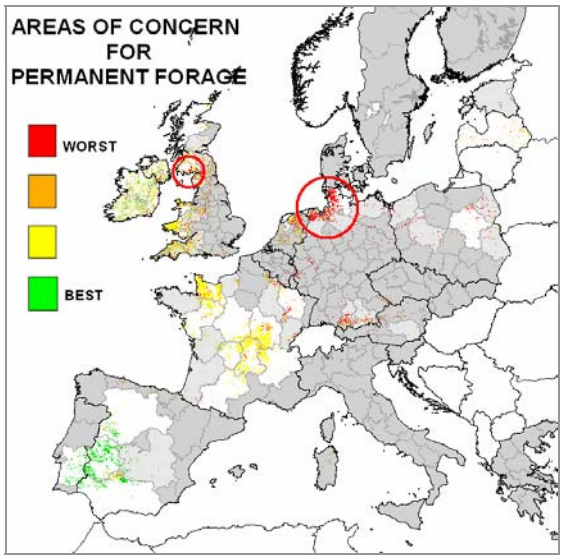
INTRODUCTION: The "PASTURE BULLETIN", beyond monitoring the conditions of grazed grassland, also takes into consideration the development of "harvested forage", including alpha-alpha, rye grass, maize fodder and others. These types of forage are found and cultivated on different and complementary territories. While pastures and grassland make up a specific and independent land use class, harvested or rotational forage surfaces are incorporated in the common arable areas.

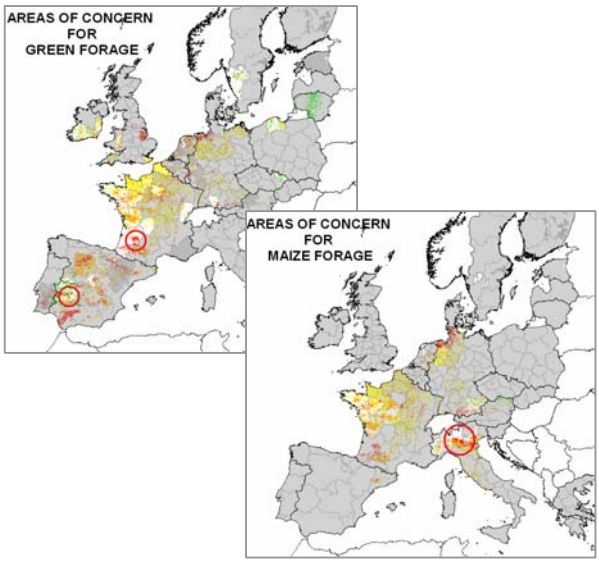
Dry conditions in May affected grassland in northern Germany and the UK. The dry weather affects also on green maize in the Po Valley in Italy. Minor damage expected for green fodder in France and Spain

AREAS OF CONCERN for the period May - June 2006[1]

PERMANENT FORAGE



ROTATION FORAGE



For **PERMANENT FORAGE** significant anomalies are observed on the North Sea coast of Germany as well as in south-western Scotland. Some stressed areas are in evidence in portions of the high Danube valley in Germany. Spain, which had been affected by a severe drought in 2005, on the contrary experienced a positive winter, in particular in the pastoral areas of Andalucía and Extremadura as highlighted by the green colour on the map.

For **ROTATION FORAGE**, the evolution of the season followed the trend of all other crops. The cultivation, of green fodder is dominant on the Atlantic coast and in southern France. During the 2006, spring season crops suffered from dry conditions especially in the Midi Pyrenees Region. Problems are also highlighted for maize fodder in north-western France but the worst situations are highlighted in the Po Valley of Italy.

[1] *The analysis relies on the classification of satellite data and the identification of stress areas from the deviation of the vegetation index from the long term average*

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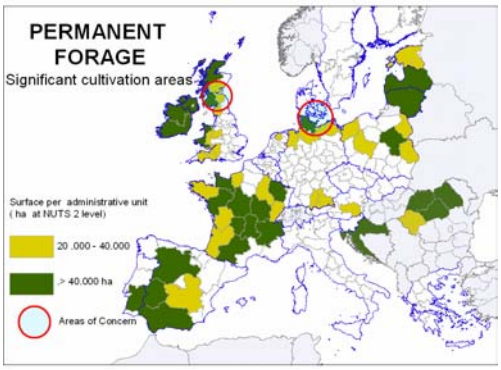
Data production: AGRIFISH Unit – MARS STAT Action/JRC, Alterra (NL)/VITO (B)/Meteoconsult (NL)/MeteoFrance (Fr)/EUROSTAT

PERMANENT FORAGE: Pastures and grassland, making up permanent forage surfaces, include very diverse situations in the EU. These range from the green meadows of Ireland, grazed all through the summer, to the dry agro-forestry areas of southern and central Spain ("dehesa"). These pastures are actually grazed agro-forestry areas and have a steep drop in available biomass due to the normal onset of hot and dry summers. The analysis of these areas relies mainly on the use of satellite remote sensing, by means of specific indicators (NDVI, Normalized Difference Vegetation Index) connected to the conditions of the vegetation and the level of biomass.



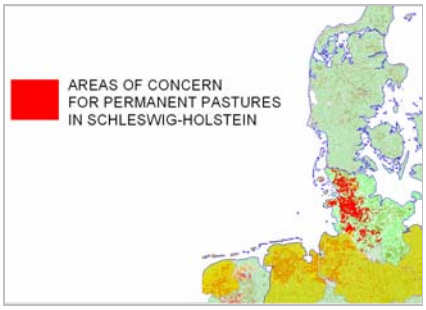
PERMANENT FORAGE

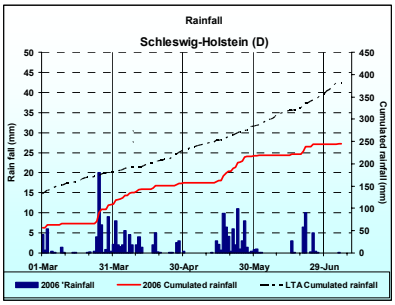
Most significant countries for permanent forage in the EU27

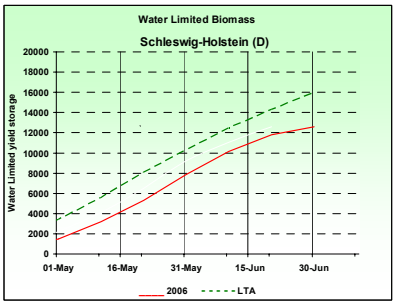
	Areas (1.000 ha)	% Surface on the total of EU 27
France	815	20.39%
United Kingdom	473	11.82%
Ireland	363	9.08%
Spain	280	7.00%
Germany	209	5.24%
Romania	206	5.14%
Poland	148	3.70%

Germany - Schleswig-Holstein: On the North Sea coast of Germany the rainfall starting in January 2006 continued into the spring. The cumulate precipitation remained around 30-40% below the long-term average affecting the climatic water balance.

In May and June, the situation worsened in the areas dedicated to grazing, problems can be expected for the availability of green grassland. The potential shortage is confirmed by the estimated levels of biomass that remained largely below the norm and even declining.

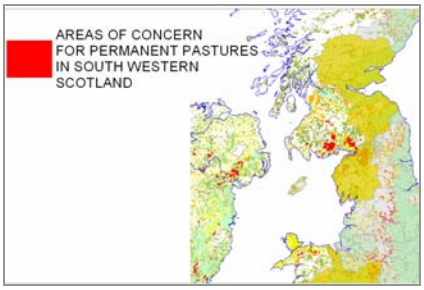


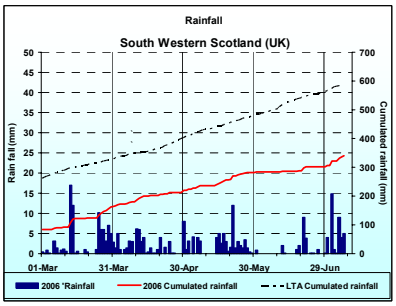


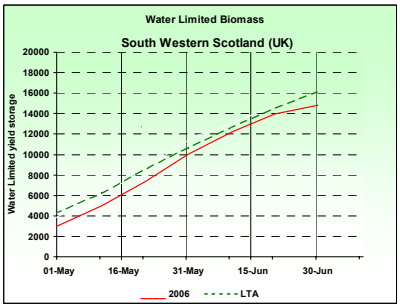


South Western Scotland: A second area of concern for grazed pastures is in South Western Scotland. This area, facing the Irish Sea, on the Solway Firth, is quite limited and the seasonal trend resembles the situation described for Schleswig-Holstein.

The rainfall shortage occurred around May, and proceeded to reach a peak deficit in late June. The modelled level of available biomass is slightly below the long-term average but precipitation in the second half of June should favour a full recovery







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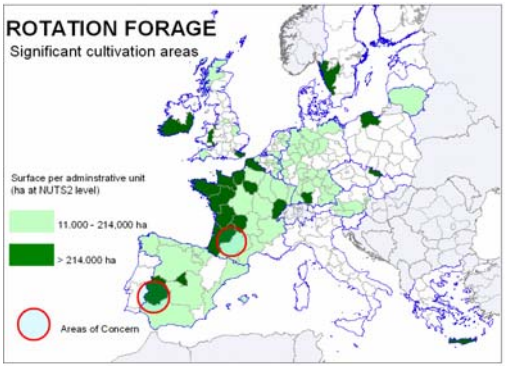
ROTATION FORAGE: Green and maize fodder can be considered as normal crops characterized by an early harvesting, at the maximum of biomass availability. The analysis of these crops relies on the functionalities provided by the CGMS (Crop Growth Monitoring System)

GREEN FODDER

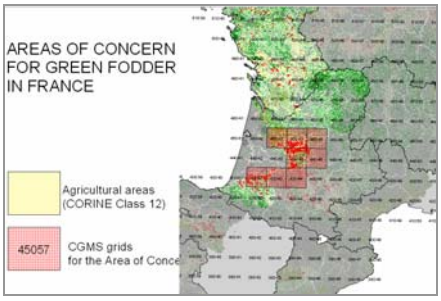


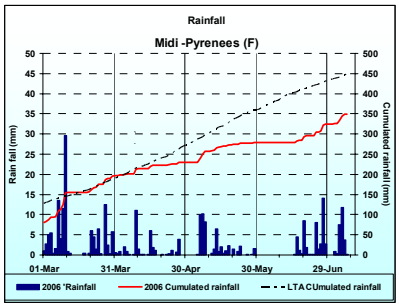
ROTATION FORAGE
Green Fodder : Most significant countries in the EU27

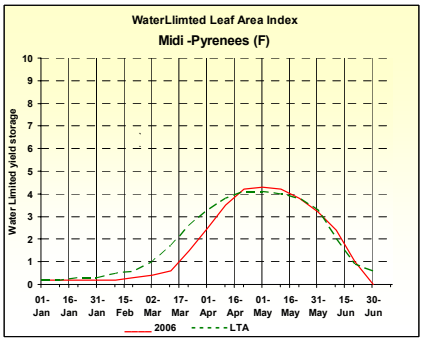
	Areas (1.000 ha)	% Surface on the total of EU 27
France	8479	33.06%
Spain	6123	23.88%
Ireland	2694	10.51%
Sweden	2192	8.55%
United Kingdom	1819	7.09%
Germany	1279	4.99%
Greece	1214	4.73%
Poland	470	1.83%

France - Midi Pyrenees: The majority of green forage cultivation in France is in the west of the country and although this crop is not relevant in the south, this was the portion of the country that was most affected by the dry spell. The cumulated rainfall diverged significantly from the average starting from late May but there was a certain recovery in June.

The biomass levels, which are represented by the curve of the estimated Leaf Area Index (LAI), had an immediate and negative response to the drought. The situation shows however, a convergence to the norm as it is characteristic of Mediterranean climate that going into the summer, rainfall shortage is associated to raising temperatures with consequent reduction in biomass levels.

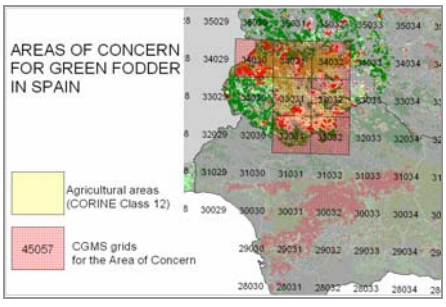


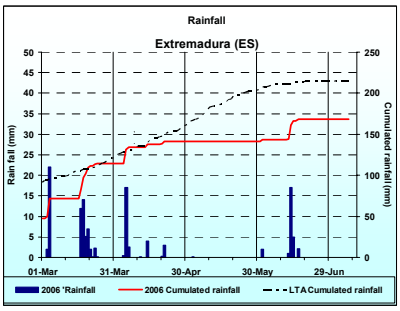




Spain - Extremadura: In Spain the 2006 season started with sufficient rainfall and mild temperatures. In early April, however, precipitation started declining in central and western Spain. The rain deficit only marginally affected the south of the country but it was felt in the arable areas in west of Extremadura on the border with Portugal.

In this area, the most significant green fodder crop is alpha-alpha under irrigation. The first cuttings are in May and the spring drought, besides having an impact on biomass, could reduce the water availability. Although there were some local rain in June, these were not sufficient to recover the deficit.





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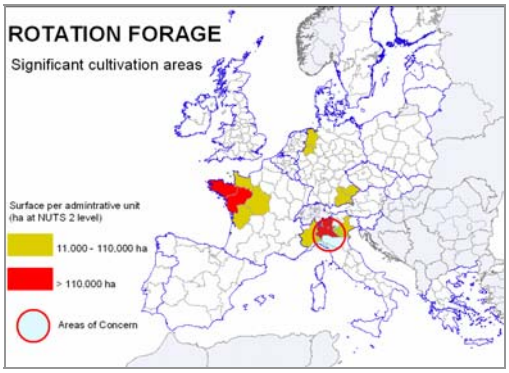
MAIZE FODDER

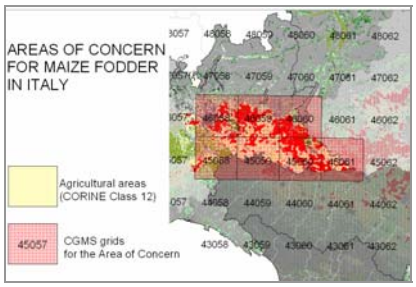


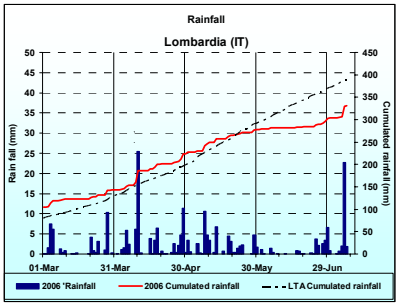
ROTATION FORAGE Maize Fodder; Most significant countries in the EU27

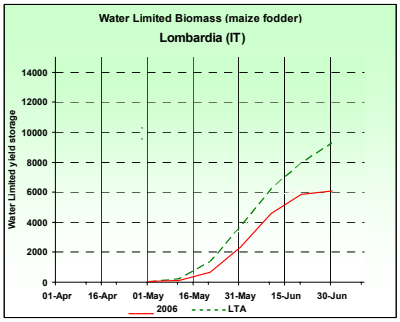
	Areas (1.000 ha)	% Surface on the total of EU 27
France	880	36.73%
Germany	668	27.88%
Italy	437	18.24%
The Netherland	115	4.80%
Spain	97	4.05%
Austria	52	2.17%
Belgium	49	2.05%
Denmark	28	1.17%
Greece	27	1.13%
Luxemburg	18	0.75%
United Kingdom	14	0.58%
Portugal	11	0.46%

Italy – Lombardia: In northern Italy, in the Po River valley, the cultivation of maize is for almost 80 % destined to the production of fodder with an early harvest in August at dough maturation. Most of the western portion of the cultivation areas is irrigated while in the east the wet climate allows a "dry" cultivation. w

Steep reduction in rainfall and warm weather during May significantly reduced the moisture availability in terms of available irrigation water. The estimated evolution of water limited yield biomass is proof of this. At present, there are no significant signs of improvement of the situation.



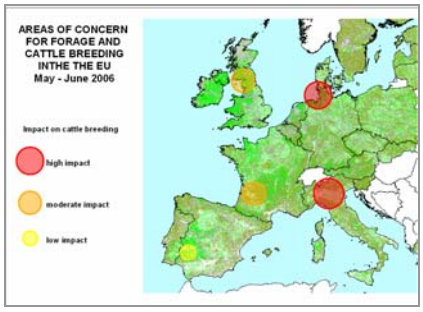


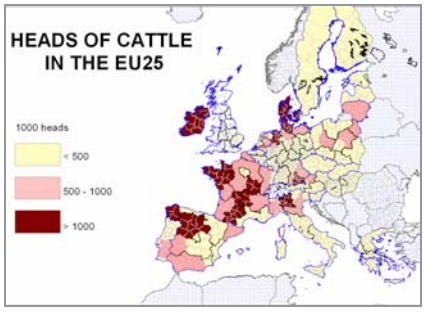


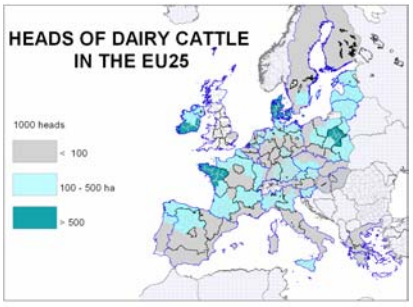
IMPACT OF PERMANENT AND ROTATION FORAGE CONDITIONS ON CATTLE RAISING:

The presence of pastures and grasslands as well as rotation forage production is generally linked to cattle and sheep raising. The maps shown here, based on EUROSTAT data, identify the most significant of these areas for cows in general and dairy cows.

An analysis can be made by overlaying these maps with the areas of concern identified for the period May-June 2006. The most significant of these overlaps and consequently the possibility for a higher impact are in Schleswig-Holstein in Germany and Lombardia in Italy. Minor impact can be expected in southern Scotland, southern France and Extremadura in Spain







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