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Structural data from agricultural censuses

March 2024 update

HIGHLIGHTS

- **The 2024 update of the FAOSTAT domain presenting structural data from agricultural censuses features data for 30 additional countries for the World Programme for the Census of Agriculture (WCA) 2020 round, new data from earlier rounds for 26 countries and territories, and data adjustments for 83 countries.**
- **The new WCA 2020 data show that the Russian Federation is the fourth country with the largest number of holdings after China, India and Indonesia. The Russian Federation is also the country with the largest number of holdings per 1 000 people, ahead of China.**
- **Based on the new data, Brazil is the third largest country in terms of total holdings' area. Australia and the United States of America remain the top largest countries in the WCA 2020 round.**
- **With the update, South Africa is the country with the second largest average holdings' area in the WCA 2020 round, behind Australia.**

FAOSTAT STRUCTURAL DATA FROM AGRICULTURAL CENSUSES

BACKGROUND

A census of agriculture is a large-scale statistical operation conducted at least once every ten years for collecting, processing and disseminating data on the structure of agriculture of a country. The census of agriculture collects data on agricultural holdings¹ (often called farms) at the lowest geographical level. Typical structural data collected include the size and number of agricultural holdings, the holder's gender, the type of land tenure, the legal status of holders, as well as information on land use, crop area and farm labour. The Food and Agriculture Organization of the United Nations' (FAO) World Programme for the Census of Agriculture is the framework under which national censuses are conducted according to common international guidelines. The ten-year frequency is used because censuses measure structural aspects of agriculture that do not change much within this time frame.

At the end of each decennial census round, FAO's Statistics Division reviews the national census practices and publishes countries' methodologies and data on the structure of agriculture under the Statistical Development Series (SDS). In May 2022, the FAO Statistics Division launched the new FAOSTAT domain *Structural data from agricultural censuses*. The FAOSTAT domain disseminated structural data gathered from the last three completed rounds (1990, 2000 and 2010) published in SDS

¹ An agricultural holding is "an economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form or size" (FAO, 2015). One household may have more than one agricultural holding (i.e. two household members managing each different agricultural activities), but normally there is only one agricultural holding in a household, i.e. one-to-one correspondence.

9/9a, 13 and 18, respectively (FAO, 1997, 2001, 2010 and 2021). Some of the data, such as the size² and number of agricultural holdings, were available over longer time series, starting as early as from the WCA 1930. The domain is a one-stop shop for agricultural structural data not available elsewhere.

FAO's Statistics Division first updated the domain in 2023 with WCA 2020 data for 21 countries and territories. It continued to review the national census practices, methodologies and main data for agricultural censuses completed so far in the WCA 2020 round (FAO, 2024a) and digitized data from previous rounds that were not available in digital format (FAO, 2024b). This effort resulted in the second update of the domain in March 2024 consisting of:

1. Update of the WCA 2020 round for 30 countries and territories, bringing the total of this round to 51 countries and territories (see Table 1). It also included an update for the Russian Federation in WCA 2010 and 2020 for the number of holdings.
2. Update of the WCA 1990 round for Bangladesh and Tunisia.
3. Update of the rounds comprised between WCA 1930 and WCA 1980 for 24 countries and territories with holding-level data (i.e. number of holdings and holding area). Three of the countries and territories (British Virgin Islands [WCA 1960], Chad [WCA 1970], and Taiwan Province of China [WCA 1960]) are new in the domain.
4. Adjustments to some holding-level data (i.e. number of holdings and holding area) for rounds ranging from WCA 1930 to WCA 1980 for 71 countries and territories, considering the newly digitized data.

In contrast to other FAOSTAT domains, for which data are available annually, census data are available decennially by virtue of the frequency of the WCA mentioned above. Table 1 below shows the data availability and the global and regional participation of countries and territories by WCA round. Figures for the WCA 2020 are still preliminary as they correspond to census data uploaded in the domain as of March 2024.³ The table shows an upward trend in country participation since the WCA 1930. Few countries have participated in all rounds, and most countries have had an irregular participation. Furthermore, due to the varying scope and coverage of national censuses, not all countries report all the structural agricultural variables covered in the FAOSTAT domain. In addition, cut-off thresholds, i.e. the minimum size limits for the inclusion of holdings that countries apply, may vary from census to census. This irregularity in terms of country participation, item coverage and thresholds must be kept in mind when making comparisons across WCA rounds.

² The area of the holding is area managed by the holder and includes: land used for growing crops (temporary and permanent), meadows and pastures, and fallow land; unutilized agricultural land; forest and other wooded land; bodies of water; farmyards and land occupied by farm buildings; and land for which a holding does not have any rights to agricultural use, except for the products of the trees grown on it (FAO, 2015).

³ The number of completed or ongoing censuses is much higher. However, 51 is the number of countries that submitted their census reports to FAO and for which processing, standardization and validation were completed by March 2024.

Table 1: Number of countries and territories participating in the WCA rounds

Region	WCA round								
	1930	1950	1960	1970	1980	1990	2000	2010	2020
Total	54	80	100	112	103	93	118	128	51
Africa	8	18	29	25	21	21	27	22	1
Americas	15	28	28	32	28	23	22	28	6
Asia	5	11	21	21	21	15	29	29	6
Europe	22	18	17	24	22	21	30	36	27
Oceania	4	5	5	10	11	13	10	13	11

Note: The WCA 1940 round could not be completed due to the onset of the Second World War. Earlier rounds include some countries and territories that had conducted an independent census but later became part of other countries. Figures for the WCA 2020 are preliminary as of early 2024.

Source: FAO. 2024. Structural data from agricultural censuses. In: FAO. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

Table 2 shows the 30 countries and territories updated on the FAOSTAT domain for the WCA 2020 since 2023, grouped by region. Out of the 30 countries added to the WCA 2020 round in the second update, 26 were European countries, for which data were extracted from the Eurostat database.⁴

Table 2: Countries and territories covered in the second update for the WCA 2020

Europe (26)		
Austria	Germany	Netherlands (Kingdom of the)
Belgium	Greece	Poland
Bulgaria	Hungary	Portugal
Croatia	Ireland	Romania
Czechia	Italy	Slovakia
Denmark	Latvia	Slovenia
Estonia	Lithuania	Spain
Finland	Luxembourg	Sweden
France	Malta	
Asia (2)	Americas (1)	Oceania (1)
Cyprus	Brazil	Niue
Palestine		

Source: FAO. 2024. Structural data from agricultural censuses. In: FAO. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

COUNTRY

Six out of the eight countries with the largest number of holdings were in Asia both in the WCA 2020 (China and India) and 2010 rounds (Figure 1). China⁵ (209.5 million), India (146.5 million), Indonesia (26.1 million in the WCA 2010), Bangladesh (15.2 million in the WCA 2010), Ethiopia (10.8 million in the WCA 2000), Viet Nam (10.4 million in the WCA 2010), and Pakistan (8.3 million in the WCA 2010) accounted for the bulk of holdings reported. The update of the Russian Federation's⁶ number of holdings

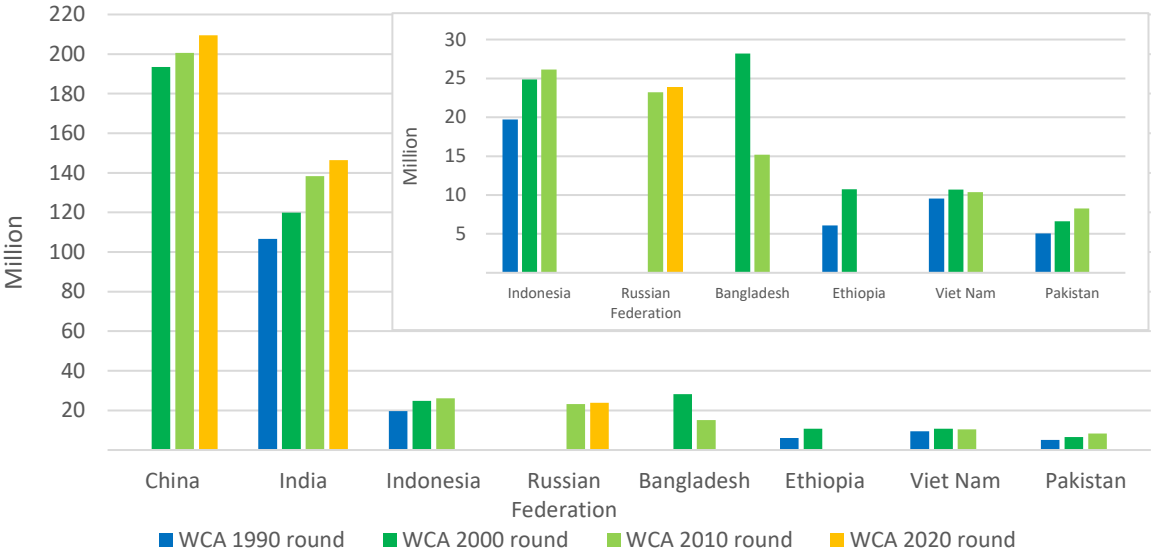
⁴ Available at: <https://ec.europa.eu/eurostat/web/agriculture/data/database>

⁵ China conducted its first national census in 1997 (WCA 2000 round).

⁶ The Russian Federation conducted its first census in 2006 (WCA 2010 round).

placed this country fourth, ahead of Bangladesh. Ethiopia was the only African country in the top eight. The number of holdings continued its upward trend in China and India in the WCA 2020. For countries where the total holding's area has remained stable or declining, this suggests that the size of the holdings may be decreasing.

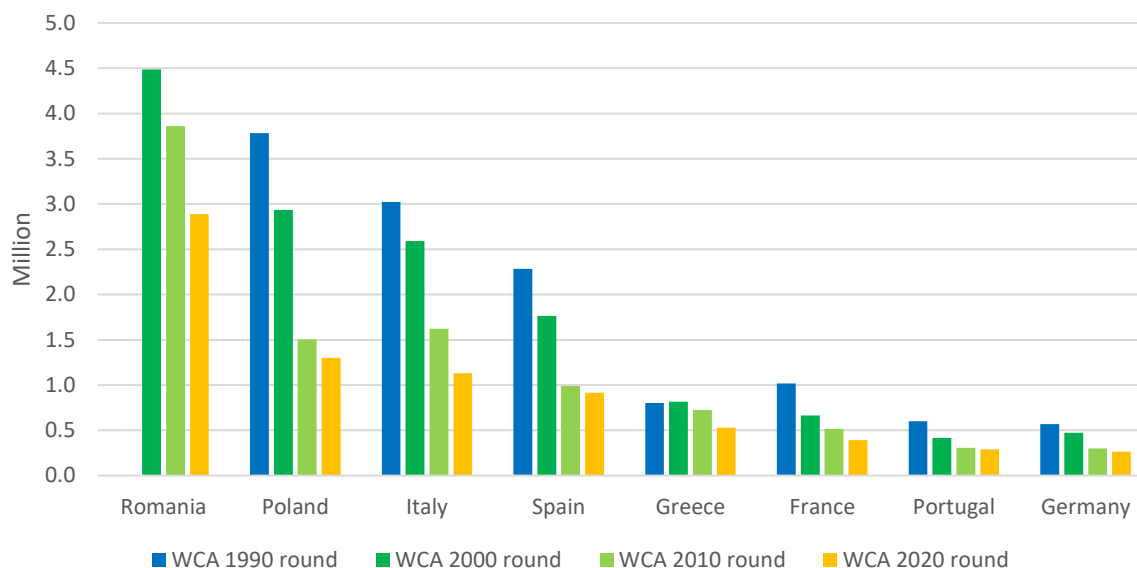
Figure 1: Countries with the largest number of holdings



Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

Taking a closer look at the countries of the European Union, for which the current update of the FAOSTAT domain provides data, significant disparities in the number of holdings can be observed (Figure 2). The two countries with the largest number of holdings in the WCA 2020 round were both in Eastern Europe: Romania had 2.9 million holdings, which is more than twice the number reported for Poland (1.3 million). The following countries in the top eight were Italy (1.1 million), Spain (0.9 million), Greece (0.5 million), France (0.4 million), Portugal (0.3 million) and Germany (0.3 million) – four are in Southern Europe and two in Western Europe. In these eight countries, the number of holdings decreased significantly between WCA rounds.

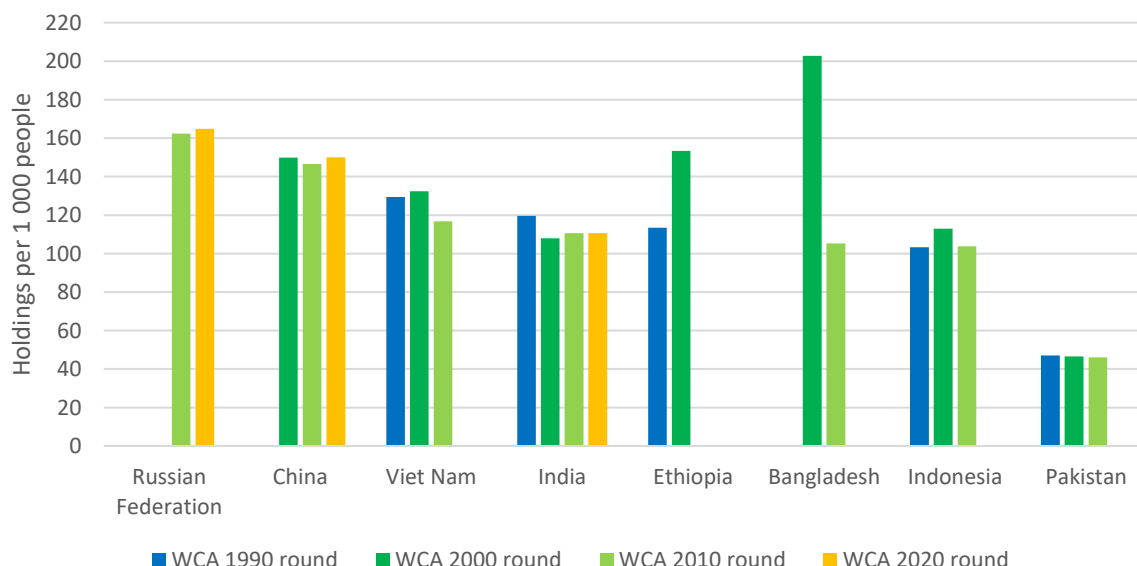
Figure 2: European Union countries with the largest number of holdings



Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

Figure 3 shows that, in terms of holdings per 1 000 people, six out of the top eight countries were in Asia. With the update, the Russian Federation now leads with 165 holdings per 1 000 people in the WCA 2020, ahead of China (150 holdings). These countries were followed by Viet Nam (117 in the WCA 2010) and India (111 in the WCA 2020). Ethiopia remains the only African country in the top eight.

Figure 3: Countries with the largest number of holdings per 1 000 people

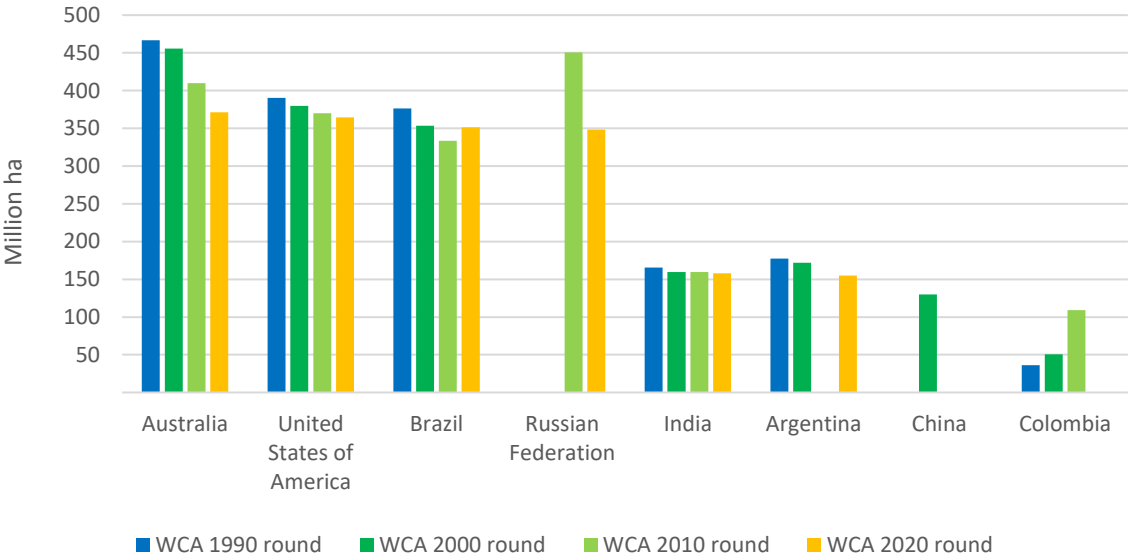


Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

The data update changed the ranking of the countries with the largest total holdings' area:⁷ Brazil (351.3 million ha, up 5.3 percent from WCA 2010) overtook the Russian Federation (348.4 million ha, down 23 percent from WCA 2010) as the third largest country in the WCA 2020 round (Figure 4). Australia (371.1 million ha, down 9 percent from WCA 2010) remains the country with the largest total holdings' area, followed by the United States of America (364.6 million ha, down 1.5 percent from WCA 2010). The reduction seen in Australia is due to changes in the threshold applied for inclusion from the WCA 2010 to the WCA 2020 from businesses undertaking agricultural activity above AUD 5 000 to above AUD 40 000.

Other countries with large holdings' area included India (157.8 million ha, down 1 percent from WCA 2010), Argentina (154.8 million ha, down 10 percent from WCA 2000), China (130 million ha in the WCA 2000 round), and Colombia⁸ (109 million ha in the WCA 2010 round). China did not report holdings' area in the 2010 and 2020 census rounds. In all these countries except Colombia, the total holdings' area disclosed in census reports has been declining since the WCA 1990 round.

Figure 4: Countries with largest total holdings' area



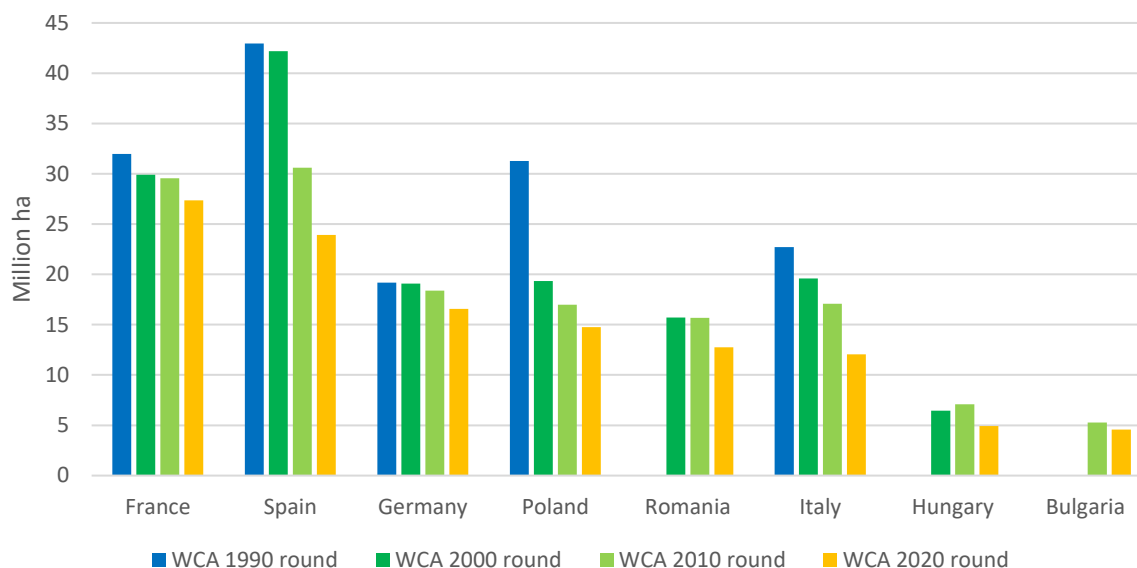
Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

The declining trend in total holdings' area can also be observed in all countries of the European Union except Ireland. The countries with the largest total holdings' area in the WCA 2020 round were France (27 million ha), Spain (24 million ha), Germany (17 million ha), Poland (15 million ha), Romania (13 million ha), Italy (12 million ha), Hungary and Bulgaria (5 million ha each).

⁷ The agricultural holding's area is the area managed or operated by the holder. Therefore, a country's total holding's area differs from the agriculture land area reported in the FAOSTAT Land Use domain, which includes area not operated by agricultural holders, such as community land.

⁸ Data reported by Colombia in the WCA 1990 and 2000 rounds were sourced from national agricultural surveys.

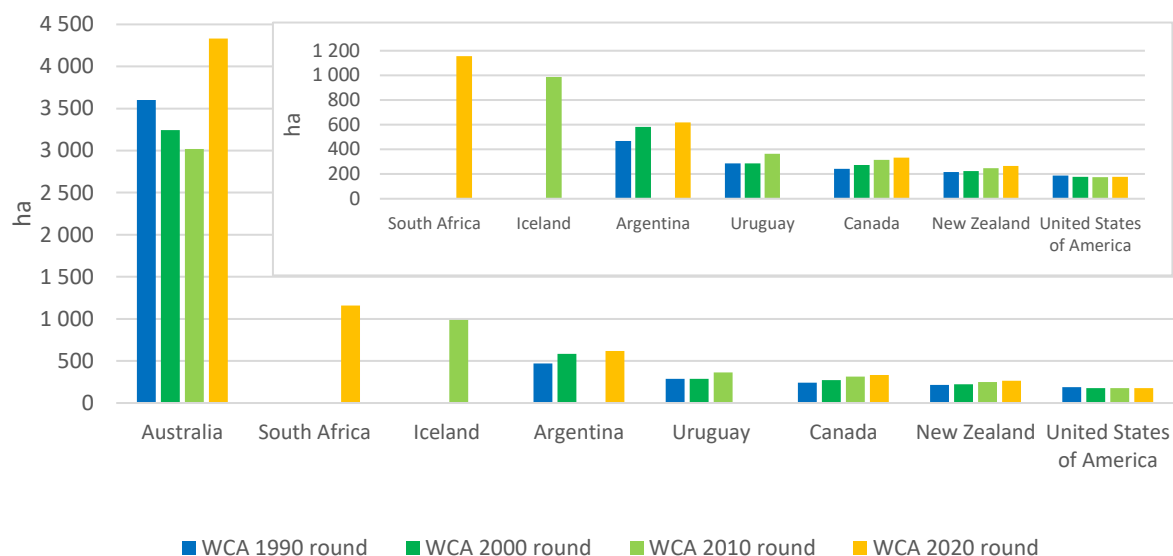
Figure 5: European Union countries with largest total holdings' area



Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

Finally, the new WCA 2020 updated data show that the largest average holdings' areas were observed in Australia (4 331 ha), South Africa (1 157 ha), Iceland (988 ha in the WCA 2010), Argentina (620 ha), Uruguay (365 ha in the WCA 2010), Canada (332 ha), New Zealand (266 ha), and the United States of America (179 ha) (Figure 6). The average holding's area rose in all countries reporting in the 2020 census round. In South America, the leading meat-producing countries, such as Argentina and Uruguay, have large holdings and are increasing their average sizes.

Figure 6: Countries with the largest average holdings' areas



Source: FAO. 2024. Structural data from agricultural censuses. In: *FAOSTAT*. Rome. [Cited March 2024]. <http://www.fao.org/faostat/en/#data/WCAD>

EXPLANATORY NOTES

The FAOSTAT domain *Structural data from agricultural censuses* was launched in 2022 to disseminate data collected in national censuses of agriculture at the agricultural holding level. The censuses of agriculture are conducted under the FAO's World Programme for the Census of Agriculture, which is a decennial programme. Following this launch, FAO's Statistics Division continued to review data from censuses completed before the end of the current WCA 2020 round. This effort allowed the update of the domain with new WCA 2020 data for 30 countries and of some holding data for earlier census rounds starting in WCA 1930.

An agricultural holding is an economic unit of agricultural production under single management and its size is the area managed or operated by the holder. Therefore, a country's total holding's area differs from agriculture land area reported in other FAOSTAT domains. The structural data in the domain includes the size and number of holdings, holder gender, land tenure, legal status of holders, and farm labour, among others.

The data in this FAOSTAT domain are not available annually, as census structural data are collected and reported on a decennial basis. It is important to note that most countries have had irregular participation in the WCA rounds. Furthermore, due to the varying scope and coverage of national censuses, not all countries report all the structural agricultural variables covered in this FAOSTAT domain. In addition, cut-off thresholds for the inclusion of holdings may vary from census to census. This irregularity in terms of country participation and coverage must be considered when making comparisons across WCA rounds.

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