

JRC MARS Bulletin

Crop monitoring in Europe

November 2021

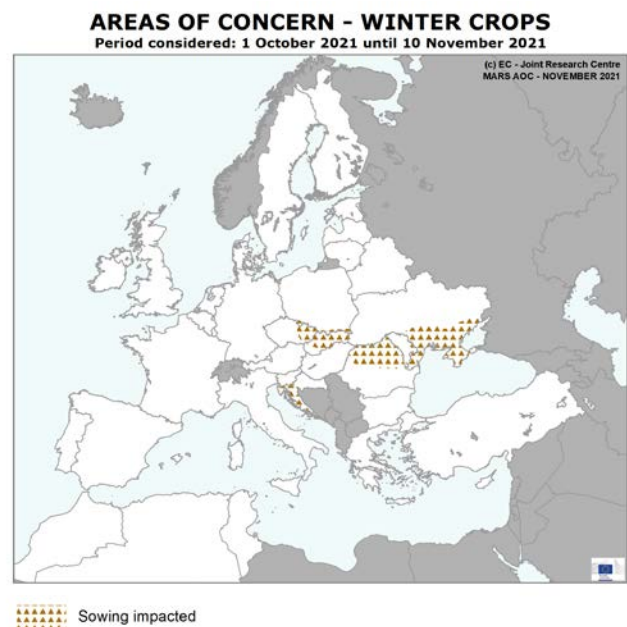
Sowing campaign close to conclusion

Rain deficit in central and eastern Europe raises some concern

In most parts of Europe, continued fair autumn weather provided good conditions for farmers to progress with the sowing of winter crops, as well as for emergence and early development of the seedlings. In most regions, weather conditions have also been favourable for the harvesting of summer crops, and to catch up progress where delays were reported in October.

Rapeseed sowing was concluded within the optimal time window and under generally favourable conditions in the main producing regions; with the exception of Romania, where the sowing campaign was prolonged due to dry conditions. In most regions, adequate temperatures and soil moisture sustained emergence and early development of rapeseed seedlings, and the plants are in good condition for entering the winter period.

The sowing campaign for winter cereals has been completed on time in most of central and northern Europe, and is currently progressing well in the south. In most of these regions, weather conditions have been favourable for emergence and early development. Dry conditions in Czechia, Slovakia, southern Ukraine and northern Romania, resulted in delays in winter wheat sowing and



crop emergence. High rainfall in central and southern Italy and large parts of the Balkan region did not impact the sowing of winter crops, with the exception of Croatia, where a moderate delay in emergence is observed.

In most regions, weather conditions have also been favourable for the harvesting of summer crops, and to catch up progress where delays were reported in October. In France, for example, more than 90% of grain maize has been harvested in most of the regions; only Alsace is still somewhat behind.

Contents:

1. Agrometeorological overview
2. Sowing conditions
3. Atlas

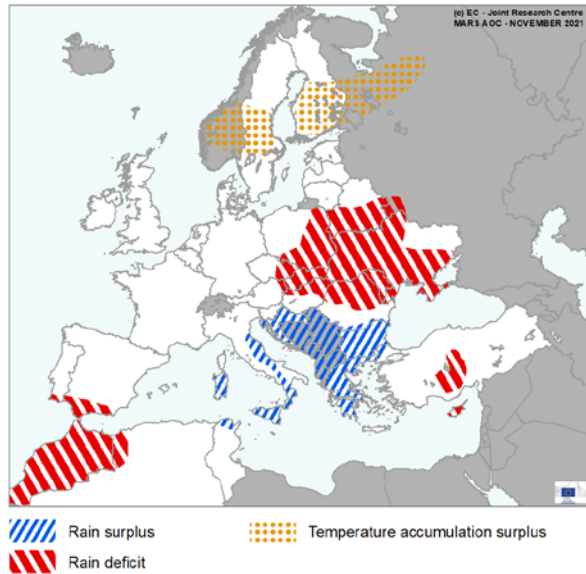
Covers the period from 1 October until 10 November

1. Agrometeorological overview

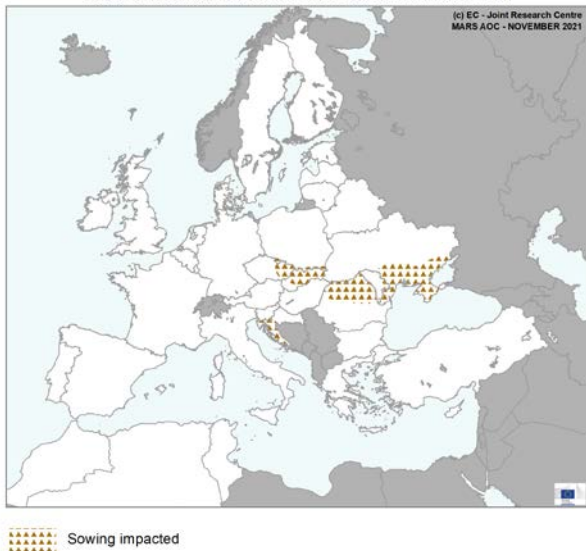
1.1 Areas of concern

The maps below display the most noteworthy meteorological events that occurred between 1 October and 10 November (top) and their impact on the sowing of winter crops and/or their emergence (bottom). Events reported in the October issue of our Bulletin are not repeated here.

AREAS OF CONCERN - EXTREME WEATHER EVENTS
Based on weather data from 1 October 2021 until 10 November 2021



AREAS OF CONCERN - WINTER CROPS
Period considered: 1 October 2021 until 10 November 2021



Weather anomalies during the period under analysis mainly occurred in **northern, central, and eastern Europe** and in the **Mediterranean** region.

Rainfall which was substantially above average levels was observed in central and southern **Italy**, including its main islands, as well in a large part of the **Balkan** region. Accumulated precipitation was 50-80% higher than the LTA and was mainly concentrated in the first half of October and in early November. In Italy (*Sicilia, Sardegna and Calabria*), localised floods and landslide events occurred as consequence of Mediane Apollo, at the end of October, as highlighted also by the Copernicus Emergency Management Service (EMS). However, with the exception of **Croatia**, where a moderate delay in emergence is observed, these anomalous conditions did not impact the sowing of winter crops (mainly wheat and rapeseed) or emergence.

By contrast, some other regions were characterized by rain deficit with negative effects on winter crops. In particular, in **central-eastern Europe, Turkey, southern Ukraine and Morocco**, rainfall was 50-100% lower than the LTA, corresponding to a deficit of 80 – 150 mm. In **Czechia, Slovakia, southern Ukraine and northern Romania**, these dry conditions resulted in delays in winter wheat sowing and crop emergence. Also, in the **Maghreb** region, the marked deficit in rainfall has raised concerns, and the need to closely monitor winter crop production areas will continue over the coming weeks.

The period analysed was warmer than usual in northern Europe, particularly in **Sweden, Finland and eastern Russia**. Temperature anomalies here reached between 1 and 4 °C above the LTA but without any significant impact for winter crops.

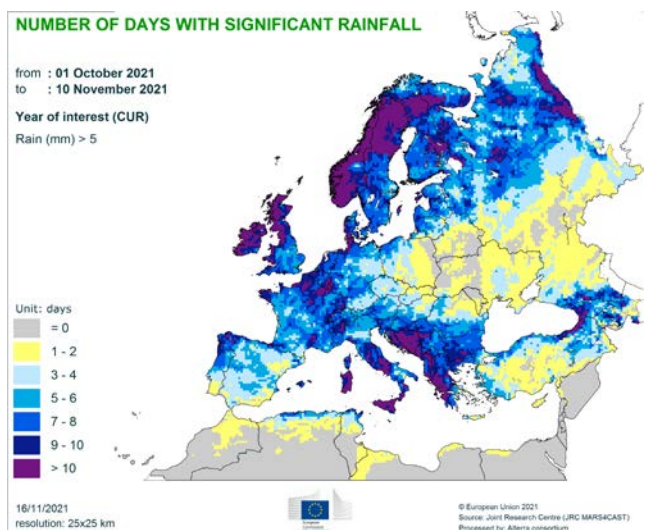
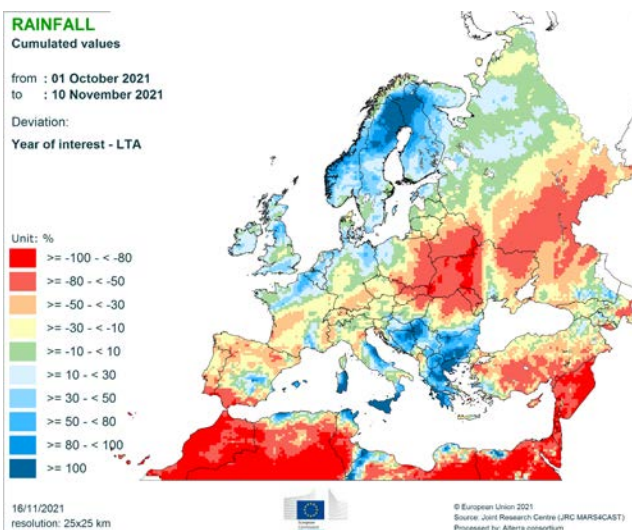
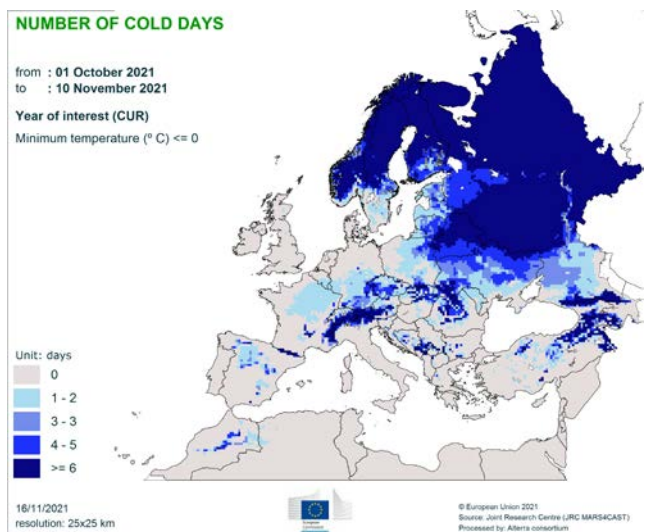
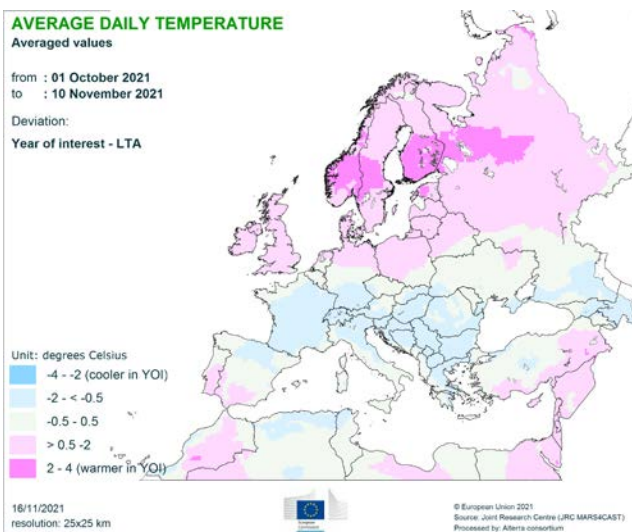
1.2 Meteorological review (1 October – 10 November 2021)

Conditions slightly warmer-than-usual were recorded in northern Europe and the northernmost parts of western and central Europe, as well as in southern parts of the Iberian Peninsula and southern Turkey. Daily mean temperature anomalies were mainly from +0.5 °C to +2 °C in these regions. More substantial temperature anomalies (up to +4 °C) occurred in central Scandinavia, Finland, and some parts of Estonia and Russia.

Conditions slightly colder-than-usual, with daily mean temperature anomalies from -2 °C to -0.5 °C, were mainly recorded in a large region extending from northern Spain, France, northern Italy and southern Germany to the Balkan region, and southern parts of European Russia. However, in most regions, the number of days with minimum temperatures below 0 °C was equal to or less than the LTA. In central and northern Spain, a few mild frost events were observed where they are not usually seen at this time of year.

Wetter-than-usual conditions were mainly observed in the Mediterranean isles, the Balkan region, and in western and northern Scandinavia. Anomalies in total precipitation were mostly greater than +80% compared with the LTA. Less marked positive rainfall anomalies (+30% to +80%) occurred in the North Sea and Ost Sea region. At the end of October, Medicane Apollo caused extreme precipitation and associated floods in eastern Sicily.

Drier-than-usual conditions, with anomalies in total cumulative precipitation from -100% to -50%, were observed in a large region covering eastern Poland, southern Belarus, western Ukraine, Slovakia, north-eastern Hungary, and northern Romania. This was also true in southernmost parts of the Iberian Peninsula, north-eastern Ukraine, central parts of European Russia, large parts of Morocco, and central and southern Turkey. Rainfall that did occur in these regions was confined to two or less events.



1.3 Weather forecast (19 – 26 November 2021)

Weather conditions in the forecast period will be mainly determined by a slowly-evolving cyclonic disturbance centred over Spain linked to a sequence of two large scale troughs extending over north-eastern Europe. This atmospheric circulation will favour colder-than-usual conditions in north-eastern Europe and, towards the end

of the forecast period, also in western and central Europe. Moderate-to-intense precipitation events are also expected over large areas in the western Euro-Mediterranean region, south-eastern Europe, and in northern and north-eastern Europe.

2. Sowing conditions

Winter cereals (soft wheat, durum wheat, winter barley, rye, triticale)

Sowing mostly completed in the north, and progresses well in the south

The winter sowing campaign has been completed on time in most of central and northern Europe and is currently progressing well in the south. Besides some concerns in some central and eastern regions, weather conditions have been favourable for emergence and early development.

Winter sowing was completed in September in Scandinavia, the Baltic countries and Finland, and in October in Ireland and the United Kingdom. It was almost completed at the beginning of November in France, Germany and the Benelux countries. In most of these regions, weather conditions posed no serious constraints to sowing. In the Benelux countries, the campaign was hampered by periods with frequent and high rainfall but the few windows with suitable (albeit not always optimal) conditions offered sufficient opportunities to sow the planned areas. Mild temperatures and adequate soil moisture conditions favoured rapid emergence and good stand formation. However, the temperatures that were favourable for emergence and early development also favoured the development of pests in these countries, which are currently closely monitored, and controlled where needed.

In most of central and partially in eastern Europe, soil conditions were generally adequate in October for sowing to be concluded and for crops to emerge. In Poland, for example, after the rainy month of September sowing was concluded in October, mainly under favourable conditions. In Croatia, high rainfall in November might lead to poor crop establishment, whereas in Slovenia conditions were fair for sowing and the early development of cereals.

In Czechia and eastern Slovakia, the rain deficit that has built up since September could affect crop establishment.

In Hungary, the campaign was almost concluded in October under satisfactory conditions.

In Bulgaria and Romania, where dry conditions characterised significant areas during recent months, the sowing campaign has recently been progressing well and should be concluded as planned. Soil moisture conditions improved in October and the beginning of November to ensure adequate germination and emergence.

In Ukraine, sowing has progressed well and has almost been completed. However, the dry and relatively cold conditions observed in October caused delays to emergence and early crop development with a possible negative effect on crop establishment in the most significant areas for winter cereals in the south. In Russia, sowing was concluded under predominantly dry conditions but with adequate emergence.

Sowing started at the end of October in Greece and earlier than usual in Italy. In both countries, the sowing of winter cereals is progressing well. If weather conditions in the coming weeks allow, the campaign should be concluded as usual. In Spain and Portugal, rainfall at the end of October and the first days of November created adequate soil moisture conditions for sowing and germination, but more rainfall is needed for sowing to progress and to sustain crop establishment. However, the mild temperatures in southern areas allow the sowing window to be extended until December, ensuring more appropriate soil moisture conditions for crop germination. Durum wheat sowing has started in southern Europe, and progresses normally, but in Spain, farmers in the south, where durum wheat is mainly cultivated, are waiting for more substantial rain to start the sowing campaign.

Winter rapeseed

Predominantly good conditions at the start of the growing season

Conditions were generally favourable for rapeseed sowing in most of the main producing regions, and the sowing carried out was concluded within the optimal time window, with the exception of Romania, where the sowing campaign was prolonged due to dry conditions. In most regions, adequate temperatures and soil moisture sustained emergence and early development of rapeseed seedlings, and the plants are in good condition for entering the winter period.

In the EU's main rapeseed producing countries (Germany, Poland, and France), agro-meteorological conditions were generally favourable for early crop development, including of late-sown crops in Germany and Poland that are generally in good condition, despite a delayed start to the season, and are adequately prepared for winter. Nevertheless, high insect pressure may be reported regionally. In France, the rapeseed stands are in exceptionally good condition. In mid-November, plants reached the stage of 4-5 leaves. A high incidence of flea beetle larvae was reported in October, but it was well controlled by farmers. In November, the dry and relatively cold conditions reduced the pest and disease pressure.

In Romania, very dry conditions in September impaired sowing and germination of rapeseed plants. Although

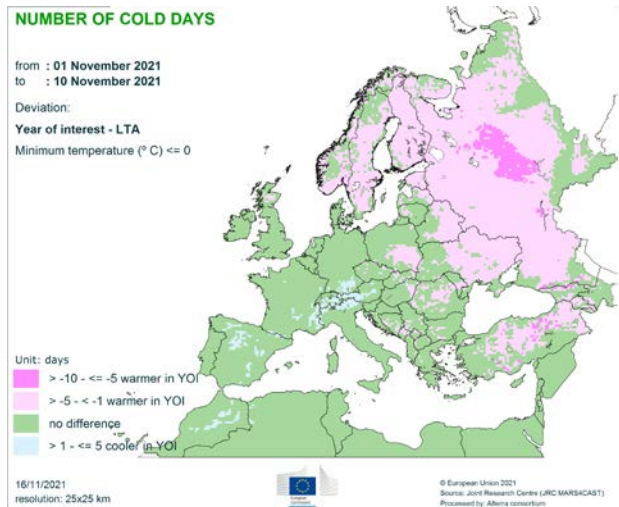
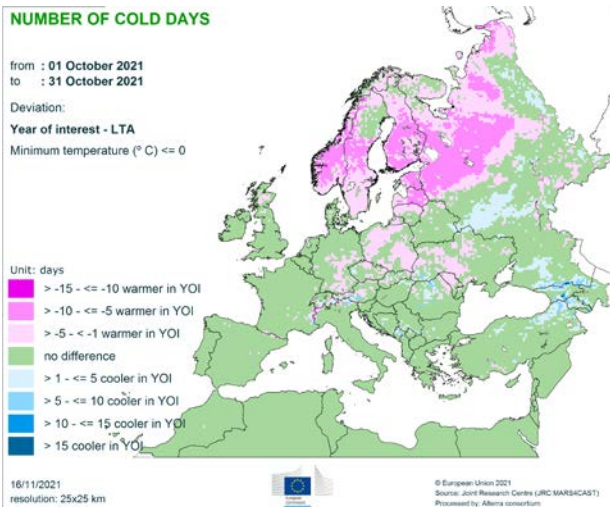
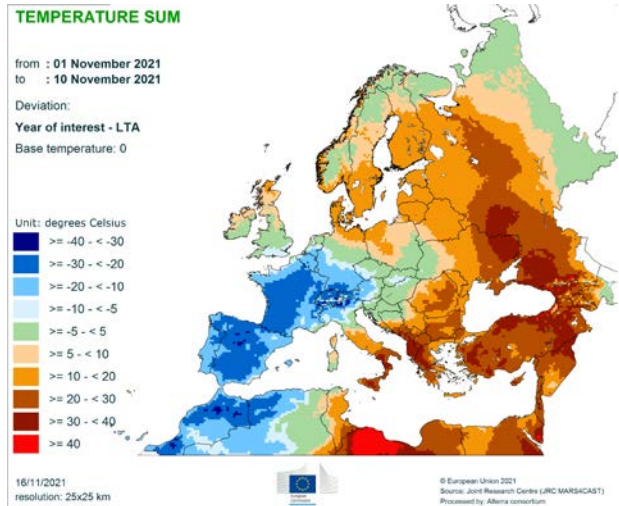
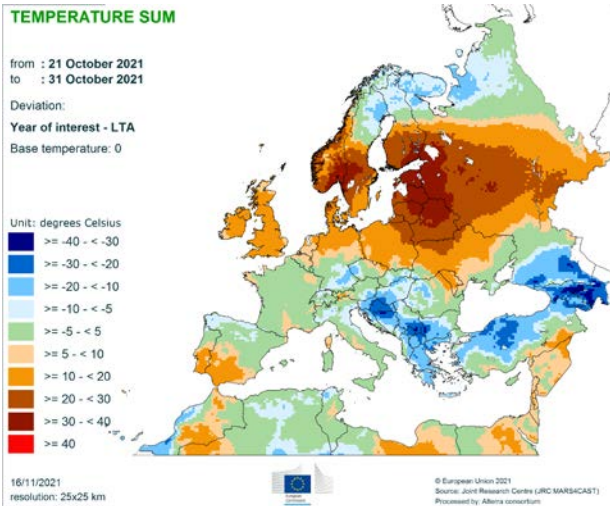
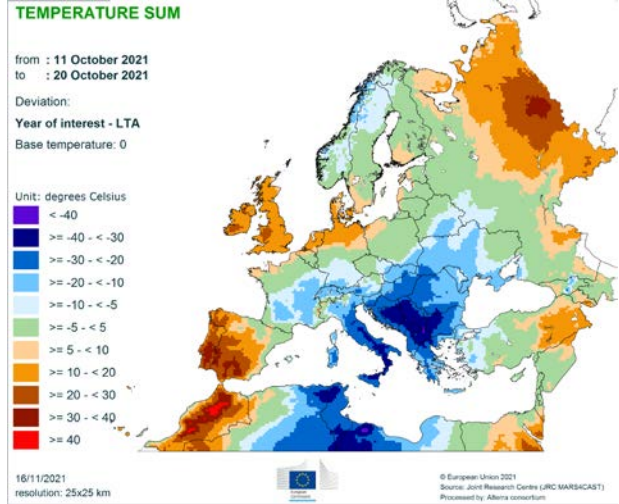
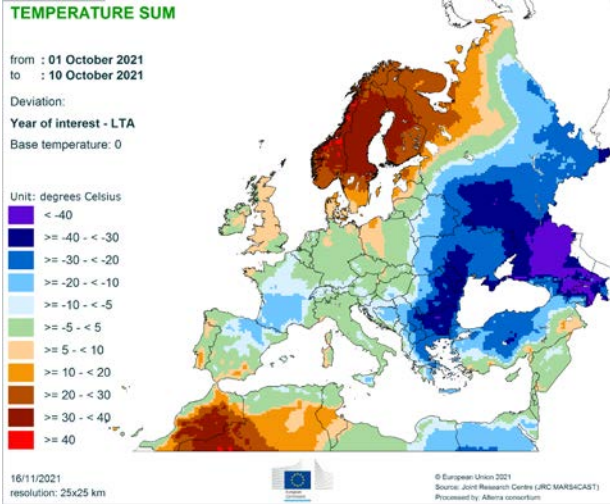
precipitation in October improved soil moisture conditions (especially in southern Romania) plants are lagging behind in development, as compared to an average season, and are sub-optimally prepared for winter. In Czechia, soil moisture levels were generally adequate for germination and early development of seedlings despite below-average rainfall. However, there are reports of high pest pressure. In Hungary, the conditions are good, and plants are reaching the 5-6 leaf stage.

In Denmark, conditions have been favourable for rapeseed development. Also, in Sweden which received substantial rainfall in September and during the first half of October, no negative impact on rapeseed plants is foreseen.

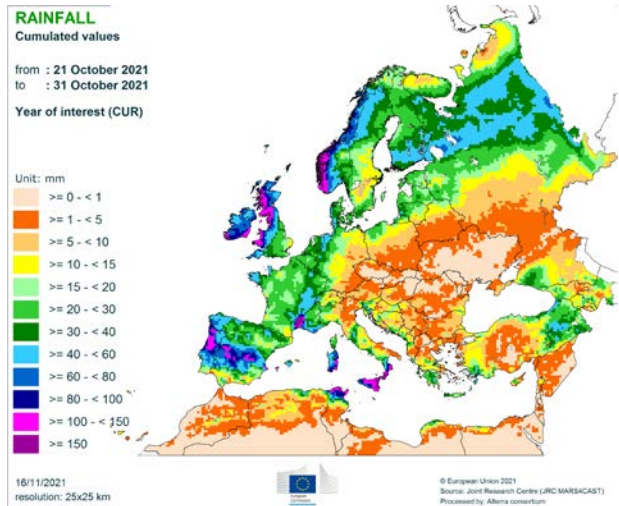
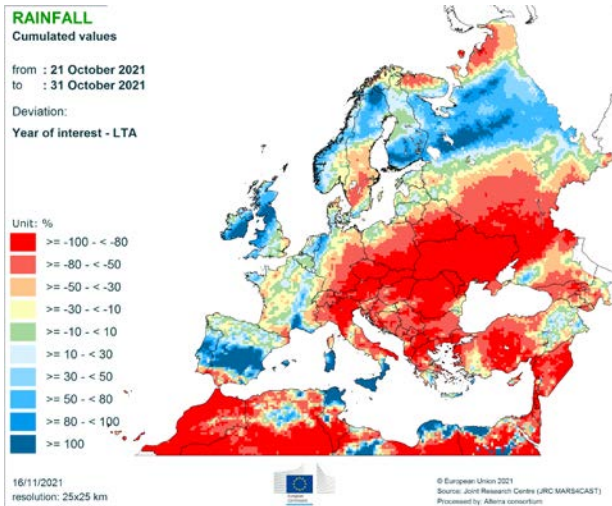
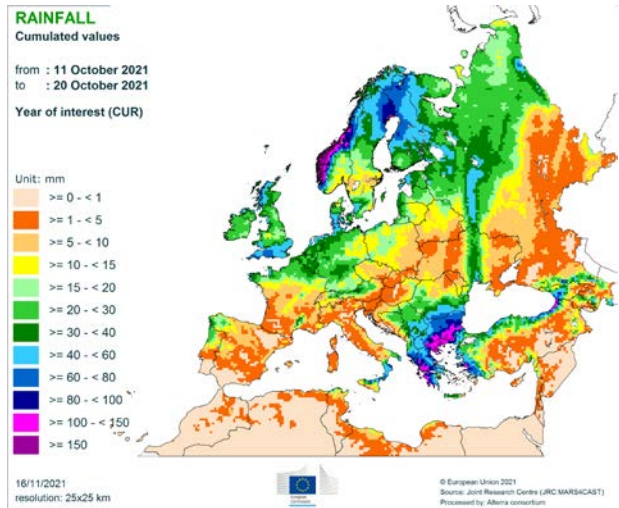
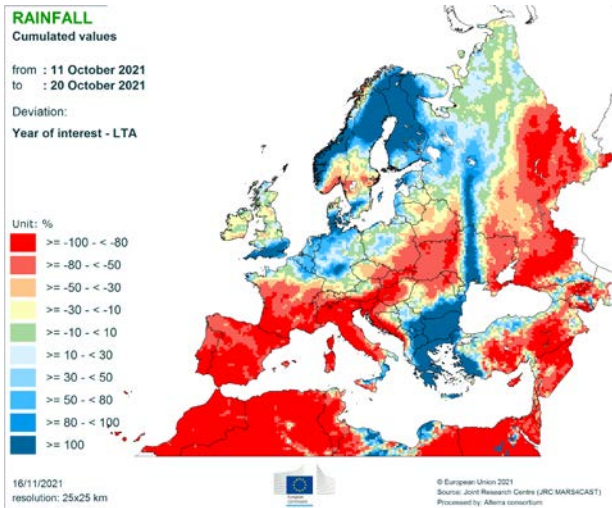
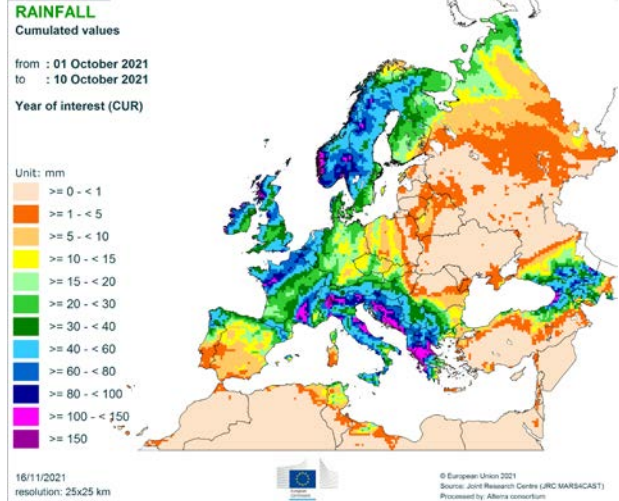
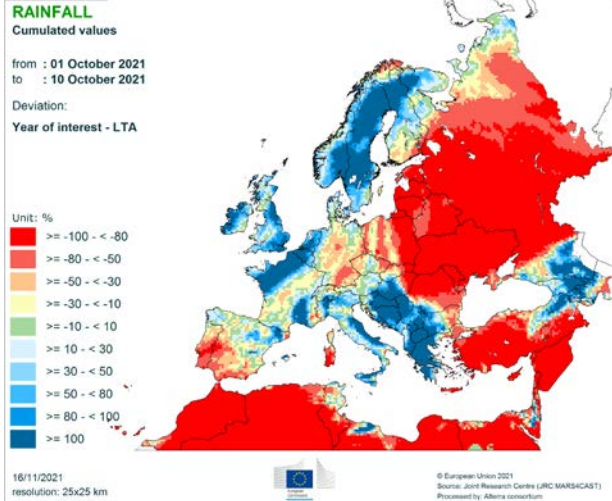
In Spain, sowing was completed in October, and the rainfall at the end of October favoured emergence. More rainfall is needed in the coming weeks to sustain adequate crop establishment. In Italy, the sowing campaign was concluded mid-October. Dry conditions in September were not favourable, but conditions improved after rainfall in October. Plant development currently ranges from emergence to the 3-leaf stage, depending on the sowing period.

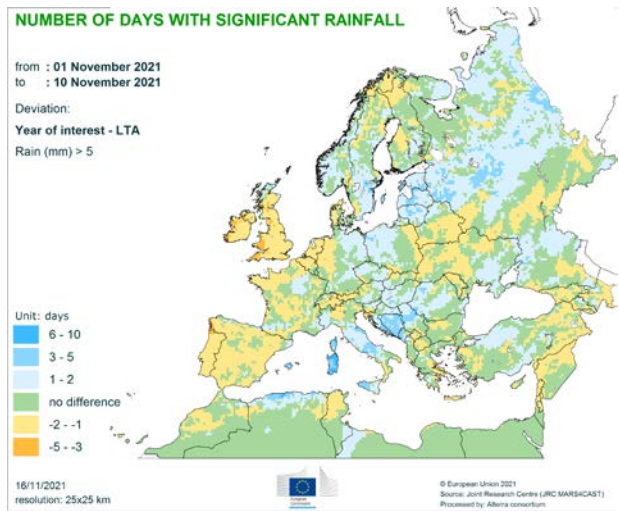
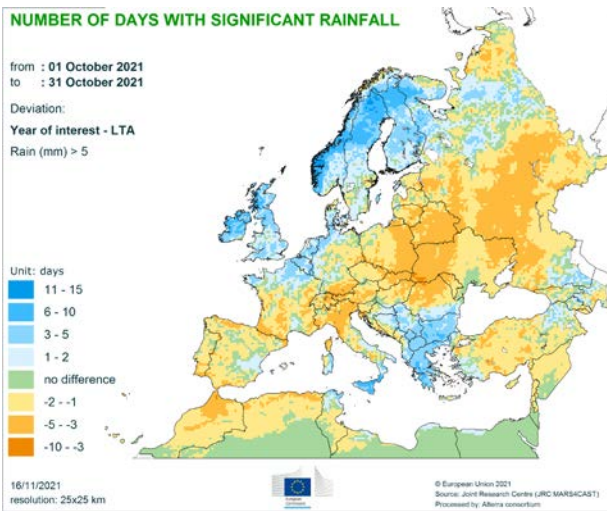
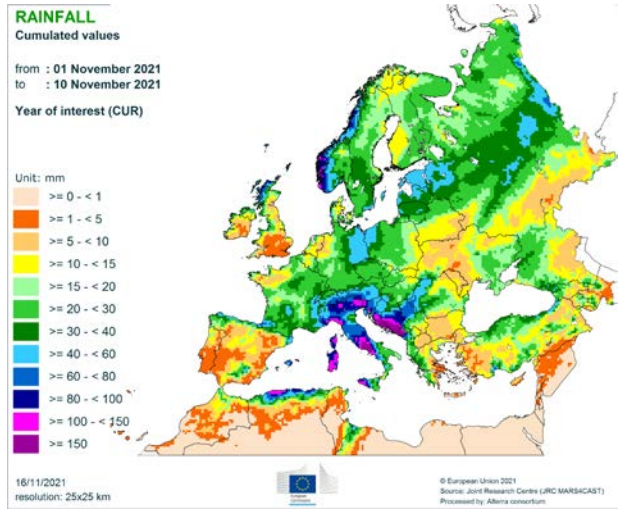
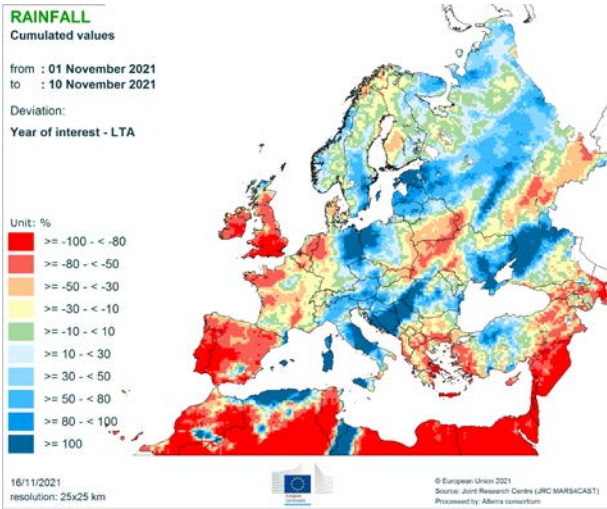
3. Atlas

Temperature regime

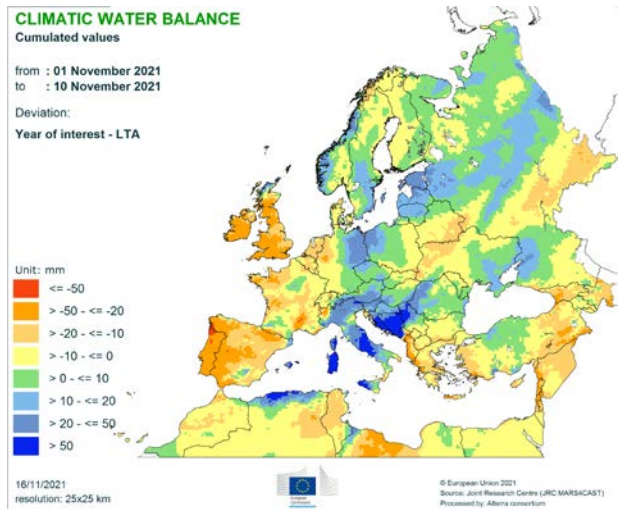
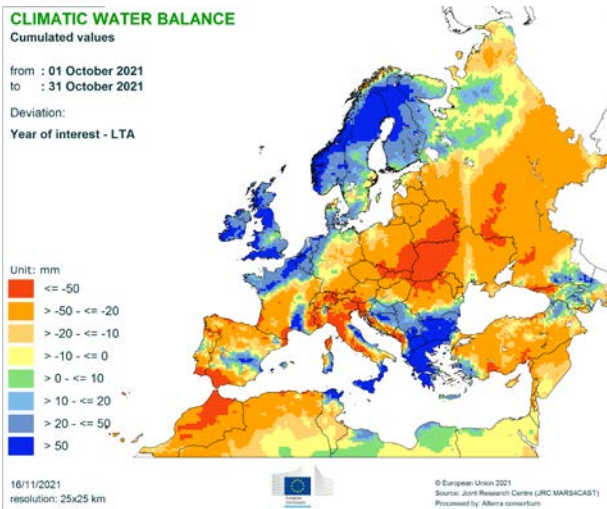


Precipitation





Climatic water balance



JRC MARS Bulletins 2021

Date	Publication	Reference
25 Jan	Agromet analysis	Vol. 29 No 1
22 Feb	Agromet analysis	Vol. 29 No 2
15 Mar	Agromet analysis, yield forecast	Vol. 29 No 3
26 Apr	Agromet analysis, remote sensing, pasture analysis, sowing conditions, yield forecast	Vol. 29 No 4
25 May	Agromet analysis, remote sensing, pasture analysis, sowing update, yield forecast	Vol. 29 No 5
21 Jun	Agromet analysis, remote sensing, pasture analysis, rice analysis, yield forecast	Vol. 29 No 6
26 Jul	Agromet analysis, remote sensing, pasture analysis, harvesting conditions, yield forecast	Vol. 29 No 7
23 Aug	Agromet analysis, remote sensing, pasture update, harvesting update, yield forecast	Vol. 29 No 8
20 Sep	Agromet analysis, remote sensing, pasture analysis, rice analysis, harvesting update, yield forecast	Vol. 29 No 9
25 Oct	Agromet analysis, pasture update, sowing conditions, harvesting update, yield forecast	Vol. 29 No 10
22 Nov	Agromet analysis, sowing update, harvesting update	Vol. 29 No 11
13 Dec	Agromet analysis	Vol. 29 No 12

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PDF: KJ-AW-21-011-EN-N ISSN 2443-8278 doi:10.2760/692705

The JRC MARS Bulletin – Crop monitoring in Europe is a European Commission publication of the Joint Research Centre's AGRI4CAST project (JRC Food Security Unit – Directorate for Sustainable Resources)

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Analysis and reports

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