



REPUBLIC OF CROATIA  
CROATIAN BUREAU OF STATISTICS



**QUALITY REPORT FOR STATISTICAL SURVEY**  
**Crop production**  
**for 2022**

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## 0. Basic information

- Purpose, goal, and subject of the survey

The objective of the statistical survey on crop production is to obtain the most accurate data possible on the situation in Croatian agriculture, having in mind its importance for Croatian economy. The data obtained will be an indicator through which the government and local authorities will be able to define the problems of this branch more accurately, as well as to plan and make appropriate decisions and provide appropriate support for its development.

The goal of the survey is to collect the following data:

- the manner of land use according to the situation (arable land and gardens, permanent crops, vegetable gardens, meadows and pastures)
- the area of orchards, vineyards and olive groves and the number of extensive and plantation fruit trees
- the total number of vines and olive trees
- on expected yield of some important crops and fruits.

The Croatian Bureau of Statistics is responsible for agricultural statistics. Since 2005, Croatia has been conducting sample-based surveys using the interview method. Data on business entities are collected in two ways: by using the reporting method on an appropriate form or via a web-based application.

In June, the Survey on Utilised Areas and Land Sown at the End of Spring Harvest, on the Number of Fruit Trees and the Number of Vines (situation as on 1 June) is conducted. In November and December, the annual Survey on Crop and Livestock Production (situation as on 1 November) is conducted, which, among other phenomena, observes harvested areas, yields and production.

Data on expected yields for private family farms are collected on a selected stratified sample, and for business entities and parts thereof on the whole population. Data collection is linked to the calendar of the crop production statistics.

The crop production statistics comprise the following annual surveys:

- 1) Survey on Utilised Areas and Land Sown at the End of Spring Harvest (PO-22 form), situation as on 1 June (includes questions on expected yields of some important early crops)
- 2) Annual Survey on Crop and Livestock Production (PO-71 form), situation as on 1 November
- 3) Survey on Actual Yields of Citrus Fruits and Olives (PO-34 form), situation as on 31 December; the sample covers the Mediterranean part of Croatia.

The Survey PO-71 in 2022 replaced the following three earlier surveys:

- 1) Survey on Actual Yield of Early Crops and Fruits (PO-32 form)
- 2) Survey on Actual Yields of Late Crops, Fruits and Grapes (PO-33 form)
- 3) Survey on Autumn Sowing and Agricultural Consumption of Mineral Fertilisers (PO-21 form)

The results of all surveys are available at HR NUTS 1 and HR NUTS 2 levels.

- Reference period

Calendar year

- Legal acts and other agreements

The methodology is fully harmonised with Eurostat's recommendations (Regulation (EC) No 543/2009 of the European Parliament and of the Council of 18 June 2009 concerning crop statistics and repealing Council Regulations (EEC) No 837/90 and (EEC) No 959/93, and Commission Delegated Regulation (EU) 2015/1557 of 13 July 2015 amending Regulation (EC) No 543/2009 of the European Parliament and of the Council concerning crop statistics).

Crop production statistics cover at least 95% of the following areas:

- total area under crops on arable land
- total harvested area of fruits, melons and strawberries
- total production of permanent crops
- utilised agricultural land.

Decision on the National Classification of Activities 2007 - NKD 2007 (OG, Nos 58/07 and 72/07)

Classification of Products by Activities of the Republic of Croatia, 2015 version - KPD 2015 (OG, No. 157/14)

Official Statistics Act (OG, No. 25/20)

- Classification system

Decision on the National Classification of Activities 2007 - NKD 2007.

Classification of Products by Activities of the Republic of Croatia, 2015 version – KPD 2015

- Concepts and definitions

The main objective of the Survey on Utilised Areas and Land Sown at the End of Spring Harvest (PO-22 form) is to collect data on the following:

- the manner of land use according to the situation (arable land and gardens, permanent crops, vegetable gardens, meadows and pastures)
- the area of orchards, vineyards and olive groves and the number of extensive and plantation fruit trees
- the total number of vines and olive trees
- on expected yield of some important crops and fruits

and provide a common list of features observed using common rules and procedures, thus allowing comparability of data across the European Union.

- **Statistical units**

Statistical unit is an agricultural holding that has a unique management, shares the means of production (machinery, facilities, land) and labour force, and operates as a company, craft, cooperative or private family farm.

- **Statistical population**

The basic set includes all agricultural holdings that have at least 0.40 hectares of utilised agricultural area (UAA), or less than 0.40 hectares of utilised agricultural area (UAA), but they have:

- at least 0.10 hectares of orchards, vineyards and/or olive groves
- area of nurseries > 0
- area under vegetables, flowers and horticultural plants intended for market.

## **1. Relevance**

### **1.1 Data users**

National Accounts Department, agricultural institutes, the Ministry of Agriculture, the Government of the Republic of Croatia

#### 1.1.1 User needs

Users engaged in developing economic policies and distribution of the State Budget resources.

#### 1.1.2 User satisfaction

The first survey on satisfaction of users of the Croatian Bureau of Statistics was carried out in 2013, then in 2015, and the most recent one at the end of 2022. The results can be checked out on the website of the Croatian Bureau of Statistics <https://dzs.gov.hr/highlighted-themes/quality/user-satisfaction-surveys/686>

### **1.2. Completeness**

Submitted data are fully harmonised with the European Commission legislation in force.

#### 1.2.1 Data completeness rate

The data completeness rate is: 100%

## **2. Accuracy and reliability**

### **2.1. Sampling error**

The data obtained are weighted due to the unequal probability of selection and non-response. The same methodology is applied to all surveys on agriculture.

For key variables (total arable land, total cereals, vegetables, grasslands, vineyards, orchards and plantation orchards), standard errors and coefficients of variation are calculated. The estimation procedure was performed via SAS, applying the SURVEYMEANS procedure. The response rate is the share of responses among all valid private family farms. Non-valid private family farms are those that no longer exist at the time of surveying. The validity rate is the share of valid private family farms in all private family farms selected for the sample.

### 2.1.1 Sampling error indicators

Sampling error indicators for selected variables: statistic	Domain	Domain value	Notice	Value
			Coefficients of variation for areas under: early cereals – 0.66%, grain maize – 0.65%, dried pulses – 4.33%, root crops 2.37%, oilseeds – 0.77%, rapeseed – 1.59%, soya beans – 1.08%, vegetables and strawberries – 5.03%, moderate climate fruits – 2.22%, berries – 7.72%, nuts – 2.53%, vineyards – 1.10%, olive groves – 1.84%	0.01

## 2.2. Non-sampling error

Since no poststratification was performed for this survey, misclassification errors were not assessed. However, the Farm Structure Survey results show that there were no problems with misclassification.

### 2.2.1. Coverage error

Over-coverage rate by surveys:

1) Annual Survey on Crop and Livestock Production (PO-71 form) – 0.91%

2) Survey on Actual Yields of Citrus Fruits and Olives (PO-34 form) – 0.80%

Under-coverage exists, but it cannot be estimated and includes unregistered agricultural holdings.

### 2.2.2. Over-coverage rate

Over-coverage rate is 0,91%, unweighted for PO-71 survey.

### 2.2.3. Measurement error

Statistics correct possible measurement errors by data validation. Efforts to avoid measurement errors include training of interviewers, data checks and the validation process.

Extreme values of variables are checked after the data have been entered and corrected if necessary.

### 2.2.4. Non-response error

The main reasons for non-response were refusals for the following reasons:

- dissatisfaction with the current agricultural policy in Croatia
- issues with unresolved ownership (official succession procedures can be time-consuming)
- general refusal for other reasons.

Non-response errors by surveys:

1) Annual Survey on Crop and Livestock Production (PO-71 form) – 7.58%

2) Survey on Actual Yields of Citrus Fruits and Olives (PO-34 form) – 24.09%

### 2.2.5. Unit non-response rate

Unweighted non-response rate is 7,58% for PO-71 survey.

### 2.2.6. Item non-response rate

Indicator was not computed for this survey.

### 2.2.7. Processing error

The main sources of processing errors were errors in the survey processing application developed by experts from the Croatian Bureau of Statistics. Data on the number of corrections were not collected during data processing.

### 2.2.8. Imputation rate

Weighted imputation rate for certain variables Variable	Domain	Domain value	Notice	Value
Area and production of crops	Croatia	27 000		33.9%

### 2.2.9. Model assumption error

Not applicable.

## 2.3. Data revision

### 2.3.1. Data revision – policy

The users of statistical data are informed about revision (preliminary, final data) on the website of the Croatian Bureau of Statistics. [General Revision Policy of the CBS](#)

### 2.3.2. Data revision – practice

Provisional figures are not published in this survey and therefore regular revision is not planned.

### 2.3.3. Data revision – average size

Indicator was not computed for this survey.

## 2.4. Seasonal adjustment

Not applicable.

## 3. Timeliness and Punctuality

### 3.1. Timeliness

1 June 2022 – 16 May 2023

#### 3.1.1. Time lag – first results

Time lag - first results is: T + 1

#### 3.1.2. Time lag – final results

Time lag - final results is: T + 11

### 3.2. Punctuality

There is no time lag.

#### 3.2.1. Punctuality – delivery and publication

Delivery and publication is: 100 %

## 4. Accessibility and clarity

Final results were published on 16 May 2023. The publication contains short Notes on Methodology, such as source and methods of data collection, coverage and comparability, definitions etc. Results contain all final data. The methodology is available on the website of the Croatian Bureau of Statistics (<https://dzs.gov.hr/en>).

#### 4.1. News release

Not released.

#### 4.2. On-line database

The released data are available on the website of the Croatian Bureau of Statistics in the PC-Axis database. [https://web.dzs.hr/PX-Web\\_e.asp?url=%22Eng/Archive/stat\\_databases.htm%22](https://web.dzs.hr/PX-Web_e.asp?url=%22Eng/Archive/stat_databases.htm%22)

#### 4.3. Micro-data access

Conditions under which certain users can have access to microdata are regulated by the Ordinance on the Conditions and Manner of Using Confidential Statistical Data for Scientific Purposes.

#### 4.4. Documentation on methodology

PC-Axis database

### 5. Comparability over time

#### 5.1. Asymmetry for mirror flows statistics

Not applicable.

#### 5.2. Comparability - over time

Data have been comparable since 2000.

##### 5.2.1. Length of comparable time series

Length of comparable time series is: 22

##### 5.2.2. Reasons for break in time series

Prior to 2000, different methodology was applied and, therefore, product structure was not the same in surveys.

#### 5.3. Coherence – subannual and annual statistics

Indicator was not computed for this survey.

#### 5.4. Coherence – national accounts

Indicator was not computed for this survey.

#### 5.5. Coherence – administrative sources

Coherence with data from administrative sources:	Domain	Domain value	Notice	Value
	Croatia			1

### 6. Cost and burden

#### 6.1. Cost

Costs are approximately 60 000 euro.

#### 6.2. Burden

The greatest burden is on the largest units, for which there is a full coverage in the sample for all stages of the survey, while for smaller units, the Sampling, Statistical Methods and Analyses Department ensures that the same unit is not included in the sample for several consecutive periods.