

# Single Integrated Metadata Structure (SIMS v2.0)

**Country:** Greece

**Compiling agency:** ELSTAT

**Domain name:** COST INDICES FOR THE FACTORS OF  
AGRICULTURAL AND LIVESTOCK PRODUCTION

<b>ELSTAT metadata</b>	
<u><a href="#">Reference metadata</a></u>	
1.	<a href="#">Contact</a>
2.	<a href="#">Metadata update</a>
3.	<a href="#">Statistical Presentation</a>
4.	<a href="#">Unit of measure</a>
5.	<a href="#">Reference period</a>
6.	<a href="#">Institutional mandate</a>
7.	<a href="#">Confidentiality</a>
8.	<a href="#">Release policy</a>
9.	<a href="#">Frequency of dissemination</a>
10.	<a href="#">Accessibility and clarity</a>
11.	<a href="#">Quality management</a>
12.	<a href="#">Relevance</a>
13.	<a href="#">Accuracy and reliability</a>
14.	<a href="#">Timeliness and punctuality</a>
15.	<a href="#">Coherence and comparability</a>
16.	<a href="#">Cost and burden</a>
17.	<a href="#">Data revision</a>
18.	<a href="#">Statistical processing</a>
19.	<a href="#">Comment</a>

<b>1. Contact</b>		<a href="#">Top</a>
<b>1.1 Contact organisation</b>	HELLENIC STATISTICAL AUTHORITY (ELSTAT)	
<b>1.2 Contact organisation unit</b>	Agriculture, Livestock, Fishery and Environment Statistics Division Agricultural Input-Output and Indices Section	
<b>1.3 Contact name</b>	a) Maria Oikonomakou (Mrs) b) Maria Pontika (Mrs)	
<b>1.4 Contact person function</b>	a) Head of Section b) Employee	
<b>1.5 Contact mail address</b>	Pireos 46 & Eponiton Str., 18510 Piraeus	

<b>1.6 Contact email address</b>	<a href="mailto:m.oikonomakou@statistics.gr">m.oikonomakou@statistics.gr</a> <a href="mailto:m.pontika@statistics.gr">m.pontika@statistics.gr</a>
<b>1.7 Contact phone number</b>	(+30) 213 135 2053, 2470
<b>1.8 Contact fax number</b>	

<b>2. Metadata update</b> <a href="#">Top</a>	
<b>2.1 Metadata last certified</b>	07/07/2023
<b>2.2 Metadata last posted</b>	07/07/2023
<b>2.3 Metadata last update</b>	07/07/2023

<b>3. Statistical presentation</b> <a href="#">Top</a>	
<b>3.1 Data description</b>	
<p>The data refer to the relevant changes in the prices paid by the producers for the agricultural wages (Labour), land rents (Land), for the machinery rentals and the agricultural loan interests (Capital).</p> <p>The data are compiled on a yearly basis and are presented as indices and percentage changes of the indices.</p> <p>The cost indices for the factors of agricultural and livestock production are released as follows:</p> <ul style="list-style-type: none"> <li>- Labour remuneration index (agricultural wages), with base year 2020=100.0</li> <li>- Utilized land remuneration index (land rents), with base year 2020=100.0</li> <li>- Capital remuneration index (capital income), with base year 2020=100.0</li> <li>- Annual rates of change</li> </ul>	
<b>3.2 Classification system</b>	
<p>In compliance with the common methodology implemented by all EU Member States and Eurostat, the classification used for the groups of products in the Agricultural Price Indices (API) and by extension to Cost Indices for the Factors of Production, is the same with the classification used in the Economic Accounts for Agriculture (EAA).</p>	
<b>3.3 Sector coverage</b>	
<p>The cost indices for the factors of agricultural and livestock production cover the prices paid by the producers for the purchase of consumable means and the lease of services, which are necessary for the production process of the agricultural-livestock holding.</p>	
<b>3.4 Statistical concepts and definitions</b>	
<p>The cost indices for the factors of agricultural and livestock production measures the changes, in the course of time, in the prices paid by the producers for labour (wages), land (land rents) and capital (loans interest and machinery rents).</p> <p>The Labour remuneration index (agricultural wages) is an annual index, which is compiled from the individual agricultural wage indices by gender and by crops. A representative sample of wages in agriculture is the wage of seasonal workers, since the number of permanent workers in agriculture is very limited. For each geographical area and for each crop the type of agricultural work is described in detail and moreover many other variables are recorded, such as the gender of the seasonal worker, the way of payment, etc, so as to ensure the comparability of the data over time.</p> <p>The Utilized land remuneration index (rents paid for agricultural land) is an annual index compiled from the sub-indices of the rents paid, by kind of crop. Since the rents paid by the farms depend on the type of the crops and the geographical area, a representative sample of farms is chosen for the main crops</p>	

throughout the different geographical areas of Greece.

The Capital remuneration index is an annual index compiled from the composition of the loans interest index and the machinery rents index.

The funds loaned to farmers are usually used either for the means of agricultural production (short-term loans), or for fixed capital formation (long-term loans). As a consequence, the interest paid depends on the interest rates and on the expenditures pertaining to the purchase of the means of agricultural production and of goods and services contributing to agricultural investment (fixed capital formation goods). All the above are based on the official interest rates announced by Piraeus Bank (ex Agricultural Bank of Greece).

Many farmers rent agricultural machinery. The rent for the use of the machinery represents: (a) the interest on the capital, (b) the depreciation, (c) the profit of the entrepreneur. For the compilation of the Index, the machinery used by type of crops is selected and then the most representative geographical areas are selected where the prices for the machinery rents are collected.

### **3.5 Statistical unit**

The sampling units of the survey on the cost of the factors of agricultural and livestock production are the agricultural producers who employ mostly seasonal workers and who rent land and machinery, as well as the enterprises providing agricultural land or machinery.

### **3.6 Statistical population**

Data refer to the total of agricultural wages, farm rents and machinery rents for the surveyed crops. The price collection sources are selected samples of agricultural producers and enterprises in different geographical areas of the country, providing the necessary data for compiling the individual indices.

### **3.7 Reference area**

The data refer to Greece Total.

### **3.8 Time coverage**

From 2000 onwards, the time series for the cost indices for the factors of agricultural-livestock production with base year 2020 (2020=100.0).

### **3.9 Base period**

The base year is the year 2020 (2020=100.0).

## **4. Unit of measure**

[Top](#)

Indices, rates of change (%).

## **5. Reference period**

[Top](#)

The reference period is the year.

## **6. Institutional mandate**

[Top](#)

### **6.1 Legal acts and other agreements**

The legal framework concerning the organization and operation of ELSTAT is detailed in the following link:

<http://www.statistics.gr/en/legal-framework>

Eurostat legislation:

The compilation of the cost indices for the factors of agricultural and livestock production is governed by voluntary agreements among EU Member States and Eurostat. The foundations of these agreements were laid down in the beginning of the 70s.

## 6.2 Data sharing

None.

## 7. Confidentiality

[Top](#)

### 7.1 Confidentiality - policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 7, 8 and 9 of the Law 3832/2010 as in force, by Articles 8, 10 and 11(2) of the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System and by Articles 10 and 15 of the Regulation on the Operation and Administration of ELSTAT.

More precisely:

ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

<http://www.statistics.gr/en/statistical-confidentiality>

#### Protection of personal data

ELSTAT abides by the commitments and obligations arising from the applicable EU and national legislation on the protection of the individual from the processing of personal data and the relevant decisions, guidelines and regulatory acts of the Hellenic Data Protection Authority.

Pursuant to the Regulation on the protection of natural persons with regard to the processing of personal data [Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation - GDPR)], ELSTAT implements the appropriate technical and organisational measures for ensuring adequate level of security against risks for the personal data it collects and has access to, in the context of carrying out its tasks, in order to meet the requirements of this Regulation and to protect these personal data from any unauthorised access or illegal processing.

The personal data collected by ELSTAT are used exclusively for purposes related to the conduct of surveys and the production of relevant statistics. Only ELSTAT has access to the data. The controller is the person appointed by law pursuant to the relevant provisions concerning the Legal Entities of Public Law and the Independent Authorities. The data are stored in the databases of ELSTAT for as long as required by the relevant legislation.

Legal basis of the processing: Article 6, para 1(c) and 1(d) of the General Data Protection Regulation (GDPR)

<https://www.statistics.gr/el/privacy-info>

### 7.2 Confidentiality - data treatment

- ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:

a) these data have been treated, as it is specifically set out in the Regulation on Statistical

Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or

b) the statistical unit has given its consent, without any reservations, for the disclosure of data.

- The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.
- ELSTAT may grant researchers conducting statistical analyses for scientific purposes access to data that enable the indirect identification of the statistical units concerned. The access is granted provided the following conditions are satisfied:

a) an appropriate request together with a detailed research proposal in conformity with current scientific standards have been submitted;

b) the research proposal indicates in sufficient detail the set of data to be accessed, the methods of analyzing them, and the time needed for the research;

c) a contract specifying the conditions for access, the obligations of the researchers, the measures for respecting the confidentiality of statistical data and the sanctions in case of breach of these obligations has been signed by the individual researcher, by his/her institution, or by the organization commissioning the research, as the case may be, and by ELSTAT.

- Issues referring to the observance of statistical confidentiality are examined by the Statistical Confidentiality Committee (SCC) operating in ELSTAT. The responsibilities of this Committee are to make recommendations to the President of ELSTAT on:

- the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
- the anonymization criteria for the microdata provided to users;
- the granting to researchers access to confidential data for scientific purposes.

- The staff of ELSTAT, under any employment status, as well as the temporary survey workers who are employed for the collection of statistical data in statistical surveys conducted by ELSTAT, who acquire access by any means to confidential data, are bound by the principle of confidentiality and must use these data exclusively for the statistical purposes of ELSTAT. After the termination of their term of office, they are not allowed to use these data for any purpose.
- Violation of data confidentiality and/or statistical confidentiality by any civil servant or employee of ELSTAT constitutes the disciplinary offence of violation of duty and may be punished with the penalty of final dismissal.
- ELSTAT, by its decision, may impose a penalty amounting from ten thousand (10,000) up to two hundred thousand (200,000) euros to anyone who violates the confidentiality of data and/or statistical confidentiality. The penalty is always imposed after the hearing of the defense of the person liable for the breach, depending on the gravity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.
- Pursuant to the Regulation on the protection of natural persons with regard to the processing of personal data [Regulation (EU) 2016/679 of the European Parliament and of the Council, of 27 April 2016 (General Data Protection Regulation - GDPR)], ELSTAT implements the appropriate technical and organisational measures for ensuring adequate level of security against risks for the personal

data it collects and has access to, in the context of carrying out its tasks, in order to meet the requirements of this Regulation and to protect these personal data from any unauthorised access or illegal processing.

## 8. Release policy

[Top](#)

### 8.1 Release calendar

At the end of September of each year, ELSTAT publishes a release calendar with the precise release dates of statistics for the following year.

### 8.2 Release calendar access

The press releases calendar is disseminated to the media and it is available to users for free. The release calendar is also posted on the web page of ELSTAT, "Press Releases" / "Release Calendar": <http://www.statistics.gr/en/calendar>

### 8.3 User access

In compliance with Community legislation and the European Statistics Code of Practice, ELSTAT releases all national statistical data on its webpage <https://www.statistics.gr>, fully observing professional independence and with a view to ensuring the simultaneous, equal and timely access of all users to statistical data.

Data are released simultaneously to all users through press releases, which are posted on the webpage of ELSTAT according to the release calendar. The press releases can also be transmitted to users by fax or e-mail.

## 9. Frequency of dissemination

[Top](#)

The cost indices for the factors of agricultural and livestock production are disseminated on an annual basis.

## 10. Accessibility and clarity

[Top](#)

### 10.1 News release

A press release, in Greek and English, is announced every year, 6 months after the end of the reference year. This press release is disseminated to the media and to other users, free of charge, through e-mail. This press release is available on the website of ELSTAT at:

<http://www.statistics.gr/en/statistics/-/publication/DKT33/->

### 10.2 Publications

On the website of ELSTAT at:

<http://www.statistics.gr/en/statistics/-/publication/DKT33/->

### 10.3 On-line database

Tabulated data are available through the website of ELSTAT:

<https://www.statistics.gr/en/statistics/-/publication/DKT33/->

### **10.3.1 Data tables - consultations**

In 2022, total access to the website as regards the cost indices for the factors of agricultural and livestock production amounted to 7,270 hits. There is no possibility to make the distinction between users' consultations on data tables and users' consultations on metadata.

### **10.4 Micro-data access**

The microdata are available on request to:

[http://www.statistics.gr/en/scientific\\_provision\\_data](http://www.statistics.gr/en/scientific_provision_data)

For confidentiality reasons access to microdata is granted to users only under strict conditions and by always adhering to the relevant procedure.

### **10.5 Other**

ELSTAT website:

<http://www.statistics.gr/en/home>

For historical data:

<http://dlib.statistics.gr/portal/page/portal/ESYE/>

Users can be given data not available on the website, after submitting an application to:

<http://www.statistics.gr/en/provision-of-statistical-data>

EUROSTAT website:

[http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)

#### **10.5.1 Metadata – consultations**

See 10.3.1

### **10.6 Documentation on methodology**

The methodology on the compilation of the Cost Indices for the factors of agricultural and livestock production, which contains detailed information on the sources and the methodology used, is available on the webpage of ELSTAT (in Methodology) at:

<http://www.statistics.gr/en/statistics/-/publication/DKT33/->

#### **10.6.1 Metadata completeness – rate**

The metadata of the cost indices for the factors of agricultural and livestock production are posted on the webpage of ELSTAT, with metadata completeness amounting to 100%.

### **10.7 Quality documentation**

A concise user-oriented quality report is available on the website of ELSTAT at :

<http://www.statistics.gr/en/statistics/-/publication/DKT33/->

## **11. Quality management**

[Top](#)

### **11.1 Quality assurance**

Quality controls and validation of data are carried out during the whole process of the compilation of the indices: from the data collection stage to the final compilation of the indices.

First of all, well-trained and experienced staff is involved in all the stages of the compilation of the indices, that is, for data collection (including communication with the producers and the enterprises by the Regional Statistical Offices) and initial checks, data entry and final checks, which are conducted after the calculation of the indices in the central offices of ELSTAT. This way, the personnel has a global and timeless picture of the producers and enterprises under their responsibilities.

Data are validated either before or after data entry, by means of logical checks. During data processing the data are checked in order to identify and correct any errors. When an error is identified, data are further investigated, in cooperation with producers and enterprises in order to confirm that it is an error or it is just an unusual price. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables.

The indices are calculated by means of specialised software, through computation routines, thus eliminating any errors to the final results. Nevertheless, even during this stage, consistency checks are carried out to the final results, mainly by means of comparing the percentage changes of the sub-indices and their impact on the general input and output indices.

Moreover, in order to ensure the quality of data, all the procedures that are described in the circulars on the Quality Policy of ELSTAT are followed: <http://www.statistics.gr/en/policies>

### 11.2 Quality assessment

All the aforementioned quality checks ensure high reliability of the cost indices for the factors of agricultural and livestock production. Furthermore, these indices are being compiled in Greece since 1975, thus the competent staff has an accumulated experience in this area. In addition, concepts and definitions of variables, as well as relevant methodology follow European and international standards and guidelines.

## 12. Relevance

[Top](#)

### 12.1 User needs

According to ELSTAT's general policy the user needs are expressed in user conferences conducted at regular intervals: <http://www.statistics.gr/en/user-conference>

ELSTAT also records the user needs through the every day communication between the institution and the users. ELSTAT compiles its annual programs as well as the 3-year program of the Hellenic Statistical System setting as a goal the satisfaction of users needs.

Among the main national users are: the government, public services, Piraeus Bank (ex. Agricultural Bank of Greece), other banks. At international level, these indices are used by Eurostat, the UN, the Food and Agriculture Organisation (FAO), etc.

The compiled indices cover the wide range of users' needs: as concerns domestic market, the indices are used as a tool providing useful information on the activities, competitiveness and productivity of the agricultural-livestock sector, thus helping the government in drawing agricultural policy and agricultural-livestock producers or other agencies in decision making concerning their taking up several initiatives. At European level, there is the need for fully comparable statistics in order to draw the European agricultural policy.

### 12.2 User satisfaction

In order to fulfill users' need, ELSTAT carries out:

a. A users' satisfaction survey

Every six months, ELSTAT conducts a user's satisfaction survey. The results of this survey are published in the "Library's Newsletter" (in Greek and English), a publication which is issued by the Library of ELSTAT and by the Section of Statistical Information Dissemination, on the basis of information deriving from the User Questionnaire. This publication presents semi-annual data on the number of users in combination with other variables, such as the degree of satisfaction of users' requests, the kind of the requested data and the modes of statistical dissemination. These data are presented in the form of tables, absolute values and percentage points.

<https://www.statistics.gr/en/user-satisfaction-survey>

b. A User Conference

In accordance with its Annual Statistical Work Programme, ELSTAT, from 2010 onwards, has been conducting a User Conference, on a yearly basis with the participation of representatives of the private and public sector, academics, researchers and research institutes. These conferences give ELSTAT the opportunity to gather comments and interventions made by the users of statistics on issues such as the dissemination of statistical information, access of users to statistics and any omissions in the statistical output. The User Conferences help ELSTAT to draw useful conclusions on how the statistical output and the services provided can be improved so as to meet user's growing needs. These conclusions are incorporated in the annual statistical work programmes of ELSTAT.

<https://www.statistics.gr/en/user-conference>

### 12.3 Data completeness

The compilation of the cost indices for the factors of agricultural and livestock production and the data provided are fully in line with voluntary agreements among EU Member States and Eurostat.

## 13. Accuracy and reliability

[Top](#)

### 13.1 Overall accuracy

The indices are characterised by high accuracy. Nevertheless, sampling errors are not taken into consideration because the sampling method used is not random sampling but directed sampling. As regards non-sampling errors, these are mostly due to erroneous counting and to the non-response of some producers or enterprises. The efforts are mostly focused in identifying and correcting as many errors as possible during the revision of data.

Furthermore, on the basis of the agreements between EU Member States and Eurostat and for comparability reasons, these indices are revised every five (5) years and more specifically in the years ending in 0 and 5.

### 13.2 Sampling error

Sampling errors are not calculated because the sampling method used is the directed sampling.

### 13.3 Non-sampling error

**a. Unit non – response**

In case of non-response, the producer or the enterprise is contacted by telephone, or is sent a reminder by fax or e-mail or even a statistical interviewer pays a visit to the enterprise in order to obtain the required information. Total non-response rate does not exceed 5% of the total sample. Missing values due to non-response are treated by estimation on the basis of current price collection from neighboring prefectures of the country or price collection in previous years.

## **b. Item non - response**

Not existing.

### **13.3.1 Coverage error**

No coverage errors are observed.

#### **13.3.1.1 Over-coverage – rate**

No over-coverage errors are observed.

#### **13.3.1.2 Common units – proportion**

The indices are compiled on the basis of a common sample for each year, which is renewed with the change of the base year.

### **13.3.2 Measurement error**

Measurements errors occur during data collection. They are identified by means of quality checks and are duly corrected.

### **13.3.3 Processing error**

These errors are usually easily detected, through checks and cross-checks of the data provided by the companies in previous periods and are corrected after telephone communication. There are no processing errors as regards the use of the relevant software application.

### **13.3.4 Model assumption error**

No model is used for the compilation of the indices.

## **14. Timeliness and punctuality**

[Top](#)

### **14.1 Timeliness**

The cost indices for the factors of agricultural and livestock production are published, 6 months after the end of the reference year.

### **14.2 Punctuality**

The cost indices for the factors of agricultural and livestock are published in accordance with the Release Calendar of ELSTAT.

## **15. Coherence and comparability**

[Top](#)

### **15.1 Comparability - geographical**

The definitions of variables for the cost indices for the factors of agricultural and livestock production are common throughout EU Member States, thus the survey produces fully comparable results, taking always into consideration specific conditions in each country, which may require minor deviations from methodology.

#### **15.1.1 Assymetry for mirror flows statistics – coefficient**

For the compiled indices there are no mirror-flows statistics among EU Member States.

## 15.2 Comparability over time

Time series of the revised cost indices for the factors of agricultural and livestock production (with base year 2020=100.0) were calculated by regression of the previous time series from 2000 to 2019. The back casting calculation of the previous time series is a simple reduction (rescaled) in the base year 2020=100.0, without retrospective recalculation of the cost indices with the new weights 2020=100.0. From 2021 onwards, the cost indices are calculated using the base prices of 2020 and the new weighting coefficients of the revision 2020=100.0.

The backcasting calculations of the annual Cost Indices for the Factors of Agricultural and Livestock production were conducted using the individual mean annual indices in 2020 with 2015 as base year, according to the following type:

$$R_{i(2020)}^{(t)} = R_{i(2015)}^{(t)} * \frac{100}{\bar{R}_{i(2015)}^{(2020)}}$$

Where:

$R_{i(2020)}^{(t)}$  is the retrospective indices  $i$  in the period (year)  $t$  with 2020 as base year,

$R_{i(2015)}^{(t)}$  is the compiled indices  $i$  in the period (year)  $t$  with 2015 as base year and

$\bar{R}_{i(2015)}^{(2020)}$  is the mean compiled annual indices  $i$  in 2020, with 2015 as base year.

## 15.3 Coherence cross-domain

### 15.3.1 Coherence – sub annual and annual statistics

Checks are carried out regularly on the basis of data from other surveys, as the monthly Input and Output Price Indices in Agriculture-livestock, the RICA survey, etc. In addition, the data are compared with the results of the annual surveys on agricultural production, when such data are available.

### 15.3.2 Coherence – National Accounts

The cost indices for the factors of agricultural and livestock production follow the same classifications with the Economic Accounts for Agriculture (EAA).

## 15.4 Coherence - internal

All correlating variables are coherent with each other.

## 16. Cost and burden

[Top](#)

The results of estimations concerning cost and burden, are as follows: a) as regards the staff of ELSTAT involved in the compilation of the indices, the annual cost expressed in hours worked, is estimated at 1,200 hours, b) as regards the surveyed units, the average annual burden, expressed in hours worked for filling in the questionnaire, is estimated at 0.38 hours per unit or 235 hours for all the surveyed units.

## 17. Data revision

[Top](#)

### 17.1 Revision policy

The data are revised, in accordance with the Revision Policy of ELSTAT, which is available at the following link:

<http://www.statistics.gr/en/policies>

## 17.2 Revision practice

The Indices are published 6 months after the end of the reference year and the released data are final. Furthermore, on the basis of the agreements among EU Member States and Eurostat and for comparability reasons, these indices are revised every five (5) years and more specifically in the years ending in 0 and 5.

## 18. Statistical processing

[Top](#)

### 18.1 Source data

In order to compile the cost indices for the factors of agricultural and livestock production a survey is carried out.

The prices collected refer to the prices that the producers pay for agricultural wages (Labour), land rents (Land), loans interest and machinery rents (Capital), that are used for the agricultural and livestock production.

The sources used for the land rents, machinery rents and agricultural wages are producers, agricultural cooperatives and enterprises, while for the agricultural loans interest, the interest rates set out by the Piraeus Bank (previous years by Agricultural Bank).

### 18.2 Frequency of data collection

The data are collected the in November and December of the reference year.

### 18.3 Data collection

Data are collected through a specially designed questionnaire. The items for which prices are requested are prefilled in the questionnaire. The questionnaires are transmitted in electronic format to all Regional Statistical Offices of ELSTAT, which are responsible for collecting the data by means of:

- visits paid by ELSTAT's statistical staff who interview the surveyed units
- telephone communication
- sending the questionnaire by fax
- sending the questionnaire by e-mail

while the questionnaires are sent to ELSTAT's central offices via email (100% email).

### 18.4 Data validation

The data are validated by means of logical checks and quality checks. During data processing any errors are identified and are dully corrected. Special emphasis is placed on the errors that may have major impact on the results. After identifying the errors, those are further checked and cross-checked in cooperation with the price collection sources in order to confirm that it is an error or it is just about an unusual price. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables. Data processing and validation of data are carried out either during or after data entry.

The data are compared with the data of previous years and if major inconsistencies are identified, further checks are carried out.

### 18.5 Data compilation

The General cost index for the factors of agricultural and livestock production is calculated as a weighted average index of the sub-indices. The weights are calculated on the basis of the expenditures of Economic Accounts for Agriculture (EAA) for the year 2020, and the data of the 2021 Agricultural census with 2020 as reference year, for each category of individual indicators.

#### Labour (agricultural wages)

ELSTAT compiles an agricultural wage index for men and an agricultural wage index for women. The overall

wages index (Labour remuneration index) is the weighted average of the above individual indices:

$$H = \sum_{s=1}^2 H_s * W_s$$

where  $H$  is the overall wage index and  $W_s$  is the weighted coefficient per gender  $s$ ,  $s = 1, 2$ .

#### Land (land rents)

The land rents Index (Utilized land remuneration index) is calculated by the formula:

$$L = \sum_{i=1}^n L_i W_i$$

where,  $L_i$  is the land rents index by crop and  $W_i$  is the weighted coefficient for each crop  $i$ ,  $i = 1, 2, \dots, n$ .

#### Capital charges

##### 1) Loans interest

If we assume that  $E_A^{(0)}$  is the interest rate of short-term loans for the base period (0) and  $E_A^{(1)}$  for the period (1), and  $I^{(0)}$ ,  $I^{(1)}$ , are the corresponding Price Indices of the means of agricultural-livestock production,  $E_B^{(0)}$  is the rate interest of long-term loans for the base period (0) and  $E_B^{(1)}$  for the period (1), and  $\Delta^{(0)}$ ,  $\Delta^{(1)}$ , are the corresponding Price Indices of fixed capital formation, then the index of loans interest  $T$  is:

$$T = \frac{E_A^{(1)} I^{(1)}}{E_A^{(0)} I^{(0)}} W_1 + \frac{E_B^{(1)} \Delta^{(1)}}{E_B^{(0)} \Delta^{(0)}} W_2$$

where,  $W_{1,2}$  are the weights or else the ratio, of short-term loans and long-term loans, as announced by the Piraeus Bank.

##### 2) Machinery rents

For the compilation of the Index, the machinery used by type of crops was selected.

The rents index  $K$  is calculated by the formula:

$$K = \sum_{i=1}^n C_i \Pi_i$$

where  $C_i$  is the rent index by crop and  $\Pi_i$  is the weighted coefficient for each crop  $i$ ,  $i = 1, 2, \dots, n$ .

Further details on the methodology and the calculation of the cost index for the factors of agricultural and livestock production is available on the webpage of ELSTAT and specifically under the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT33/>

#### **18.5.1 Imputation – rate**

Imputed values are used in very few cases, the percentage of which does not exceed 0.01%. The procedure followed for the treatment of the missing data (missing values) is their assessment (imputed values), based on the prices received by neighboring prefectures of the country and on corresponding prices of previous years.

#### **18.6 Adjustment**

In the survey for the cost for the factors of agricultural-livestock production, a quality adjustment is carried out only in the case where there are significant changes in the specific quality characteristics of one of the surveyed items.

In case an item is replaced, the new item takes a new base price adjusting the relevant price, so as not to have an impact on the calculation of the individual index of the product. The quality adjustment method is used when products are priced in different units of measurement or there are changes in their specific characteristics (e.g.: work per acre or hectare or per hour/day) where they are adjusted accordingly.

#### **18.6.1 Seasonal adjustment**

No seasonal adjustment.

#### **19. Comment**

[Top](#)

None.