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AGJENCIA E STATISTIKAVE TË KOSOVËS  
AGENCIJA ZA STATISTIKE KOSOVA  
KOSOVO AGENCY OF STATISTICS

# Input Price Index in Agriculture

## Q4 2022 (2015=100)

**February, 2023**

**Prishtina, 10.02.2023**, Kosovo Agency of Statistics, respectively the Department of Agriculture and Environment Statistics, has started to collect data on agriculture output prices since November 2003. At the beginning, the number of items was limited. With the change of the base year from 2003 to the base year of 2005, prices have been collected for 64 different agricultural inputs. Whereas, with the change of the base year 2005 to 2010, prices for 67 agricultural inputs were collected. Currently, with the change of the base year from 2010 to the base year 2015, prices are collected for 73 different agricultural inputs. The plan for the future is to increase the number of inputs. In addition to the input price index is also the output price index

This is the sixtieth (60) publications on Input Price Index and Average Absolute Prices for agriculture inputs produced by Statistical Agency of Kosovo (SAK). In this publication, Input Price Index and prices for some major agriculture inputs are presented.

KAS thanks the Swedish International Development Cooperation Agency (SIDA) for their support for building the agro-monetary statistical system. KAS also thanks all collaborators of its regional offices, other co-operators (respondents) of point-of-sale places such as: agricultural farms, industrial enterprises, trade, etc.

In particular, KAS thanks Swedish price statistics expert, Mr. Anders Grönvall and others who directly or indirectly assisted in finalizing this publication.

Suggestions and remarks regarding this publication can be sent to the department's email address: [agriculture@ks-gov.net](mailto:agriculture@ks-gov.net)

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## Abbreviations and Acronyms

KAS - Kosovo Agency of Statistics

API - Agriculture Price Index

EU - European Union

SIDA - Swedish International Development Cooperation Agency

Q4 - Fourth quarter

## Key to symbols

· - Not applicable

‰ - Promile

In the tables where figures have (weight) have been rounded to the nearest final digit might be a slight discrepancy in the sum.

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## Input Price Index for agriculture products

The data presented in this publication include data on the monthly index covering the period from October to December of the year 2022 with the base year 2015=100

The price collection was carried out at agriculture pharmacy enterprises, veterinary pharmacy enterprises, companies, markets, and other places where prices on agriculture input products are available. Some prices on agriculture input products we got from consumer prices (CPI) at KAS.

KAS has changed the base year from 2010 =100 in 2015 = 100 according to Eurostat methodology.

The products which make up the base for the Input Price Index are divided into two main groups:

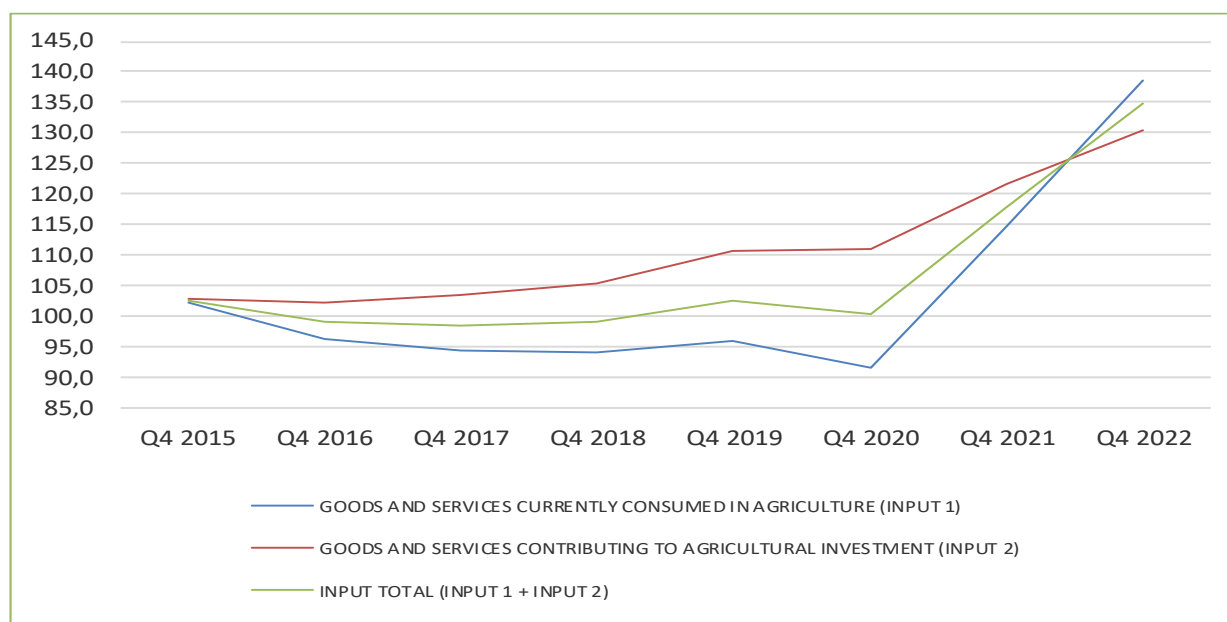
Goods and Services Currently Consumed in Agriculture (Input 1) and Goods and Services Contributing to Agriculture Investment (Input 2). Within Goods and Services Currently Consumed in Agriculture, prices are collected under the following groups; Seeds and Planting Stock, Energy; Lubricants, Fertilizers and Soil Improvers, Plant Protection Products and Pesticides, Veterinary Expenses, Animal Feeding stuffs, Maintenance of Materials, Maintenance of Buildings and Other Goods and Services. Within Goods and Services Contributing to Agriculture Investment, prices are collected for Materials (Machinery and Other Equipment), Buildings and Other (Farm Buildings Non-Residential, other works except land improvements).

Figure 1 shows the fourth quarter for Input Price Index from 2015 - 2022 for Total Input as well as for Input 1 and Input 2 (2015 = 100).

### The index changes in Q4 2022 compared to Q4 2021 (change in %)

In the fourth quarter 2022 the Input 1 has increased by (20,72%) compared the third quarter 2021. The Index for **Input 2** has increased by (7,38%) compared the fourth quarter 2021. Total Input Index (**Input 1 + Input 2**) has also increased by (14,61%) compared to the fourth quarter 2021.

**Fig. 1: Q4 Agricultural Input Price Index 2015 – 2022, (2015 = 100)**



**Agricultural Input Price Index Q4****Tab. 1: Q4 Agricultural Input price Index 2015-2022, (2015=100)**

Input 1 (Goods and services currently consumed in agriculture)												
API code	Description	Weight		Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4
		%	1000 Euro	2015	2016	2017	2018	2019	2020	2021	2022	
<b>200000</b>	<b>GOODS AND SERVICES CURRENTLY CONSUMED IN AGRICULTURE (INPUT 1)</b>	<b>556</b>	<b>126.490</b>	<b>102,2</b>	<b>96,5</b>	<b>94,4</b>	<b>94,2</b>	<b>96,1</b>	<b>91,6</b>	<b>114,8</b>	<b>138,6</b>	
201000	SEEDS AND PLANTING STOCK	91	20.777	116,0	86,0	83,6	74,2	85,1	81,8	87,3	87,2	
202000	ENERGY; LUBRICANTS	103	23.433	98,6	100,2	101,0	111,0	106,9	89,8	116,3	140,8	
202100	Electricity	17	4.637	109,6	111,9	105,9	95,6	95,6	95,6	100,8	98,2	
202300	Motor fuels	137	17.480	95,3	97,6	100,4	116,5	110,8	87,4	121,1	152,7	
202400	Lubricants	3	1.316	104,2	93,0	92,6	92,6	94,8	101,8	107,2	132,0	
203000	FERTILISERS AND SOIL IMPROVERS	149	33.958	100,1	95,0	88,4	85,5	88,3	85,8	146,5	210,2	
203100	Straight fertilizers	56	12.777	98,7	91,3	87,1	82,5	85,7	83,6	138,3	219,1	
203200	Compound fertilizers	93	21.181	100,9	97,2	89,2	87,3	89,8	87,1	151,4	204,9	
204000	PLANT PROTECTION PRODUCTS AND PESTICIDES	23	5.137	96,9	104,2	102,9	106,3	105,6	103,1	112,7	118,2	
205000	VETERINARY EXPENSES	38	8.732	99,5	99,3	96,9	98,2	98,9	99,9	101,8	106,8	
206000	ANIMAL FEEDINGSTUFFS	3	741	106,3	102,9	105,8	103,4	105,8	108,7	127,7	160,7	
206100	Straight feeding stuffs	104	630	108,2	104,1	105,2	102,7	105,2	107,9	126,8	163,5	
206200	Compound feeding stuffs	12	111	95,3	96,1	109,7	107,5	109,4	113,1	132,7	144,8	
207000	MAINTENANCE OF MATERIALS	48	10.883	99,9	99,5	99,8	99,4	99,7	98,6	101,0	106,6	
208000	MAINTENANCE OF BUILDINGS	4	833	100,1	97,5	98,8	98,7	98,9	101,8	105,5	119,2	
209000	OTHER GOODS AND SERVICES	97	21.996	99,8	100,0	100,5	101,0	101,4	101,4	102,6	107,2	
Input 2 (Goods and services contributing to agricultural investment)												
<b>210000</b>	<b>GOODS AND SERVICES CONTRIBUTING TO AGRICULTURAL INVESTMENT (INPUT 2)</b>	<b>444</b>	<b>100.971</b>	<b>102,8</b>	<b>102,4</b>	<b>103,5</b>	<b>105,3</b>	<b>110,7</b>	<b>111,2</b>	<b>121,5</b>	<b>130,5</b>	
211210	TRACTORS	208	47.375	105,8	107,2	108,2	110,8	120,5	120,6	136,2	139,3	
211290	OTHER	236	53.596	100,2	98,1	99,4	100,4	101,9	102,8	108,6	122,7	
Input total (Input 1 + Input 2)												
<b>220000</b>	<b>INPUT TOTAL (INPUT 1 + INPUT 2)</b>	<b>1.000</b>	<b>227.461</b>	<b>102,5</b>	<b>99,1</b>	<b>98,4</b>	<b>99,1</b>	<b>102,5</b>	<b>100,3</b>	<b>117,8</b>	<b>135,0</b>	

## Monthly Agricultural Input Price Index

Tab. 2: Monthly Agricultural Input price Index October– December 2022 ( 2015 = 100)

Input 1 (Goods and services currently consumed in agriculture)						
API code	Description	Weight		2022		
		%	1000 Euro	Oct	Nov	Dec
<b>200000</b>	<b>GOODS AND SERVICES CURRENTLY CONSUMED IN AGRICULTURE (INPUT 1)</b>	<b>556</b>	<b>126.490</b>	<b>140,4</b>	<b>138,2</b>	<b>137,1</b>
201000	SEEDS AND PLANTING STOCK	91	20.777	87,5	87,2	87,0
202000	ENERGY; LUBRICANTS	103	23.433	148,7	139,9	133,8
202100	Electricity	17	4.637	98,2	98,2	98,2
202300	Motor fuels	137	17.480	163,3	151,5	143,4
202400	Lubricants	3	1.316	132,0	132,0	132,0
203000	FERTILISERS AND SOIL IMPROVERS	149	33.958	211,7	209,5	209,5
203100	Straight fertilizers	56	12.777	225,5	216,0	216,0
203200	Compound fertilizers	93	21.181	203,3	205,7	205,7
204000	PLANT PROTECTION PRODUCTS AND PESTICIDES	23	5.137	116,7	119,0	119,0
205000	VETERINARY EXPENSES	38	8.732	107,2	106,5	106,5
206000	ANIMAL FEEDINGSTUFFS	3	741	159,8	160,6	161,6
206100	Straight feeding stuffs	104	630	162,6	163,5	164,2
206200	Compound feeding stuffs	12	111	143,9	143,9	146,7
207000	MAINTENANCE OF MATERIALS	48	10.883	105,9	106,7	107,1
208000	MAINTENANCE OF BUILDINGS	4	833	119,3	119,2	119,1
209000	OTHER GOODS AND SERVICES	97	21.996	107,2	107,1	107,2
Input 2 (Goods and services contributing to agricultural investment)						
<b>210000</b>	<b>GOODS AND SERVICES CONTRIBUTING TO AGRICULTURAL INVESTMENT (INPUT 2)</b>	<b>444</b>	<b>100.971</b>	<b>129,9</b>	<b>129,9</b>	<b>129,9</b>
211210	TRACTORS	208	47.375	139,3	139,3	139,3
211290	OTHER	236	53.596	121,7	121,6	121,7
Input total (Input 1 + Input 2)						
<b>220000</b>	<b>INPUT TOTAL (INPUT 1 + INPUT 2)</b>	<b>1.000</b>	<b>227.461</b>	<b>135,7</b>	<b>134,5</b>	<b>133,9</b>

## Methodological explanations

Prices and price indices in this publication have been calculated according standards for price statistics in European Union. The project for calculation these Prices and Indices was conducted in the frame of the project of Improving agro monetary statistics" in cooperation with Statistic Sweden and with financial support by SIDA (Swedish International Development Cooperation Agency).

Prices have been collected since 2003 and are collected in seven regions: Pristina, Mitrovica, Peja, Gjakova, Prizren, Ferizaj and Gjilan. Prices are collected around the 15<sup>th</sup> in every month. Since the start the number of different prices that are collected have increased step by step.

The purpose of Agricultural Input Price Index is to follow the purchase prices of the means of agricultural production. By definition, the index does not cover factors of production. Thus, wages and wage costs, rent, interest payment, purchase of land and fixed asset animals are not part of the field of observation.

To compare the EU index presented in this publication with other countries, the Eurostat website is recommended (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>).

Weights to calculate aggregated indices are mainly based on Agricultural Economic Account 2015, which is the base year in the index (2015=100). These weights are fixed as long as the base of the index is 2015. The index is a price index and is calculated on the basis of the Laspeyres formula

### Calculation of elementary Price Index

Calculations of elementary indices are in general done by using following formula, with un-weighted arithmetic mean price.

$$R_i^t = \frac{\frac{1}{n} \sum P_{ij}^t}{\frac{1}{n} \sum P_{ij}^o} \cdot 100$$

- R<sub>i</sub><sup>t</sup> – Elementary index for month t and product i
- P – Collected price
- i – Product i
- j – Price j recorded for product (in general price for region)
- t – Observed month
- 0 – Base month

### Calculation of aggregated Price Index

Calculating aggregated index for total Input or subgroups of Input Index is done using following formula.

$$I^t = \sum (R_i^t \cdot \frac{w_i^0}{\sum w_i^0})$$

- I<sup>t</sup> – Aggregated index for period t
- w<sub>i</sub><sup>0</sup> – Weighting factor in base period for product i
- i – Product i
- t – Observed month
- 0 – Base month

### Questionnaire

Target definition
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Item number	Item name				Quantity	Unit
Price Collector				Collection place/ Company		
Date						
Price						
<p>Enumerators notes</p> <ul style="list-style-type: none"> <li>- Detailed description of specific variety selected for re-pricing</li> <li>- Changes in the detailed description, date for changes</li> <li>- Treatment of quality change when description changed (information of over-lap Price observation, alt. valuation of quality change)</li> </ul>						



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