby the two divide production revenues according to an agreement. The effective holder in this case is considered to be the partner responsible for managing the holding, provided that the holding is his place of residence if he lives on the holding's land.
 5. **Government Entity:** The holder is a government entity when the holding belongs to a government entity that has the power to dispose of its resources and to manage it, either directly or through a paid manager or establishment.
 6. **Cooperative:** A cooperative status applies to collaborative work that takes a separate status from the individuals who make up the cooperative organization. Each member of the cooperative in this case has the right to vote on administrative, production, and organizational decisions regardless of his contribution to the cooperative's funding or to his financial contribution to its investment.
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7. Other: This applies beyond the legal forms mentioned above. The legal status should be specified in this case.

10- Main Purpose of Production:

The main purpose of production may be:

1. Sale: When more than 50% of the production value achieved from various holding activities during an agricultural year is allocated for sale. Production granted to third parties outside the holder's household is considered up for sale.
2. Consumption: When more than 50% of the production value achieved from various holding activities during an agricultural year is allocated for the household's direct consumption as is common in simple traditional holdings.

11- Main Activity of the Holding

It is the prevailing activity practiced by the holding and is consistent with its economic revenues, such that it represents more than 50% of the annual income of that holding. For this agricultural census, the main activities of holdings have been divided into five categories:

1. Plant When the activity that represents over 50% of the holding's annual income during an agricultural year is based on various permanent and temporary winter and summer crops.
 2. Animal When the activity that represents over 50% of the holding's annual income during an agricultural year is based on various types of animal resources farmed on the holding (lamb, sheep, camel, cattle, livestock) and on beehives.
 3. Poultry When the activity that represents over 50% of the holding's annual income during an agricultural year is based on various types of poultry (boiler chicken, laying hens, chicken parents, chicken grandparents, free range chicken, other birds such as ostrich, duck, goose, quail). Rabbits are also considered poultry.
 4. Fish When the activity that represents over 50% of the holding's annual income during an agricultural year is based on the farming and aquaculture of fish in internal ponds such as farms dedicated to fish or shrimp production.
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5. Mixed 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 plant, animal, poultry or fish activities, and that each component represents less than 50% of the holding's activity.

12- Agricultural Laborer:

An individual who at some time during the agricultural survey year works inside the holding for cash or in-kind compensation. Agricultural labor is divided into three main types:

1. Permanent Agricultural Laborer: An individual who works regularly and continuously at the holding during the agricultural year. This individual normally spends over six months at the holding. The holder is considered a permanent laborer if his main occupation is "agriculture".
2. Temporary Agricultural Laborer: An individual who works irregularly and non-continuously at the holding during the agricultural year. This type of labor is often used for short periods of time, between three and six months, to complete certain tasks such as fruit picking. The laborers' service ends when the task assigned to them is completed.
3. Casual Agricultural Laborer (Occasional): An individual who works irregularly and non-continuously at the holding during the agricultural year. Casual (occasional) labor is often used for short periods of time that do not exceed three months to complete certain tasks such as fruit picking. The laborers' service ends when the task assigned to them is completed.

13- Compensated Laborers:

Individuals who receive compensation for their work at the holding. They can be Saudi or non-Saudi nationals, male or female, and members of the holder's household or from outside the household.

14- Non-compensated Laborers:

Individuals who do not receive compensation for their work at the holding. They can be Saudi or non-Saudi nationals, male or female, and members of the holder's household or from outside the household.

15- Main Source of Irrigation

They are the main sources used to irrigate the holding. They include:

1. **Artesian Wells:** They are machine-dug wells with depths that vary according to the nature of each region. They are also called artesian aquifers.
2. **Hand-dug Wells:** They are regular wells that are usually hand-dug. They are generally deeper than artesian wells.
3. **Wellsprings:** They are wells that automatically generate water without an external pumping method.
4. **Dams:** They are barriers erected at the streams of valleys and water flows to preserve water and increase groundwater reservoirs, or for purposes of irrigation, control, or drinking. They can be made of cement or mud and their source of water is usually rainwater falling on valleys that gets collected in the dams. The water is used for irrigation in some regions.
5. **Springs:** They are a natural formation in the shape of a cavity or crack in the earth that contains water. The water does not flow above ground like the Aflaj and Ahsa springs. They are considered a source of irrigation for nearby holdings that may extract water from the springs using pumps.
6. **Rain:** It is the water that results from rainfall in many regions and that is used to irrigate plants.
7. **Other Sources:** They are sources used for irrigation such as cisterns, treated wastewater, and other sources.

16- Energy Used for Irrigation:

They are the key sources used by the holding for irrigation. One holding may depend on several sources. Energy sources are divided as follows:

1. **Public Electricity:** The source of energy used for irrigation at the holding comes from the Saudi Electricity Company.
 2. **Private Electricity** The source of energy used for irrigation at the holding depends on the private sector for operation.
 3. **Petroleum Products:** The source of energy used for irrigation at the holding depends on some kind of petroleum product such as diesel or petrol. These products are used at the holding during the agricultural survey year to operate the private source of energy for irrigation.
 4. **Other:** The holding depends on other sources of energy for irrigation. These sources should be mentioned.
 5. **None:** The holding does not have any source of energy
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Indicators:

The Publication includes many results and indicators regarding agricultural holdings, mainly:

| Key Indicators: |
|---|
| 1. Number and area of agricultural holdings with land by administrative region in the Kingdom, 2017. |
| 2. Number and area of agricultural holdings with land by administrative region in the Kingdom, 2017 according to land tenure, main purpose of production, legal status, type of holding, and main holding activity. |
| 3. Number of holders by main activity of holdings with land per administrative region in the Kingdom, 2017 |
| 4. Number of holders of agricultural holdings with land by nationality and gender per administrative region in the Kingdom, 2017. |
| 5. Number of holders of agricultural holdings with land by main occupation and nationality of the holder per administrative region in the Kingdom, 2017. |
| 6. Number of holders of agricultural holdings with land by nationality and education of the holder per administrative region in the Kingdom, 2017. |
| 7. Number of household members in addition to the holder by type of residency, nationality, and gender per administrative region in the Kingdom, 2017. |
| 8. Number of laborers at agricultural holdings with land by type of labor, nationality and gender per administrative region in the Kingdom, 2017. |
| 9. Number of laborers outside the holder's household at agricultural holdings with land by type of labor, nationality and gender per administrative region in the Kingdom, 2017. |
| 10. Number of agricultural holdings with land, number of wells by main source of irrigation (artesian and hand-dug wells) per administrative region in the Kingdom, 2017. |
| 11. Number and area of agricultural holdings with land by energy used for irrigation per administrative region in the Kingdom, 2017. |
| 12. Percentage distribution of disposal methods for waste and carcasses, 2017. |

Coverage

1- Spatial Coverage:

The Agricultural Holdings Survey Publication covers data related to agricultural holdings and their holders for all 13 administrative regions of the Kingdom of Saudi Arabia. The survey covers the regions of Riyadh, Makkah Al Mukarramah, Al Madinah Al Munawwarah, Al Qaseem, Eastern Region, Aseer, Tabuk, Hail, Northern Borders, Jazan, Najran, Al Bahah, and Al Jawf. In each region, it visits a sample of holdings selected scientifically to form a representative sample of the region's holdings.

2- Time Coverage:

The data of the Agricultural Holdings Survey relies on the following in terms of agricultural holdings and their characteristics:

1. Day of Visiting the Holding:

The data concerning the holder and his household members depends on the day the form is filled (the day the researcher visited the agricultural holding).

2. The remaining data in the form is for the year 2017 (1/1/2017 until 31/12/2017 corresponding to 3/4/1438 Hijri until 13/4/1439 Hijri).

Statistical Classifications Used:

Definitions and notions in the Publication are based on the FAO's World Program for the Agriculture statistics 2020.

Sample Selection:

The survey's sample was selected by identifying 20,274 holdings as a selected and representative sample for the survey population in the Kingdom divided by administrative regions as follows:

| Administrative Region | Number of Holdings | Administrative Region | Number of Holdings | Administrative Region | Number of Holdings |
|--------------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| Riyadh | 3,858 | Aseer | 2,591 | Najran | 512 |
| Makkah Al Mukarramah | 2,739 | Tabuk | 947 | Al Bahah | 441 |
| Al Madinah Al Munawwarah | 712 | Hail | 1,178 | Al Jawf | 929 |
| Al Qaseem | 2,372 | Northern Borders | 32 | | |
| Eastern Region | 2,664 | Jazan | 1,299 | | |

Agricultural Holdings Survey Sampling Units:

Primary sampling units are sampling units selected in the first stage of the survey sample design. Holdings are considered secondary and final sampling units at the same time. They are sample units collected at the secondary stage of the survey sample design. Every secondary unit forms part of the primary sampling units.

Data Collection Tools:

Field Data Collection Forms: The survey form was drafted and designed by agricultural survey experts at GASTAT. International recommendations, standards, and definitions were considered during the design of these forms, which were presented to agricultural statistics experts and specialists. They were also presented to concerned entities for insight and comments. The questions were redrafted based on a specific scientific approach aimed at unifying the structure of questions asked by researchers.

The form was divided into six thematic sections to improve the efficiency of complying with technical standards during the field work stage.

| | | | |
|---------------------------------|--------------|-------------|--------------------|
| Geographic and distinctive data | Profile data | Holder data | Agricultural labor |
|---------------------------------|--------------|-------------|--------------------|

| | |
|---------------------------------------|---|
| Sources of irrigation and energy used | Percentage distribution of disposal methods for waste and carcasses |
|---------------------------------------|---|

After the survey form was approved, it was transformed into an electronic form that could be handled through the advanced data collection system using tablet devices. The system includes the following:

- 1- Presentation of the field researcher's work location (survey sample)
- 2- Access to the sample (agricultural holding) using the device's map
- 3- High-quality data collection using data and transfer accuracy checks (to automatically identify entry errors and illogical entries at the moment of data collection)
- 4- Communication between supervising sections by sending and receiving comments to and from the field researcher.

Survey Data Collection Method:

- 1- Candidates for the positions of field researchers to visit holdings for data collection were selected based on several objective and scientific standards related to the nature of the work.
- 2- All candidates (GASTAT employees and employees of some government entities) were trained through special training programs.
- 3- Direct contact with agricultural holders was adopted as a method to fill out the survey form and collect data. The field researchers visited the agricultural holdings listed in the survey sample and accessed them through coordinates on the tablets, guiding maps, and the holding's profile. They were equipped with official documents proving their identity within the statistics project and the aim of the visit. They also provided an overview of the survey and its objectives, and filled-in the forms through verbal discussions with the agricultural holders. In the cases where no holder was available, the data was collected from any member of the holding with knowledge of its affairs.
- 4- All field researchers used tablet devices to collect the data in the survey form according to a timeline set based on the agricultural holding and its characteristics.
- 5- Field researchers at work locations across the Kingdom used the "sync" feature on the tablets to download and transfer the collected data on agricultural holdings

directly to a linked database at the GASTAT headquarters where the data was stored appropriately to be reviewed and consulted at a later stage.

- 6- Electronic accuracy checks were conducted to guarantee that the data entered in the agricultural holdings survey form was coherent, accurate, and logical (an electronic formula that identifies contradictions). The formula was designed using a logical link between answers on the form and their variations to help field researchers directly identify any errors when collecting data from agricultural holders through the form. The programmed formula doesn't allow any mistakes to go through when an answer contradicts another piece of information or answer in the form.
- 7- The authenticity of the collected data was checked by the field researcher, his inspector, and the survey supervisor for the control region. All work locations were monitored and reviewed by the Data Quality Room at the GASTAT headquarters. The Room also controlled and reviewed all field work performances as the data was being collected, from day one until the last working day.

Results Preparation and Review:

After the collected data was reviewed, results were analyzed and extracted and outputs were uploaded to and stored in the database. Final reviews were then conducted by agricultural statistics specialists using modern techniques and software designed for review and accuracy checks.

Data Publication:

First: Preparing the results set for publishing:

At this stage, GASTAT uploaded the data results to the agricultural holdings surveys database. It then prepared publication tables and graphics for data and indicators, and added description and methodology information as seen in this Publication . These were prepared in both Arabic and English.

Second: Preparing media content and announcing the Publication :

At the start of the Gregorian year, GASTAT announced the dates for issuing the Publication through its official website. At this stage, it prepared the media content related to the

announcement to be sent to all media outlets and published on its own social media accounts. The announcement is made on the date of publication and the Publication is initially published on the official website in various forms compatible with Excel. This guarantees its circulation and access to all clients and parties interested in agricultural statistics. The Publication is included in the website's statistics library.

Third: Communicating with clients and sending them the Publication :

GASTAT gives great importance to communicating with clients who use its data. Therefore, upon publication of the Agricultural Holdings Survey Publication , GASTAT communicates with clients to provide them with the Publication . It also receives questions and Inquiries from clients regarding the Publication and its results through various communication channels, also used to request data. Inquiries are received through:

- GASTAT website: www.stats.gov.sa
- GASTAT email: info@stats.gov.sa
- The client support email: cs@stats.gov.sa
- By visiting the GASTAT headquarters in Riyadh or one of its branches in the Kingdom
- Official letters
- By phone: (920020081).

Implemented Quality Procedures:

Agricultural statistics go through several technical procedures to guarantee the quality of the collected data. These procedures include:

- 1- Evaluating previous surveys conducted by GASTAT to identify weaknesses and strengths and to improve data collection.
- 2- Training and testing researchers to guarantee that they are able to obtain data correctly in line with the survey's objectives.
- 3- Testing the electronic methods used to collect the data to guarantee that the data is safe and protected at all stages of the survey process.
- 4- Reducing the burden put on respondents by using the appropriate statistical methods.
- 5- Committing to the timely publishing of results based on previously set deadlines.

Several other measures are implemented by the Data Quality Room at GASTAT during the field data collection process.

Data Quality Room:

The Data Quality Room works in parallel to field operations and is equipped with electronic monitoring methods and screens. Its controllers and quality experts check the accuracy of the collected data and identify errors and extreme values during the field data collection process. They do so by immediately reviewing the information filled by the researcher. Their work guarantees that researchers comply with survey guidelines, and checks that the data is authentic, logical, and reliable. They also review some important survey indicators to check data accuracy. The Room has several responsibilities, including:

- Reviewing collected data and sending comments to field teams of all levels through an automatic system linked to the tablet devices used by researchers, who then receive the comments systematically at the work locations.
- Contacting agricultural holders by phone and asking them some of the questions on the form to check that the researchers collected the data correctly and complied with instructions during their visits. These calls also seek to obtain any missing data and to thank the holders for their collaboration.
- Answering field enquiries from field researchers and from agricultural holders.
- Checking the accuracy of the location where the form was filled by matching the location's coordinates to those registered in the sample file.

Publication 's Beneficiaries and Benefits:

All government sectors whose work is linked to agricultural activities in the Kingdom of Saudi Arabia benefit from the Agricultural Holdings Publication . The Ministry of Environment ,Water and Agriculture, the Agricultural Development Fund, and the Saudi Grains Organization are considered to be the main beneficiaries followed by international and regional organizations, and researchers and planners interested in agricultural statistics. Agricultural holdings data and indicators are considered key statistical products for informing decision-making in this field.

More details on the methodology of the Agricultural Holdings Survey can be found on the GASTAT website:

Report on Key Indicators:

The results of the Agricultural Holdings Survey have provided up-to-date agricultural statistical data and information regarding the structure of agricultural activities in the Kingdom. They have also provided a comprehensive set of quantitative and qualitative data that clarify the components of this activity.

The following is a qualitative presentation of the Agricultural Holdings Survey's most important results and indicators:

First: Agricultural Holdings Characteristics:

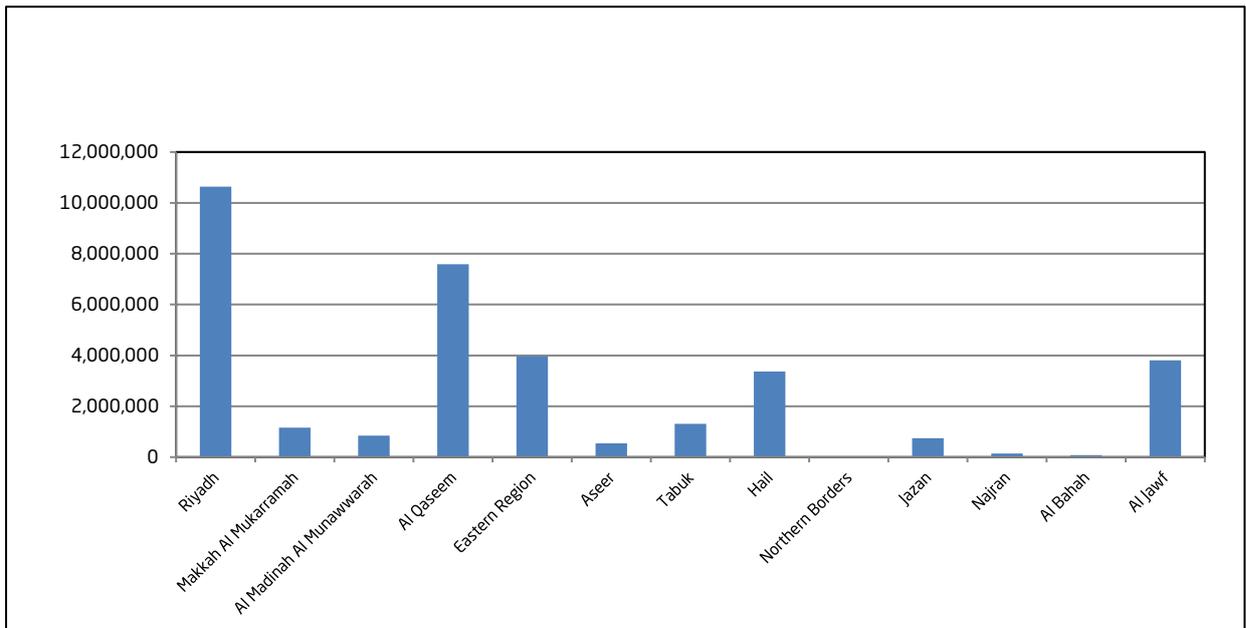
1- Agricultural Holdings:

Agricultural holdings across all administrative regions in the Kingdom for 2017 reached 283,788 a decrease of 1,378 holdings compared with the Agricultural Census of 2014/2015. Aseer is the administrative region with the most agricultural holdings: 24.5% of all agricultural holdings in the Kingdom (69,466) holdings. It was followed by Makkah Al Mukarramah with 60,592 (21.4%) and the Eastern Region with 27,485 (9.7%).

In terms of area, Riyadh came in first with a total area of 10.63 million Dunam (31.1%) of the total area of agricultural holdings in the Kingdom. It was followed by Qaseem with 7.58 million Dunam (22.2%) and by the Eastern Region with 3.98 million Dunam (11.6%).

Figure 1.

Overall Distribution of Agricultural Holdings by Administrative Region, 2017

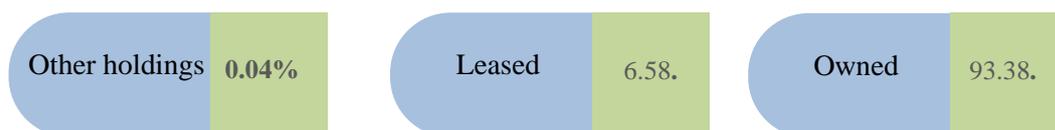


2- Land Tenure:

Survey results showed that 93.38% of agricultural holdings were owned by holders and 6.58% were leased. The remaining holdings, 0.04%, were distributed across other land tenure systems.

Figure 2.

Percentage distribution of Agricultural Holdings by Land Tenure, 2017



3- Legal Status of the Holder:

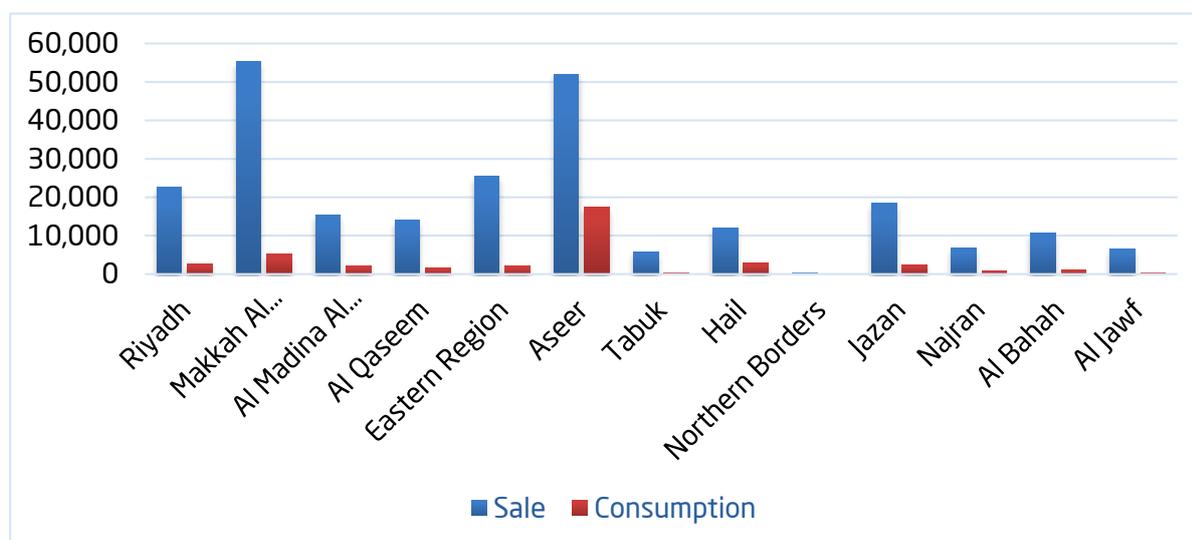
In terms of the legal status of holders at agricultural holdings, individuals represented 98% of holders, registering an increase of 0.2% compared with the Agricultural Census. In terms of the type of holding, traditional holdings with individual holders represented the majority with 97.9%.

4- Main Purpose of Production:

In terms of the main purpose of production, 86.4% of agricultural holdings with land (245,158 holdings) allocated their products for sale, registering an increase of 0.2% compared with the Agricultural Censuses. The remaining holdings, 13.6% or 38,630 holdings, allocated their products for consumption, registering an increase of 0.2% compared with the Agricultural Censuses. Per administrative region, 22.6% of agricultural holdings with land in Makkah Al Mukarramah (55,389) allocated their products for sale, followed by Aseer where 21.2% of agricultural holdings with land (52,086 holdings) allocated their products for sale.

Figure 3.

Number of Agricultural Holdings by Main Production Purpose, 2017



5- Type of Holding:

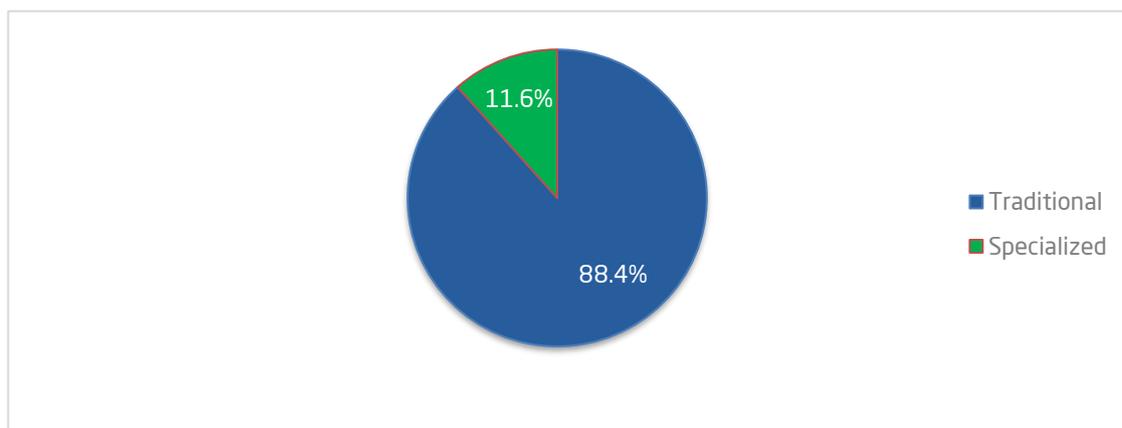
Results showed that traditional holdings represented 88.4% (250,916) of all agricultural holdings in the Kingdom with a total area of approximately 10.9 million Dunam. Specialized holdings represented 11.6% of all agricultural holdings in the Kingdom with a total area of over 23.3 million Dunam.

Aseer was the region with the most traditional holdings: 67,590 holdings (26.9%) of all traditional holdings in the Kingdom. Riyadh had the biggest area of traditional holdings with 3 million Dunam, representing 30.1% of the total area of traditional holdings in the Kingdom.

Riyadh was the administrative region with the most specialized holdings: 6,727 holdings or 20.5% of all specialized holdings in the Kingdom. Riyadh also had the biggest area of specialized holdings with 7.3 million Dunam, representing 31.6% of the total area of specialized holdings in the Kingdom.

Figure 4.

Percentage distribution of Agricultural Holdings by Type of Holding, 2017

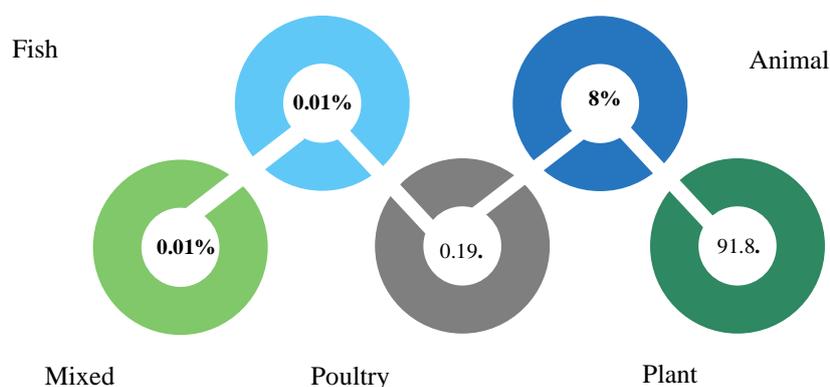


6- Main Activity of the Holding

In terms of the main activity of agricultural holdings, plant holdings came in first with 91.8% (260,498) of all agricultural holdings while animal holdings came in second with 8% (22,675) and poultry holdings came in third with 542 holdings. Twenty-two fish farms were recorded as well as 51 mixed holdings in the Kingdom.

Figure 5.

Percentage distribution of Agricultural Holdings by Main Holding Activity, 2017



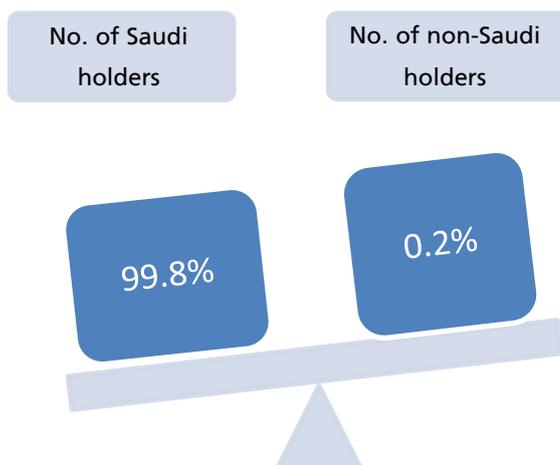
Second: Characteristics of Holders:

1) Number of Holders:

The number of holders for all agricultural holdings was 283,203 which indicates a 0.2% decrease compared with the Agricultural Census. Saudi holders represented 99.8% (282,616) of all holders in the Kingdom while non-Saudi holders represented 0.2% (587).

Figure 6.

Percentage distribution of Agricultural Holders by Nationality of the Holder, 2017

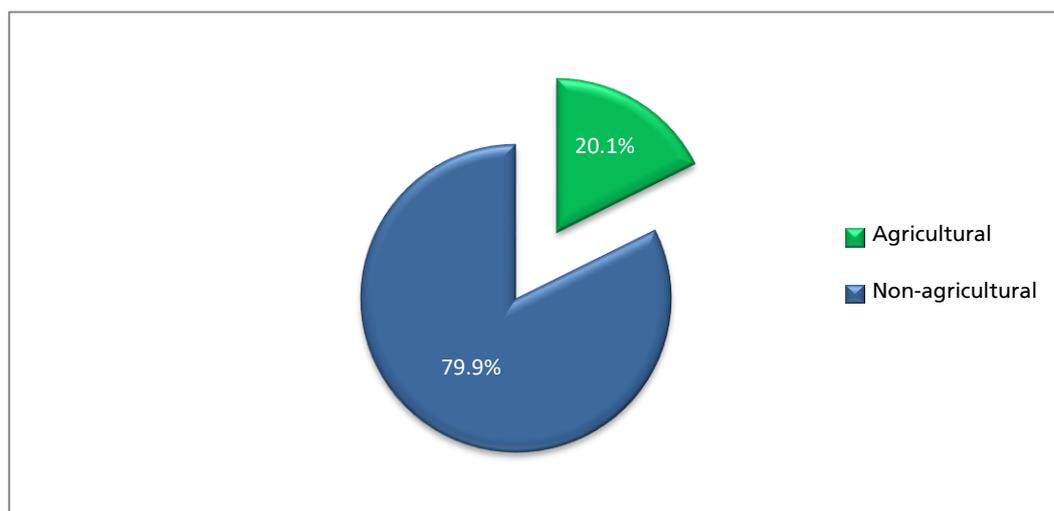


2) Main Occupation of the Holder:

Survey results showed that 20.1% of holders (57,015 holders) had agriculture as their main occupation, a 4.1% decrease compared with the Agricultural Census. The remaining holders (79.9%) had non-agricultural occupations. Results also showed that Saudi holders with agriculture as their main occupation formed 99.5% (56,721) of all holders who had agriculture as their main occupation.

Figure 7.

Percentage distribution of Agricultural Holders by Main Occupation, 2017

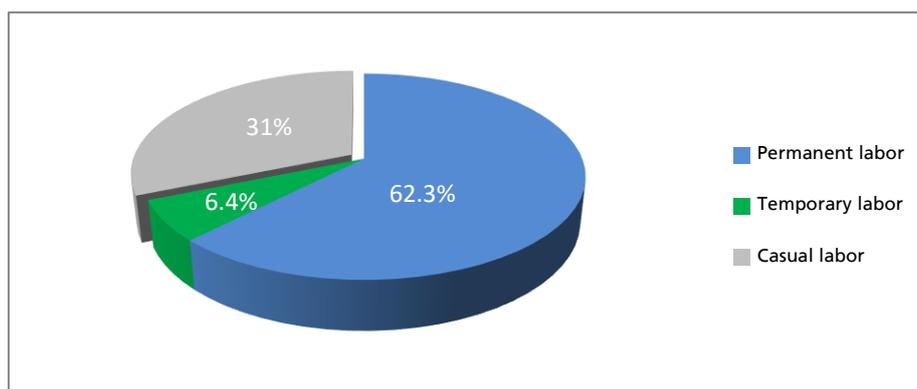


Third: Labor:

Survey results showed that the total number of laborers from outside the holder's household reached 827,843 laborers, an increase of 195,694 compared with the 2014/2015 Agricultural Census. Agricultural labor is divided into three types. Permanent labor formed 62.3% (515,706) of the total number of laborers from outside the holder's household. Temporary labor - working 3 to 6 months during the agricultural year - formed 6.4% (52,850) of the total number of laborers from outside the holder's household. Casual labor (occasional) - working less than three months during the agricultural year - formed 31.3% (259,287) of the total number of laborers from outside the holder's household.

Figure 8.

Percentage distribution of Laborers Outside the Holder's Household in Agricultural Holdings by Type of Labor, 2017



The total number of laborers inside the holder's household (for all types of labor) reached 181,187 or 17.9% of overall labor inside the household. Permanent laborers inside the holder's household reached 177,413 laborers or 97.9% of overall labor inside the household.

Temporary laborers inside the household formed 0.9% while casual laborers inside the household formed less than 1.2%.

Fourth: Main Source of Irrigation and Number of Wells:

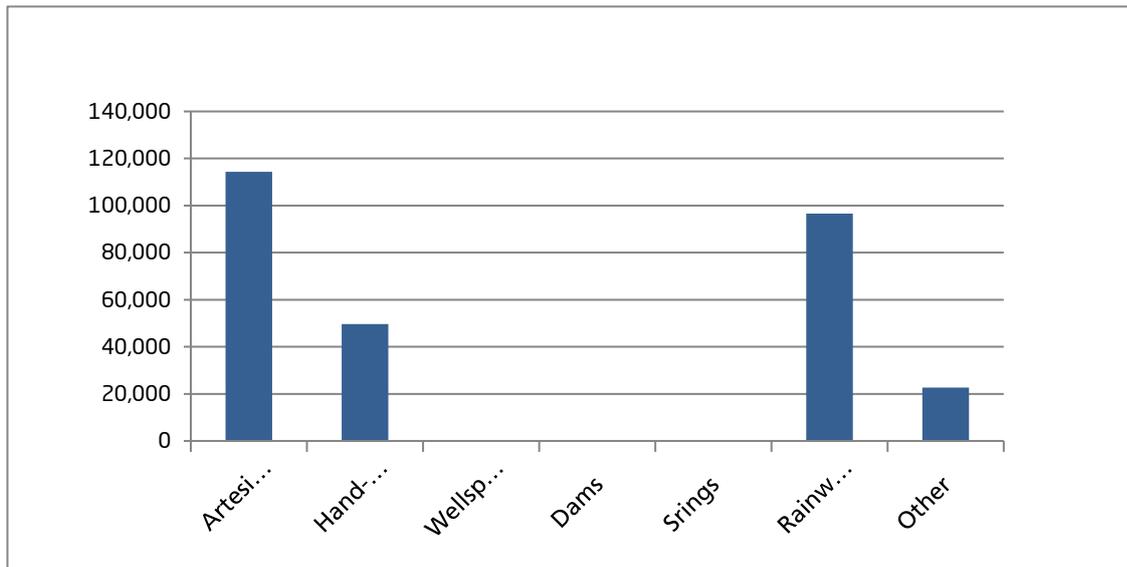
Agricultural holdings that use wells for irrigation in the Kingdom were 164,064, with artesian wells being the most dominant type used at 69.7% (114,383) of all holdings. Hand-dug wells formed 30.2% (49,621) of wells and 60 wellsprings were counted, 63.6% of which were in the Eastern Region.

The area of agricultural holdings with land exceeded 34 million Dunam and the main source of irrigation was artesian wells at 85.9% (29 million Dunam) of the total area of agricultural holdings with land.

The total number of holdings that used rainwater as their main source of irrigation was 96,627 holdings with a surface of 294,572 Dunam, which formed 0.9% of the total area of agricultural holdings. The regions of Makkah and Aseer had the largest areas irrigated with rainwater at 205,000 Dunam or 69.9% of the total area using rainwater as a main source of irrigation and 78.6% of holdings.

Figure 9.

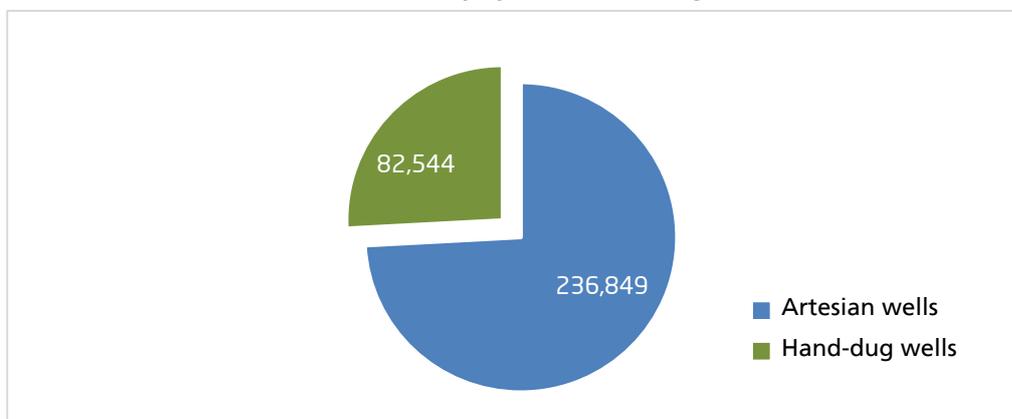
Number of Agricultural Holdings by Main Source of Irrigation, 2017



Results showed that the total number of wells was 319,393 in the Kingdom. Among these, 74.2% (236,849) were artesian wells and 25.8% (82,544) were hand-dug wells.

Figure 10.

Number of Wells by type in the Kingdom, 2017

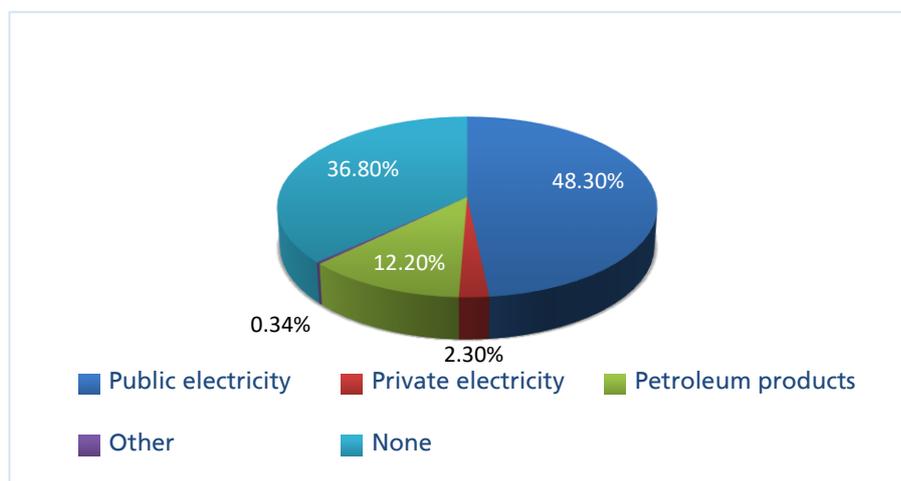


Fifth: Energy Used for Irrigation:

Results showed that 48.3% of holdings used public electricity as their energy source for irrigation. Riyadh was the administrative region with the highest number of holdings to rely on public electricity for irrigation with 15% of holdings using public electricity as their energy source for irrigation, followed by the Eastern Region with 14.4%.

Figure 11.

Percentage distribution of Energy Used for Irrigation, 2017



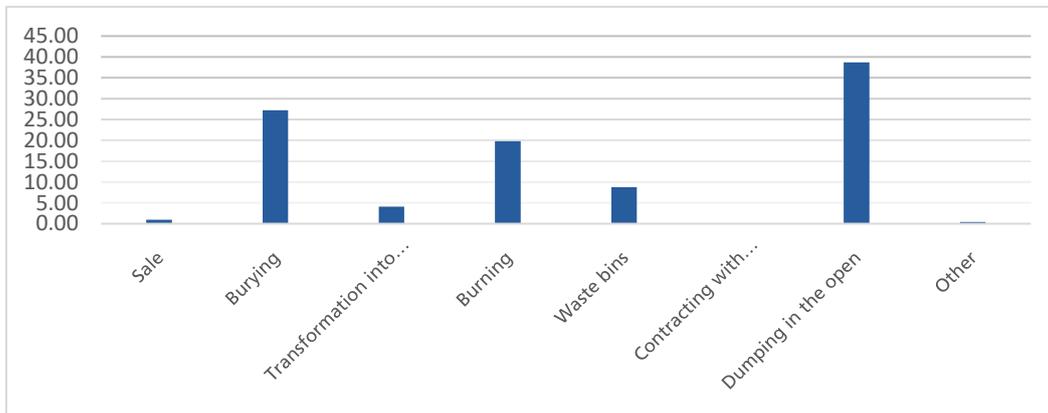
Sixth: Disposal of Waste and Carcasses:

1) Animal Carcasses:

Results showed that agricultural holdings used several methods to dispose of the carcasses of dead animals, mainly throwing them in the open (38.7%) and burying them (27.2%).

Figure 12.

Percentage distribution of Disposal Methods for Dead Animals, 2017

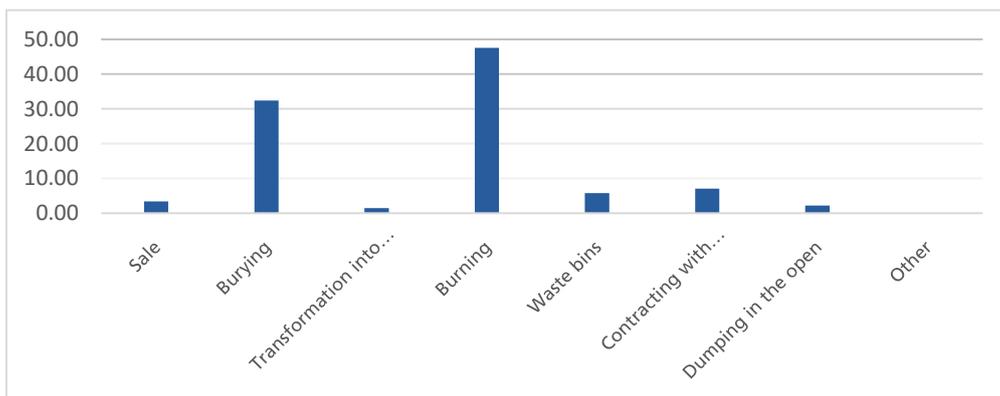


2) Poultry Carcasses

Results showed that agricultural holdings used several methods to dispose of the carcasses of dead poultry, mainly burning them (47.6%) and burying them (32.5%).

Figure 13.

Percentage distribution of Disposal Methods for Dead Poultry, 2017

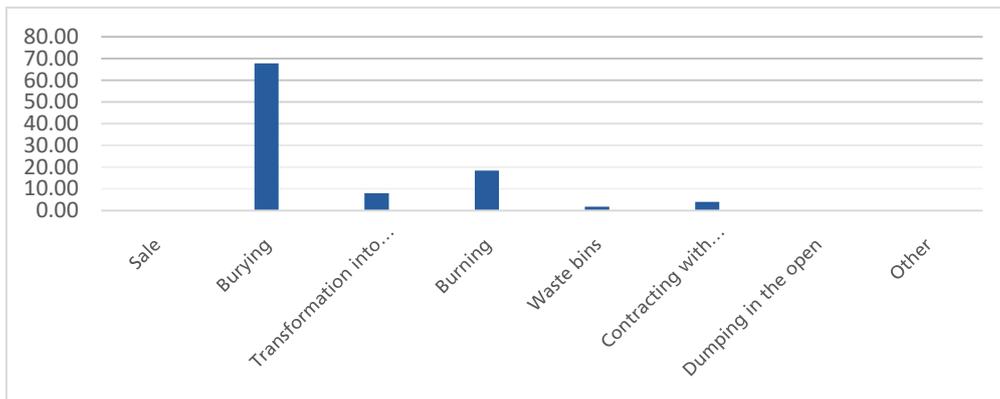


3) Fish Carcasses:

Results showed that agricultural holdings used several methods to dispose of the carcasses of dead fish, mainly burying them (67.8%) and burning them (18.4%).

Figure 14.

Percentage distribution of Disposal Methods for Dead Fish, 2017

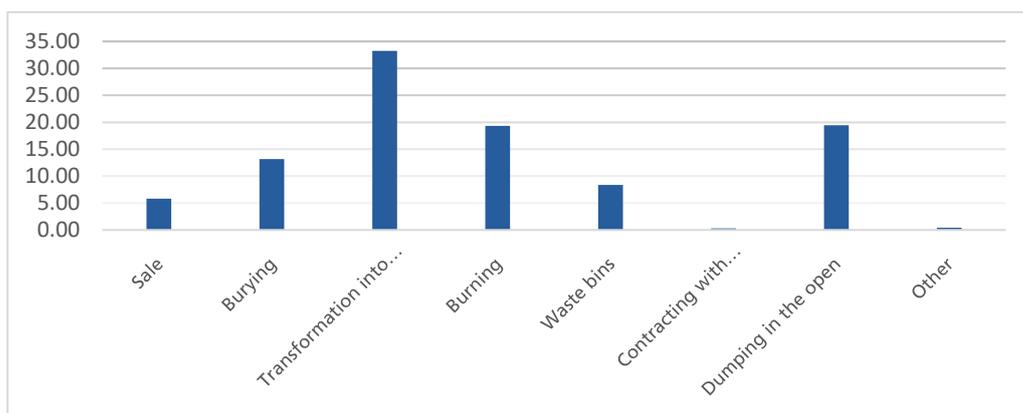


4) Organic Animal Waste:

Results showed that agricultural holdings used several methods to dispose of organic animal waste, mainly by transforming it into manure (33.2%) and throwing it in the open (19.4%).

Figure 15.

Percentage distribution of Disposal Methods for Organic Animal Waste, 2017

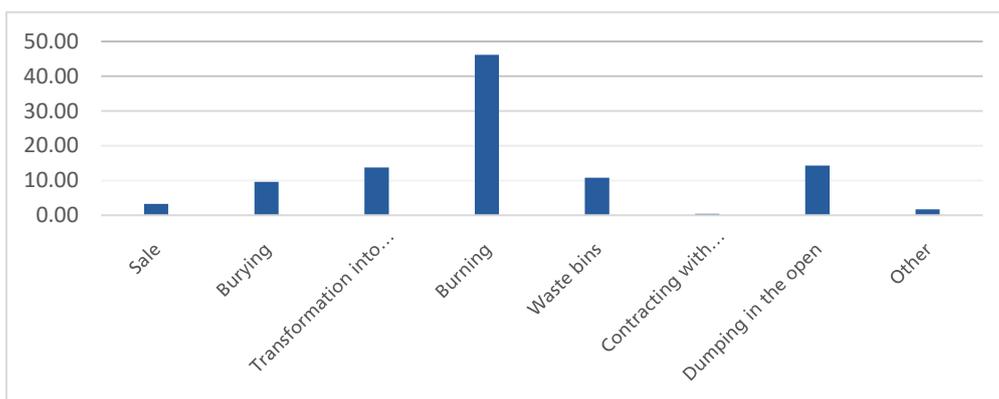


5) Organic Plant Waste:

Results showed that agricultural holdings used several methods to dispose of organic plant waste, mainly by burning it (46.2%) and throwing it in the open (14.3%).

Figure 16.

Percentage distribution of Disposal Methods for Organic Plant Waste, 2017

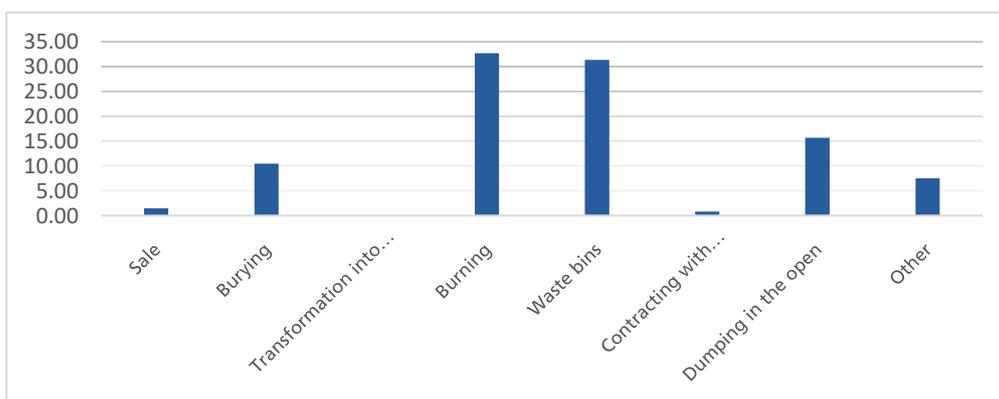


6) Leftover Medicines and Disinfectants:

Results showed that agricultural holdings used several methods to dispose of leftover medicines and disinfectants, mainly by burning them (32.8%) and throwing them in disposal bins (31.3%).

Figure 17.

Percentage distribution of Disposal Methods for Leftover Medicines and Disinfectants, 2017

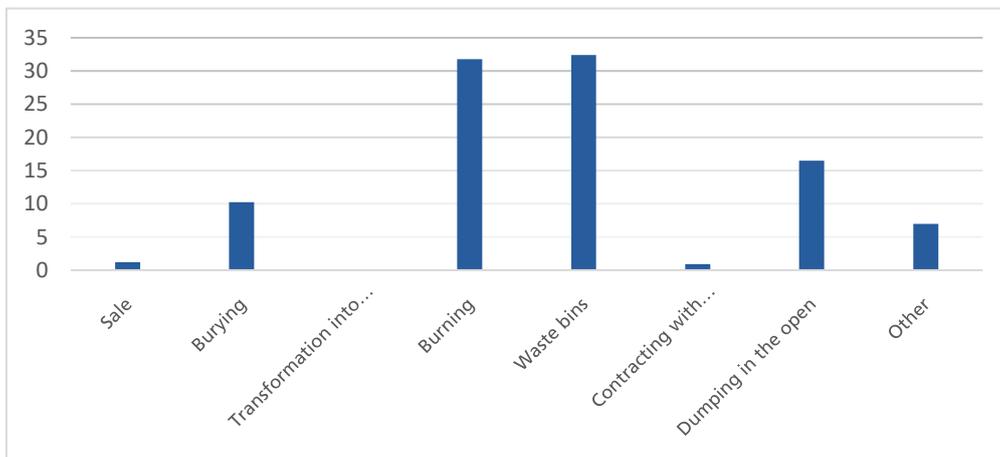


7) Pesticide Waste:

Results showed that agricultural holdings used several methods to dispose of pesticide waste, mainly by burning it and throwing it in disposal bins (32.4%) and throwing it in the open (16.5%).

Figure 18.

Percentage distribution of Disposal Methods for Pesticide Waste, 2017



Publication Tables:



