

General favourable conditions and a good yield potential

Agro-meteorological conditions

Quite wet autumn, moderately cold winter and milder than seasonal spring

As a whole, autumn had a normal course with a slightly wet but colder than seasonal expected values. On the contrary, in October, November and December more seasonal cumulated rain was recorded. In this period the temperatures remained within the normal ranges of variation, but large fluctuations occurred in the second half of December with 15°-18°C of amplitude in a few days. Intense frost occurred at the end of the year.

The winter followed with slightly dryer than average conditions and quite mild temperatures. In January a progressive increase in temperatures was recorded and again in February milder than seasonal conditions occurred until a significant drop pushed the values below the average. From March a new increase of temperatures and new water supplies rapidly closed the winter crops dormancy and anticipated the starting of the growing season. The persistent rain could have affected the crop spring sowings with possible delays. Nevertheless, during the following months again favourable conditions were recorded.

Crop analysis

Last yields forecasted (6th May) are showing a good potential: 3.79 t/ha for barley (+5.2 % compared to the 5-year average) and 4.62 t/ha for soft wheat (+9.7 %).

Wheat

After a decidedly early start of the season winter wheat is completing the flowering stage with a 1-week advance compared to the long term average. Although this shortening of the crop vegetative phase is leading to sub-optimal leaf area expansion, aboveground biomass is currently still close to the average. Favourable values for soil water content were simulated since wheat was sown.

Rapeseed

The significant advance in development, which has characterized the crop from the start of the season, is holding over but with a slight reduction since the end of March. The crop is therefore ending the flowering phase. As well as soft wheat, rapeseed is presenting a leaf area expansion slightly below the average. Green leaf area index is in fact going to start its decreasing phase after having reached a maximum leaf area index 20 % lower than the average. Simulated aboveground biomass is currently losing the initial advantage with respect to the average.

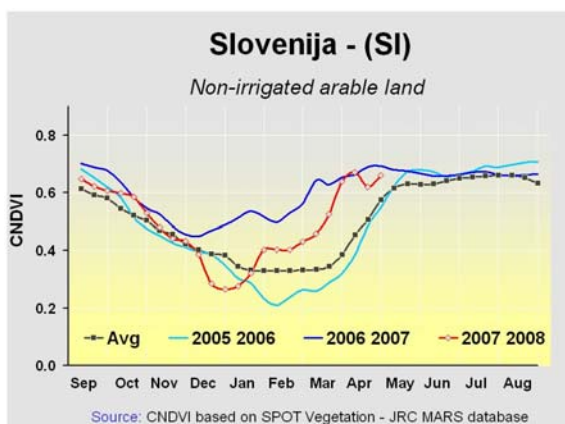
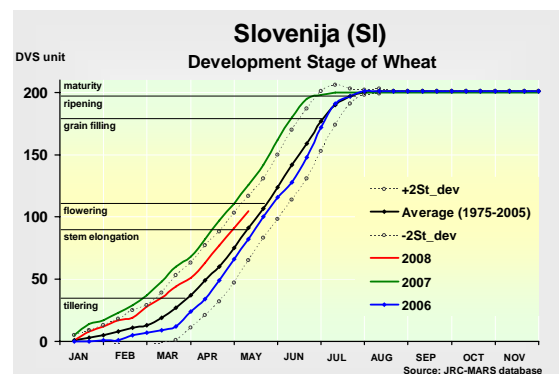
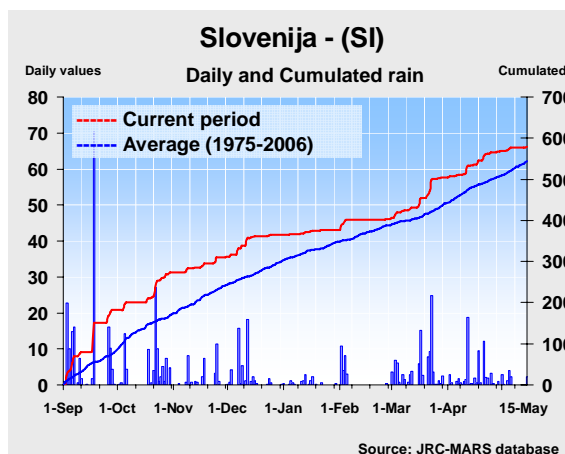
Spring barley

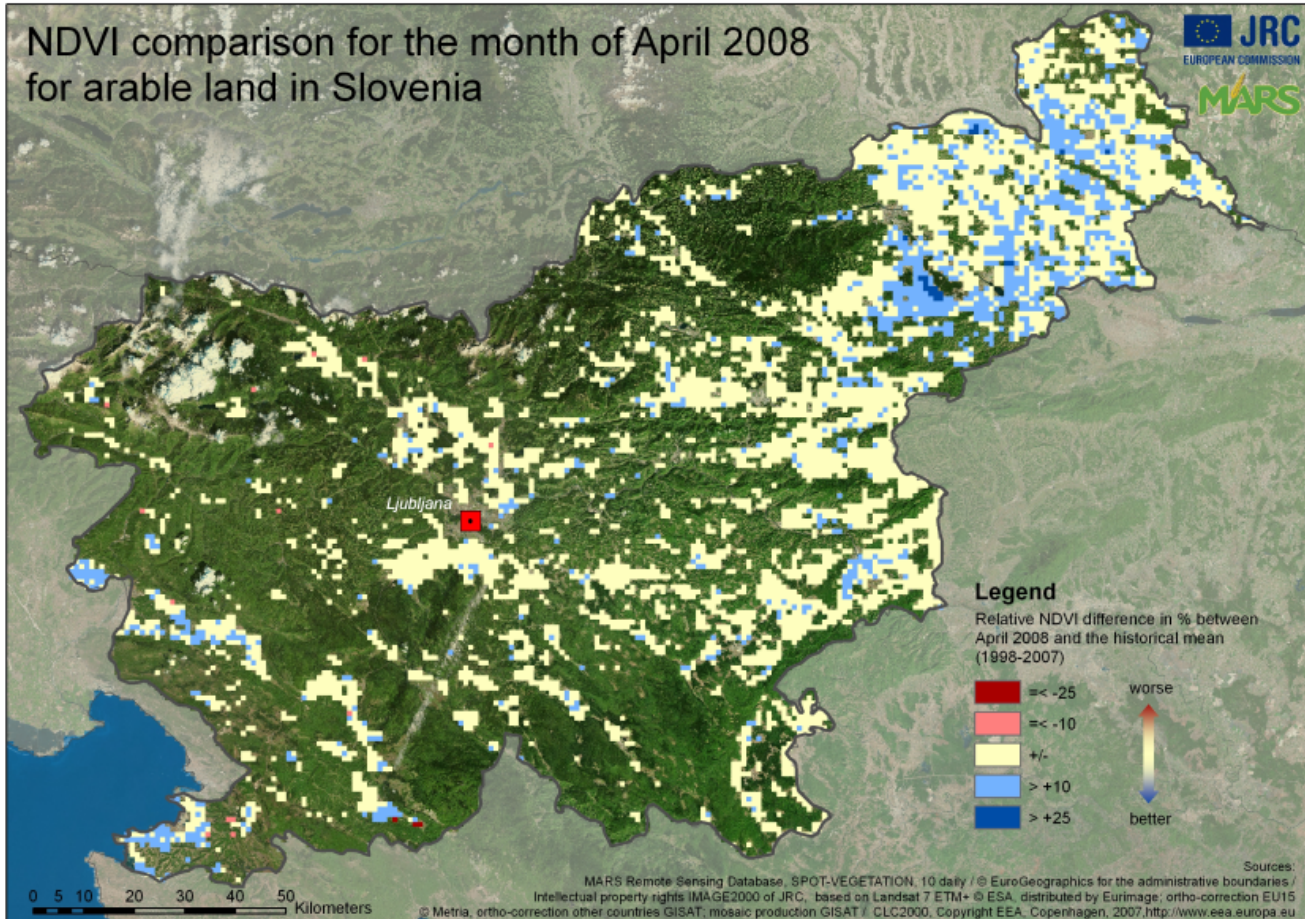
The crop is completing the first part of the stem elongation phase. The young plants could have suffered due to the considerable and daily rainfall events which occurred during sowing and emergence.

Maize

The slight but almost daily rainfall events which interested the sowing period for maize should have not created significant problems of access to the fields for farmers.

The overall good yield potential is also confirmed by the Remote Sensing analysis with an NDVI profile well above the average showing the anticipated cycle and the difference to the historical mean shown on the map of the next page





AGRI4CAST focuses on the **European Commission Crop Yield Forecasting System** aiming at providing **accurate and timely crop yield forecasts and crop production biomass**. Since 1992 AGRI4CAST has been developing and running a Crop Forecasting System at Pan-European level. This system monitors **crop vegetation growth** (cereal, oil seed crops, protein crops, sugar beet, potatoes, pastures, rice) and includes the short-term effects of **meteorological events on crop production**. The mandate is given through a regulation stating its maintenance, operational run and analysis. The rationale behind the crop forecasts at EU level is based on the lack of timely information to take rapid decisions on Common Agricultural Policy instruments during the year.

The system is made by remote sensing and meteorological observations, agro-meteorological modelling (Crop Growth Monitoring System, CGMS) and statistical analysis tools. Slovenia as a Member State belongs to the group of countries covered by the regularly issued crop monitoring bulletins.

The Remote Sensing Infrastructure

AGRI4CAST has developed a pan European remote sensing infrastructure based on medium to low resolution satellite:

MODIS-TERRA (250m), SPOT-VGT, NOAA-AVHRR, METOP – AVHRR (1Km), MSG –SEVERI (5Km). Integrated in the Crop Yield Forecasting System it provides qualitative information every 10 days on the vegetation development. Thanks to the historical data base consolidation from 1981, it is possible to make comparisons at pixel level with reference year and perform scenarios analysis.

Efforts are made to ingest quantitative remote sensing information at the different 3 levels of the yield forecast system: meteo, agrometeo and yield estimates.

More information is available under:

<http://mars.jrc.it/marsstat/Bulletins/2008.htm>

<http://www.marsop.info>

<http://cid.jrc.it/idp/thematic-portals/mars-stat-imageserver/>