



# Different price statistics for different purposes

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## Price statistics in general <sup>1/4</sup>

- European System of Statistics provides a range of different price statistics
- Two main approaches:
  - Spatial prices
    - Comparing the price level between geographical areas in a given period of time
    - in absolute terms (observable average prices), or
    - in relative terms (e.g. purchasing power parities)
  - Temporal prices (price indices)
    - Development in prices over time within and between geographical areas



## Price statistics in general 2/4

- Prices of what:
  - Output (goods and services)
  - Input (factors of production)
- Prices for whom?
  - Purchasers
  - Producers
  - Importers
  - Wholesalers
  - Retailers
  - Brokers etc..



## Price statistics in general <sup>3/4</sup>

- Usually price indices are constructed to measure the price development in a basket of goods and services



Three ways to address the price change:

1. If a given basket bought in year N cost 100, how much would the same basket cost today? or,
2. if a given basket today costs 100, how much did the same basket cost in year N?, or
3. a combination of 1 and 2



## Price statistics in general 4/4

- Some important price statistics
  - Consumer price indices (CPIs)
  - Harmonised Index of Consumer Prices (HICP)
  - Producer price indices (PPIs)
  - Import end export price indices
  - Purchasing Power Parities (PPPs)
  - Labour cost indices (LCIs)
  - Construction cost indices (CCIs)
  - Service producer price indices (SPPIs)
  - National Accounts deflators
  - Energy price statistics
  - The Absolute agricultural prices (AAP)
  - The Agricultural price indices (API)



## Short on some main price statistics 1/4

- **Consumer price indices (CPIs)**, measure changes in the prices of goods and services from a consumer's perspective. CPIs are based on the prices of the goods and services which households typically buy.
- To ensure consistency of consumer price indices at the European level, the **Harmonised Index of Consumer Prices (HICP)** was developed, which is a harmonised consumer price index for all EU countries and the official measure of consumer price inflation in the euro area.



## Short on some main price statistics 2/4

- **Producer price indices (PPIs)** measure developments in producers' transaction prices, the gross monthly changes in the trading price of products and services on the domestic and the non-domestic market.
- **Import and export price indices** use data from the establishments surveyed in order to measure price developments of representative exported and imported items.



## Short on some main price statistics 3/4

- **Labour cost indices (LCIs)** show the total cost for employers of employing the labour force on an hourly basis. The LCIs measure the cost pressure arising from the “labour production factor”.
- **The Cost of capital** is not captured by any specific price statistics. For analyses one could envisage to use other sources, e.g. as information on interest rates, rate of return in stock markets or yield on government bonds to get a picture of the cost of the use of capital.



## Short on some main price statistics 4/4

- **Purchasing Power Parities (PPPs)** compare price levels between countries, groups of countries/regions. They are used to convert prices in national currencies into an artificial common currency (the Purchasing Power Standard, PPS), in order to eliminate price level differences between countries/regions, and to be able to calculate the actual/real purchasing power of the resident population.
- The main use of PPPs is to convert national accounts aggregates, like the Gross Domestic Product (GDP) of different countries, into comparable volume aggregates that avoid overestimating the GDP of countries with high price levels relative to countries with low price levels.
- PPPs are also applied in analyses of relative price levels across countries.



## Agricultural price statistics 1/11

- Agricultural price statistics (APS) is an essential tool to analyse and monitor the Common Agricultural Policy (CAP)
- Agricultural price statistics are drawn up from the farmers' viewpoint. They measure the prices of agricultural products (output) paid to the farmers and the means of agricultural production (input) paid by the farmers



## Agricultural price statistics 2/11

- **The Agricultural price indices (API)** – quarterly and annual data based on the sales of agricultural products and on the purchases of the means of agricultural production
- **The Absolute agricultural prices (AAP)** – annual data and monthly data are observed in countries for a range of agricultural products and means, but Eurostat only disseminates annual absolute prices
- Unlike other major components of agricultural statistics, agricultural price statistics are based on voluntary agreements between Eurostat and the Member States. Further, all agricultural economic statistics are methodologically harmonized with general national accounts principles (satellite to National Accounts)



## Agricultural price statistics 3/11

- **The Absolute agricultural prices (AAP)**
  - What is collected:
    - Average prices in national currencies of more than 200 products (output items) and close to 70 input items are collected by the countries and reported to Eurostat in national currencies
    - **Output** items comprises crop production and animal production and **input** items comprises fertilizers, animal feed, electricity and fuels, machines and other equipment
    - Data on agricultural land and rents are also collected
    - Sales prices (output) are usually excluding VAT



## Agricultural price statistics 4/11

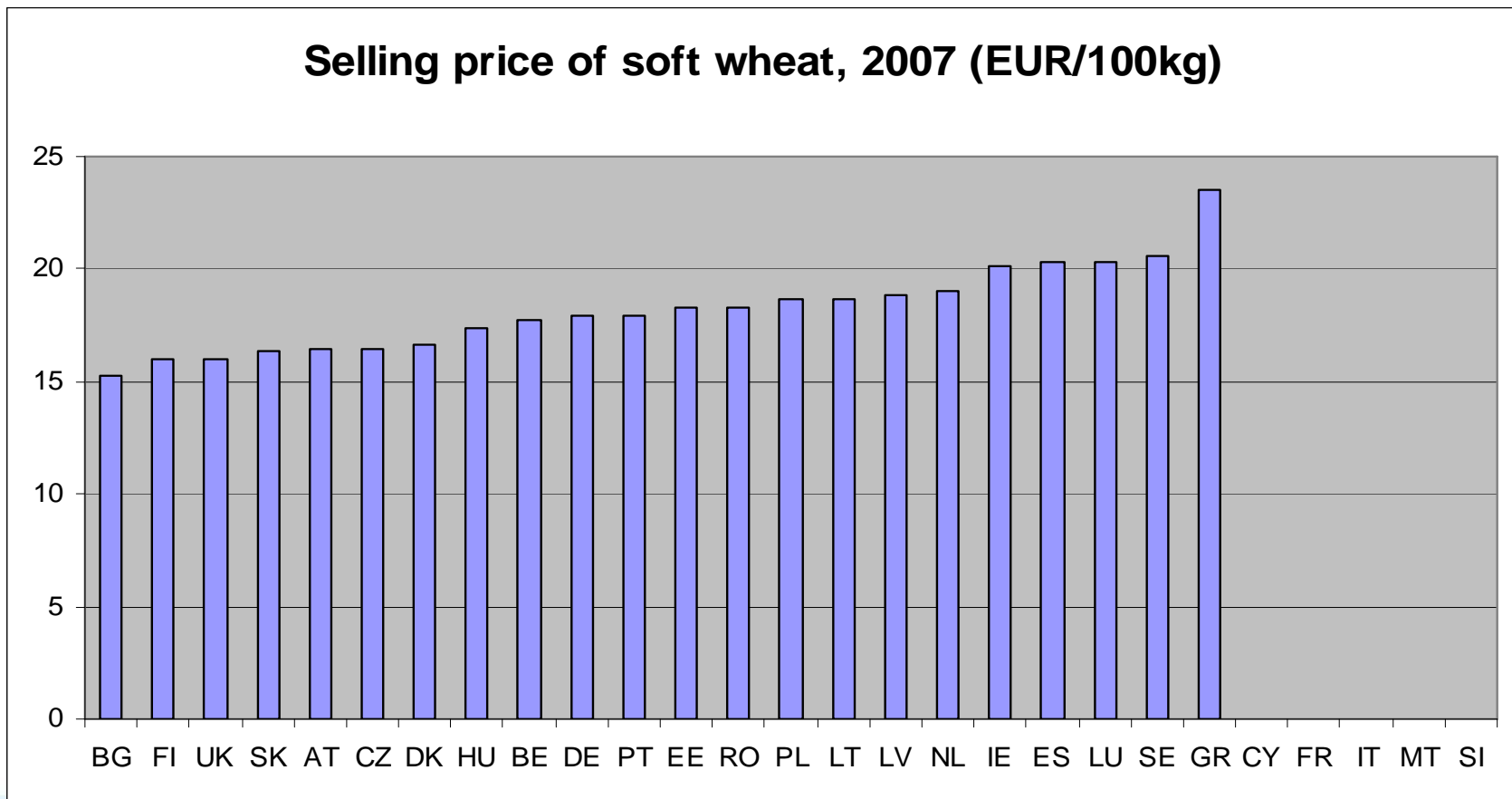
### – Objectives:

- Direct comparisons of average price levels between countries into EURO
- Comparisons could usefully also take into account purchasing power parities (PPS) - but not done currently
- EU aggregates are calculated by using PPS as weights
- Average price levels are often used in macro economic models and in sector economic models
- Price level information also important information in estimating price elasticities



## Agricultural price statistics 5/11

**Selling price of soft wheat, 2007 (EUR/100kg)**





## Agricultural price statistics 6/11

- **Agricultural prices indices (API)**
  - Quarterly and annual price indices for output and input are calculated on the basis of 80 output products and 40 input items
  - Main objective:
    - Comparison of price trends both between countries and for the EU as a whole
    - Comparisons of price trends of agricultural products within or between countries
    - Comparisons between trends in producer prices (output prices) and purchase prices (input prices)



## Agricultural price statistics 7/11

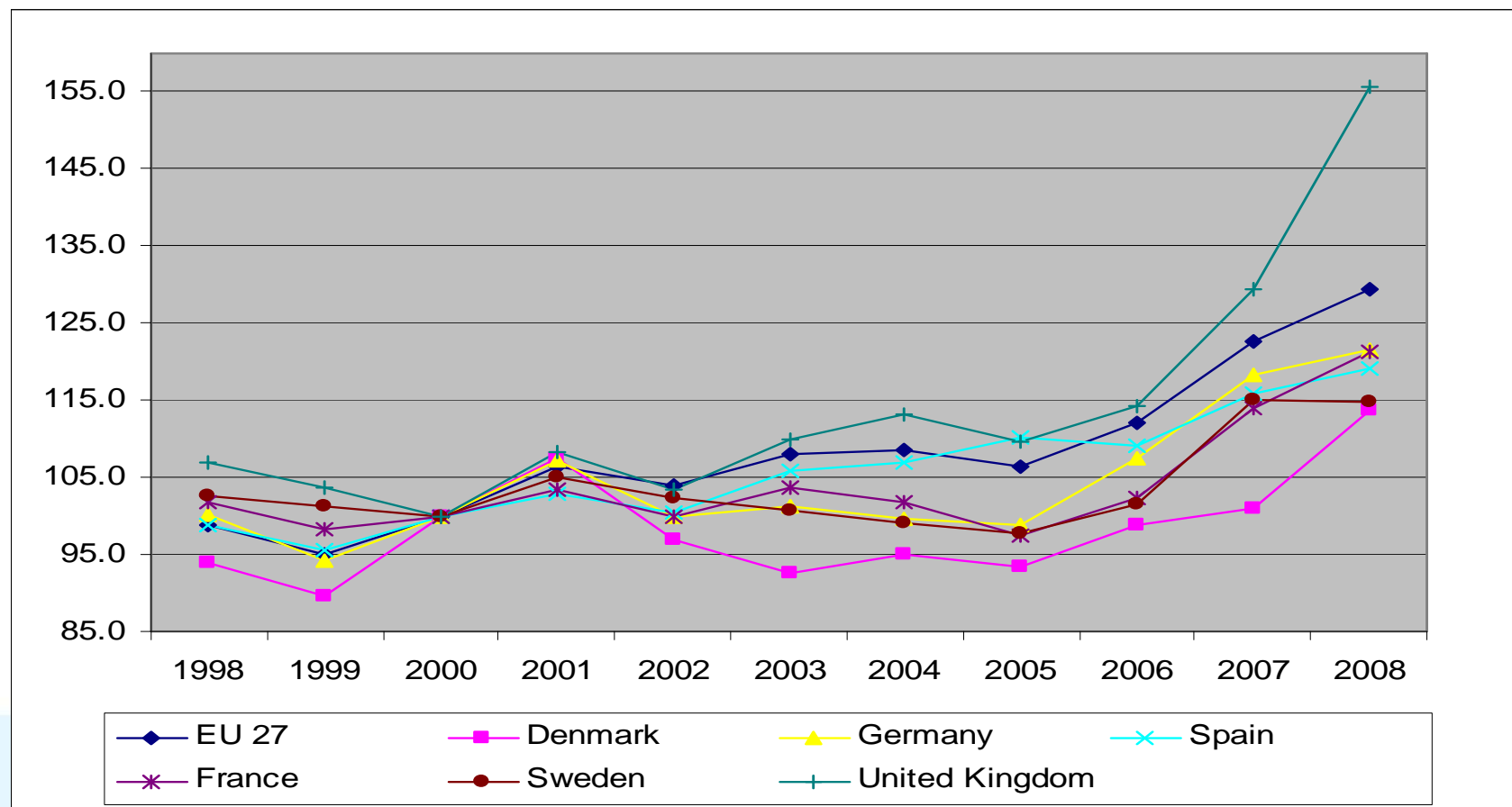
- To adjust for the impact of seasonalities in the quarterly price indices, the “baskets” are changed for the respective quarters to reflect changes in the composition of the production across quarters
- To “read” correctly the price trends for agricultural products, it is also important to look at the trend of price changes in general

	Agricultural price change	General price change	“Real” price change
Example: Country A	8%	10%	negative
Country B	4%	2%	positive



# Agricultural price statistics 8/11

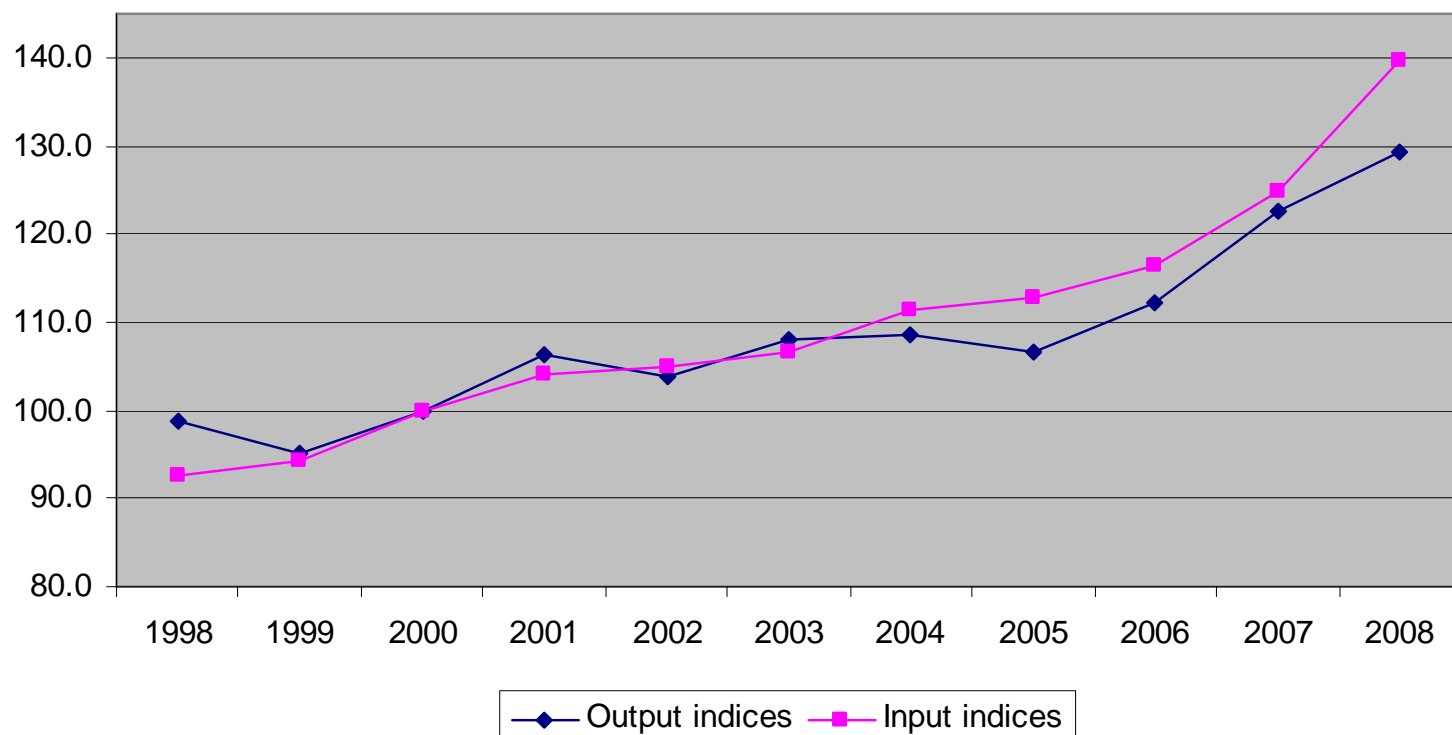
Producer price indices, total agricultural production; Nominal value, 2000=100





## Agricultural price statistics 9/11

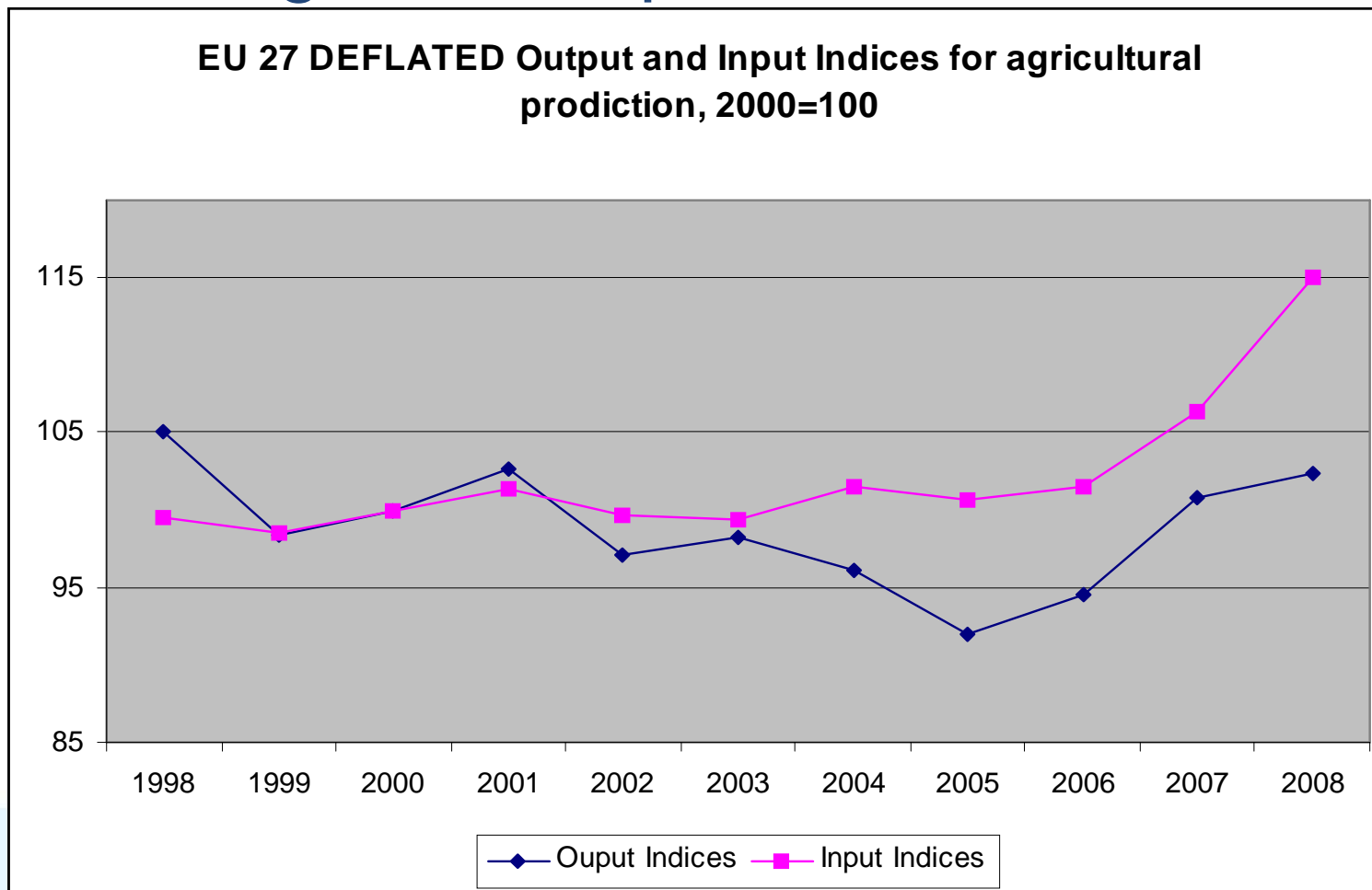
EU 27 Nominal Output and Input Indices for agricultural production,  
2000=100





## Agricultural price statistics 10/11

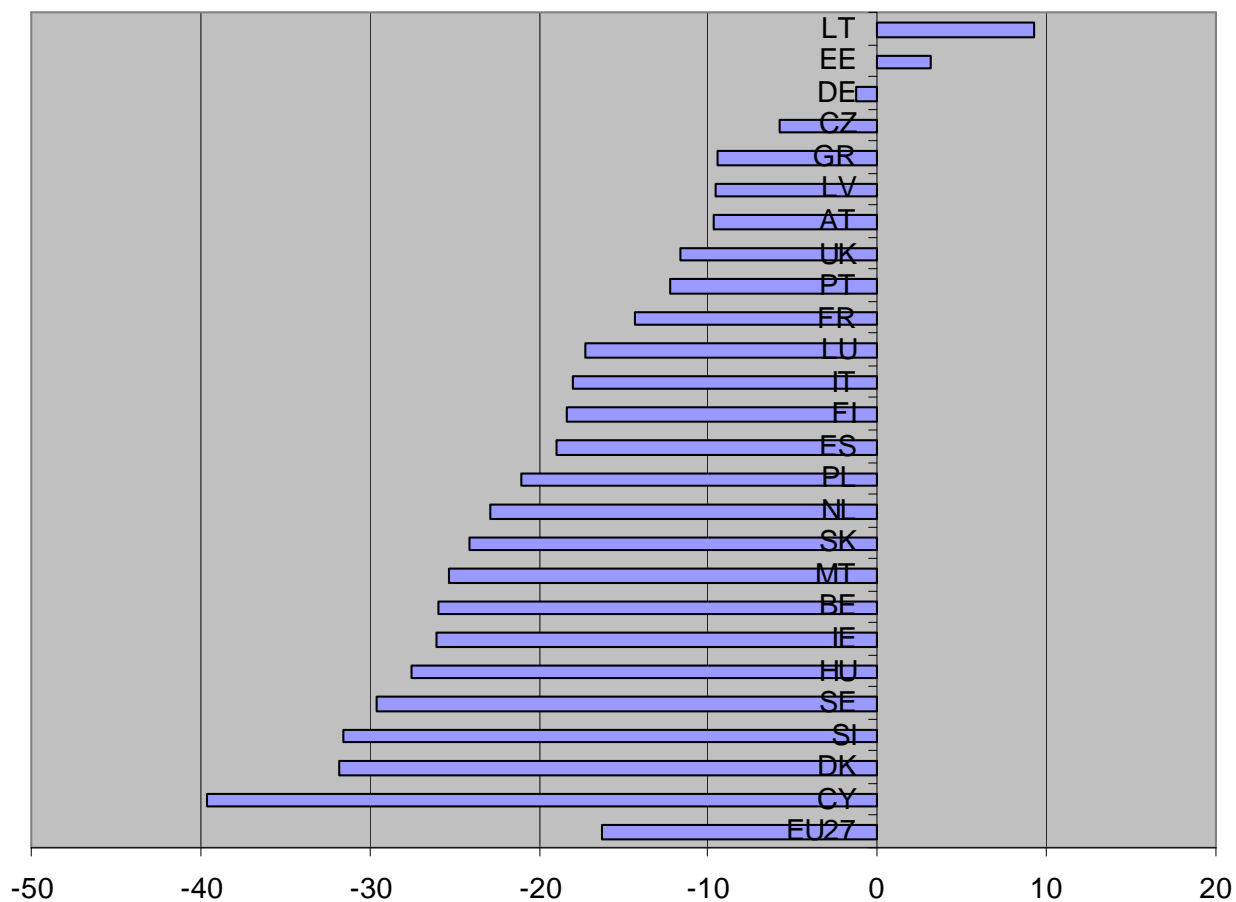
EU 27 DEFLATED Output and Input Indices for agricultural production, 2000=100





# Agricultural price statistics 11/11

Difference in %-points between % change in deflated output price indices and input price indices by country, 2000-2008





## Concluding remarks

- A wide range of different price statistics
- Agricultural price statistics can usefully be used in combination with other price statistics to better read the complete picture
- Statisticians cannot alone address the need for statistics. It is crucial to communicate with the main groups of users of the statistics to develop new or to improve existing statistical products in terms of concepts, timeliness, frequency and other quality dimensions
- More statistics on Eurostat database:  
[http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)