

Agricultural Census 2020-2021

**Treasury Portfolio of the Australian Government, Australian Bureau of Statistics
(ABS)**

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Identification

SURVEY ID NUMBER

AUS_2020-2021_AC_v01_M_v01_A_ESS

TITLE

Agricultural Census 2020-2021

ABBREVIATION OR ACRONYM

AC 2020-21

COUNTRY

Name	Country code
Australia	AUS

STUDY TYPE

Agricultural Census [ag/census]

SERIES INFORMATION

Australia has collected agricultural commodity data since the 1860s. The Agricultural Census (AC) was conducted annually at the end of March each year, until 1996/1997. From then, the Australian Bureau of Statistics (ABS) changed the collection period to 30 June to ensure better alignment with other ABS surveys. The current strategy envisages a five-year interval census with sample surveys in inter-censal years. Subsequent ACs have been conducted on a quinquennial basis since 2000/2001.

The cut-off threshold has been changed since the previous agricultural census (see Universe), as such the estimates from the 2015/2016 Agricultural Census will not be directly comparable to the previously published estimates.

ABSTRACT

The main purpose of the Agricultural Census (AC) is to provide benchmark information on the agriculture industry for small geographic areas. Furthermore, it is designed to support decision making and analysis by a wide variety of stakeholders across government, industry, the research sector and wider community by providing comprehensive high quality agricultural commodity production and activity data (including area and production for crops and area irrigated, number of livestock and number of producers for each commodity) at low levels of geographic disaggregation. The AC also enables updates to core statistical infrastructure as well as being the major source of commodity data used in the calculation of Value of Agricultural Commodities Produced (VACP), which is used as an input to the Australian National Accounts. Outputs from the AC include statistics on land and water use, crop and horticultural area and production, livestock numbers and farm management and demographic information undertaken by businesses in Australia, while data is produced at national, state, and sub-state levels.

KIND OF DATA

Census/enumeration data [cen]

UNIT OF ANALYSIS

Agricultural holdings

Scope

NOTES

The census scope covered agricultural activities (crop and livestock production).

The questionnaire aimed to collect information on several areas:

1. Use of Land by Agricultural Businesses
2. Livestock: livestock and poultry inventory
3. Horticulture: vegetables, fruits and/or nuts for sale
4. Nurseries, Cut Flowers, and Cultivated Turf
5. Broadacre Crops: e.g. cereals, cotton, oilseeds, pulses and legumes, other crops
6. Irrigation

KEYWORDS

Keyword
Structure of Agriculture
Land use
Crops
Livestock and Poultry

Coverage

GEOGRAPHIC COVERAGE

The AC 2020/2021 covered the entire territory of Australia.

UNIVERSE

The statistical unit for the AC 2020/2021 was a "business", identified by its Australian Business Number (ABN), and a geographic split was applied for ABNs operating over multiple locations. Units were identified as undertaking agricultural activity if any of the primary or secondary productive activities of those businesses fall within the Agriculture Subdivision (Subdivision 01), as defined by the 2006 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC).

The coverage of the AC 2020/2021 included all businesses undertaking agricultural activity recorded on the ABS Business Register with size above the cut-off of AUD 40 000. The measure of size was based on the Australian Bureau of Statistics (ABS) estimated Value of Agricultural Operations (EVAO). Note that for previous ABS Rural Environment and Agricultural Collections a scope of EVAO of \$5,000 or greater was used. The change in scope better aligns this collection with contemporary definitions of an agricultural business and reduces the overall reporting load for smaller agricultural businesses.

Producers and sponsors

PRIMARY INVESTIGATORS

Name
Treasury Portfolio of the Australian Government, Australian Bureau of Statistics (ABS)

Sampling

SAMPLING PROCEDURE

The AC 2020/2021 was conducted through complete enumeration of agricultural businesses listed on the ABSBR that met the cut-off threshold.

The frame used for the AC 2020/2021 was drawn from the ABS Business Register (ABSBR), which is based on the Australian Business Register (ABR). Businesses and organizations are included on the ABR when they register with the Australian Taxation Office for an Australian Business Number (ABN). The ABSBR has been used for ABS agricultural collections since 2005/2006.

Data collection

DATES OF DATA COLLECTION

Start	End
2021-07	2022-01

DATA COLLECTION MODE

Computer Assisted Web Interview (CAWI)

DATA COLLECTION NOTES

Data collection was accomplished through the mail-out/mail-back and the CAWI methods. A letter was sent to all businesses with an access code to complete the questionnaire via the CAWI method. Where respondents had previously indicated that they could not complete the questionnaire via the CAWI method, a paper questionnaire was attached with the option of completing it and returning it to the Australian Bureau of Statistics (ABS) using postage-paid envelopes. Administrative data from non-ABS sources were also used to supplement reported data.

Since the AC 2020/2021 was conducted using both mail-out/mail-back paper collection instruments and a web-based e-form, enumerators and/or field staff were not required.

Due to COVID-19 pandemic, content consultation, testing and census preparation slowed down through 2020. The plan was to send questionnaires to respondents to be completed and returned by email or CAWI. Some follow-up strategies were considered (emails, SMS) due to the impact of the pandemic on mail delivery services with reduced air travel, impacting mail delivery across Australia. Other changes included the ability for new respondents to have more choice in how they wish to respond. Census content and forms were finalized in January 2021 while operational planning, set-up and testing were underway.

QUALITY ASSURANCE

The accuracy of estimates was assured through coherence between earlier years' estimates and relevant other sources. The estimates were based on information obtained from agricultural businesses that responded to the AC 2020/2021. As not all businesses responded, the estimates were subject to sampling variability and might differ from the estimates that would have been produced if information had been obtained from all businesses. The most common measure of the likely difference resulting from not all businesses responding is given by the standard error. The main measure of accuracy of estimates from the AC 2020/2021 was indicated by calculating relative standard errors, calculated by dividing the standard error of the estimate by the estimate itself, which were assigned to each estimate produced and released.

questionnaires

QUESTIONNAIRES

Data was collected using one single questionnaire. The AC 2020/2021 covered 11 out of the 23 essential items recommended in the WCA 2020.

data_processing

DATA EDITING

Survey responses were checked for completeness, coherence, and accuracy. Where possible, follow-up contact was made with agricultural businesses to resolve reporting problems.

For item nonresponse, imputation was applied using historical data or information from similar agricultural businesses that had responded. In cases of unit nonresponse, weighting methods were used to compensate for these non-sampling errors. Data was then aggregated and weighted to account for nonresponse and ABSBR coverage error.

Data was edited using ABS designed and built imputation and estimation processes which accessed oracle servers on which input data was stored. SAS was the primary tool for analyzing responses and to identify anomalies. Blaise was used to directly edit respondent data when correcting anomalies.

Before finalizing statistics, estimates were compared against and may be adjusted to better align with other information sources including: other ABS surveys; administrative data, including data from the Bureau of Meteorology and the then Department of Agriculture, Water and Environment; industry estimates and expectations; and reports on rainfall, temperature, climatic events, and natural disasters.

DATA PROCESSING NOTES

The ABS distributed statistical processing activities across specialist processing and support areas located in a number of Australian state offices of the ABS.

Direct data capture was ensured by the CAWI method. Whereas paper questionnaires were processed using optical character recognition (OCR) to extract data.

Access policy

CONTACTS

Name	Affiliation	Email	URL
Australian Bureau of Statistics (ABS)	Treasury Portfolio of the Australian Government	agriculture.statistics@abs.gov.au	Link

ACCESS CONDITIONS

For general inquiries, or inquiries related to microdata access contact ABS:

Call in Australia: 1300 135 070

Outside Australia: +61 2 92 684 909

Fill the form at: <https://www.abs.gov.au/about/general-enquiry-form>

Responsible use of ABS microdata:

<https://www.abs.gov.au/statistics/microdata-tablebuilder/responsible-use-abs-microdata>

Conditions of use of DataLab available at:

<https://www.abs.gov.au/statistics/microdata-tablebuilder/datalab/conditions-use>

DATA AND METADATA ARCHIVING

Data and metadata are stored on Oracle servers, the Input Data Warehouse for input unit record data along with relevant metadata, and the Information Warehouse, which permanently stores aggregate (anonymized) outputs and their relevant metadata.

Metadata production

DDI DOCUMENT ID

DDI_AUS_2020-2021_AC_v01_M_v01_A_ESS_FAO

PRODUCERS

Name	Abbreviation	Affiliation	Role
Australian Bureau of Statistics		Treasury Portfolio of the Australian Government	Metadata producer
Statistics Division		Food and Agriculture Organization of the United Nations	Metadata adapted for FAM
Development Data Group	DECDG	World Bank Group	Metadata adapted for World Bank Microdata Library

DDI DOCUMENT VERSION

Identical to a metadata (AUS_2020_2021_AC_v01_M_v01_A_ESS) published on FAO microdata repository (<https://microdata.fao.org/index.php/catalog>). Some of the metadata fields have been edited.

data_dictionary

Data file	Cases	variables
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study_resources

reports

Main Results

title Main Results
filename Main_Results_Australia_2020_2021.pdf
