

## Single Integrated Metadata Structure (SIMS v2.0)

**Country:** Greece

**Compiling agency:** ELSTAT

**Domain name:** Cost Indices for the Factors of Agricultural and  
Livestock Production

### ELSTAT metadata

#### Reference metadata

- [1. Contact](#)
- [2. Metadata update](#)
- [3. Statistical Presentation](#)
- [4. Unit of measure](#)
- [5. Reference period](#)
- [6. Institutional mandate](#)
- [7. Confidentiality](#)
- [8. Release policy](#)
- [9. Frequency of dissemination](#)
- [10. Accessibility and clarity](#)
- [11. Quality management](#)
- [12. Relevance](#)
- [13. Accuracy and reliability](#)
- [14. Timeliness and punctuality](#)
- [15. Coherence and comparability](#)
- [16. Cost and burden](#)
- [17. Data revision](#)
- [18. Statistical processing](#)
- [19. Comment](#)

#### 1. Contact

[Top](#)

1.1 Contact organisation	HELLENIC STATISTICAL AUTHORITY (ELSTAT)
1.2 Contact organisation unit	Agriculture, Livestock, Fishery and Environment Statistics Division Agricultural Input-Output and Indices Section
1.3 Contact name	a) Maria Oikonomakou (Mrs) b) Maria Pontika (Mrs)
1.4 Contact person function	a) Head of Section b) Employee
1.5 Contact mail address	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>	(+30) 213 135 2474

<b>2. Metadata update</b> <a href="#">Top</a>	
<b>2.1 Metadata last certified</b>	10/07/2020
<b>2.2 Metadata last posted</b>	10/07/2020
<b>2.3 Metadata last update</b>	10/07/2020

<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 not presented by geographical breakdown. The data are compiled on a monthly 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 compiled on an annual basis and are released as follows:</p> <ul style="list-style-type: none"> <li>- Labour remuneration index (agricultural wages), with base year 2015=100.0</li> <li>- Rent remuneration index of utilized land (land rents), with base year 2015=100.0</li> <li>- Capital remuneration index (capital charges), with base year 2015=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 the gender of the seasonal worker, the mode of payment, etc, so as all the collected data are comparable over time.</p> <p>The Rent remuneration index of utilized land (rents for agricultural land) is an annual index and it is compiled from the sub-indices of the rents paid, by kind of crops. Since the rents of the farms depend on the type of the crops and on the geographical area, a representative sample of farms is chosen for the</p>	

main crops throughout the different geographical areas of Greece.

The Capital remuneration index is an annual index, which is compiled on the basis of the loans interest index and the machinery rents index.

The remuneration for the capital is the loans' interest paid. 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, either from other farmers or from machinery rental companies. 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 machinery, as well as the enterprises providing agricultural 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 municipal or local communities 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 2015 (2015=100.0) are available on an annual basis.

### 3.9 Base period

The base year is the year 2015 (2015=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 as follows:

- **Law 3832/2010** (Government Gazette No 38, Issue A): *"Hellenic Statistical System Establishment of the Hellenic Statistical Authority (ELSTAT) as an Independent Authority"*, as amended and in force
- **Regulation on the Operation and Administration of the Hellenic Statistical Authority (ELSTAT)**, 2012, (Government Gazette No 2390, Issue B, 28-8-2012)
- **Regulation (EC) No 223/2009 of the European Parliament and of the Council**, on the European statistics (Official Journal of the European Union L 87/164).
- **Article 14 of the Law 3470/2006** (Government Gazette No 132, Issue A): *"National Export Council, tax regulations and other provisions"*.
- **Article 3, paragraph 1c, of the Law 3448/2006** (Government Gazette No 57, Issue A): *"For the further use of information coming from the public sector and the settlement of matters falling within the responsibility of the Ministry of Interior, Public Administration and Decentralization"*.
- **European Statistics Code of Practice**, adopted by the Statistical Programme Committee on 24 February 2005 and promulgated in the Commission Recommendation of 25 May 2005 on the independence, integrity and accountability of the national and Community statistical Authorities, after its revision, which was adopted on 28 September 2011 by the European Statistical System Committee.
- **Presidential Decree 226/2000** (Government Gazette No 195, Issue A): *"Organization of the General Secretariat of the National Statistical Service of Greece"*.
- **Articles 4, 12, 13, 14, 15 and 16 of the Law 2392/1996** (Government Gazette No 60, Issue A): *"Access of the General Secretariat of the National Statistical Service of Greece to administrative sources and administrative files, Statistical Confidentiality Committee, settlement of matters concerning the conduct of censuses and statistical works, as well as of matters of the General Secretariat of the National Statistical Service of Greece"*.

The Legal Framework 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.

## 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.

## 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.

In addition, data are transmitted to Eurostat on a predefined date, at the same time they are released at national level.

## 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

Data on the cost indices for the factors of agricultural and livestock production can be found in the following publications of ELSTAT:

- "Monthly Bulletin":

[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007366&p\\_topic=10007366](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007366&p_topic=10007366)

- "Statistical Yearbook of Greece":

[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007369&p\\_topic=10007369](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007369&p_topic=10007369)

- "Concise Statistical Yearbook of Greece":

[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007372&p\\_topic=10007372](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007372&p_topic=10007372)

- a specific informative publication "Agriculture, Livestock, Fisheries" pulished in the frame of the Thessaloniki International Fair (TIF).

<https://www.statistics.gr/en/elstat-84-tif>

as well as in specialized publications of Eurostat on agricultural and livestock sector.

### 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 2019, total access to the website as regards the cost indices for the factors of agricultural and livestock production amounted to 8,206 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 utilized for all the stages of the compilation of the indices, that is, for data collection (including communication with the producers and enterprises by the Regional Statistical Offices) and initial checks, data entry and final checks, which are conducted after the calculation of the indices in CO of ELSTAT. This way, the personnel have a comprehensive and longitudinal image 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

The cost indices for the factors of agricultural and livestock production cover national needs, as well as the needs of European and other users. More generally, they provide statistical information, which is necessary for improving competitiveness and productivity of the agricultural-livestock sector.



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. Accordingly, the Cost Indices for the factors of agricultural -livestock production are revised every five years with the change of the base years and the renewal of the surveyed products and

the corresponding weights.

## **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 surveyed agricultural 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 of producers and businesses of the indices 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 the neighboring enterprises in Prefectures (the municipal or local communities) of the country.

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

There are no errors, which have to do with inconsistent use of definitions or with data processing. If some products or varieties of products are not representative any more, or if there are changes in their determining characteristics, they are replaced by new products. In these cases, their calculation, for the base year, is based on the use of the indices of the group in which they belong.

### **13.3.1 Coverage error**

No coverage errors are observed.

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

No over-coverage errors (e.g.: closed enterprises, enterprises out of the scope of the survey, etc.) are observed which the survey on the compilation of the indices was designed.

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

The indices are compiled on the basis of a common sample of enterprises for each year, which is renewed with the change of the base year. Therefore, the percentage of common enterprises of the sample among the years is high, up to 100%.

### **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**

After data collection a series of processes takes place before the compilation of the indices (e.g., weighting of enterprises, calculations by implementing mathematic formulae, tabulation of results, etc). There are some processing errors, such as errors on account of erroneous information provided by the surveyed enterprises. These errors are usually easy to be identified by means of checks and cross-checks of data with the corresponding data of the previous years after contacting by phone the enterprise. 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 2015=100.0), include the indices that were calculated by regression of the previous time series from 2000 to 2018. The back casting calculation of the previous time series is a simple reduction (rescaled) in the base year 2015=100.0, without retrospective recalculation of the cost indices with new weights 2015=100.0. From 2019 onwards, the cost indices are calculated on the new the base prices of 2010 and the new weighting coefficients of the revision 2015=100.0.

Backdated calculations for retrospective indices of the annual Cost Indices for the Factors of Agricultural and Livestock production, were calculated using the individual annual indices in 2015 year, according to the following type:

$$R_{i(2015)}^{(t)} = R_{i(2010)}^{(t)} * \frac{100}{\overline{R}_{i(2010)}^{(2015)}}$$

Where:

$R_{i(2015)}^{(t)}$  is the retrospective indices  $i$  in the current period (year)  $t$  with 2015 as base year,

$R_{i(2010)}^{(t)}$  is the compiled indices  $i$  in the current period (year)  $t$  with 2010 as base year and

$\overline{R}_{i(2010)}^{(2015)}$  is the mean compiled annual indices  $i$  in 2015, with 2010 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 are made available to the National Accounts Division for the calculation of the provisional estimates. The groups of products of the indices follow the same sorting with the groups of products of EAA.

### **15.4 Coherence - internal**

The cost indices for the factors of agricultural and livestock production are characterised by internal coherency since a common data base is used and they are compiled using the same methodology. The indices of the higher distribution levels are based on the indices of lower levels in compliance with clearly defined procedures.

## **16. Cost and burden**

[Top](#)

The results of ELSTAT estimations for the year 2018, 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 1,325 hours, b) as regards the surveyed enterprises, the average annual burden, expressed in hours worked for filling in the questionnaire, is estimated at 0.38 hours per enterprise or 235 hours for all the surveyed enterprises.

## **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. Accordingly, cost indices for the factors of agricultural and livestock production are revised every five years with the change of the base year and the renewal of the surveyed products and services with the corresponding weights.

## **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.

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

The sources of price collection for land rents, machinery rents and agricultural wages are the local communes. The sources of price collection for the agricultural loans interest are the interest rates set out by the Piraeus Bank (previous years by ATE).

### **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, which is appropriately adjusted for every municipal or local commune (in the the previous Prefectures of Greece). The items surveyed in each municipal or local commune figure on the questionnaire, and prices are collected for these very items, during the reference year. The questionnaires are transmitted in electronic format to all the 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

All the questionnaires are sent from the Regional Statistical Offices to ELSTAT by e-mail.

In case of non-response, the surveyed enterprise is contacted by telephone, or is sent a reminder by fax or e-mail, or even the competent staff may pay a visit to the enterprise.

### 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 overall 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 2015, taking into account the available 2016 Farm Structure Survey (FSS) data, 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:

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

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

#### Land (land rents)

The land rents Index (Rent remuneration index of utilized land) in 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  $i$ ,  $i = 1, 2, \dots, n$  ( $n \leq 10$ ).

### 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 announces 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,

$C_i$  the rent index by crop and

$\Pi_i$  is the weighted coefficient for each crop  $i$ ,  $i = 1, 2, \dots, n$  ( $n \leq 10$ ).

For the initial compilation of the capital charges index (with base year 1976=100.0), only data for machinery rentals were used, while from the revision of 1980=100.0 onwards, when the index of loans interest is compiled, the capital remuneration index derives from the composition of the indices of loans interest and machinery rentals.

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

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

#### **18.5.1 Imputation – rate**

Usually, no imputed values are used to substitute the price collection by sample enterprises. However, in very few cases imputed values is use but not exceeding 0.01%. Missing data (missing values) are treated by estimation (imputed rates), on the basis of the trend of the current price collection from the neighboring enterprises in municipal or local communes of the country and of the annual 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 the surveyed items.

Quality adjustment takes place in cases where there are changes in specific quality characteristics of the surveyed products. In case a variety is replaced, the new item takes a new base price adjusting the relevant price of the variant of product, 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 sold in different quantities and there are changes in the special characteristics (e.g.: work per acre or hectare or per hour/day) where adjusted accordingly.

#### **18.6.1 Seasonal adjustment**

No seasonal adjustment.

### **19. Comment**

[Top](#)

None.