



Period covered: 1 October - 20 November Issued: 25 November 2013

# Crop Monitoring in Europe MARS BULLETIN Vol.21 No. 11 (2013)

# Favourable weather supported timely sowing and crop establishment in most EU-28 regions

Significant parts of western and central Europe faced overly wet conditions, mainly during the month of October. These conditions caused difficulties in some locations, but overall did not seriously hamper the sowing of winter crops. The warm temperatures and the normal precipitation levels were beneficial to crop emergence and early establishment during the second half of October and the first two dekads of November across most of Europe.

Winter wheat experienced some sowing delays in France, but these where compensated by rapid early development and conditions were particularly favourable for sowing in eastern Europe and the southern Mediterranean region. In Italy, the sowing of durum wheat, which usually occurs later than soft wheat, progressed well until the first dekad of November but was then hampered by frequent rainfall events. The winter barley sowing period has almost finished in central and northern Europe, generally under favourable weather conditions. Weather conditions generally allowed for the timely sowing of rye, except in the eastern part of Poland and some smaller areas of Germany where abundant rainfall hampered sowing activities in late September and early October. The big European producers of rapeseed (i.e. France, Germany, Poland and the UK) benefited from good sowing conditions during and after the typical sowing window (mid- to end of August). The subsequent weather conditions suggest that rapeseed crops are now well established and developed, and are ready to withstand the winter.



		Y	rield t/ha		
Сгор	2012	2012 MARS 2013 forecasts		%13/12	%13/5yrs
TOTAL CEREALS	4.82	5.30	5.06	+9.9	+4.7
Total Wheat	5.18	5.50	5.37	+6.2	+2.3
soft wheat	5.41	5.74	5.63	+6.0	+1.9
durum wheat	3.13	3.31	3.20	+5.7	+3.4
Total Barley	4.39	4.83	4.39	+9.8	+9.9
spring barley	3.93	4.39	3.83	+11.8	+14.7
winter barley	5.21	5.48	5.25	+5.2	+4.3
Grain maize	6.05	6.90	6.98	+14.1	-1.2
Rye	2.42	3.71	3.05	+53.5	+21.8
Triticale	4.17	4.23	4.06	+1.5	+4.3
Other cereals	3.08	3.41	3.23	+10.6	+5.4
Rape and turnip rape	3.11	3.10	3.04	-0.3	+1.9
Potato	30.61	31.29	30.59	+2.2	+2.3
Sugar beet	69.74	69.75	69.72	+0.0	+0.0
Sunflower	1.67	1.98	1.83	+19.0	+8.1

issued 22 November 2013

1

Agro-meteorological overview 2 Sowing conditions -

campaign 2013 / 14

**3** Crop yield forecasts 4

Atlas maps

Joint Research Centre

# 1. Agro-meteorological overview

### 1.1 Areas of concern

Significant parts of western and central Europe faced overly wet conditions, mainly during the month of October. These conditions caused difficulties in some locations, but overall did not seriously hamper the sowing of winter crops. The warm temperatures and the normal precipitation levels were beneficial to crop emergence and early establishment during the second half of October and the first two dekads of November across most of Europe.



#### 1.2 Agro-meteorological review (1 October - 20 November)

Relatively warm conditions prevailed throughout Europe. Above-average precipitation was recorded in central Europe and northern Russia

#### Observed temperatures

During **October**, slightly above-average thermal conditions prevailed over Europe. The mean daily air temperature was 2 to 4°C above the long-term average over the eastern part of Spain, England, southern and eastern France, Croatia, and central and southern Italy. Maximum temperatures exceeding 25°C were recorded in southern Italy, the southern part of the Iberian Peninsula, south-western France, the Balkan Peninsula and Turkey. The first two dekads of **November** were characterised by warmer-than-usual weather conditions in the Mediterranean region as well as in central and eastern Europe, with positive average temperature anomalies in the







2





#### **Observed rainfall**

From 1 **October** to 20 **November**, cumulated rainfall above 150 mm occurred in large areas of central and western Europe. The rainfall recorded during the whole period exceeded the long-term average by more than 50 mm in central and northern parts of France, the Benelux Countries, Denmark, Germany, the UK, southern Sweden, Austria, Slovenia, Croatia and central Italy. In contrast, the Iberian Peninsula and southern France

were much drier than usual over this period, with cumulated rainfall up to 50 mm below average. Below-average rainfall was also observed in Ukraine, northern Poland, Turkey and the central part of Russia





# 2. Sowing conditions EU-28 and neighbourhood countries 2.1 Winter crops EU-28 Winter soft and durum wheat

### Sowing delays, in some regions, compensated by rapid early development

In France, the largest wheat producer of the EU-28, sowing was hampered by frequent, albeit mostly moderate, rainfall events, especially during the second and third dekads of October. As a consequence, the sowing of winter wheat has extended well into November. In other parts of western and central Europe, rainfall during the sowing period tended to be more concentrated, providing sufficient suitable windows for sowing although with some delays, especially in the western UK, the Benelux countries and parts of Germany and northern Italy. By contrast, conditions were particularly favourable for sowing in eastern Europe and the southern Mediterranean region. Even where sowing was delayed, this would not have caused serious problems as, once sown, emergence and crop establishment generally progressed very well, thanks to above-average temperatures and good soil moisture



conditions across the EU-28.

Regarding durum wheat, which is usually sown later than soft wheat, the second half of October and the first dekad of November provided good sowing conditions in Italy's major production areas. Since then, sowing has been more difficult due to frequent rainfall events. In France, the sowing of durum wheat suffered similar problems to those of soft wheat. Sowing conditions in Spain, on the other hand, have been excellent thus far. Greece has experienced significant rainfall events since the start of November, but intermitting dry periods allowed sowing to proceed at a more or less normal pace. Durum wheat emergence and crop establishment have thus far also benefited from above-average temperatures, but the chilly conditions expected during the coming weeks in most regions could negatively affect the later-sown crops.



## Winter barley Predominantly favourable weather conditions permitted adequate progress of sowing

The winter barley sowing period has almost finished in central and northern Europe, generally under favourable weather



conditions. Precipitation during September and October has been very close to an average year in France and Germany,



which permitted an adequate progression of sowing activities. Unusually mild temperatures from the second half of October, especially in France, have favoured crop emergence, which occurred much earlier than in the previous season. Similar conditions have been observed in northern regions of Italy and Spain, where sowing is almost complete without any major constraints. The weather has also been favourable in southern regions of both countries, with some precipitation during the past weeks benefiting the preparation of soil for sowing, which usually takes place from the second half of November on. In Romania and Bulgaria, sporadic thunderstorms during the first days of October might have caused slight delays to the start of the sowing period, but the absence of substantial rainfall during the rest of the month has permitted the completion of the preparatory works for the upcoming season.

#### Rye Favourable weather conditions supported timely sowing and crop

Considering the main EU-28 producers of rye, weather conditions generally allowed for timely sowing, except in the eastern part of Poland and some smaller areas of Germany where abundant rainfall hampered sowing activities in late September and early October. Abundant rainfall and overly wet soil conditions could also have delayed sowing in Denmark. The sowing campaign of rye was finished within the normal window in Sweden, Finland and the Baltic countries thanks to moderate rainfall. Favourable weather conditions with below or near average precipitation, allowing timely sowing, were also experienced in the Czech Republic, Slovakia, Austria Hungary, Romania and Greece. During October and the first half of November, which comprise the typical sowing window of rye in France, Spain and Portugal, precipitation remained in the normal range and had no significant effect on sowing progress in most areas of these countries. Considerable surplus rainfall was recorded in the north-western regions of the Iberian Peninsula, however, causing some delay.

Sufficient rains during October and the first half of November provided adequate soil moisture supply for the germination of the seeds. This, coupled with above-average thermal conditions, primarily over northern and central regions of Europe, led to rapid emergence and advanced development resulting in well-established crop stands before the start of winter.



#### Winter rapeseed Favourable conditions in late summer favoured the good establishment of rapeseed in the most productive areas

The big European producers of rapeseed (i.e. France, Germany, Poland and the UK) benefited from good sowing conditions during and after the typical sowing window (mid-to end of August). In most of this zone (including smaller countries such as Denmark, Lithuania, Czech Republic and Hungary), several days with no rain occurred before 1 September. This should have given enough time for proper sowing in a moist soil. Light rains followed, favouring a normal emergence. Temperatures have remained relatively warm. Overall, this suggests that rapeseed crops are now well established and developed, ready to withstand the winter. Conditions are similarly favourable in regions with a later sowing window, such as Romania, Bulgaria and the south of France. These regions were drier overall, but experienced sufficient rains late in September.





## 2.2 Winter crops - Neighbourhood countries

#### Turkey

#### Good sowing conditions for winter crops

The weather conditions that prevailed during the sowing period of winter wheat and barley (i.e. October-November) in Turkey's main production areas (comprising *Konya, Ankara, Kirikkale, Samsun, Tekirdag* and *Kayseri*) were characterised by ample rainfall (comparable to the long-term average) and

favourable temperatures. The currently prevailing conditions in the areas concerned are favourable for the emergence and early development of crops, with near-average temperatures and sufficient soil moisture.

#### Ukraine

#### Fair crop establishment after difficult start to sowing campaign

In September, persistent rainfall and below-average thermal conditions led to rather complex sowing conditions. The resulting overly wet soil conditions led to significant delays in the sowing of winter wheat. Cold weather hampered the germination and emergence of earlier sown seeds. Abundant rainfall was still experienced in the first dekad of October in areas surrounding the Azov Sea, but drier weather conditions started to prevail elsewhere, creating conditions favourable to catching up on the delayed sowing and to decreasing the gap between the actual and intended sown areas. The period between 11 October and mid-November showed strongly improved conditions, with relatively warm weather (3 to 5°C positive thermal anomaly) and favourable soil moisture conditions that support the early growth of winter cereals, thus enabling the crops to develop sufficiently and strengthen well before winter.

## Belarus

#### Timely sowing of winter cereals

Meteorological conditions observed since the beginning of September were favourable for the sowing of winter cereals. Cumulated rainfall from 1 September to 15 November was mostly close to the average. Thermal conditions were also close to the long-term average, except during the last dekad of September and first dekad of October when a few days with minimum temperatures slightly below 0°C were recorded.

In the southern regions, the low levels of rainfall at the end of September and beginning of October created a good window for sowing, so the sowing is expected to be on time. In the north, where winter cereals are sown during early September, rainfall was close to the average. Since the last dekad of October, conditions are favourable for the emergence and early development of winter cereals, with near-average rainfall and slightly milder temperatures. Abundant rains adversely affected most of the northern winter wheat production areas of Russia during September. Cumulative precipitation exceeded the long-term average by 50-140 mm in the *Central* and *Volga Federal Okrugs*, for which September is the peak period of the winter wheat sowing campaign. This water excess had the most significant negative effect in the black soils region, hampering the sowing of winter cereals. Temperatures remained considerably below average in the last dekad of September and first dekad of October, which even experienced some light snow fall. In the *Southern* and *North Caucasus Oblasts*, precipitation was

also above average but caused fewer problems due to the later and much wider sowing window. Rainfall eased and the weather became more favourable to sowing in the beginning of October. The soil surface became drier, allowing for sowing to be resumed and reducing the delay. Nevertheless, the area sown with winter cereals probably remains less than planned, except in the regions north of the Caucasus. Since the second dekad of October, temperatures were higher than average by 2 to 4°C, providing overall good conditions for the sprouting of seeds and for young plants to gain strength before winter dormancy.

## Maghreb Average precipitation, but with irregular distribution, allows for sowing cereal crops

The sowing period for cereals in the Maghreb countries is usually considered October and the first part of November, but sowing can occur earlier (in September, for instance) if there is sufficient rain to support sowing and emergence.

There has been above average rainfall during September across much of the cereal areas of Morocco, western Algeria and Tunisia. This pattern was reversed in October, where reduced rainfall is seen across much of this region, with the exception of some of the cereal areas of eastern Algeria. So far, November has brought above average rainfall in Algeria and Tunisia, but much reduced levels of rainfall in Morocco. In general, these weather conditions have provided ample windows for sowing activities and rainfall levels have been sufficient to bring soil moisture levels within a favourable range for sowing to have occurred without major problems or delay.

# 3. Crop yield forecasts

Country		TOT	AL WHEAT (t	/ha)		SOFTWHEAT (t/ha)						DURUM WHEAT (t/ha)					
Country	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs		
EU28	5.18	5.50	5.37	+6.2	+2.3	5.41	5.74	5.63	+6.0	+1.9	3.13	3.31	3.20	+5.7	+3.4		
AT	4.14	5.42	5.13	+30.9	+5.7	4.19	5.46	5.17	+30.2	+5.5	3.07	4.53	4.34	+47.9	+4.4		
BE	8.45	8.70	8.77	+2.9	-0.9	8.45	8.70	8.77	+2.9	-0.9	-	-	-	-	-		
BG	3.76	4.07	3.71	+8.2	+9.8	3.78	4.08	3.70	+8.0	+10.1	2.68	3.70	3.85	+37.7	-4.1		
CY	-	-	-		-	-	-	-	-	-	-	-	-	-	-		
CZ	4.32	5.42	5.22	+25.6	+3.9	4.32	5.42	5.22	+25.6	+3.9	-	-	-	-	-		
DE	7.33	7.98	7.49	+8.9	+6.6	7.34	7.99	7.50	+8.8	+6.5	-	-	-	-	-		
DK	7.37	7.20	7.27	-2.3	-1.0	7.37	7.20	7.27	-2.3	-1.0	-	-	-	-	-		
EE	3.90	3.35	3.13	-14.1	+7.1	3.90	3.35	3.13	-14.1	+7.1	-	-	-	-	-		
ES	2.35	3.57	2.93	-52.1	+21.9	2.64	3.75	3.19	+41.8	+17.5	1.08	2.68	2.06	+148.4	+30.3		
FI	3.93	3.84	3.77	-2.3	+1.8	3.93	3.84	3.77	-2.3	+1.8	-	-	-	-	-		
FR	7.15	7.03	7.08	-1.6	-0.7	7.30	7.15	7.26	-2.0	-1.5	5.45	5.26	5.06	-3.4	+3.9		
GR	2.42	2.64	2.74	+8.9	-3.9	2.83	2.71	2.99	-4.1	-9.4	2.31	2.62	2.66	+13.3	-1.8		
HR	5.35	4.96	4.86	-7.3	+2.0	5.35	4.96	4.86	-7.3	+2.0	-	-	-	-	-		
HU	3.73	4.54	4.10	+21.5	+10.8	3.73	4.54	4.10	+21.7	+10.9	3.70	4.07	3.80	+9.7	+7.0		
IE	6.31	8.34	8.39	+32.3	-0.6	6.31	8.34	8.39	+32.3	-0.6	-	-	-	-	-		
IT	4.13	3.86	3.83	-6.6	+0.8	5.89	5.28	5.39	-10.4	-2.0	3.32	3.21	3.14	-3.4	+2.0		
LT	4.78	4.16	3.99	-13.1	+4.2	4.78	4.16	3.99	-13.1	+4.2	-	-	-	-	-		
LU	5.87	6.19	6.12	+5.6	+1.2	5.87	6.19	6.12	+5.6	+1.2	-	-	-	-	-		
LV	4.37	3.76	3.64	-13.9	+3.3	4.37	3.76	3.64	-13.9	+3.3	-	-	-	-	-		
MT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
NL	8.52	8.60	8.65	+1.0	-0.5	8.52	8.60	8.65	+1.0	-0.5	-	-	-	-	-		
PL	4.14	4.26	4.18	+2.8	+1.8	4.14	4.26	4.18	+2.8	+1.8	-	-	-	-	-		
PT	1.19	2.20	1.55	+85.2	+42.3	1.19	2.20	1.55	+85.2	+42.3	-	-	-	-	-		
RO	2.61	3.43	2.96	+31.3	+15.8	2.61	3.43	2.96	+31.3	+15.8	-	-	-	-	-		
SE	6.26	5.85	5.84	-6.5	+0.1	6.26	5.85	5.84	-6.5	+0.1	-	-	-	-	-		
SI	5.43	4.63	4.78	-14.9	-3.2	5.43	4.63	4.78	-14.9	-3.2	-	-	-	-	-		
SK	3.29	4.05	4.04	+23.2	+0.3	3.30	4.03	4.03	+22.2	+0.0	2.72	4.42	4.13	+62.4	+7.2		
UK	6.66	7.73	7.66	+16.1	+1.0	6.66	7.73	7.66	+16.1	+1.0	-	-	-	-	-		

Country		TOTA	L BARLEY (	/ha)			SPRIN	G BARLEY	(t/ha)		WINTER BARLEY(t/ha)					
Country	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	
EU28	4.39	4.83	4.39	+9.8	+9.9	3.93	4.39	3.83	+11.8	+14.7	5.21	5.48	5.25	+5.2	+4.3	
AT	4.40	5.16	4.86	+17.3	+6.3	3.44	4.25	4.13	+23.4	+2.8	5.29	5.91	5.61	+11.6	+5.4	
BE	8.21	8.40	8.48	+2.3	-1.0	-	-	-	-	-	8.21	8.40	8.48	+2.3	-1.0	
BG	3.47	3.81	3.66	+9.8	+4.2	-	-	-	-	-	3.47	3.81	3.66	+9.8	+4.2	
CY	2.32	1.41	1.77	-39.2	-20.3	-	-	-	-	-	2.32	1.41	1.77	-39.2	-20.3	
CZ	4.23	4.37	4.39	+3.4	-0.4	4.31	4.32	4.33	+0.1	-0.3	3.98	4.49	4.54	+12.7	-1.1	
DE	6.19	6.40	6.11	+3.3	+4.7	5.64	5.31	5.09	-5.8	+4.4	6.49	6.72	6.48	+3.4	+3.7	
DK	5.61	5.31	5.32	-5.3	-0.2	5.49	5.20	5.17	-5.2	+0.7	6.37	5.90	5.94	-7.5	-0.8	
EE	3.13	2.65	2.65	-15.2	+0.2	3.13	2.65	2.65	-15.2	+0.2	-	-	-	-	-	
ES	2.23	3.92	2.74	+75.5	+43.1	2.27	3.94	2.80	+73.2	+40.7	2.00	3.80	2.41	+89.9	+57.4	
FI	3.48	3.78	3.41	+8.6	+11.0	3.48	3.78	3.41	+8.6	+11.0	-	-	-	-	-	
FR	6.74	6.60	6.48	-2.1	+1.8	6.64	6.50	6.23	-2.2	+4.3	6.80	6.64	6.60	-2.3	+0.7	
GR	2.48	2.45	2.62	-1.3	-6.5	-	-	-	-	-	2.48	2.45	2.62	-1.3	-6.5	
HR	4.25	4.19	4.03	-1.4	+4.0	-	-	-	-	-	4.25	4.19	4.03	-1.4	+4.0	
HU	3.61	4.14	3.71	+14.7	+11.6	3.21	3.47	3.31	+7.9	+4.8	3.83	4.39	3.96	+14.5	+10.9	
IE	5.98	6.97	6.82	+16.6	+2.1	5.70	6.67	6.54	+17.1	+2.0	7.00	8.25	8.34	+17.8	-1.1	
IT	3.77	3.58	3.58	-5.0	+0.0	-	-	-	-	-	3.77	3.58	3.58	-5.0	+0.0	
LT	3.38	3.06	2.98	-9.6	+2.7	3.38	3.06	2.98	-9.6	+2.7	-	-	-	-	-	
LU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	2.83	2.53	2.56	-10.6	-1.0	2.83	2.53	2.56	-10.6	-1.0	-	-	-	-	-	
MT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NL	5.70	5.98	6.02	+5.0	-0.6	5.70	5.98	6.02	+5.0	-0.6	-	-	-	-	-	
PL	3.60	3.55	3.30	-1.4	+7.6	3.56	3.36	3.15	-5.7	+6.7	3.85	4.09	3.98	+6.2	+2.6	
PT	1.27	2.10	1.63	+66.0	+29.1	-	-	-	-	-	1.27	2.10	1.63	+66.0	+29.1	
RO	2.36	2.99	2.70	+26.4	+10.7	1.84	2.17	2.01	+17.7	+7.7	2.64	3.38	3.09	+28.0	+9.4	
SE	4.60	4.52	4.36	-1.7	+3.8	4.55	4.49	4.32	-1.3	+4.1	6.63	5.41	5.41	-18.4	+0.1	
SI	4.72	4.33	4.21	-8.2	+2.9	-	-	-	-	-	4.72	4.33	4.21	-8.2	+2.9	
SK	3.18	3.45	3.49	+8.4	-1.2	3.19	3.43	3.48	+7.6	-1.4	3.12	3.56	3.59	+13.8	-1.1	
UK	5.51	5.74	5.73	+4.2	+0.3	4.97	5.44	5.31	+9.5	+2.5	6.38	6.62	6.40	+3.9	+3.5	

Country		G	RAIN MAIZE	(t/ha)				RYE (t/ha)			TRITICALE (t/ha)					
Country	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	
EU28	6.05	6.90	6.98	+14.1	-1.2	3.72	3.71	3.34	-0.2	+11.2	4.17	4.23	4.06	+1.5	+4.3	
AT	10.70	10.86	10.68	+1.5	+1.7	4.23	3.73	4.02	-11.9	-7.3	5.04	5.02	5.06	-0.3	-0.8	
BE	10.92	11.13	11.77	+2.0	-5.4	-	-	-	-	-	-	-	-			
BG	3.68	6.04	4.77	+64.1	+26.5	-	-	-	-	-	2.45	3.07	3.11	+25.0	-1.4	
CY	-	-	-	-	-	-	-	-	-	-	-	-	-			
CZ	7.78	7.86	7.82	+1.1	+0.6	4.78	4.00	4.50	-16.2	-11.0	4.31	4.28	4.26	-0.6	+0.6	
DE	10.48	9.32	9.94	-11.0	-6.2	5.47	5.63	4.99	+2.8	+12.8	6.18	6.39	5.82	+3.4	+9.9	
DK	-	•	-		-	5.95	5.50	5.30	-7.6	+3.9	5.21	5.22	5.13	+0.2	+1.7	
EE	-	-	-		-	3.39	2.84	2.65	-16.1	+7.4	-	-	-			
ES	10.83	11.14	10.56	+2.8	+5.4	1.60	2.21	1.98	+38.0	+11.9	1.76	2.56	2.26	+45.4	+13.6	
FI	-	-	-	-	-	3.18	2.70	2.76	-15.0	-2.3	-	-	-	-		
FR	8.91	9.05	9.19	+1.6	-1.5	5.08	4.92	4.93	-3.2	-0.2	5.53	5.42	5.40	-2.1	+0.4	
GR	10.61	10.50	10.79	-1.0	-2.7	2.11	2.34	2.08	+11.0	+12.5	-	-	-			
HR	4.34	6.14	6.46	+41.6	-5.0	-	-	-	-	-	4.18	4.03	3.74	-3.6	+7.9	
HU	3.98	5.34	6.17	+34.0	-13.4	2.24	2.59	2.20	+15.5	+17.9	3.11	4.06	3.27	+30.5	+24.2	
IE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IT	8.36	8.66	9.15	+3.6	-5.4	-	-	-	-	-	-	-	-	-		
LT	6.11	6.64	5.77	+8.6	+15.1	2.80	2.55	2.35	-8.9	+8.6	3.65	3.06	2.97	-16.3	+3.0	
LU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LV	-	-	-	-	-	3.42	3.07	3.03	-10.2	+1.2	3.70	2.76	2.68	-25.3	+3.2	
MT	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
NL	11.67	11.66	12.00	-0.1	-2.8	-	-	-	-	-	-	-	-	-		
PL	7.35	6.47	6.51	-11.9	-0.6	2.80	2.65	2.53	-5.4	+4.5	3.38	3.57	3.41	+5.7	+4.6	
PT	8.32	7.87	7.27	-5.4	+8.2	0.93	0.99	0.93	+6.2	+7.0	1.15	1.69	1.38	+47.3	+22.6	
RO	2.16	3.95	3.53	+82.3	+11.7	-	-	-	-	-	2.93	3.24	3.02	+10.5	+7.0	
SE	-	-	-	-	-	6.35	5.86	5.82	-7.8	+0.6	5.92	4.99	5.03	-15.7	-0.9	
SI	7.01	6.30	7.88	-10.1	-20.1	-	-	-	-	-	-	-	-	-		
SK	5.51	5.26	6.70	-4.5	-21.4	3.15	2.76	2.90	-12.3	-4.8	3.08	2.75	3.05	-10.9	-9.9	
UK	-	-	-	-	-	-	-	-		-	3.50	4.06	4.02	+16.0	+1.1	

0		RAPE	AND TURNIP RAPE	E (t/ha)		POTATO(t/ha)							
Country	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs			
EU28	3.11	3.10	3.04	-0.3	+1.9	30.61	31.29	30.59	+2.2	+2.3			
AT	2.67	2.58	3.06	-3.5	-15.9	30.55	32.52	32.51	+6.5	+0.0			
BE	3.84	4.02	4.08	+4.6	-1.5	41.96	43.51	45.04	+3.7	-3.4			
BG	2.02	2.65	2.33	+31.2	+13.8	10.15	13.70	15.10	+34.9	-9.3			
CY	-	-	-	-	-	-	-	-	-	-			
CZ	2.76	3.22	2.90	+16.8	+11.1	27.98	28.79	27.01	+2.9	+6.6			
DE	3.69	3.80	3.71	+2.9	+2.4	44.76	41.69	43.69	-6.9	-4.6			
DK	3.75	3.48	3.64	-7.1		42.13	40.60	39.98	-3.6	+1.6			
EE	1.81	1.69	1.57	-6.5	+7.8	-	-	-	-	-			
ES	1.86	2.11	1.82	+13.4	+15.9	30.44	31.36	29.78	+3.0	+5.3			
FI	1.28	1.30	1.36	+2.0	-3.9	23.65	27.33	26.37	+15.5	+3.6			
FR	3.41	3.11	3.45	-8.7	-9.7	40.87	41.46	43.28	+1.4	-4.2			
GR	-	-	-	-	-	23.96	26.31	25.30	+9.8	+4.0			
HR	2.67	2.64	2.62	-1.2	+0.6	14.79	15.08	16.57	+2.0	-9.0			
HU	2.51	2.69	2.34	+7.3	+15.2	21.84	24.72	25.20	+13.2	-1.9			
IE	-	-	-	-	-	-	-	-	-	-			
IT	2.38	2.32	2.29	-2.7	+0.9	25.43	25.00	24.90	-1.7	+0.4			
LT	2.43	2.20	2.05	-9.5	+7.5	17.11	15.82	14.95	-7.6	+5.8			
LU	-	-	-	-	-	-	-	-	-	-			
LV	2.65	2.29	2.25	-13.7	+1.9	19.57	17.59	17.61	-10.1	-0.1			
MT	-	-	-	-	-	-	-	-	-	-			
NL	-	-	-	-	-	45.11	43.68	45.41	-3.2	-3.8			
PL	2.59	2.98	2.60	+15.0	+14.5	24.36	22.51	21.38	-7.6	+5.3			
PT	-	-	-	-	-	17.79	16.30	15.94	-8.4	+2.2			
RO	1.62	1.96	1.70	+20.7	+14.9	10.76	14.79	14.09	+37.5	+5.0			
SE	2.93	2.80	2.80	-4.6	-0.2	32.60	31.52	31.59	-3.3	-0.2			
SI	-	•	-		-		•		-	-			
SK	1.99	2.55	2.24	+28.3	+14.1	-	-	-	-	-			
UK	3.40	3.32	3.47	-2.2	-4.3	35.00	41.46	41.45	+18.4	+0.0			

Country			SUGAR BEETS (1	/ha)		SUNFLOWER (t/ha)							
Country	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs			
EU28	69.74	69.75	69.72	+0.0	+0.0	1.67	1.98	1.83	+19.0	+8.1			
AT	63.22	69.38	69.88	+9.7	-0.7	2.27	2.51	2.69	+10.6	-6.5			
BE	78.93	77.13	79.44	-2.3	-2.9	-	-	-	-	-			
BG	-	-	-	-	-	1.78	2.44	1.91	+36.8	+27.6			
CY	-	-	-	-	-	-	-	-	-	-			
CZ	63.26	63.80	59.91	+0.8	+6.5	2.31	2.38	2.35	+2.9	+1.0			
DE	68.86	66.67	67.47	-3.2	-1.2	2.38	2.08	2.13	-12.5	-2.0			
DK	64.92	62.19	60.52	-4.2	+2.8	-		-	-	-			
EE	-	-	-	-	-	-	-	-	-	-			
ES	88.83	93.46	85.62	+5.2	+9.1	0.85	1.10	1.11	+29.3	-1.2			
FI	34.67	40.90	38.38	+18.0	+6.6	-	-	-	-	-			
FR	86.56	87.35	88.58	+0.9	-1.4	2.32	2.36	2.42	+1.9	-2.4			
GR	54.02	61.19	63.73	+13.3	-4.0	2.59	2.54	1.91	-2.1	+32.6			
HR	39.11	52.86	51.14	+35.2	+3.4	2.68	3.22	2.70	+20.2	+19.1			
HU	47.09	49.92	55.16	+6.0	-9.5	2.14	2.29	2.29	+7.0	-0.1			
IE	-	-	-	-	-	-	-	-	-	-			
IT	54.92	53.43	56.14	-2.7	-4.8	1.66	2.22	2.13	+33.6	+4.2			
LT	52.24	50.66	46.49	-3.0	+9.0	-	-	-	-	-			
LU	-	-	-	-	-	-	-	-	-	-			
LV	-	-	-	-	-	-	-	-	-	-			
MT	-	-	-	-	-	-	-	-	-	-			
NL	78.56	76.70	76.89	-2.4	-0.2	-		-	-	-			
PL	58.25	56.75	52.94	-2.6	+7.2	-	-	-	-	-			
PT	-	-	-	-	-	0.53	0.57	0.57	+7.5	+0.4			
RO	26.59	35.10	34.69	+32.0	+1.2	1.31	1.82	1.53	+38.7	+18.4			
SE	59.34	56.14	57.70	-5.4	-2.7	-		-	-	-			
SI	-	-	-	-	-	-	-	-	-	-			
SK	45.31	50.37	56.33	+11.2	-10.6	2.19	2.13	2.21	-2.9	-3.9			
UK	70.00	69.51	67.72	-0.7	+2.6	-	•	-	-	-			

Notes: Yields are forecast for target crops with more than 10,000 ha per country

Sources: 2008-2013 data come from DG AGRICULTURE short term Outlook data (dated October 2013, received on 15/11/2013), EUROSTAT Eurobase (last update: 17/10/2013) and EES (last update: 16/09/2013) 2013 yields come from MARS CROP YIELD FORECASTING SYSTEM

Country			WHEAT (t/ha)					BARLEY (t/ha)			GRAIN MAIZE (t/ha)					
oounay	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	2012	2013	Avg 5yrs	%13/12	%13/5yrs	
BY	3.50	3.59	3.44	+2.7	+4.5	3.23	3.31	3.24	+2.4	+2.1	5.26	5.92	5.17	12.6	+14.5	
DZ	1.76	1.72	1.50	-2.5	+15.0	1.54	1.65	1.36	+7.0	+21.7	-	•	-	-	-	
MA	1.24	2.10	1.67	+69.7	+25.2	0.63	1.24	1.13	+96.7	+9.5	-	-	-	-	-	
TN	1.93	1.55	1.86	-19.5	-16.3	1.16	0.94	1.26	-18.6	-25.0	-		-	-	-	
TR	2.67	2.53	2.52	-5.4	+0.4	2.58	2.51	2.42	-2.7	+3.9	7.38	7.42	7.23	0.5	+2.6	
UA	2.80	3.05	3.12	+8.9	-2.3	2.11	2.26	2.39	+7.1	-5.4	4.79	5.46	5.09	13.9	+7.1	

Yields are forecast for crops with more than 10,000 ha per country

Sources: 2008-2013 data come from FAO, PSD-online, INRA Maroc, MinAGRI Tunisia and DSASI Algeria 2013 yields come from MARS CROP YIELD FORECASTING SYSTEM

1

Note:

# 4. Atlas maps

## Precipitation









## Temperatures





#### 2013 MARS Bulletins

Date	Publication	Reference
21 Jan	Agromet. analysis	Vol. 21 No. 1
25 Feb	Agromet. analysis	Vol. 21 No. 2
25 Mar	Agromet. analysis and yield forecast	Vol. 21 No. 3
22 Apr	Agromet. analysis, remote sensing analysis, and yield forecast	Vol. 21 No. 4
21 May	Agromet. analysis, remote sensing analysis, and yield	
17 Jun	forecast, pasture analysis Agromet. analysis, remote sensing analysis, and yield	Vol. 21 No. 5
	forecast, pasture update	Vol. 21 No. 6
22 Jul	Agromet. analysis, remote sensing analysis, and yield forecast, pasture update,	V-1 21 N- 7
	rice analysis	VOI. 21 NO. 7
26 Aug	Agromet. analysis and yield forecast, pasture update	Vol. 21 No. 8
16 Sep	Agromet. analysis, remote sensing analysis and yield forecast, pasture update	Vol. 21 No. 9
21 Oct	Agromet. analysis, remote sensing analysis and yield forecast, pasture analysis,	
	rice analysis	Vol. 21 No. 10
25 Nov	Agromet. analysis, campaign review and yield forecast	Vol. 21 No. 11
16 Dec	Agromet. analysis	Vol. 21 No. 12

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server http://europa.eu.

Luxembourg: Publications Office of the European Union

© European Union, 2013

Reproduction is authorised provided the source is acknowledged.

#### Printed in Italy

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle. Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new standards, methods and tools, and sharing and transferring its know-how to the Member States and international community.

The mission of the JRC-IES is to provide scientific-technical support to the European Union's policies for the protection and sustainable development of the European and global



# The current MARS\* Bulletin is an EC publication from AGRI4CAST (JRC/IES MARS Unit)

All *MARS Bulletins* are available under: http://mars.jrc.ec.europa.eu/mars/Bulletins-Publications *MARS agro-meteorological data* is available at http://www.marsop.info

#### Analysis and reports

B. Baruth, I. Biavetti, A. Bussay, A. Ceglar, O. Chukaliev, G. Duveiller, G. Fontana, S. Karetsos, R. Lecerf, R. Lopez, L. Seguini, A. Srivastava, M. v.d. Berg.

Reporting support G. Mulhern

Edition B. Baruth, M. van den Berg, S. Niemeyer

#### **Data production**

MARS unit AGRI4CAST/JRC, ALTERRA (NL), Meteoconsult (NL) and VITO (BE)

#### Contact

JRC-IES-MARS / AGRI4CAST Action info-agri4cast@jrc.ec.europa.eu

JRC 78476 EUR 24736 EN ISSN 2314-9736

© European Union 2013

\*MARS stands for Monitoring Agricultural Resources

#### Legal Notice

Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

#### Disclaimer

The geographic borders are purely a graphical representation and are only intended to be indicative. The boundaries do not necessarily reflect the official EC position.

#### Technical note:

The long term average (LTA) used within this Bulletin as a reference is based on an archive of data covering 1975-2012.

