Statistical surveys on fertiliser consumption in Slovenia

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SURS, Department for Agricultural, Forestry and Fishing Statistics
Slovenia is an European country with 20,273 km² of surface area. About 25% of its area is agricultural area.

According to final data of the 2010 Agriculture Census:

- there were 74,646 agricultural holdings with 474,432 hectares of utilised agricultural area (UAA).
- 79% of all agricultural holdings bred livestock.
  
  There were 421,553 livestock size units (LSU).
- An average agricultural holding used 6.4 hectares of agricultural area and bred 5.6 LSU.
- Total labour input into agriculture was performed by fewer than 208,000 persons in employment or with 77,012 annual working units (AWU).
- In addition to animal and plant production, more than 60% of agricultural holdings carried other supplementary activities like forestry, rural tourism or activities linked with food processing.
- Agricultural production is production for the market and/or for the own consumption of agricultural households involved in this production.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Slovenia in Figures

Structure of agricultural holdings (%), by UAA size classes, Slovenia, 2010
Total number of agricultural holdings = 74,646

- 61% of holdings had 5 ha or less UAA.
Slovenia in Figures

UTILISED AGRICULTURAL AREA (UAA), BY LAND USE CATEGORIES, SLOVENIA, 2010
Total UAA = 474,432 ha

In 2010 temporary grassland presented 17% of arable land or 6% of UAA.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
TOTAL LIVESTOCK SIZE UNIT (LSU), BY ANIMAL TYPES, SLOVENIA, 2010
Total LSU = 421,553

85% of all LSU were grazing animals.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Slovenia in Figures

• The previous map demonstrates that the regions with the highest share of agricultural areas are located in the central and eastern parts of Slovenia. But the regions with the highest number of LSU, on average, by agricultural holding, are located in the northern and north-western parts of Slovenia. So, agricultural production in Slovenia is spread over nearly the whole country.

• Considering the data about agricultural production, it is possible to imagine Slovenia as large pastures, with animals grazing on these pastures.

• The economic importance of agricultural activities in Slovenia is not comparable with industrial activities or services (the same situation is in some other European countries).

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regionalni zasebni domači izdelki

Bruto dodana vrednost, statistične regije, Slovenija, 2009
Gross value added, statistical regions, Slovenia, 2009

Slovenske regije v figureh

Regionalni zasebni domači izdelki

1) Sestavljena z orodja za raziskovanje, j. Because of rounding, the totals do not add up

Vse: SURS, GUSR
Vse: SURS, SNSA

Source: SURS, Department for National Accounts
AEI: Fertiliser consumption

- In spite of all presented data, agriculture in Slovenia has a huge importance on the social, indirect economic and environmental impacts on human life.

- Even if the people have their jobs in the other activities every day there are more and more of those who want to live healthy, to eat healthy, to drink healthy water, to have their own agricultural products if it is possible ...

So, they need the information which are acquired by the calculation of AEI. One of the AEIs is the indicator on Fertiliser consumption.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Fertiliser consumption, livestock manure

- Fertiliser consumption is consisted of:
  - consumption of mineral fertilisers and
  - data on the use of manure.

The Statistical Office of the Republic of Slovenia does not have a particular statistical survey on the use of livestock manure in agricultural production.

Some of these data were collected in 2010 with the statistical Survey on Agricultural Production Methods (SAPM). The Survey data were compiled as part of the Census data.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Fertiliser consumption, livestock manure

About 80% of all agricultural holdings used manure or slurry to dung their agricultural areas including permanent grassland (SAPM, 2010).

In the structure of arable land by its cover over the winter, the area sown with crops for green manure amounted to about 20% of arable land without temporary grassland (SAPM, 2010).
Fertiliser consumption, livestock manure

<table>
<thead>
<tr>
<th>Utilised agricultural area on which solid manure is applied, SAPM, Slovenia, 2010</th>
<th>Number of agricultural manure holdings</th>
<th>Area with solid manure applied (ha)</th>
<th>Solid manure (t)</th>
<th>Solid manure (t/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable land</td>
<td>48,261</td>
<td>69,288</td>
<td>942,589</td>
<td>13.6</td>
</tr>
<tr>
<td>Permanent grassland and permanent crops</td>
<td>29,508</td>
<td>101,279</td>
<td>982,057</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Fertiliser consumption, livestock manure

### Utilised agricultural area on which slurry is applied, SAPM, Slovenia, 2010

<table>
<thead>
<tr>
<th></th>
<th>Number of agricultural holdings</th>
<th>Area with slurry applied (ha)</th>
<th>Slurry (m3)</th>
<th>Slurry (m3/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable land</td>
<td>9,939</td>
<td>45,185</td>
<td>657,195</td>
<td>14.5</td>
</tr>
<tr>
<td>Permanent grassland and permanent crops</td>
<td>19,172</td>
<td>84,819</td>
<td>1,074,728</td>
<td>12.7</td>
</tr>
</tbody>
</table>

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Fertiliser consumption, livestock manure

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td>Livestock manure t N</td>
<td>38438</td>
<td>38696</td>
<td>40323</td>
<td>38673</td>
<td>38667</td>
<td>37767</td>
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<tr>
<td>Mineral fertilisers t N</td>
<td>29169</td>
<td>30383</td>
<td>29613</td>
<td>25039</td>
<td>28202</td>
<td>27486</td>
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<tr>
<td>Livestock manure %</td>
<td>48.0</td>
<td>47.6</td>
<td>49.0</td>
<td>50.7</td>
<td>48.8</td>
<td>48.6</td>
</tr>
<tr>
<td>Mineral fertilisers %</td>
<td>36.4</td>
<td>37.4</td>
<td>36.0</td>
<td>32.8</td>
<td>35.6</td>
<td>35.4</td>
</tr>
</tbody>
</table>
Fertiliser consumption, livestock manure

- As it was shown, Slovenia has livestock-oriented agricultural production and as a result of this type of production, there is a long tradition of the use of livestock manure (solid manure and liquid manure = slurry) in crop production.
- With the exception of SAPM data, Slovenia does not have the data on the mass of the used livestock manure. Instead of it, Slovenia has the annual estimation on the used plant nutrients originated from livestock manure. This estimation was performed at the Agriculture Institute of Slovenia.
- SORS and some professional institutions in the field of agriculture stand on a position that for the regular statistical purposes it is better that the quantities of plant nutrients from livestock manure be estimated on the base of the number of animals, harmonised coefficient of the contents of plant nutrients into animal excretes and some other data, such as the information which will be obtained directly from the farms.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Fertiliser consumption, Mineral fertilisers

At the Statistical Office of the Republic of Slovenia there exist two statistical surveys on the consumption of mineral fertilisers in agriculture:
- Regular annual survey (from 1995)
- Regular biannual survey (from 2006).

The Regular annual survey is based mainly on the trade and industrial production data. With the Regular biannual survey data are collected mainly from the agricultural holdings.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

From 1995 on:

Data sources:

- **Data on import and sale of mineral fertilisers for crop production and data on plant nutrients in individual mineral fertilisers** are collected with the annual statistical reports directly from import enterprises.

- **Data on domestic production of mineral fertilisers** are taken over from the Manufacturing Statistics Department. Mineral fertilisers are classified by the PRODCOM list.

- **Data on export of mineral fertilisers** are taken over from the External Trade Statistics Department. Mineral fertilisers are classified by the Combined Nomenclature.

- **Data on mineral fertilisers and plant nutrients used in enterprises, companies and co-operatives during the growing season and their stocks on 31 December of the current year** are collected with annual reports filled in by all enterprises, companies and co-operatives involved in crop production.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

Main variables:
• mass of imported mineral fertilisers,
• mass of sold imported mineral fertilisers on the domestic market for the agricultural purposes separated of the other purposes
• production of mineral fertilisers in Slovenia
• usage of mineral fertilisers in agricultural enterprises
• stocks of mineral fertilisers in trade and agricultural enterprises.

Main statistics:
• total mass of used/available mineral fertilisers for agricultural plant production by type of mineral fertilisers (CN classification) and by NPK plant nutrients
• total mass of used/available NPK plant nutrients per hectare of utilised agricultural areas.

Publishing - Annually:
• First Release.
• The SURS website (SI-STAT database)
• Statistical Yearbook.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

- **Calculation of the main statistics:**
  
  - The consumption of mineral fertilisers in agricultural enterprises is collected by a questionnaire.
  
  - If we suppose that stocks of mineral fertilisers on family farms at the end of each year are about the same, then the obtained data (import (sale on domestic market) + production (sale on domestic market) + stocks in agricultural enterprises, previous year – export – mineral fertilisers consumption at agricultural enterprises – stocks in agricultural enterprises, current year) can be shown as the **consumption of mineral fertilisers on family farms**.

  The sum of these two calculations is presented as mineral fertiliser consumption for agricultural purposes.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

Some items which improved the quality of our survey:

- Questionnaire on Import of mineral fertilisers in 2002
  Were the imported mineral fertilisers intended to be used for agricultural purposes?
  1. Yes.
  2. No.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

• Questionnaire on Import of mineral fertilisers in 2003

Were the imported mineral fertilisers in 2003 intended to be used:
• in agriculture, for plant production?
• in agriculture, for fodder production?
• for plant production out of agriculture (households, balcony flowers, parks, gardens, sport areas, graveyards...)?
• for industrial production including the mineral fertiliser production?
• for other: please, indicate for what kind of activity...?
• We don’t know.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

### Statistical Office of the Republic of Slovenia, KME-UMG, 2011

#### 1. IMPORT OF MINERAL FERTILISERS BY PURPOSES OF THEIR USAGE, 2011 (KG)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of mineral fertilisers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Straight mineral fertilisers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Compound mineral fertilisers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total, straight mineral fertilisers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Straight Nitrogenous</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Straight Phosphatic</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Straight Potassic</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

• For what reason did this small classification have influence on the improvement of our data?

• Here are two of the most important reasons:
  - Reporting units have possibilities to evident two or more intended usages for one mineral fertiliser, e.g. UREA.
  - Collecting 100% of all imported mineral fertilisers rises the possibilities for different types of control to be higher.

Source: SORS, Department for Agricultural, Forestry and Fishing Statistics
Regular annual survey

Data are processed with additional logical controls (aspect of agriculture):

• **Control of imported data with external trade data**, according to the company and type of fertilizer (CN - Combined Nomenclature). In this way we control data entry and errors in the CN tariff (information on plant nutrients helps us to determine whether a fertilizer is properly encoded by the CN).

• **Control of data with last year's data by company and by type of fertilizer**. In this way we control the particular details of the sale to cover last year's stocks.

• **Plant nutrients - control of the existing classification** (updated every year) used in the statistical survey; use of Internet as an additional source of information; direct contacts with manufacturers.

• **Control of the basic activity of the enterprises** (the NACE nomenclature and public information available on Internet) to determine the correct purpose of use of fertilizers.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Data quality assurance - The regular annual survey

All reporting units from external trade statistics and from statistics on industrial production are included in this survey.

The advantages of such methodology are:
• Easy and fast way to collect data (small number of reporting units).
• High response rate (missing data on imported quantity of mineral fertilisers could be filled in from External trade statistics).
• Some other sources could be used for data control, including websites of trade enterprises.

But there is also some disadvantages:
• These data represent still the available mass of mineral fertiliser usage in agriculture.
• Separation of mineral fertilisers by their usage is still very hard work.
• Mistakes in CN codes could seriously have influence on the final data result (e.g.: Ad Blue = Diesel Exhaust Fluid)

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Final results: The regular annual survey

Consumption of macro plant nutrients in mineral fertilisers in tons, Slovenia, 2002-2011

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

From 2006 on:

Data sources:
- CATI: we take over the sample of the statistical survey on »Crop production, Slovenia« in the reference year. The sample design is stratified simple random sampling.
- Data on the consumption of mineral fertilizers used in agricultural enterprises for the production of most important crops were collected in the regular annual survey »Consumption of mineral fertilizers«. In the survey »Consumption of mineral fertilizers by crops« these data were combined with the family farms data.

Data representativity
- Data obtained in 2006 and 2008 are representative only at the level of Slovenia.
  Data collected in 2012 will be representative at NUTS 2 level.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

• The survey questionnaire is composed of four parts:

  - identification of family farms,
  - general information on which types of fertilisers were used on a family farm in the reference period,
  - data control of sown areas by particular crop,
  - collection of data on used mineral fertilisers by particular crop.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

• Which particular crops are included in this survey?

• In this survey are included the particular crops, the sown areas of which are the largest agricultural areas in Slovenia, by main categories of EU classification of crop production. In this way it is possible to estimate the use of mineral fertilisers by the main categories of land use.

For example: for cereals there were selected: wheat, barly, maize for grains and buckwheat,

for root crops: potatoes

for industrial plants: oil turniprape, pumpkings for oil and hops ...
Regular biannual survey
Regular biannual survey

• **Logical controls as a part of the application for data entry (CATI):**
  
  – available detailed data on area by crops and by agricultural holdings,
  – available three different possibilities for fertiliser data input: by trade name, by NPK group of fertilisers and by name raised by respondent,
  – application control of total usage of a particular mineral fertiliser and its distribution per crop fertilisation.

Source: SIRS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

Main variables:
- area of particular crop cultivated with mineral fertilisers,
- area of particular crop without cultivation with mineral fertilisers,
- type of used mineral fertiliser per particular crop,
- mass of used mineral fertiliser per particular crop.

Main statistics:
- total mass of used NPK plant nutrients per hectare of agricultural area, by particular crop,
- total mass of used NPK plant nutrients per hectare of total agricultural area in the reference period.

Publishing - Biannually:
- First Release.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

Calculation of main statistics:

- The ratio between fertilised and non-fertilised areas in the sample was used for the estimation of the total fertilised and non-fertilised areas by particular crop and by strata.

- Average values of the use of NPK/ha by strata and by particular crop were used for the estimation of average use of NPK/ha for particular crop for the whole Slovenia.

- The sum of estimated usage of NPK/ha in the production of all particular crops presents the estimated usage of NPK/ha in the Slovene agriculture. (Consumption of NPK/ha in the production of some not significant crops is estimated as the average consumption of the crop(s) from the same land use category).

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
- For calculating the use of mineral fertilisers per crops only the use of more than 20 kg/ha of N or P$_2$O$_5$ or K$_2$O is justified and was taken into account. The exception is fertilisation of the one time harvested permanent grassland for which the use of 10 kg/ha is accepted.

- For all agricultural holdings with more than 2 hectares of arable land we insert (according to the defined rules) data on consumption of mineral fertilizers. For example, here are not included family farms with organic farming.
Regular biannual survey

• Some items which improved the quality of our data:

  - In 2006 and 2008 we asked agricultural fruit producers for mineral fertilisers data only if they had cultivated the intensive orchards. Fertilised extensive orchards were considered as one or two times harvested pastured (the area was defined as in the methodology of the survey on crop production).

  - In 2012 we asked agricultural fruit producers for mineral fertilisers data used for all orchards (intensive and extensive). The data will be separated through the editing process and will be published as separated data.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Regular biannual survey

- Before implementing the survey, all sample units were divided into two groups:

  in the first group were market oriented horticultural producers and in the second group all other agricultural producers.

  With horticultural producers worked the most experienced interviewers because they use the biggest number of very specific mineral fertilisers.

Source: SURES, Department for Agricultural, Forestry and Fishing Statistics
Data quality assurance - The regular biannual survey

The main facts which affect the accuracy of the results of the use of mineral fertilizers by crops (Regular biannual survey):

- sample size, which depends on the homogeneity of phenomena according to the geographical distribution;
- response rate: 68%–79%;
- size of the occurrence of particular crop or group of crops;
- assessment of the use of data sources (completeness and accuracy) for each group of agricultural area by crops - quality preparation of the sampling frame.

The advantages of such methodology are:

- validation of data when calculating different types of errors, including sample error;
- obtained data on fertilised and non-fertilised agricultural areas;
- obtained data on fertilisation of particular crops;
- geographical distribution of used mineral fertilisers.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Accuracy of results (CV < 10%) - The regular biannual survey

<table>
<thead>
<tr>
<th>Culture</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td>Pumpkins</td>
<td>5.00%</td>
</tr>
<tr>
<td>Barley</td>
<td>2.00%</td>
</tr>
<tr>
<td>Fodder root crops</td>
<td>7.30%</td>
</tr>
<tr>
<td>Potatoes</td>
<td>4.20%</td>
</tr>
<tr>
<td>Wheat</td>
<td>1.80%</td>
</tr>
<tr>
<td>Silage maize</td>
<td>2.10%</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>3.60%</td>
</tr>
<tr>
<td>Dried pulses</td>
<td>4.70%</td>
</tr>
<tr>
<td>One harvest of perm. grassland</td>
<td>8.60%</td>
</tr>
<tr>
<td>Two harvests of perm. grassland</td>
<td>3.10%</td>
</tr>
<tr>
<td>Three harvests of perm. grassland</td>
<td>2.60%</td>
</tr>
<tr>
<td>More than three harvests</td>
<td>5.00%</td>
</tr>
<tr>
<td>Green fodder from arable land</td>
<td>3.00%</td>
</tr>
<tr>
<td>Vineyards</td>
<td>6.70%</td>
</tr>
<tr>
<td>Maize for grains</td>
<td>1.80%</td>
</tr>
</tbody>
</table>

Cultures with CV < 10% in 2008 had covered more than 92% of total UAA.

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
### Accuracy of results (CV > 10%) - The regular biannual survey

<table>
<thead>
<tr>
<th>Culture</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td>Buckwheat</td>
<td>20.00%</td>
</tr>
<tr>
<td>Other fruit</td>
<td>17.00%</td>
</tr>
<tr>
<td>Hops</td>
<td>11.80%</td>
</tr>
<tr>
<td>Apple</td>
<td>11.40%</td>
</tr>
<tr>
<td>Stubble crop</td>
<td>14.20%</td>
</tr>
<tr>
<td>Oil turniprape</td>
<td>10.10%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>6.10%</td>
</tr>
</tbody>
</table>
External data control

http://www.arso.si/en/
Website of Slovenian Environment Agency with data on Water Quality. Here it is shown that the concentration of Nitrates in Water Bodies is decreasing, Slovenia, 1998 - 2011.
Final results - The regular biannual survey

Average consumption of macro plant nutrients in kg/ha of UAA, Slovenia, 2006 and 2008

- P2O5 (kg/ha): 2006 - 27, 2008 - 24
- K2O (kg/ha): 2006 - 32, 2008 - 29

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
## Final results - The regular biannual survey

<table>
<thead>
<tr>
<th>Category</th>
<th>Utilised areas (ha)</th>
<th>N (kg)</th>
<th>( P_2O_5 ) (kg)</th>
<th>( K_2O ) (kg)</th>
<th>NPK (kg/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arable land</td>
<td>180303</td>
<td>15219459</td>
<td>7306410</td>
<td>9205077</td>
<td>176</td>
</tr>
<tr>
<td>Cereals</td>
<td>105016</td>
<td>9516093</td>
<td>4721393</td>
<td>5970737</td>
<td>192.5</td>
</tr>
<tr>
<td>wheat</td>
<td>35264</td>
<td>3233113</td>
<td>1588546</td>
<td>2054342</td>
<td>195</td>
</tr>
<tr>
<td>barley</td>
<td>19229</td>
<td>1241175</td>
<td>663069</td>
<td>788266</td>
<td>140</td>
</tr>
<tr>
<td>maize for grains</td>
<td>43698</td>
<td>4532437</td>
<td>2205902</td>
<td>2805726</td>
<td>218.4</td>
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<tr>
<td>buckwheat</td>
<td>323</td>
<td>4111</td>
<td>3844</td>
<td>4368</td>
<td>38.1</td>
</tr>
<tr>
<td>other cereals</td>
<td>6502</td>
<td>505257</td>
<td>260032</td>
<td>318035</td>
<td>166.6</td>
</tr>
<tr>
<td>Dried pulses</td>
<td>1578</td>
<td>63445</td>
<td>50916</td>
<td>71435</td>
<td>117.8</td>
</tr>
<tr>
<td>Root crops</td>
<td>4986</td>
<td>371576</td>
<td>244719</td>
<td>332603</td>
<td>190.3</td>
</tr>
<tr>
<td>Industrial plants</td>
<td>9816</td>
<td>891457</td>
<td>364031</td>
<td>544004</td>
<td>183.3</td>
</tr>
<tr>
<td>Vegetables</td>
<td>3421</td>
<td>230053</td>
<td>227442</td>
<td>327074</td>
<td>229.3</td>
</tr>
<tr>
<td>Green fodder</td>
<td>54404</td>
<td>4118118</td>
<td>1661262</td>
<td>1906136</td>
<td>141.2</td>
</tr>
<tr>
<td>Permanent grassland</td>
<td>285973</td>
<td>8124259</td>
<td>4073912</td>
<td>3969234</td>
<td>56.5</td>
</tr>
<tr>
<td>one harvest</td>
<td>46249</td>
<td>438081</td>
<td>322622</td>
<td>343152</td>
<td>23.9</td>
</tr>
<tr>
<td>two harvests</td>
<td>118623</td>
<td>2835794</td>
<td>1548478</td>
<td>1456657</td>
<td>49.3</td>
</tr>
<tr>
<td>three harvests</td>
<td>88935</td>
<td>3413609</td>
<td>1660765</td>
<td>1633593</td>
<td>75.5</td>
</tr>
<tr>
<td>more than three harvests</td>
<td>23104</td>
<td>1436775</td>
<td>542047</td>
<td>535832</td>
<td>108.9</td>
</tr>
<tr>
<td>Permanent crops</td>
<td>26148</td>
<td>719874</td>
<td>537193</td>
<td>951208</td>
<td>84.4</td>
</tr>
<tr>
<td>Stubble crop</td>
<td>8603</td>
<td>81943</td>
<td>19437</td>
<td>25909</td>
<td>14.8</td>
</tr>
<tr>
<td>Utilised agricultural area (UAA)</td>
<td>492424</td>
<td>24145535</td>
<td>11936951</td>
<td>14151428</td>
<td>101.9</td>
</tr>
</tbody>
</table>

Source: SURS, Department for Agricultural, Forestry and Fishing Statistics
Conclusions

• We recognise our system of data collection on the consumption of mineral fertilisers in agriculture as described to be good – this applies also to the frequency of data collection, as well as to links between the annual survey of the areas sown and biannual survey on consumption of mineral fertilizers by crops. This link is possible at the level of the mass of plant nutrients (NPK).

Using agricultural annual data on the consumption of mineral fertilisers here it is possible to link these data with imported mineral fertiliser data from the External trade statistics survey (level of the mass of mineral fertilisers). 

These connections enable us the overall data crosschecking and their improvement if it is needed.

• Statistical data on the consumption of mineral fertilisers in agriculture are official Slovene statistical data on this issue. They are used by the international and national institutions as well as by the public, interested in this issue.
Conclusions

• These data are used for different purposes: agriculture, the environment, economic or research activities, etc.

• It is the result of our effort to respect as much as possible the international standards (methodologies, classifications, statistical quality assessment) as well as the national rules and main national agricultural features. We believe that this type of work is the way, which will provide high quality information.

• Our next goal is to establish a model for estimating the consumption of NPK/ha for agricultural area, by land use categories as annual statistics using existent surveys and their data.

• Data on mineral fertiliser consumption by crops in 2012 and the estimation for 2010 will be published in November 2013.
Links to the published data and metadata:

SI-STAT data portal
http://pxweb.stat.si/pxweb/Database/Environment/15_agriculture_fishing/07_consumption/01_15170_fertilizers/01_15170_fertilizers.asp

The Methodological Explanations
http://www.stat.si/eng/metodologija_pojasnila.asp?pod=15

The Quality Report

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