

Brussels, 7 August 2008

Crop yield forecasts for 2008

This Memorandum provides additional information, maps and graphs related to the [IP/08/1251](#) on the forecast of crops production. During the agricultural season, the European Commission's Joint Research Centre (JRC) regularly issues forecasts for the main crop yields and produces analyses of the impact of weather conditions on crop production. These are based on methodologies using satellite remote sensing and mathematical models which simulate crop growth.

The models and methodology in use have been conceived, experimentally developed and operationally implemented within the JRC. The crop yield forecasts, analyses and full description of the methodology are available at: <http://mars.jrc.ec.europa.eu/marsstat/> and <http://mars.jrc.ec.europa.eu/marsstat/Bulletins/2008.htm>

Latest issues are the [European forecast update](#) and the [Climatic Update](#) as of 5th of August

EU 27 Total yield forecasts – 5th August 2008

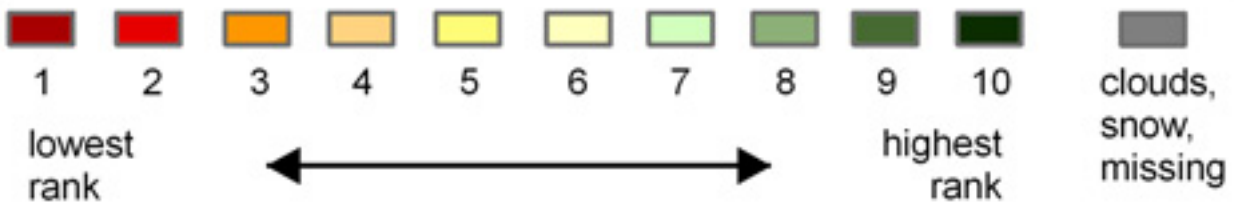
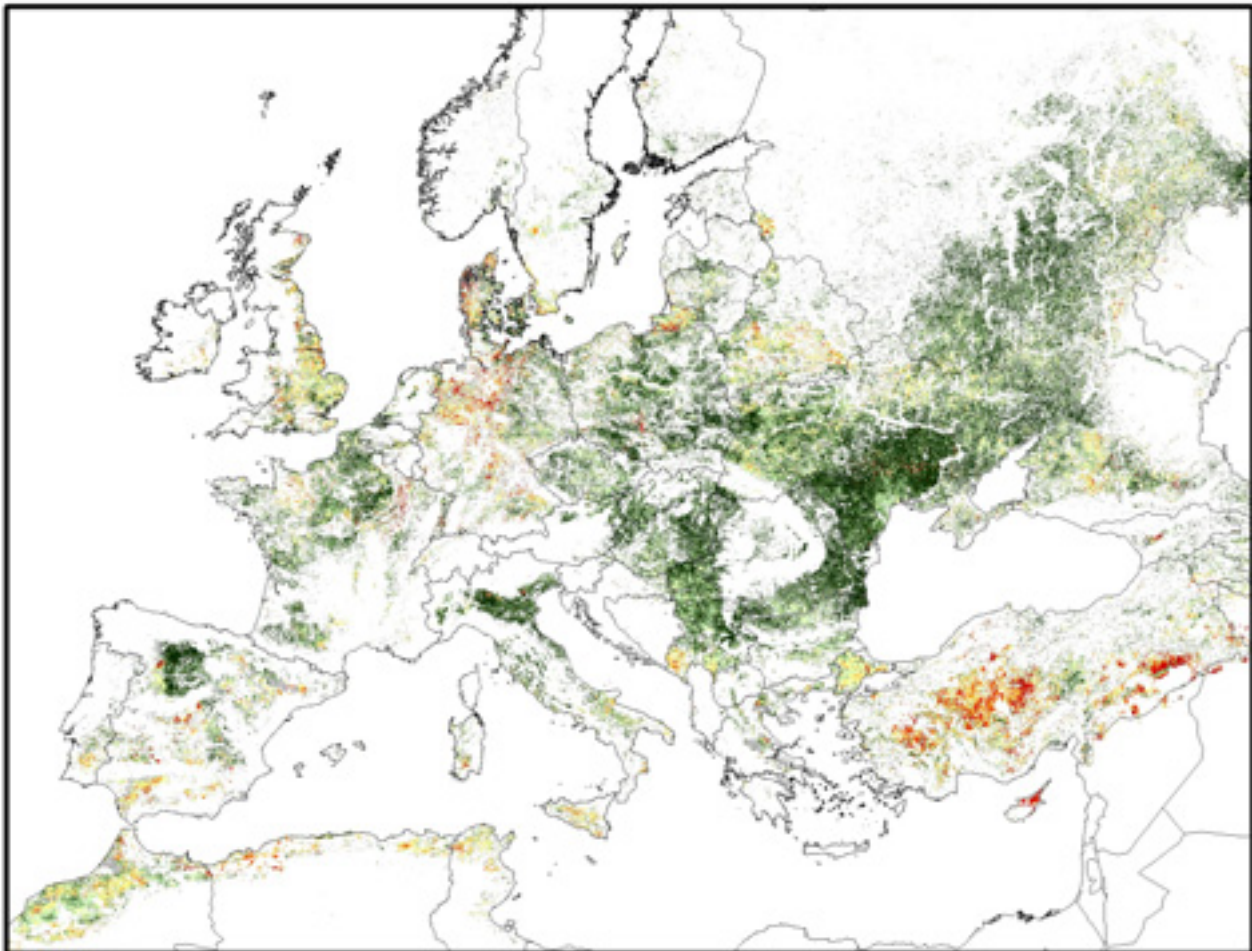
| CROPS | Yield in tons per hectare | | | | |
|-------------------------------------|---------------------------|-------------------|-----------------|-----------|----------------|
| | 2007 | JRC 2008 forecast | Average 5 years | % 2008/07 | % 2008/Average |
| TOTAL CEREALS | 4.53 | 5.03 | 4.71 | +11.1 | +6.7 |
| <i>Soft wheat</i> | 5.10 | 5.65 | 5.39 | +10.8 | +4.8 |
| <i>Durum wheat</i> | 2.84 | 3.09 | 2.74 | +9.0 | +12.8 |
| Total wheat | 4.84 | 5.35 | 5.04 | +10.4 | +6.1 |
| <i>Spring barley</i> | 3.83 | 3.89 | 3.70 | +1.5 | +5.1 |
| <i>Winter barley</i> | 4.81 | 5.27 | 4.96 | +9.7 | +6.3 |
| Total barley | 4.21 | 4.42 | 4.19 | +5.0 | +5.7 |
| Grain maize | 5.77 | 6.93 | 6.33 | +20.1 | +9.5 |
| Other cereals ⁽¹⁾ | 3.18 | 3.47 | 3.16 | +9.3 | +6.6 |
| Rape seed | 2.80 | 2.94 | 3.00 | +4.8 | -2.1 |
| Sunflower | 1.46 | 1.65 | 1.62 | +13.1 | +1.7 |
| Potato | 28.40 | 26.52 | 26.81 | -6.6 | -1.1 |
| Sugar beet | 62.97 | 70.26 | 59.02 | +11.6 | +19.0 |

- Yield figures are rounded to 100 kg
- Rice is not included
- (1) Sorghum, rye, maslin, oats, triticale, mixed grain other than maslin, millet, buckwheat
- Source EUROSTAT New Cronos and EES: last update 2008-22-07
- ** Joint Research Centre/Institute for the Protection and Security of the Citizen/Agriculture Unit/ AGRI4CAST action

Technical Note:

- Countries with areas below 10000 ha are not counted in.
- The usable production is generally 2-3 M tons below the harvested production.
- The average production includes the exceptional year 2004/2005 where set aside rate was set at 5% instead of the reference rate of 10%. Therefore the comparison with the five-year average may overestimate the decrease.
- in 2007/08 the set aside rate was set to 0 %

Comparison of Cumulated NDVI Values (Start - July)



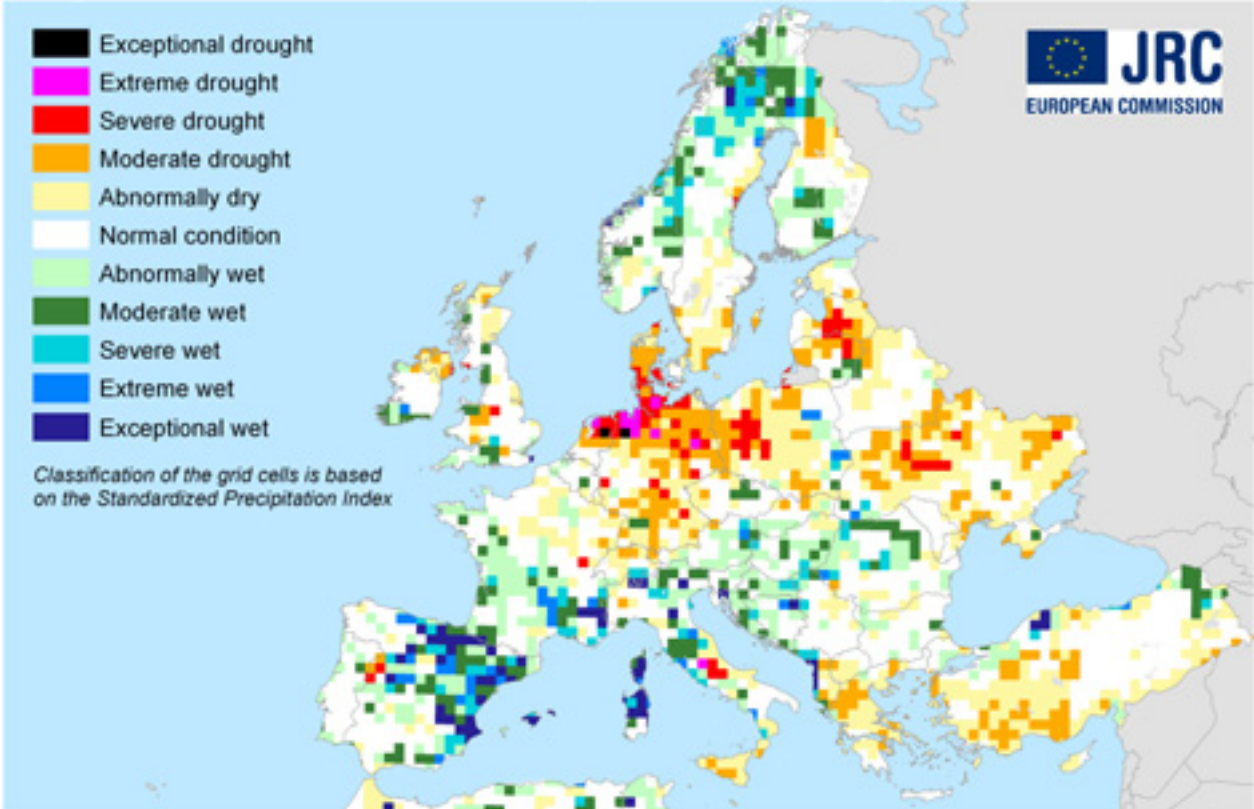
Cumulated NDVI of 2008 ranked within all historic years (1999 - 2007) for arable land



Sources: MARS Remote Sensing Database, SPOT-VEGETATION, 10 daily / © EuroGeographics for the administrative boundaries / CLC2000, Copyright EEA, Copenhagen, 2007, <http://www.eea.europa.eu> / Global Land Cover 2000 database, European Commission, Joint Research Centre, 2003, <http://www-gem.jrc.it/glc2000>

The NDVI (Normalized Difference Vegetation Index) is calculated from Remote Sensing Imagery using the red and near-red information, in this case SPOT-VGT. The NDVI expresses the development and health of vegetation. The higher the values the more biomass is present. In the map, NDVI values have been cumulated over the time period where the main crops in Europe start their growing season until the last available date. The cumulated values can be directly linked to the vegetation biomass. Thus higher cumulated values indicate a good vegetation growth and health. Furthermore, the cumulated values of the current growing season have been compared to the ones of each available year in the time series.

Dry and wet conditions for the period 1st of May until 30th of June



Analysis of crop yield by crop type and country for the EU27
Total Wheat (soft and durum varieties)

Analysis of crop yield by crop type and country for the EU27

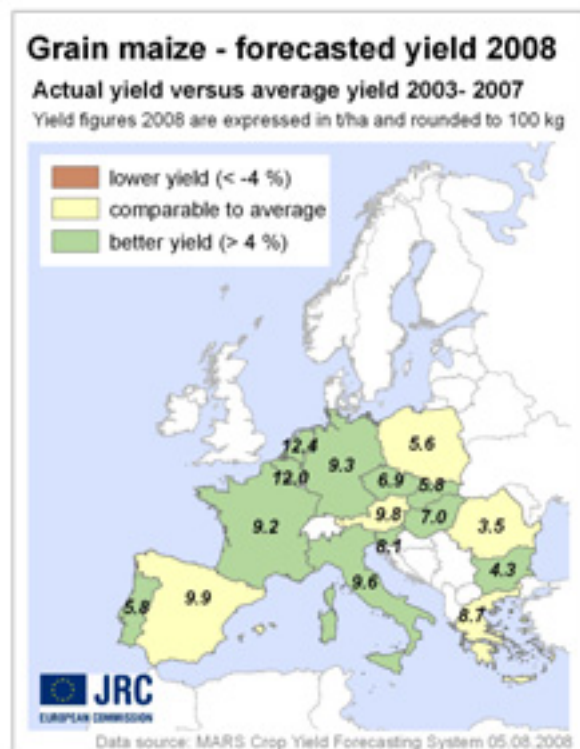
Grain Maize

| EU 27 GRAIN MAIZE yield forecast 5th of August 2008 | | | | | |
|---|------------|---------------------|----------|--------|-----------|
| Country | Yield t/ha | | | | |
| | 2007* | MARS 2008 forecasts | Avg 5yrs | %08/07 | %08/5 yrs |
| EU27 | 5.8 | 6.9 | 6.3 | +20.1 | +9.5 |
| AT | 9.9 | 9.8 | 9.4 | -1.8 | +3.5 |
| BE | 12.0 | 12.0 | 11.3 | +0.2 | +6.2 |
| BG | 1.5 | 4.3 | 3.9 | +193.1 | +8.9 |
| CZ | 6.8 | 6.9 | 6.5 | +1.1 | +6.0 |
| DE | 9.5 | 9.3 | 8.6 | -1.8 | +7.5 |
| ES | 9.9 | 9.9 | 9.76 | -0.6 | +1.0 |
| FR | 9.4 | 9.2 | 8.5 | -2.7 | +8.2 |
| GR | 8.9 | 8.7 | 8.94 | -2.0 | -2.5 |
| HU | 3.6 | 7.0 | 5.8 | +94.5 | +21.0 |
| IT | 9.3 | 9.6 | 8.9 | +3.4 | +8.4 |
| NL | 11.9 | 12.4 | 11.4 | +4.2 | +9.4 |
| PL | 6.6 | 5.6 | 5.5 | -14.5 | +2.5 |
| PT | 5.5 | 5.8 | 5.3 | +3.8 | +8.3 |
| RO | 1.6 | 3.5 | 3.3 | +122.9 | +3.4 |
| SI | 7.5 | 8.1 | 7.1 | +8.0 | +14.3 |
| SK | 4.0 | 5.8 | 5.3 | +46.2 | +9.9 |

* Source EUROSTAT New Cronos and EES: last update 2008-07-22, DG AGRI Balance sheet: last update 2008-08-01
Note: Countries with areas below 10000 ha are not counted in

The grain maize yield for **EU 27** is estimated at 6.9 t/ha. This is a significant increase of 9.5% compared to the five years average. In terms of productions 60 Mt are forecasted. This is an increase of 4% on the five year average.

For the two largest producers France and Italy yield forecasts show a clear increase compared to the five year average with 9.2 t/ha for France (compared to 8.5 t/ha) and with 9.6 t/ha for Italy (compared to 8.9 t/ha). For both countries we do see a slight increase in area compared to last year but below the 5 year average. This leads to a forecasted increase in production for Italy of 7.3% and for France of 2.3% compared to last year.



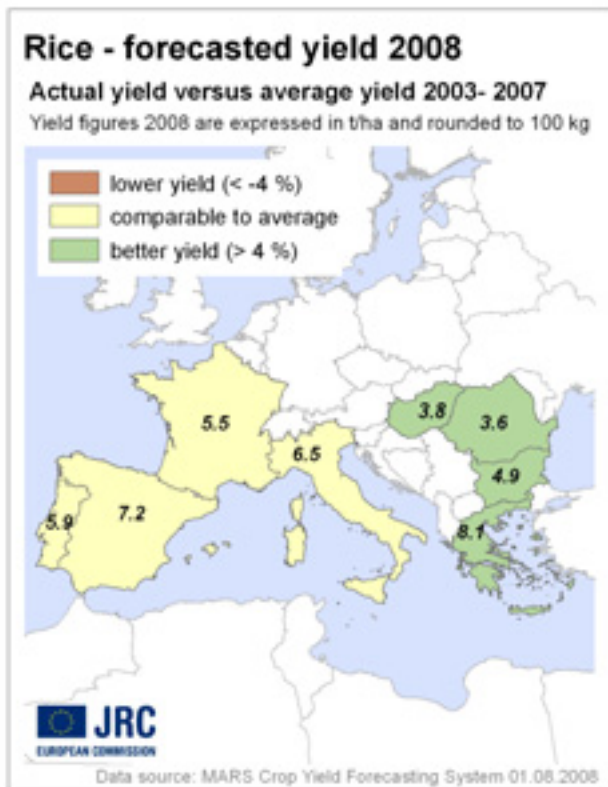
France is expected to produce 14.4 Mt and Italy is expected to produce 10.5 Mt.

Romania and Hungary as the other two main producers of grain maize experience a good season after the drought in 2007. For Hungary yield expectations are raised by 21 % compared to the five years average and almost doubled compared to last year. The production is estimated at 8.4 Mt. Production for Romania is forecasted to have more than doubled in 2008 compared to 2007 with a production of 8.7 Mt. The yield forecast is set to 3.5 corresponding to an increase of 3.4 % on the five years average and 123% on last year's yield.

The remaining countries with the exception of Greece are above the five years average.

Analysis of crop yield by crop type and country for the EU27

Rice



At EU27 level, an average season is expected: yields are forecasted to be slightly lower than the average (-0.2%) although higher than those of last year (+0.3%).

Among the main producers, forecasts are lower than last year in Spain (7.16 t/ha, -0.9%) and Portugal (5.91 t/ha, -3.0%).

Good potential is shown in Greece, whose yield (8.12 t/ha) is forecasted to be higher both than 2007 and than the average (respectively +4.0% and +4.9%).

A good season is also expected for the eastern countries: 3.81 t/ha for Hungary (+4.2% compared to the last year), 3.62 t/ha for Romania (+3.8%), and 4.91 t/ha for Bulgaria (+5.9%). The latter could have experienced problems during pollens development because of a sudden drop in temperatures.

Favourable conditions for blast disease development have been verified in north eastern Italy.

Analysis of pastures and forage crops for the EU27

The winter was moderately warm with higher than average precipitation over most of the grazing and forage production areas. These conditions supported the development of green biomass and set the conditions for an early first cut. However, the dry period that followed reduced dry matter production over most of northern Europe, Great Britain and Ireland as well as on the Atlantic coastal regions of northern France.

In these areas, a delay in the second cut is expected. Overall conditions were more positive in the forage producing areas of central France as well as in the Mediterranean Basin as a whole. In these areas a regularly timed second cut, as well as a regular continuation of the grazing season is expected.