



European Commission  
Agriculture and Rural Development



# The economics of maize in a global market

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**Head of Unit**

**Arable crops, sugar, animal feed, fibre plants**

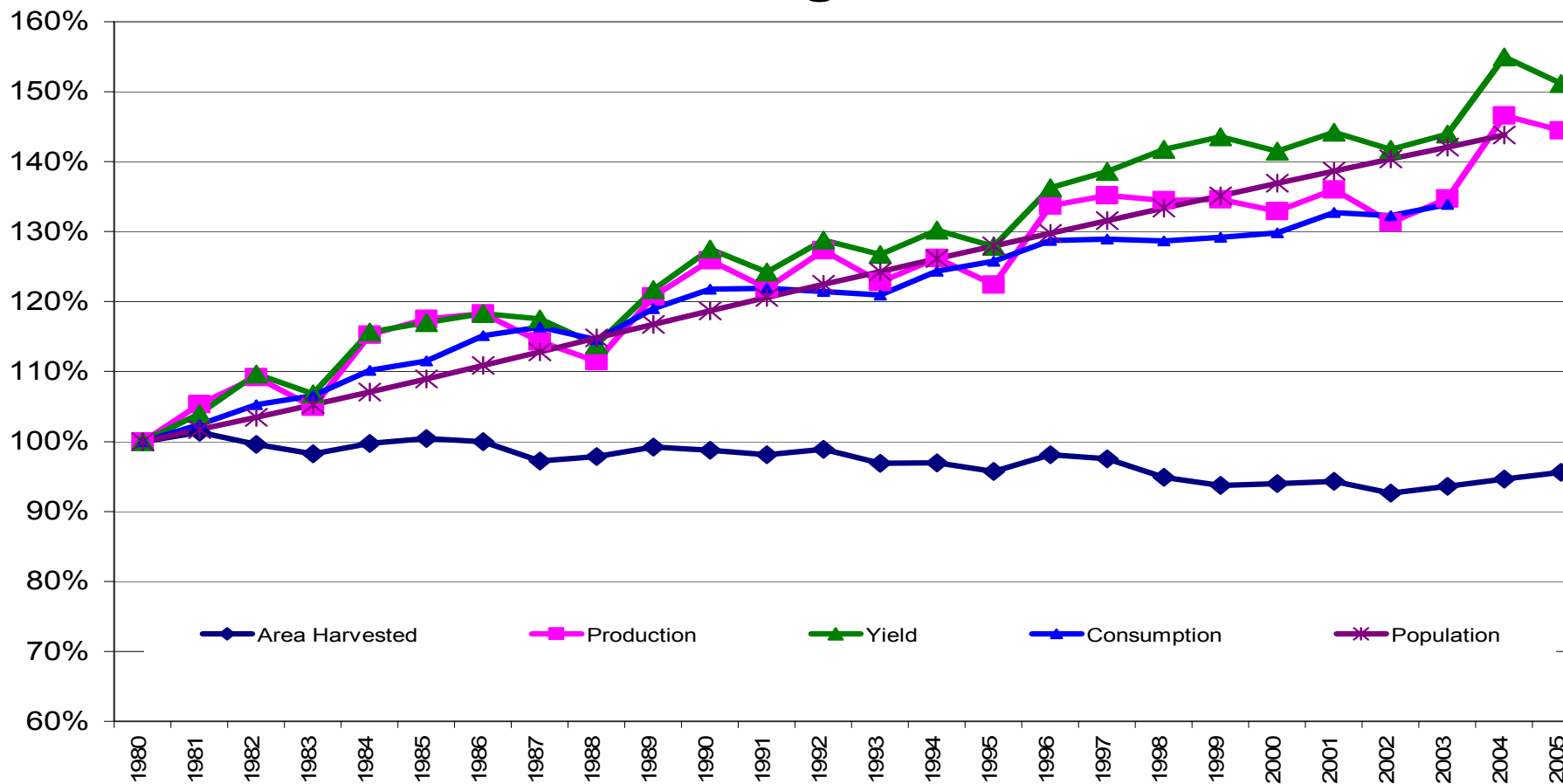
**Directorate C. Economics of agricultural markets (and CMO)**

**DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT**

**EUROPEAN COMMISSION**

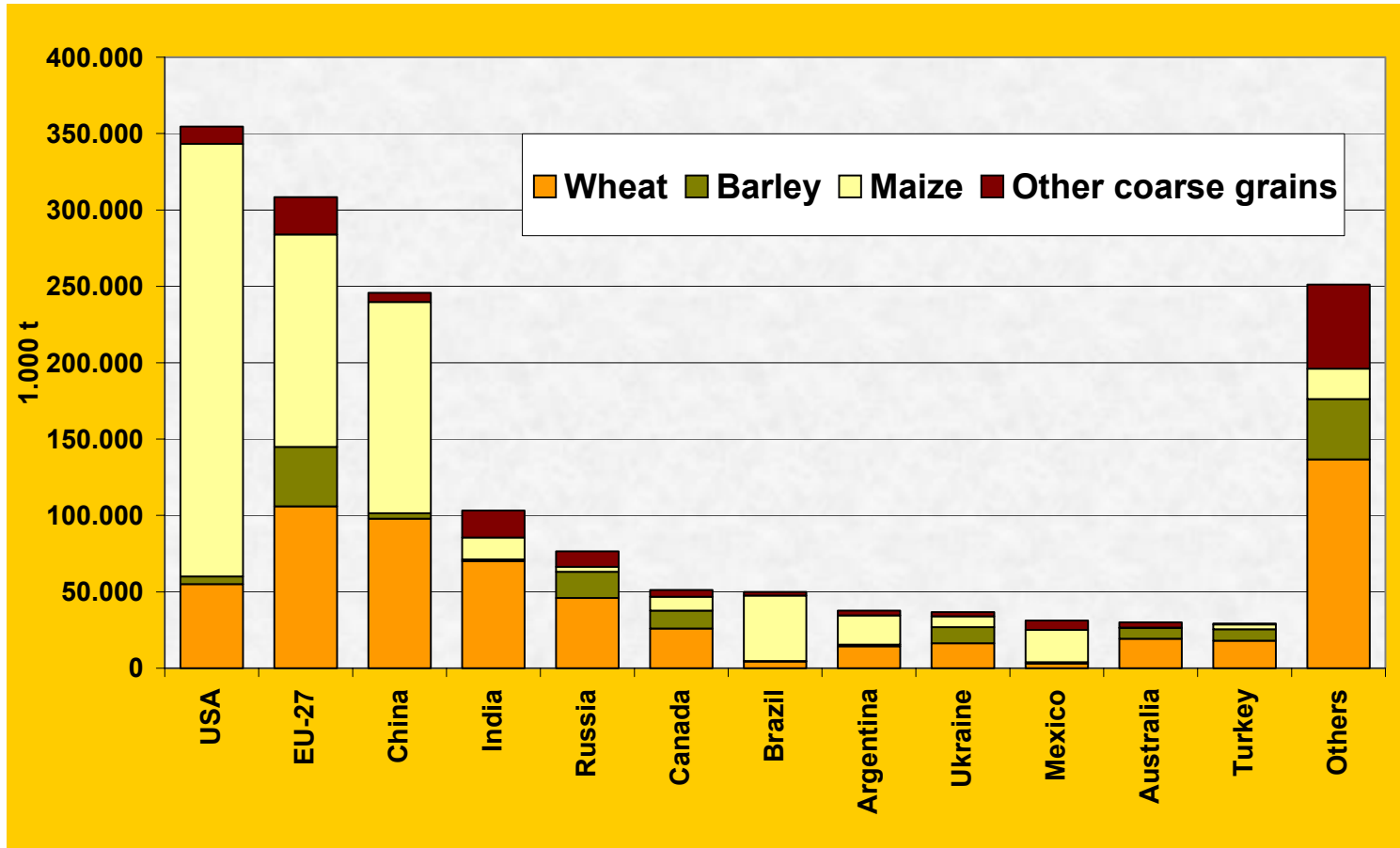


# World total cereals growth, 1980-2005



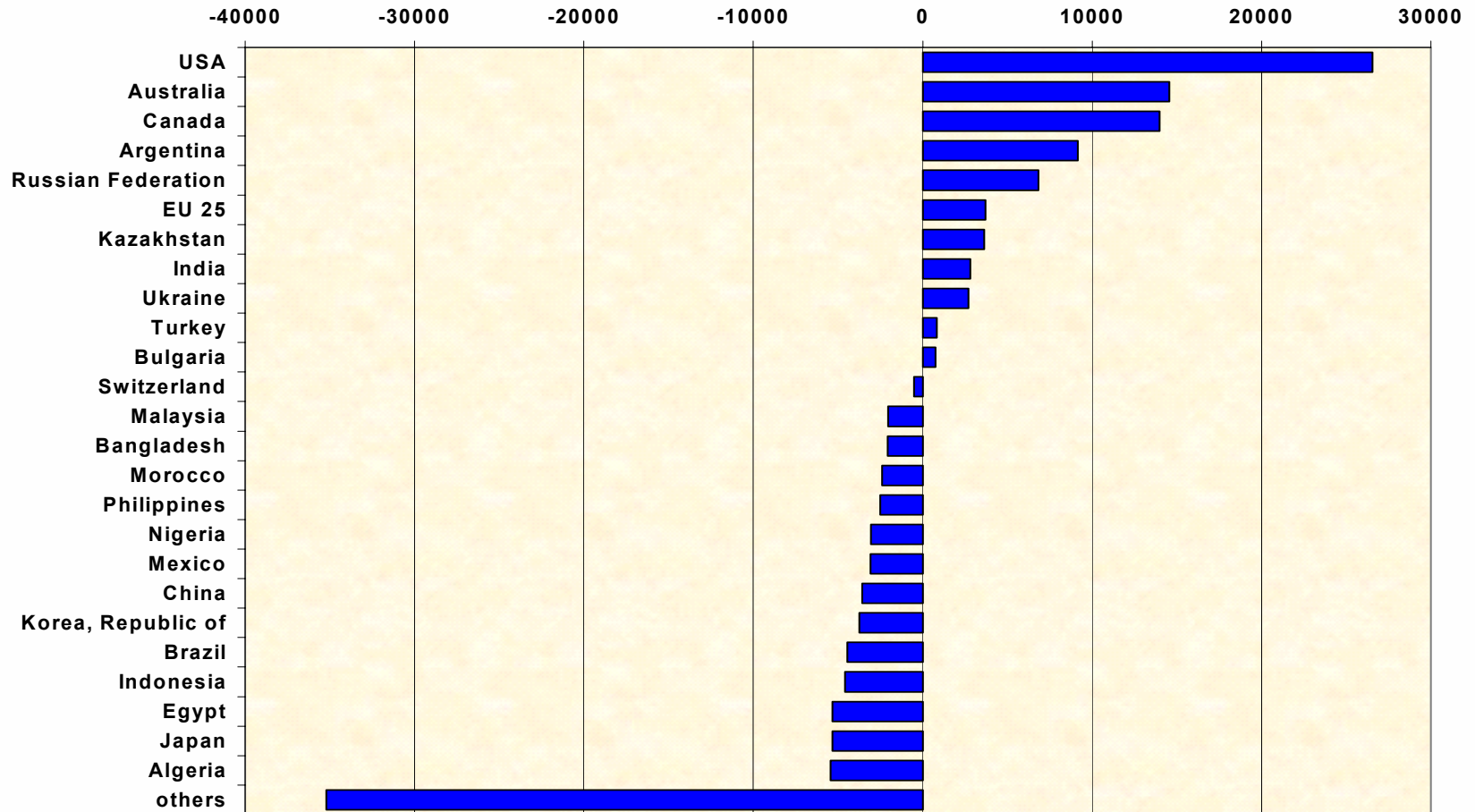


## World main cereals producers (average 2004-2006)



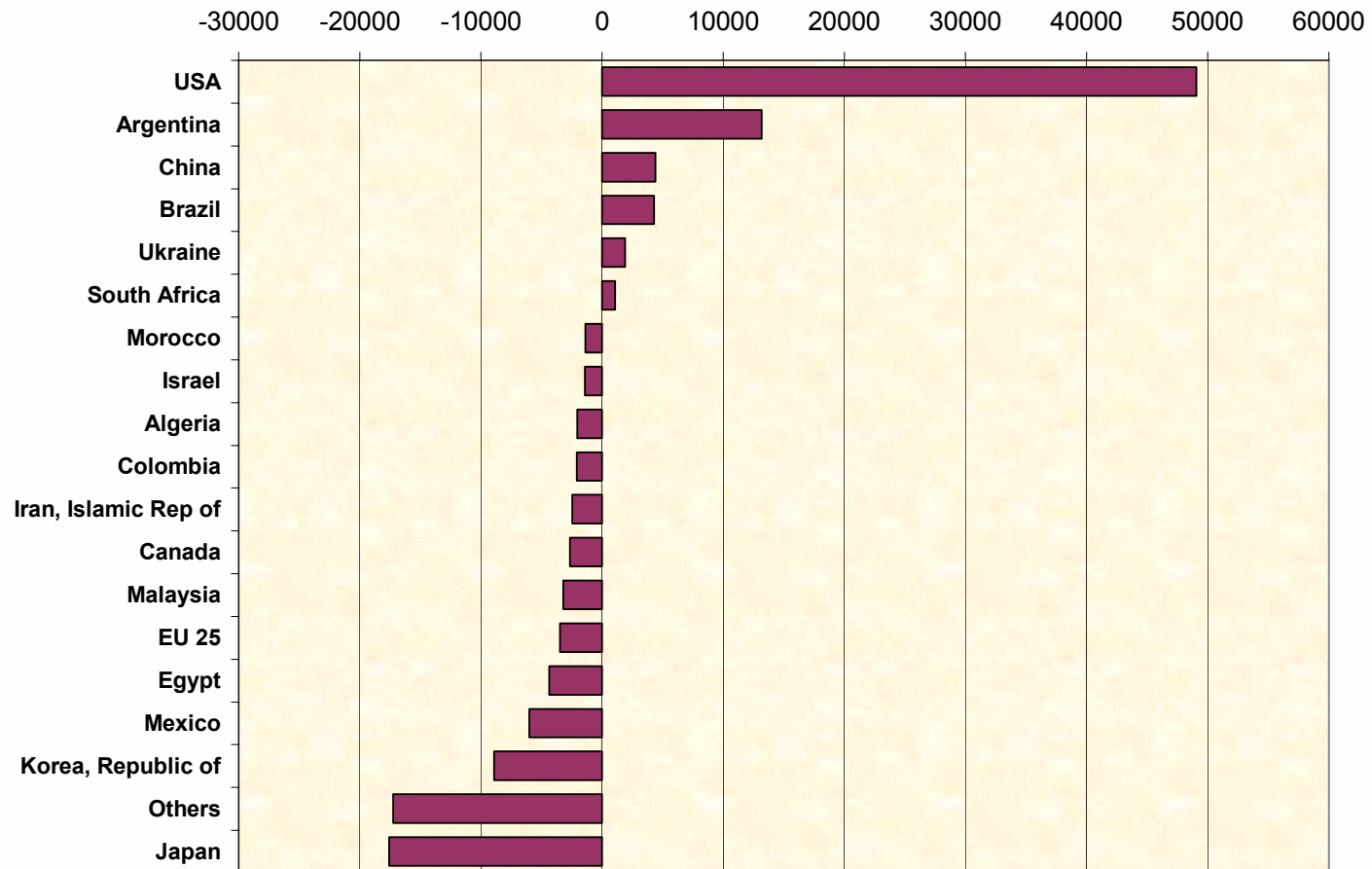


## Wheat : main importers & exporters in 1000 tonnes (2004-2006)



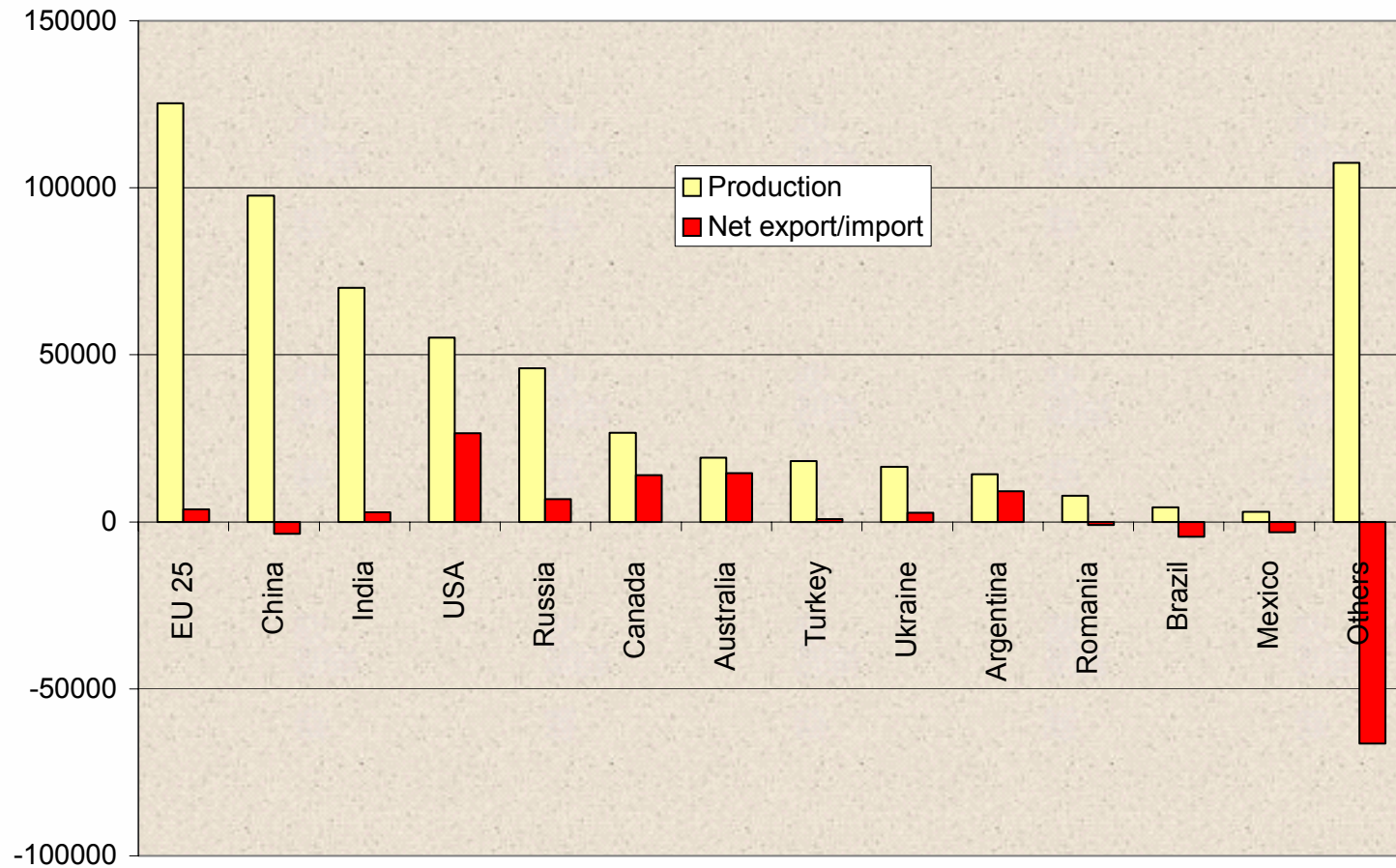


## Maize : main importers & exporters in 1000 tonnes (2004-2006)



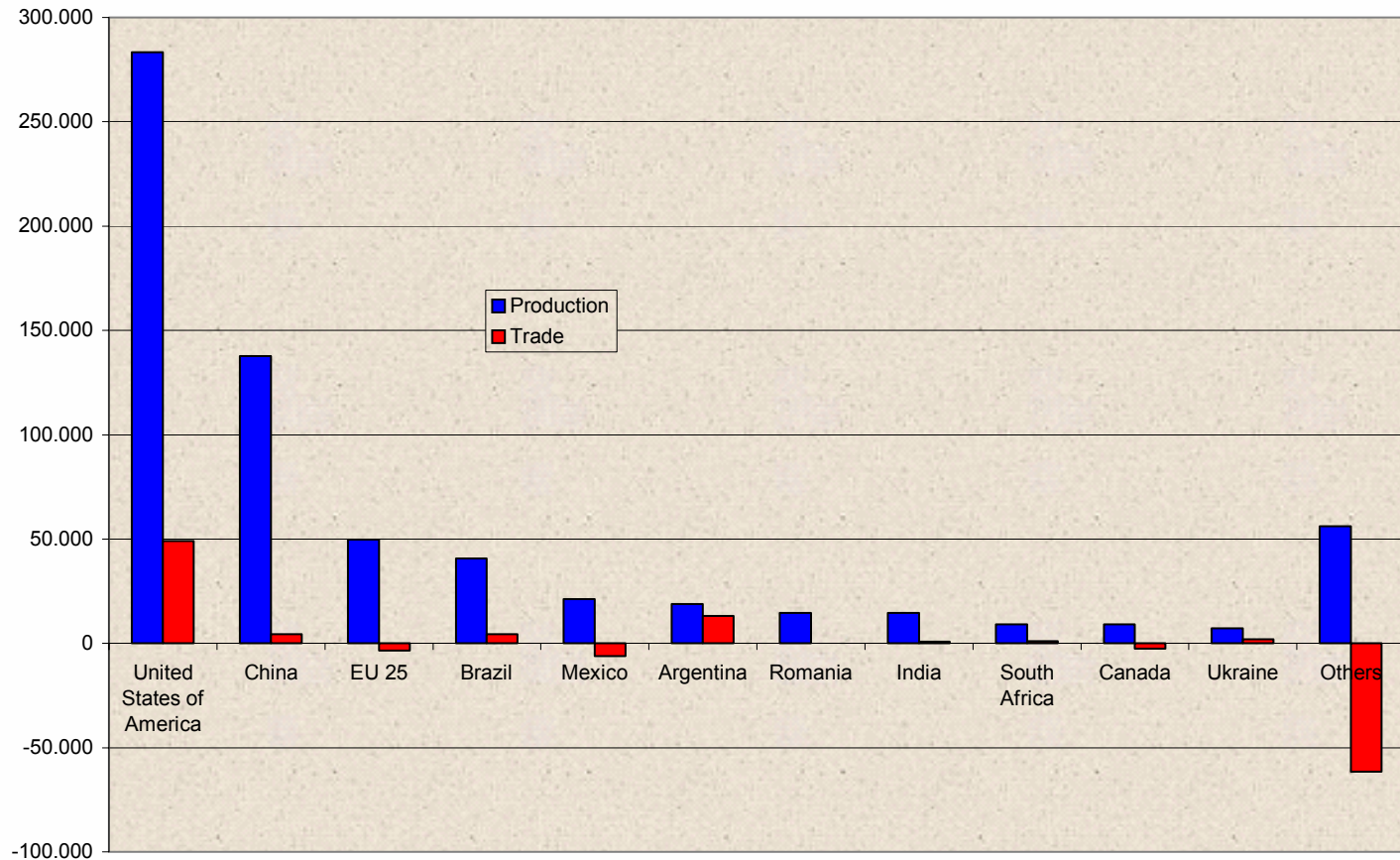


## Wheat : production & trade (1000 t) 2004-2006



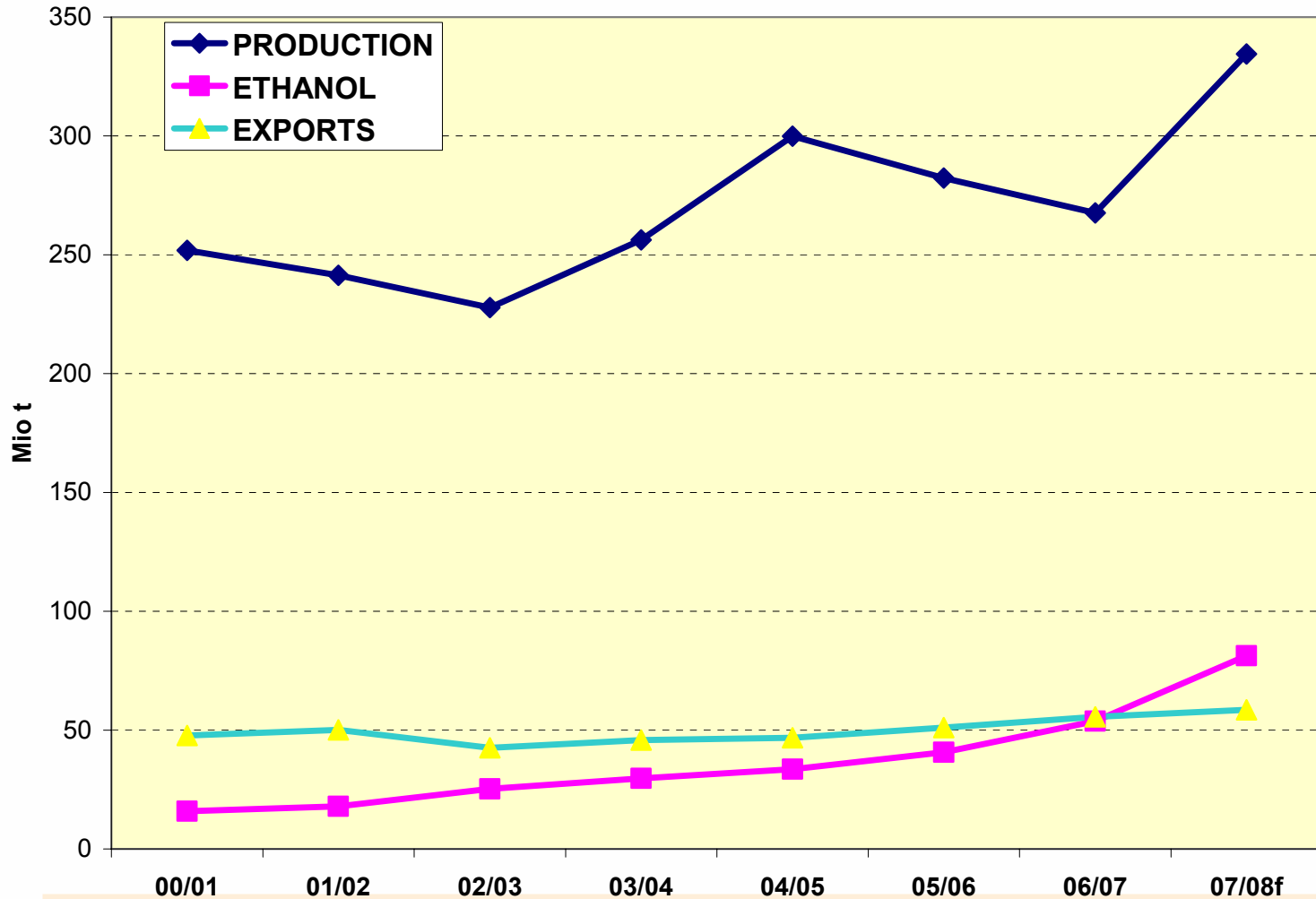


## Maize : production & trade (1000 t)



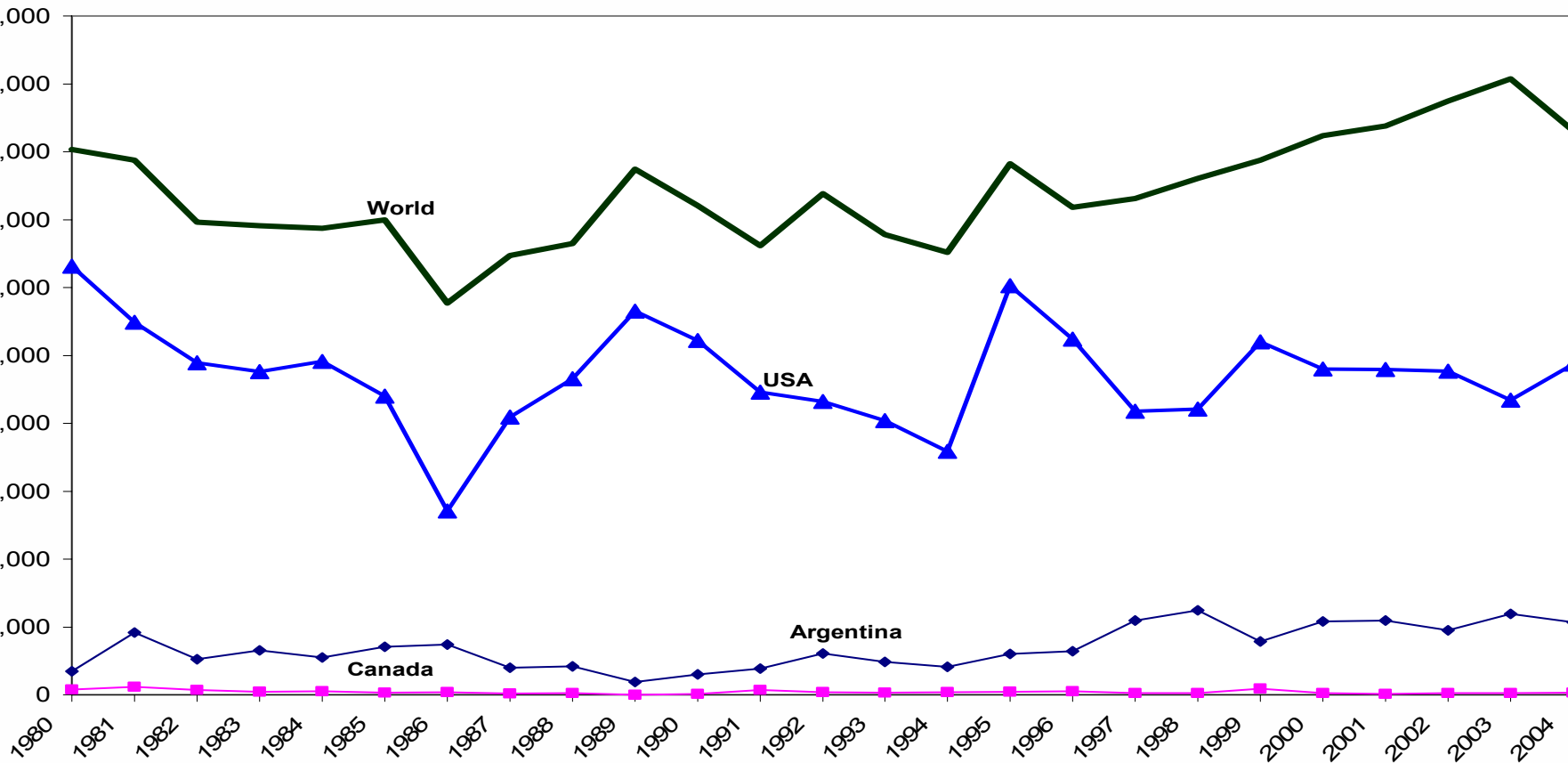


# US MAIZE development



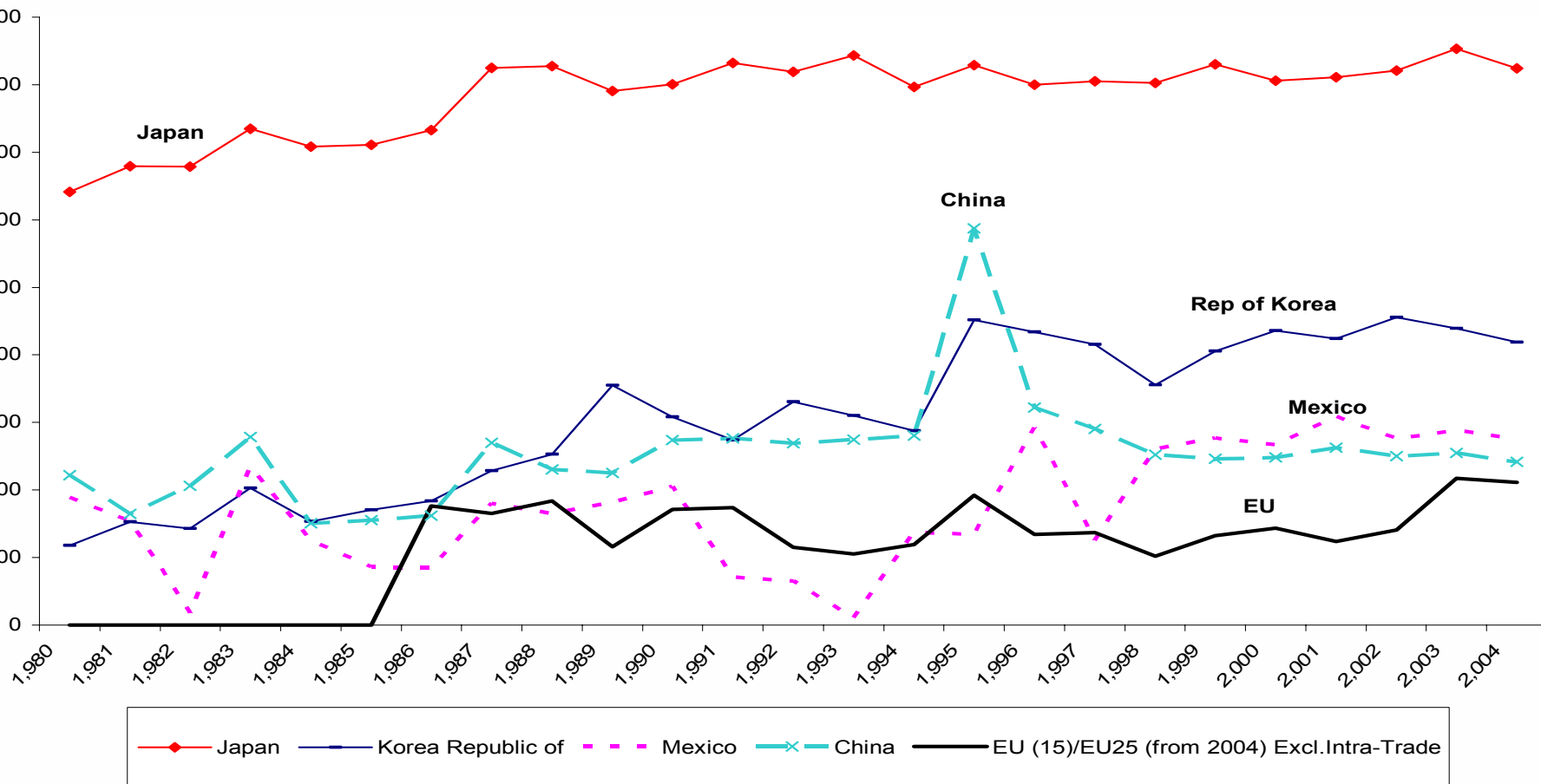


# Main exporters of maize ('000 tonnes)



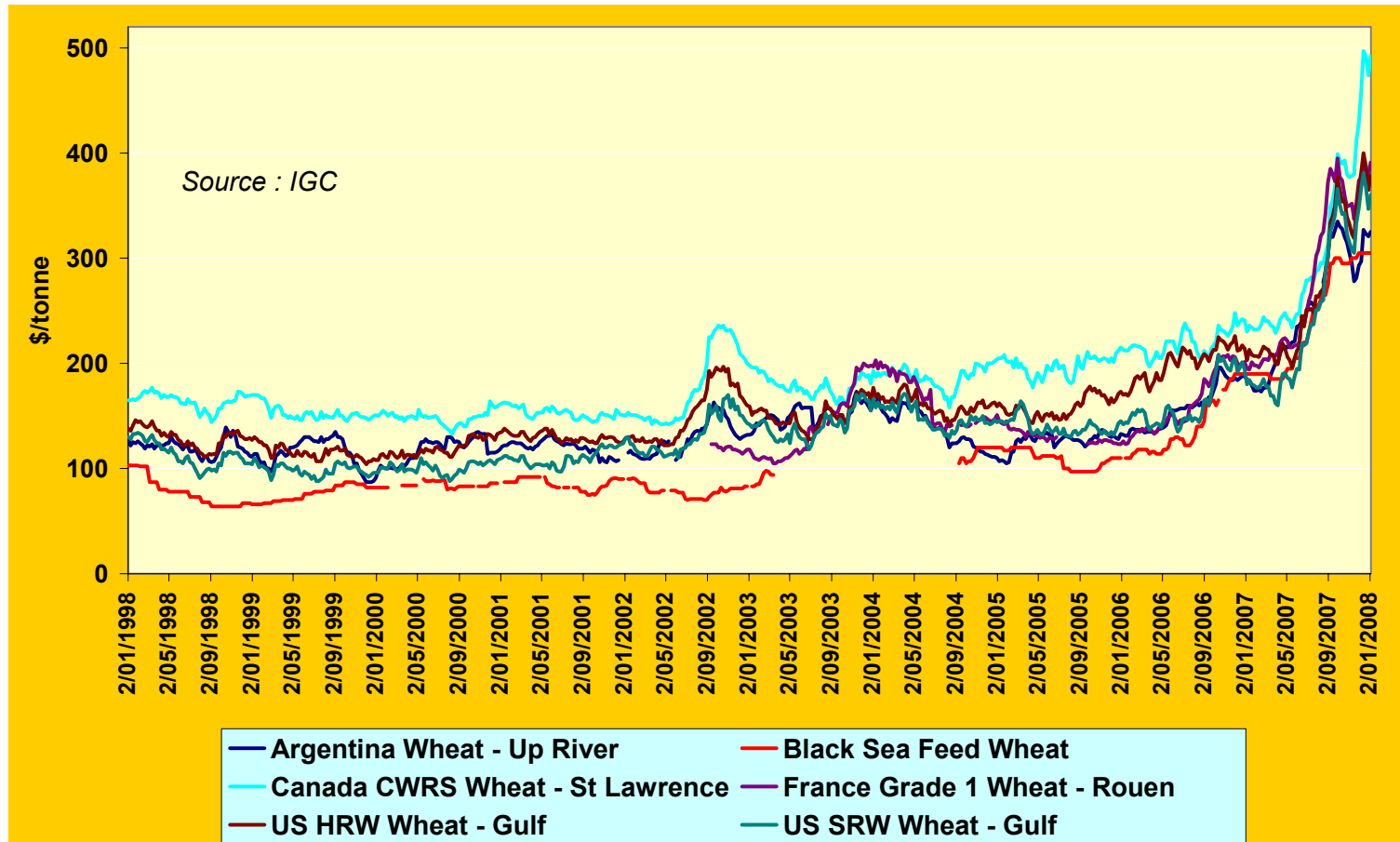


# Main importers of maize ('000 tonnes)



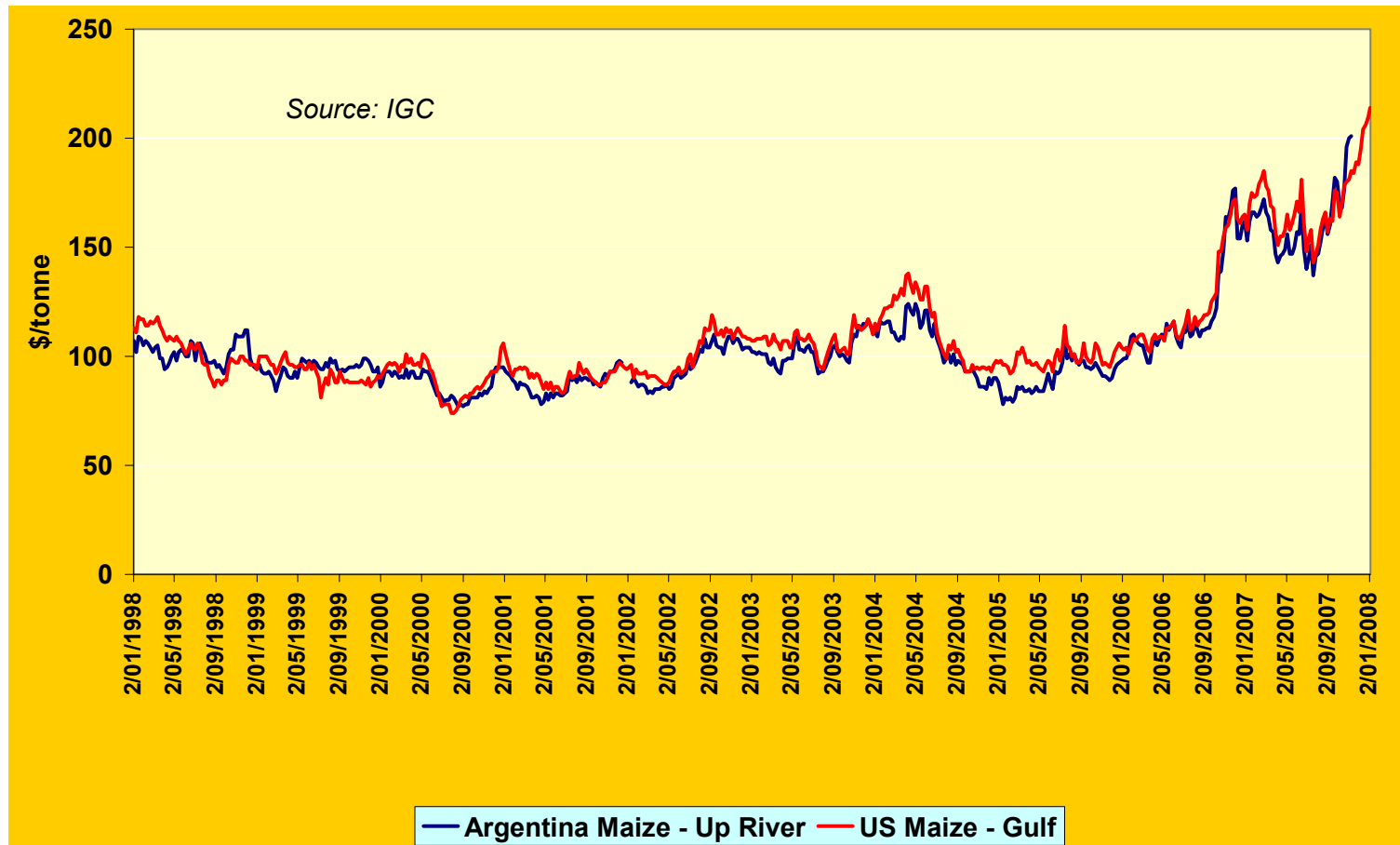


## Export wheat prices – 1998 - 2008



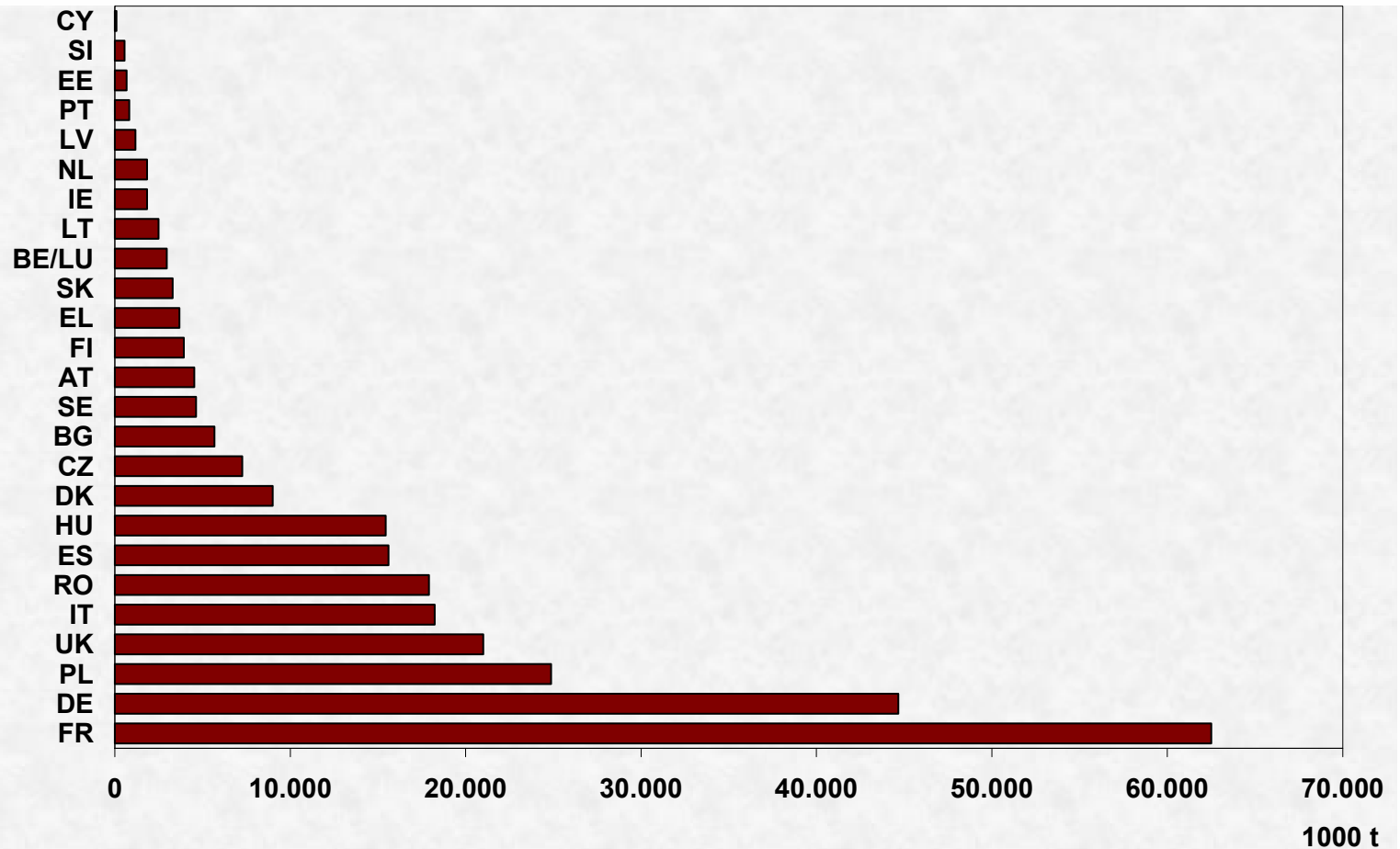


## Export maize prices – 1998 - 2008



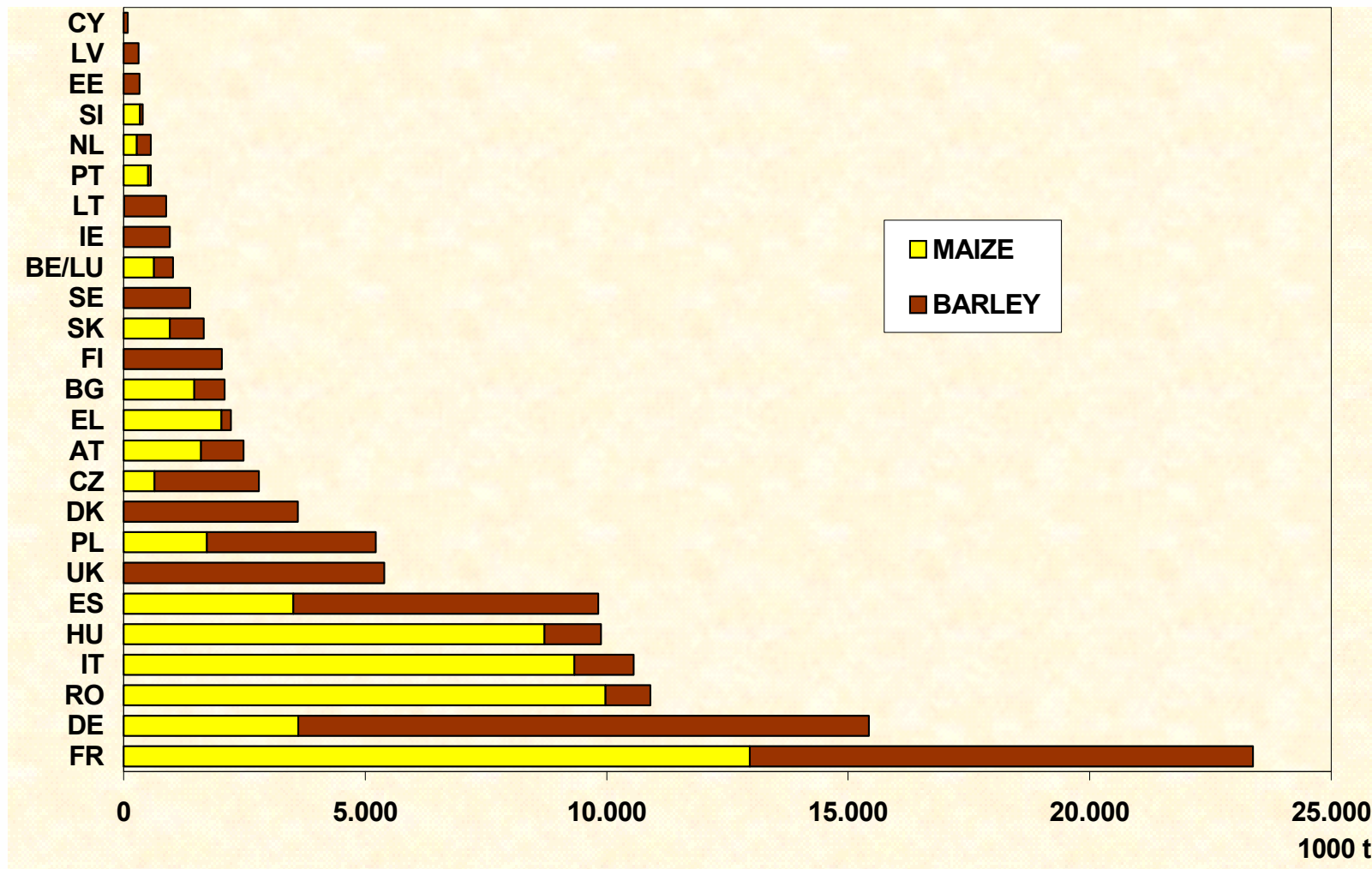


## EU-27 Cereal production



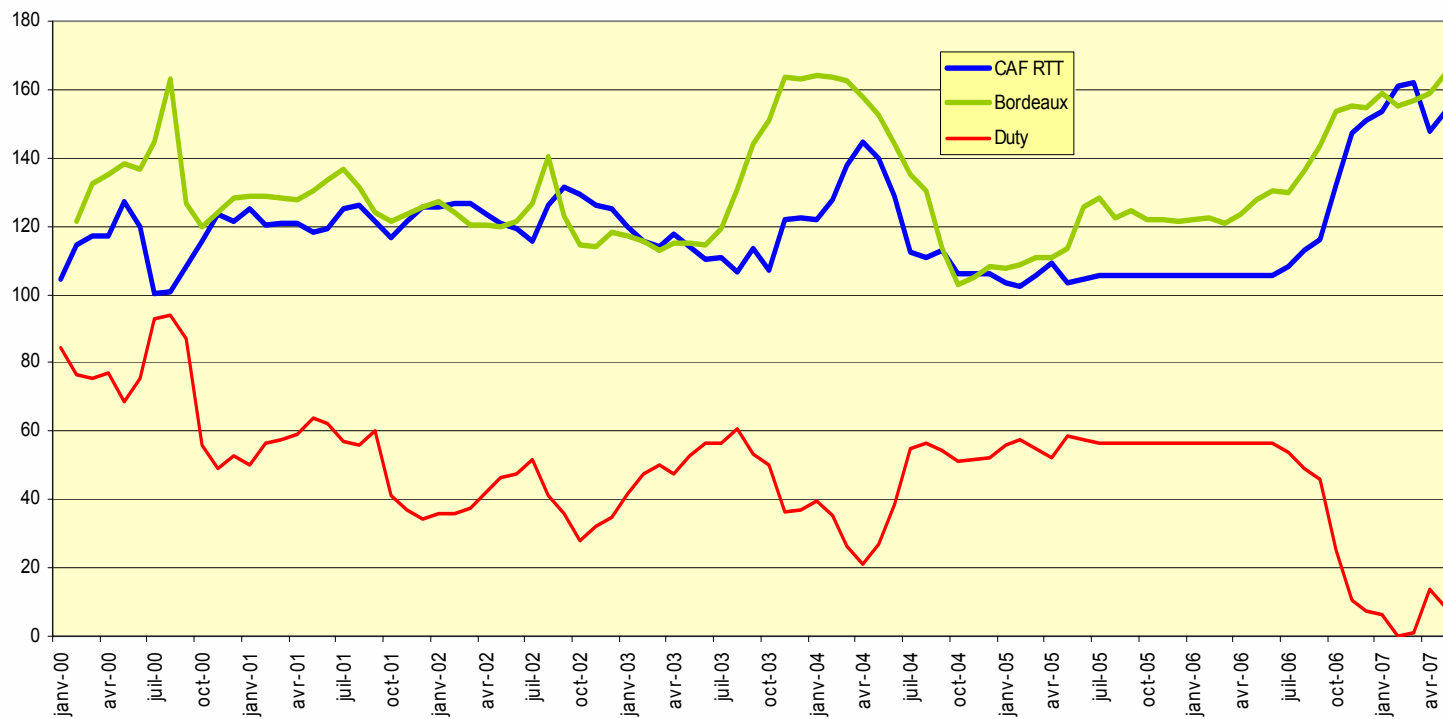


## EU-27 Coarse grain production





# Maize import duty and prices since 2000





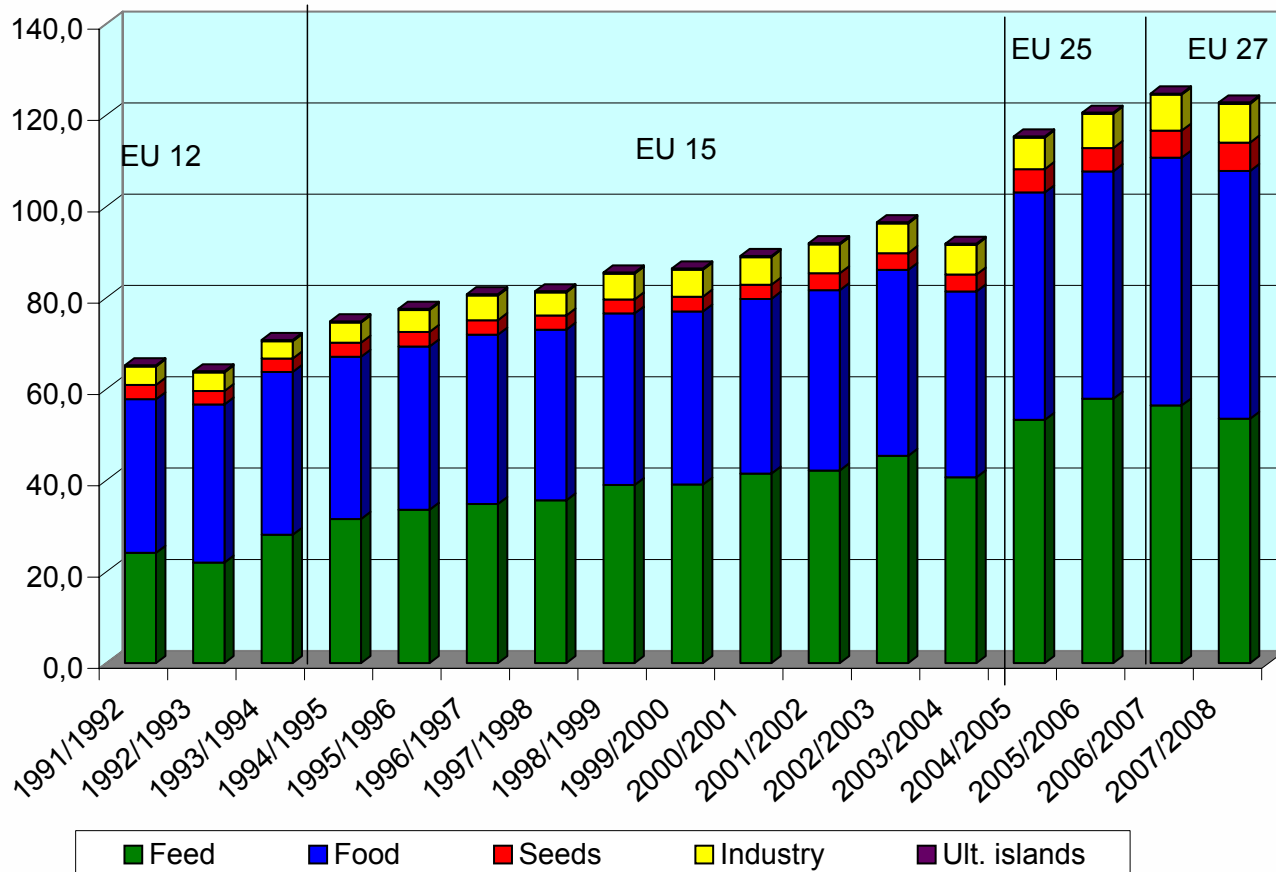
| Country        | Area                                 |                                    |                                      |                         | Production                             |                                      |                             | Holdings with cereals (number) 2003 |
|----------------|--------------------------------------|------------------------------------|--------------------------------------|-------------------------|--|--------------------------------------|-----------------------------|-------------------------------------|
|                | Area under cereals (1000 ha) 2005/06 | Area under maize (1000 ha) 2005/06 | Cereals area / Agricultural land (%) | Maize /Cereals area (%) | Production of cereals (1000 t) 2005/06 | Production of maize (1000 t) 2005/06 | Maize/cereal production (%) |                                     |
| Belgium-Lux    | 351                                  | 54                                 | 23.0                                 | 15.4                    | 3,071                                  | 634                                  | 20.6                        | 29                                  |
| Czech republic | 1,612                                | 98                                 | 44.4                                 | 6.1                     | 7,660                                  | 703                                  | 9.2                         | 24                                  |
| Denmark        | 1,503                                |                                    | 56.4                                 | 0.0                     | 9,238                                  |                                      |                             | 41                                  |
| Germany        | 6,829                                | 443                                | 40.1                                 | 6.5                     | 45,933                                 | 4,083                                | 8.9                         | 265                                 |
| Estonia        | 281                                  |                                    | 36.5                                 | 0.0                     | 760                                    |                                      |                             | 14                                  |
| Greece         | 1,201                                | 241                                | 31.5                                 | 20.1                    | 4,153                                  | 2,169                                | 52.2                        | 263                                 |
| Spain          | 6,449                                | 423                                | 24.8                                 | 6.6                     | 12,930                                 | 3,805                                | 29.4                        | 330                                 |
| France         | 9,159                                | 1,663                              | 30.9                                 | 18.2                    | 64,107                                 | 13,772                               | 21.5                        | 331                                 |
| Ireland        | 282                                  |                                    | 6.5                                  | 0.0                     | 1,938                                  |                                      |                             | 14                                  |
| Italy          | 3,684                                | 1,119                              | 24.6                                 | 30.4                    | 19,022                                 | 9,710                                | 51.0                        | 680                                 |
| Cyprus         | 58                                   |                                    | 42.6                                 | 0.0                     | 88                                     |                                      |                             | 8                                   |
| Latvia         | 469                                  |                                    | 28.6                                 | 0.0                     | 1,315                                  |                                      |                             | 52                                  |
| Lithuania      | 957                                  | 2                                  | 36.7                                 | 0.2                     | 2,810                                  | 5                                    | 0.2                         | 197                                 |
| Hungary        | 2,918                                | 1,196                              | 49.8                                 | 41.0                    | 16,114                                 | 9,010                                | 55.9                        | 321                                 |
| Malta          |                                      |                                    | 0.0                                  | 0.0                     |  |                                      |                             | 0                                   |
| Netherlands    | 235                                  | 22                                 | 12.2                                 | 9.4                     | 1,866                                  | 283                                  | 15.2                        | 20                                  |
| Austria        | 794                                  | 167                                | 23.6                                 | 21.0                    | 4,874                                  | 1,725                                | 35.4                        | 85                                  |
| Poland         | 8,263                                | 339                                | 50.7                                 | 4.1                     | 26,725                                 | 1,945                                | 7.3                         | 1,668                               |
| Portugal       | 383                                  | 111                                | 10.0                                 | 29.0                    | 694                                    | 553                                  | 79.7                        | 152                                 |
| Slovenia       | 95                                   | 42                                 | 19.4                                 | 44.2                    | 576                                    | 351                                  | 60.9                        | 47                                  |
| Slovakia       | 795                                  | 153                                | 41.1                                 | 19.2                    | 3,518                                  | 1,029                                | 29.2                        | 35                                  |
| Finland        | 1,186                                |                                    | 52.6                                 | 0.0                     | 4,057                                  |                                      |                             | 60                                  |
| Sweden         | 1,019                                |                                    | 32.3                                 | 0.0                     | 4,977                                  |                                      |                             | 43                                  |
| United Kingdom | 2,930                                |                                    | 17.5                                 | 0.0                     | 21,169                                 |                                      |                             | 61                                  |
| <b>EU-15</b>   | <b>36,005</b>                        | <b>4243</b>                        | <b>27.4</b>                          | <b>11.78</b>            | <b>198,030</b>                         | <b>36,734</b>                        | <b>18.5</b>                 | <b>2,375</b>                        |
| <b>EU-N10</b>  | <b>15,447</b>                        | <b>1,830</b>                       | <b>46.3</b>                          | <b>11.85</b>            | <b>59,565</b>                          | <b>13,043</b>                        | <b>21.9</b>                 | <b>2,365</b>                        |
| <b>EU-25</b>   | <b>51,452</b>                        | <b>6,073</b>                       | <b>31.3</b>                          | <b>11.80</b>            | <b>257,595</b>                         | <b>49,777</b>                        | <b>19.3</b>                 | <b>4,740</b>                        |
| Bulgaria       | 1,701                                | 299                                | 31.9                                 | 17.6                    | 5,739                                  | 1,586                                | 27.6                        | 341                                 |
| Romania        | 5,836                                | 2,621                              | 40.8                                 | 44.9                    | 19,700                                 | 10,627                               | 53.9                        | 2,889                               |
| <b>EU-27</b>   | <b>58,989</b>                        | <b>8,993</b>                       | <b>32.0</b>                          | <b>15.2</b>             | <b>283,034</b>                         | <b>61,990</b>                        | <b>21.9</b>                 | <b>7,970</b>                        |

\* 2003 in the case of Cyprus and United Kingdom

Source: Eurostat, DG AGRI

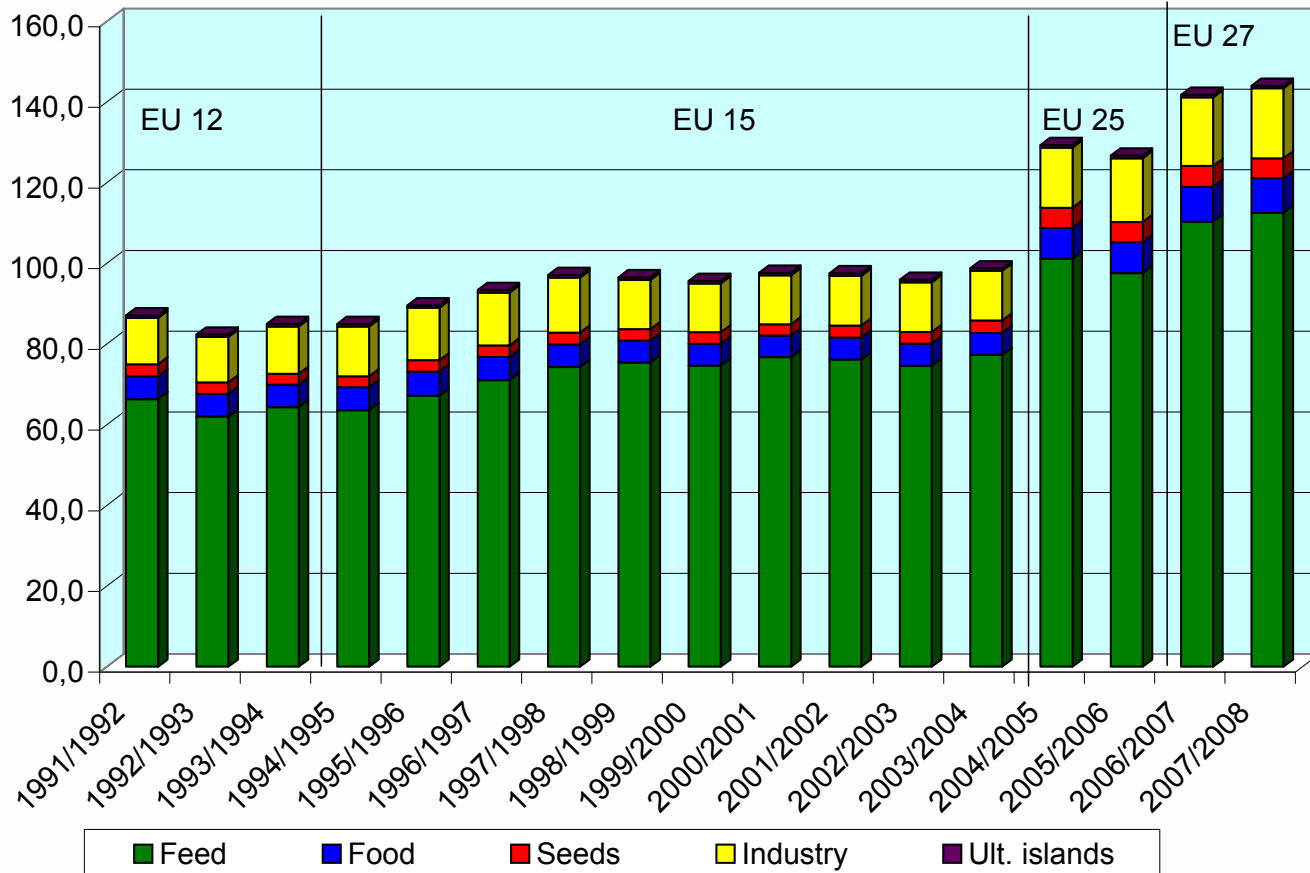


## EU wheat demand (mio t)





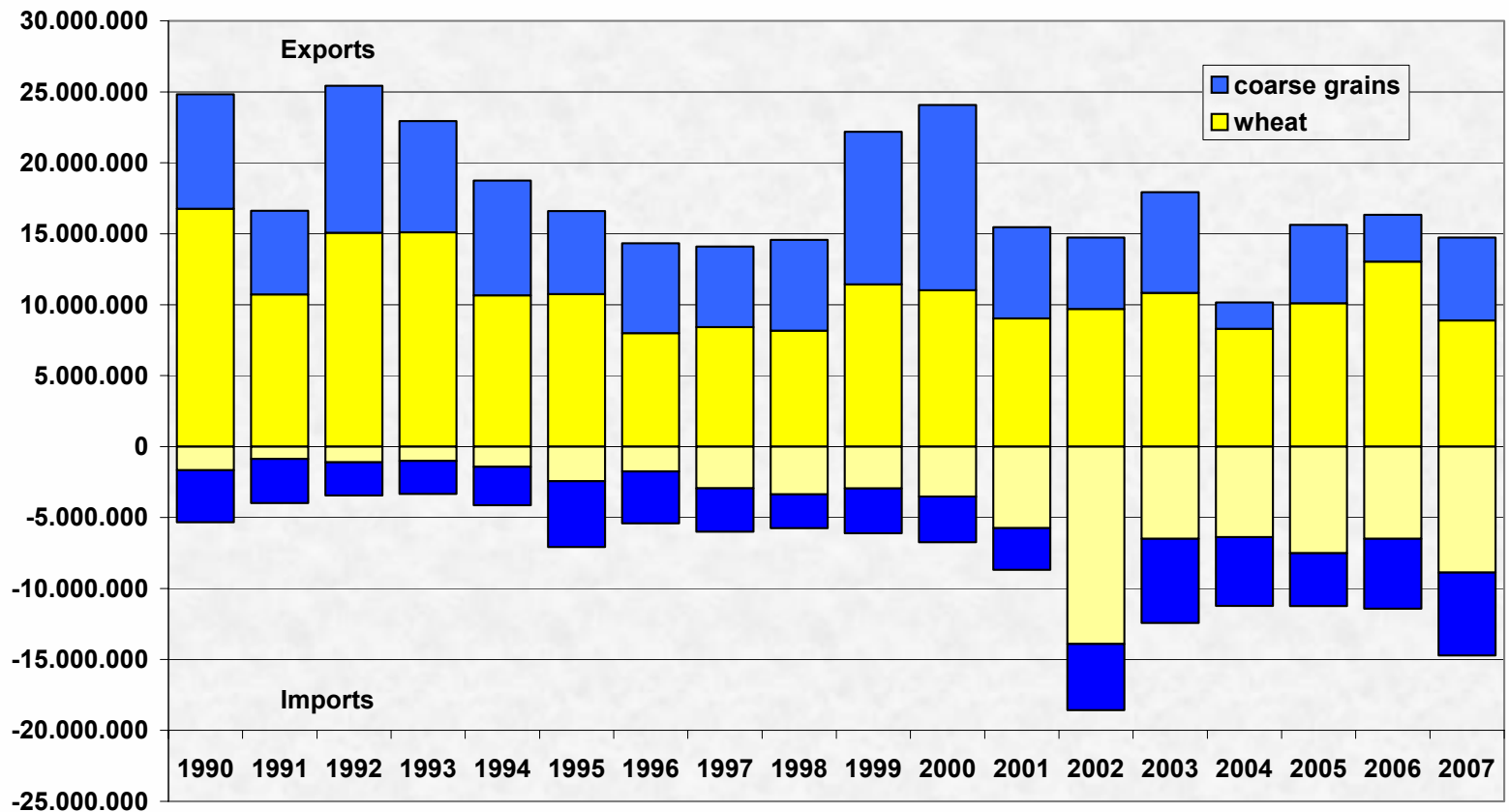
## EU coarse grain demand (mio t)





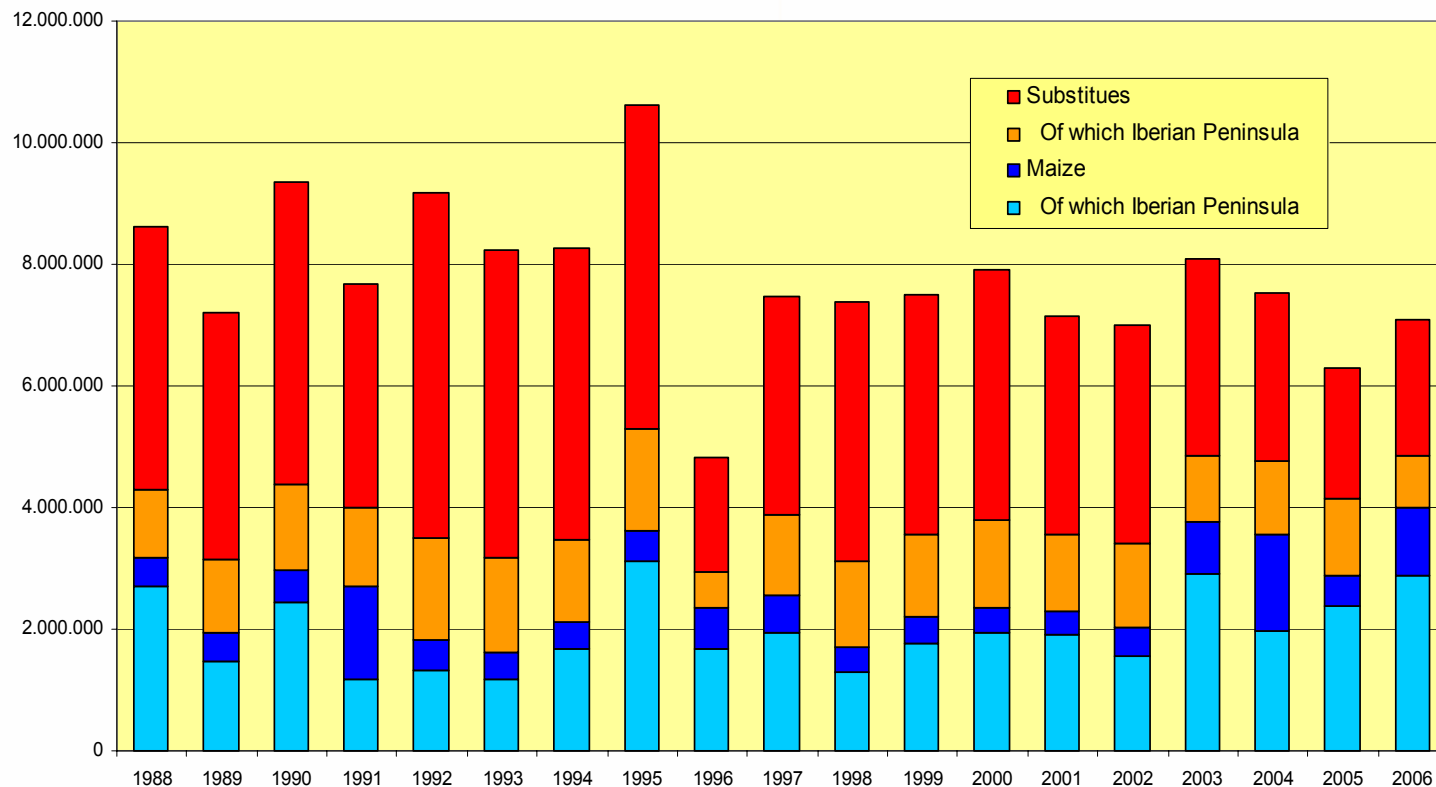
## EU imports and exports

tonnes



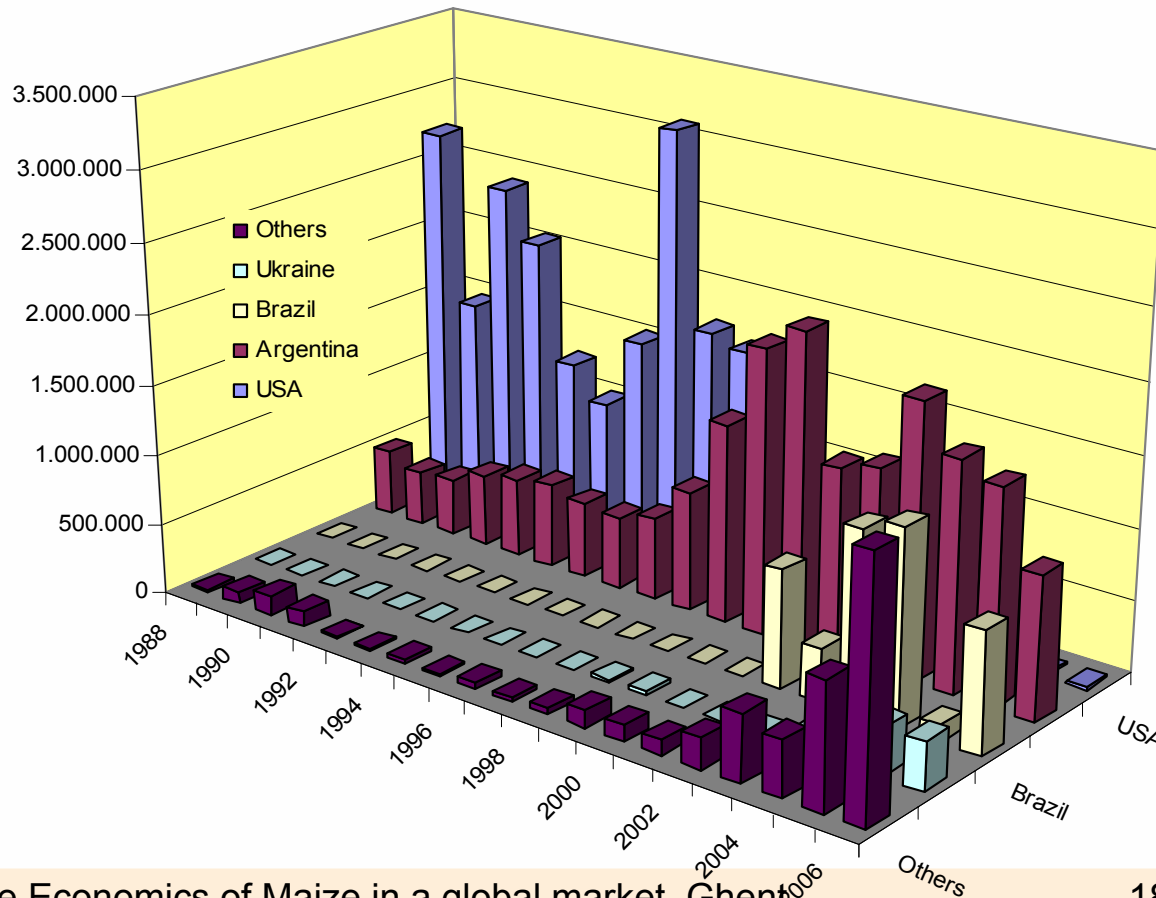


# Imports of maize and substitute products into the EU since 1988



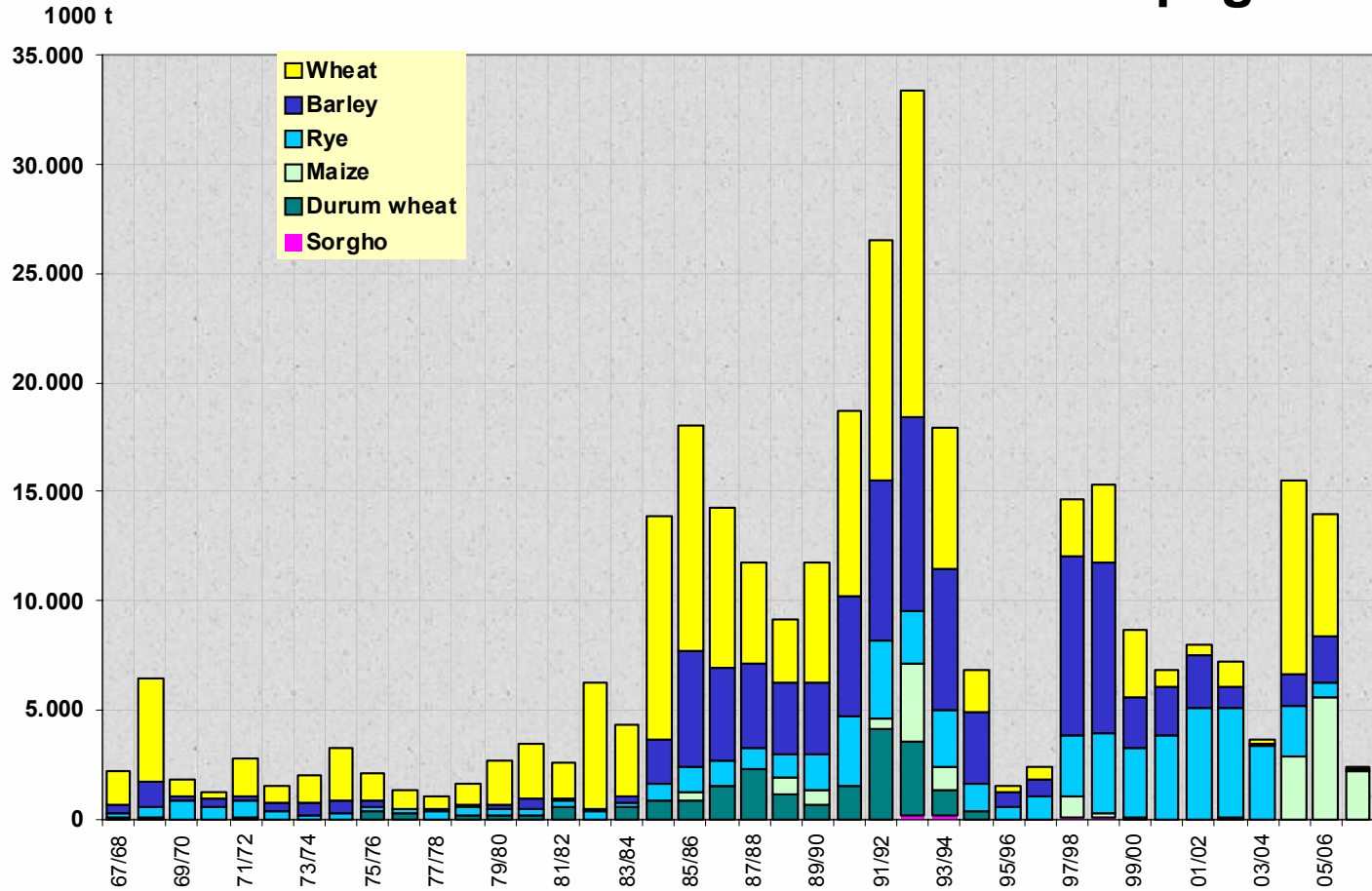


## Maize imports into the EU by origin





## Stocks d'intervention en fin de campagne



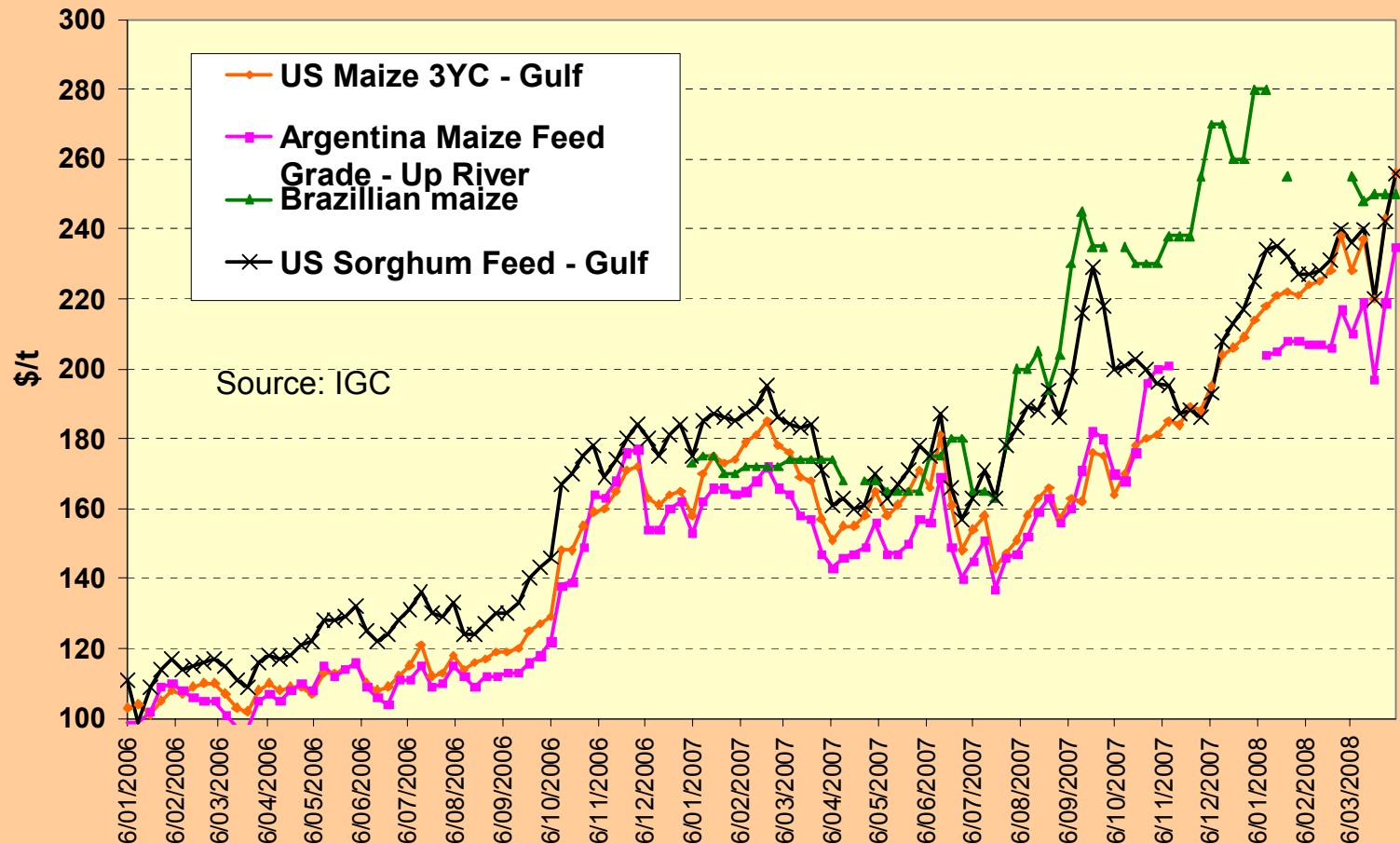


## New rules for maize intervention

- Progressive limitation and consequently abolition of maize intervention in several steps:
  - 1 500 000 tonnes in the marketing year 2007/2008,
  - 700 000 tonnes in the marketing year 2008/2009
  - 0 tonne as from marketing year 2009/2010. »

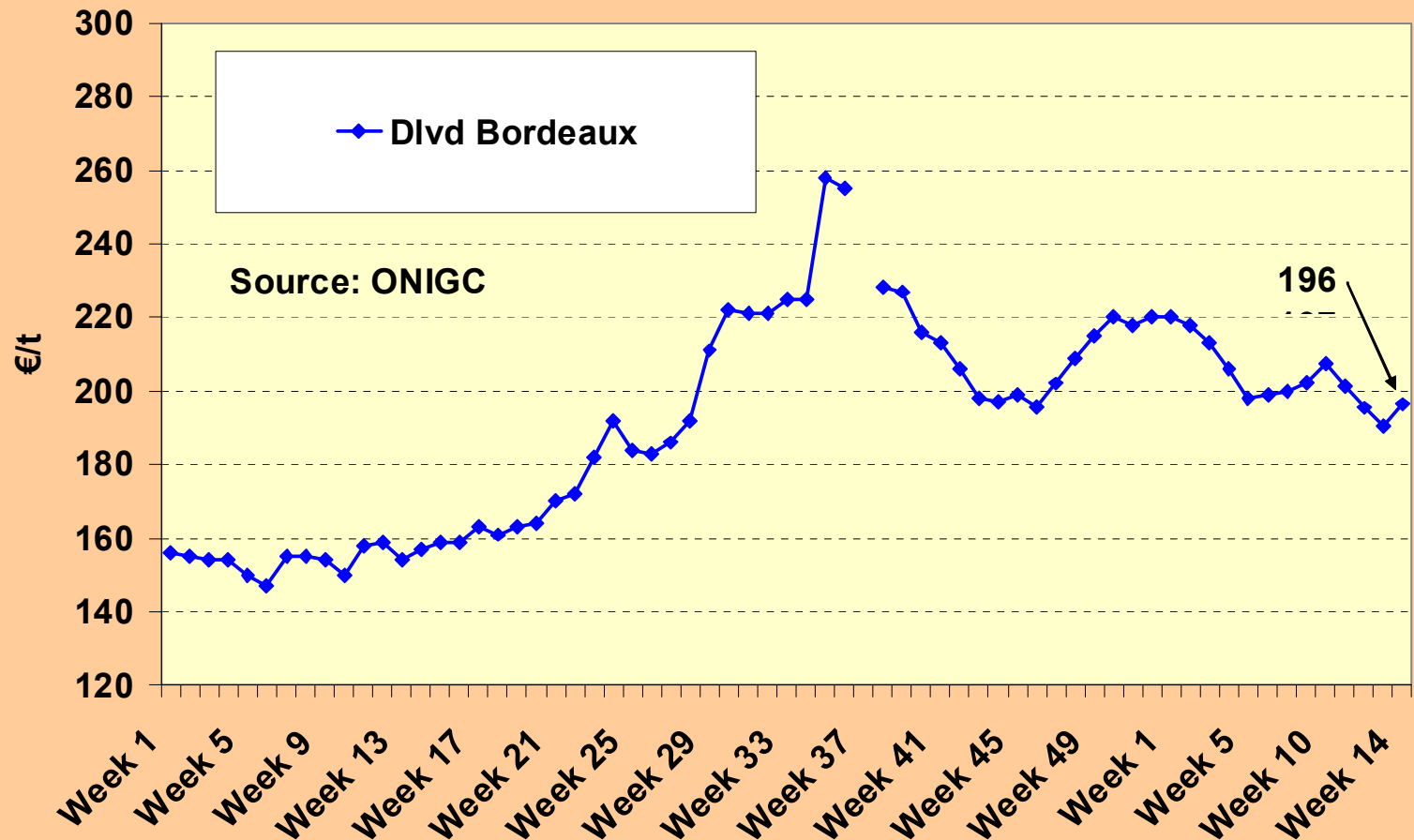


## Maize and sorghum weekly export prices since 1/1/2006





## Maize EU prices since 1/1/2007





## EU maize market

- More than 200 000 tonnes imported from Ukraine in March (Lithuania, Greece, Bulgaria, Italy...)
- GA 21 approved on 28 March
- FR ending stocks at 3.3 million t, +70% on year 2007 (ONIGC)



## EU Commitments 2007/2008

- **Situation 10 April**
- **Import: 22.2 mt (9.7)**
- 11.2 mt maize, 4.6 mt sorghum, 4.2 mt soft wheat, 1.6 durum
- **Export: 14.4 mt (14.6)**
- 6.5 mt soft wheat, flour 1.2 mt, 3.5 mt barley, 1.9 mt malt
- **Net imports: 7.8 mt (same date 2006 net exports: 4.9 mt)**



# MID TERM FORECASTS: Methodological approach

- **Type of models:** DG AGRI market projections carried out using two recursive dynamic partial equilibrium models and a regional model
- **Results:** model output consists of supply balance sheets for main commodities, market prices and income
- **Detailed results for:**
  - Old Member States (EU-15)
  - Member States acceded May 1st 2004 (EU-10)
  - Member States acceded Jan. 1st 2007 (EU-2)
  - EU-27For main commodities (cereals, oilseeds, sugar, meat, eggs and dairy)/variables



# Methodological approach

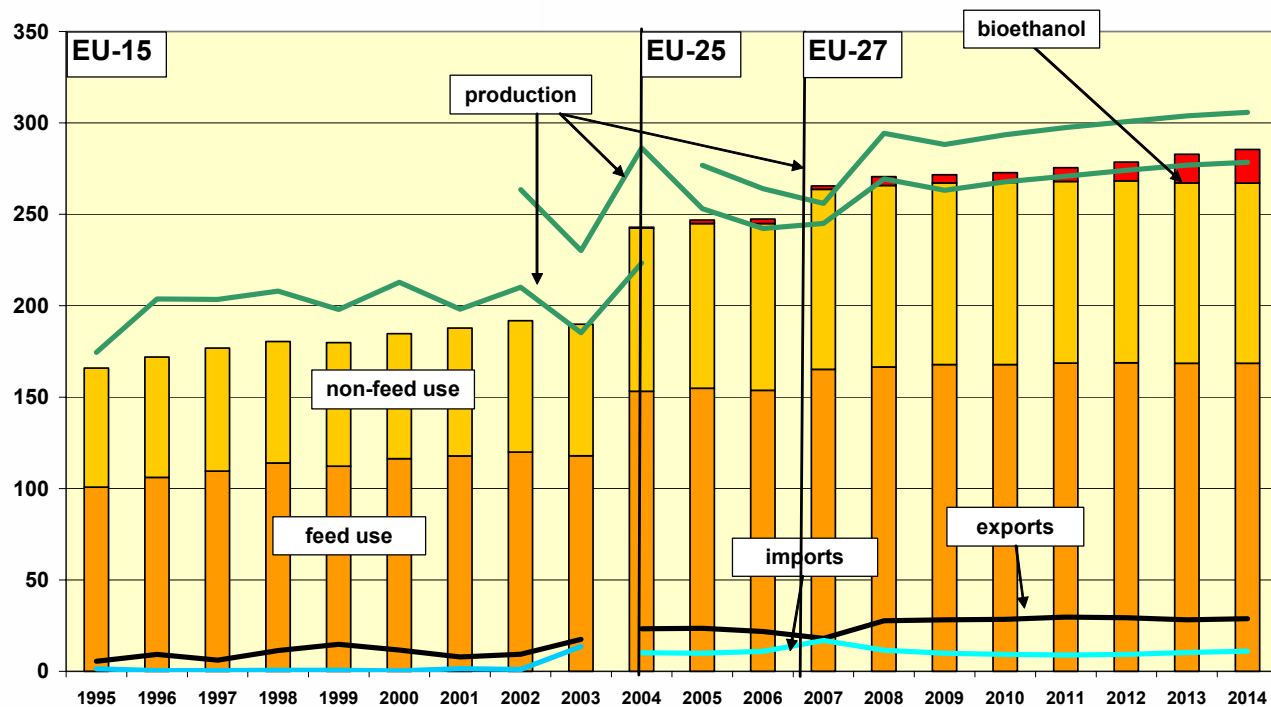
- **Main assumptions:**

- Uruguay Round Agreement on Agriculture maintained constant
- Favourable, though positive world agricultural market outlook
- Return to modest economic growth
- \$/€ exchange rate to reach 1.25 by 2014
- By 2014 direct payments are assumed to be 91% decoupled (milk 100 %, arable crops 96 %, beef 79 %, sheep 82 %)



# Slightly expanding cereal markets and emerging bioethanol markets....

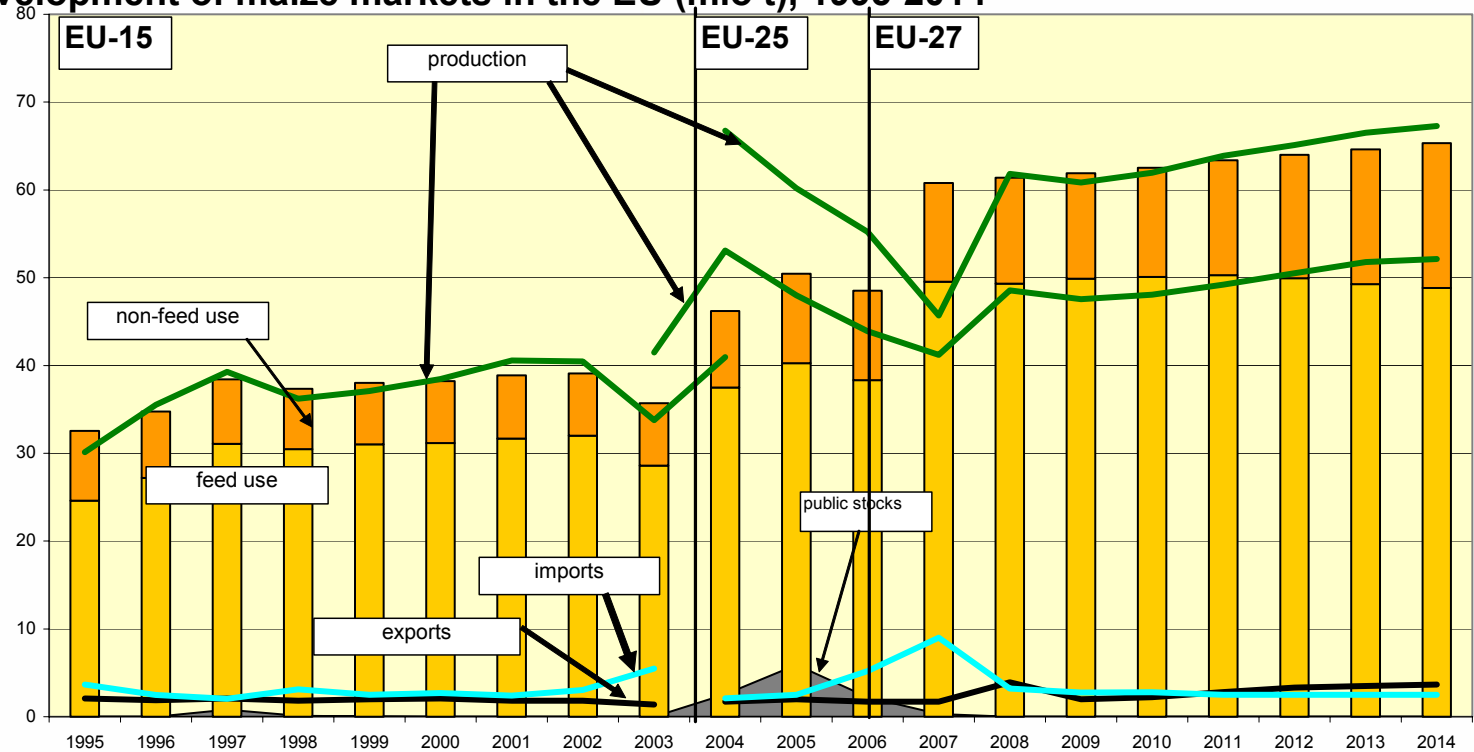
Development of cereal markets in the EU, 1995-2014 (mio t)





# ...growing competitiveness of maize use after 2007 assures fluidity of maize markets in the EU...

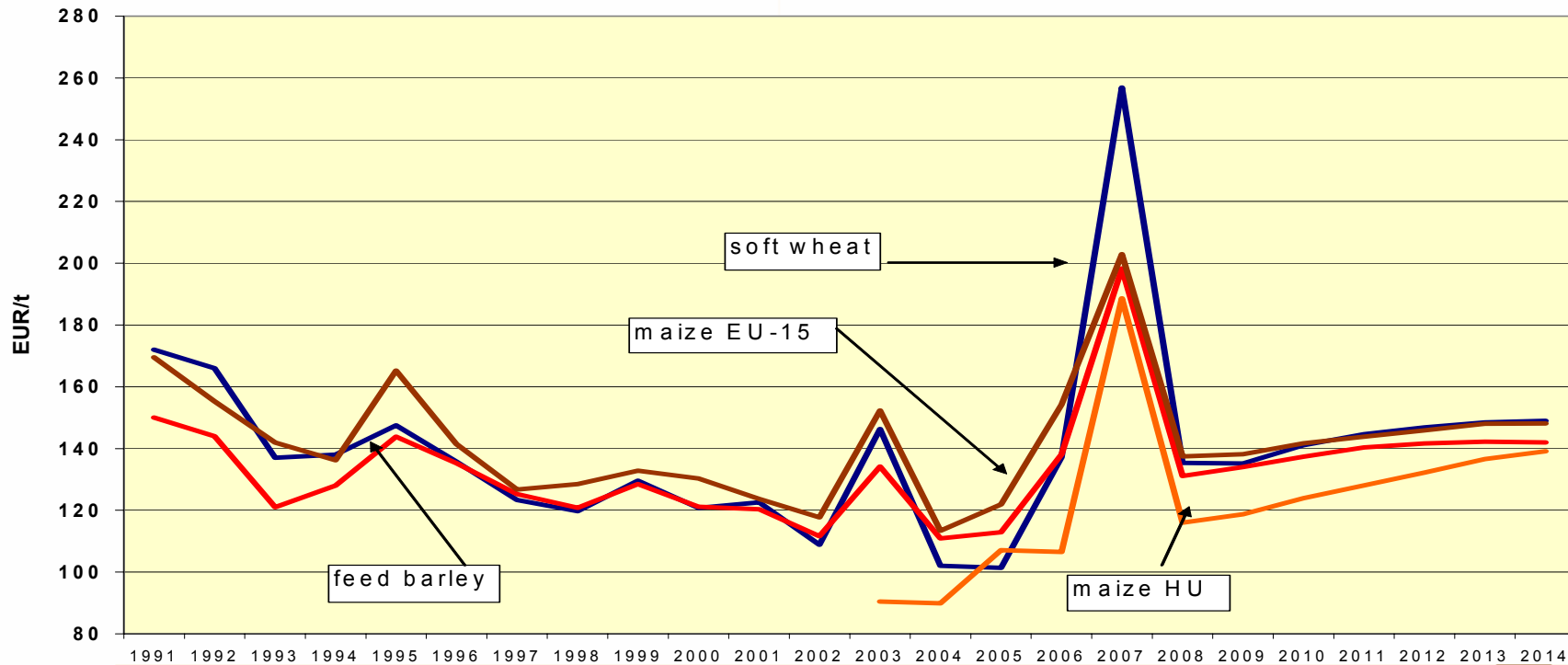
Development of maize markets in the EU (mio t), 1995-2014





# Cereal prices should stay at a higher level than seen in the last decade

Development in cereal prices in the EU (EUR/t), 1991-2014





## Conclusions (1)

- Current tight market situation due to several factors: global growing demand, high level of bio-ethanol production in the US, adverse climatic conditions.
- Export restrictions in most wheat exporters.
- World wheat production expected to strongly recover in 2008 but the maize market situation should remain tight.
- Prices expected to decline but to remain higher than last decade.
- EU: no obligatory set-aside for autumn 2007 and spring 2008 sowings – EU import duties at 0 on main cereals in 2007/2008



## Conclusions (2)

- medium term perspective appears very positive for cereal markets in line with:
  - CAP reform, decoupling and phasing out of maize intervention;
  - two consecutive low harvest in the EU in 2006 and 2007 causing a significant decline in stocks;
  - improving domestic use (emerging biofuel industry and feed);
  - favourable world market conditions and changing price relations in favour of coarse grains
  - the expected return to improved exchange rate conditions
  - removing regional imbalances of maize markets



# EU Maize and sorghum weekly import commitments

