



MED-Amin Bulletin 2021 – 1

Winter crops early outlook at the end of Feb. 2021

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March 2021

Winter crops in fair condition in account of occurred unusual weather events throughout the first half of the cereal campaign. Moderate level of concern for the final outlook in central Maghreb regions.

The present bulletin is a general outlook about the progress of cereal crops in the Mediterranean region. It provides **early qualitative forecasting** of the 2020-2021 campaign, with particular focus on soft wheat, durum wheat and barley. The period of review last from the sowing up to the end of February 2021. **Other two outlooks will be carried out** in May and June, to keep on monitoring crop conditions in the Mediterranean region until the harvest.

This crop monitoring and early warning initiative was progressively developed since 2016 by the MED-Amin network, using a general approach similar to the one implemented by GEOGLAM for the Agricultural Market Information System (AMIS). The MED-Amin network, gathering **13 Mediterranean countries** and coordinated by the CIHEAM, aims to reduce prices volatility in agricultural markets. This initiative lays the foundation for an **early warning system** strengthening food security in the region.¹

Regional outlook summary

At the end of February 2021, the general outlook for winter **crops across the Mediterranean region is rather positive and mainly in line with the last 5-year average condition**. Three main agro-meteorological events interested the region during this first half of the campaign. A lasting drought affected the southern rim of the Mediterranean (central Maghreb) in the September – November period. This prevented from normal soil preparation, and hampered

crops in the early vegetative stages, letting future harvest already at risk. The storm *Filomena*² hit the Iberian Peninsula at beginning of January, triggering local floods and an exceptional snow event in large parts of the area, especially to the north. This event was accompanied by a cold spell that lasted sometimes more than ten days (e.g. Spain, France), at mid-January, and heavy rains causing locally important floods and soaked soils in particular in North-Western Morocco and South-Western France. Another cold spell waved Northern Mediterranean countries, including Anatolian Peninsula and Balkans.

Given the above-described meteorological extremes, crops overall resulted hampered more by drought (Algeria, Morocco, Turkey) than frost or local floods conditions.

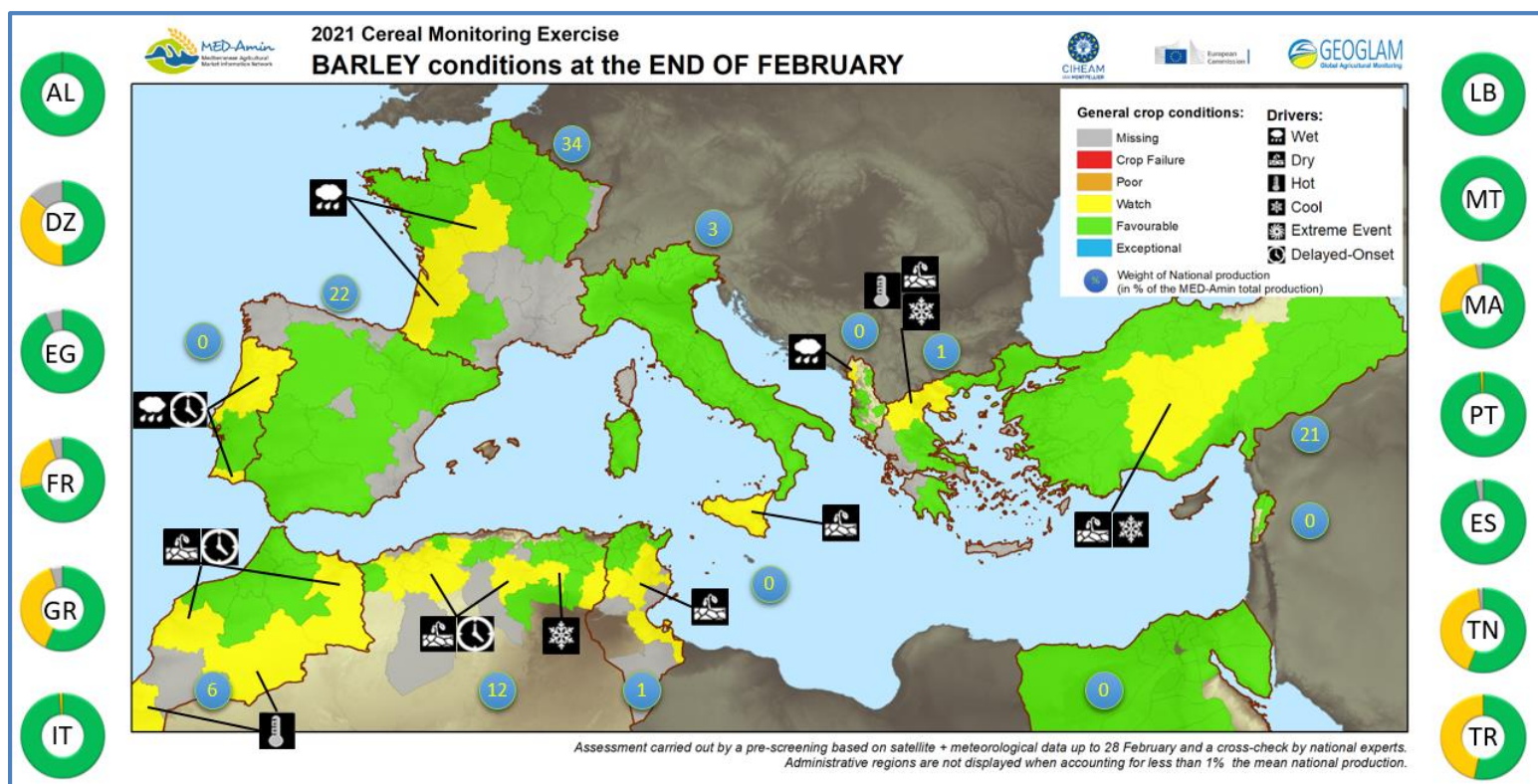
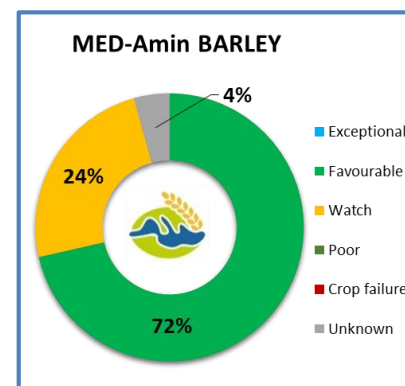
Winter crop conditions are fairly good and even with a positive outlook in **Albania, Italy, Egypt, Spain, Turkey and Lebanon**, taking into consideration that critical period (i.e. flowering) for crop development has still to come. The outlook is uncertain in **Portugal, Greece, Morocco and France**, whereas it is under risks in **Algeria**, where there is still a small room for crop recovery, and moderately in **Tunisia**.

¹ For more info: www.med-amin.org, <http://ec.europa.eu/jrc/en/mars> and <http://cropmonitor.org>

² <https://www.efas.eu/en/news/storm-filomena-andalusia-region-southern-spain-january-2021>

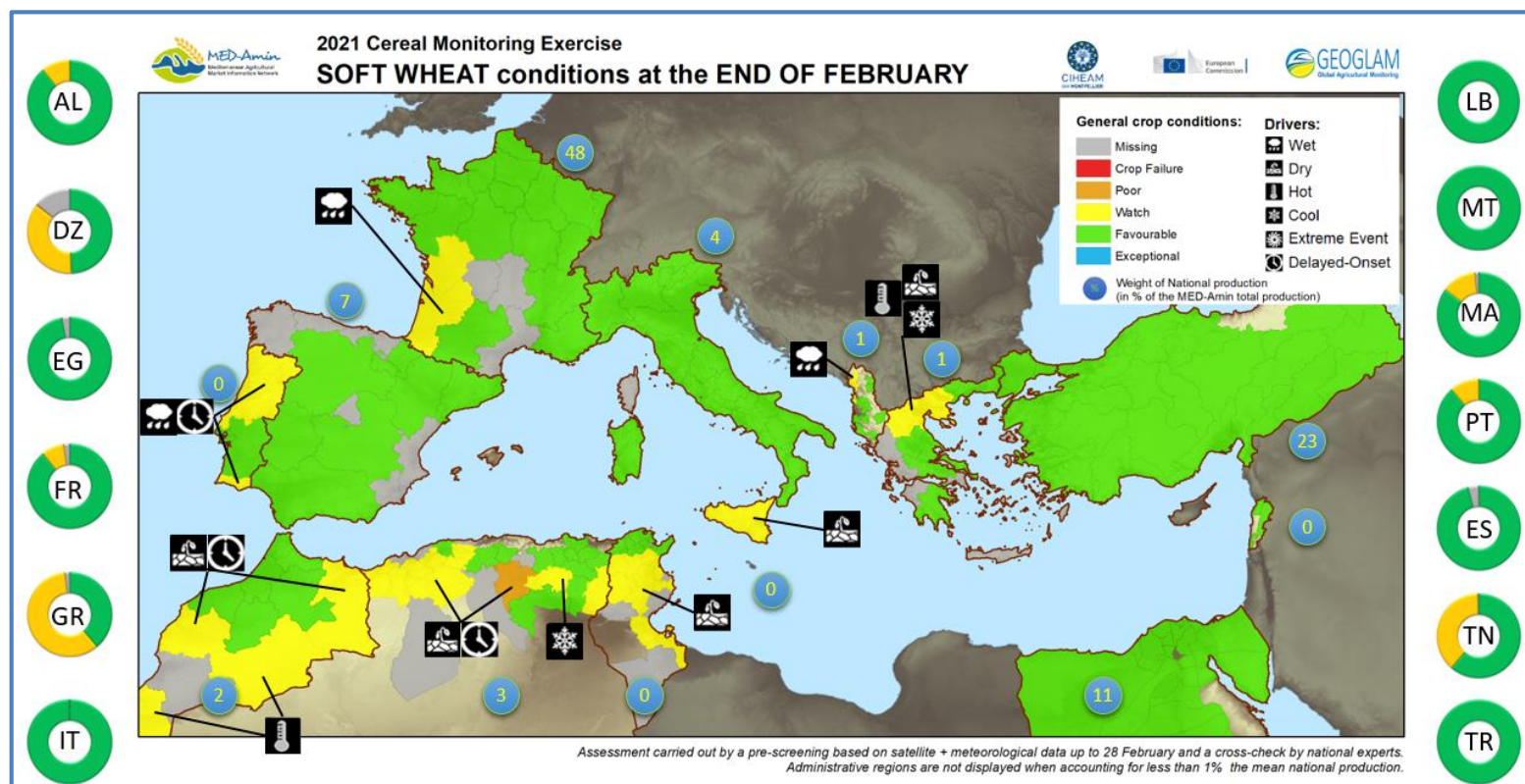
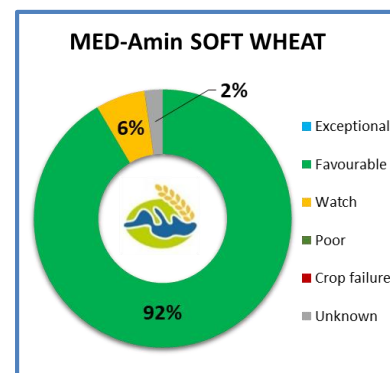
BARLEY is clearly the crop most affected by adverse abiotic conditions at regional level this campaign (see pie-chart beside on the right). About a quarter (24%) of MED-Amin planted area is highlighted as to 'watch', with potential for degradation in the coming months. Barley is performing worse than wheat in Turkey and France, two of the major producers in the region. However, more than 70% of the planted area is developing under favourable conditions. In North Africa, the most advanced crop calendar (compared to wheat) mitigated the negative impact of drought on plant development stages.

For example, in **France (FR)** accounting for 34% of MED-Amin area barley supply (based on the 5-Y average), *Centre, Aquitaine* and *Poitou-Charente* regions are to 'watch' (23% of French production, see pie chart on the left side of the map below) whereas conditions are favourable elsewhere, with even positive outlook in *Lorraine* and *Pays de la Loire* (on the contrary, barley was in crop failure in June last year in these two regions). Please refer also to the National Highlights section below (p. 6).



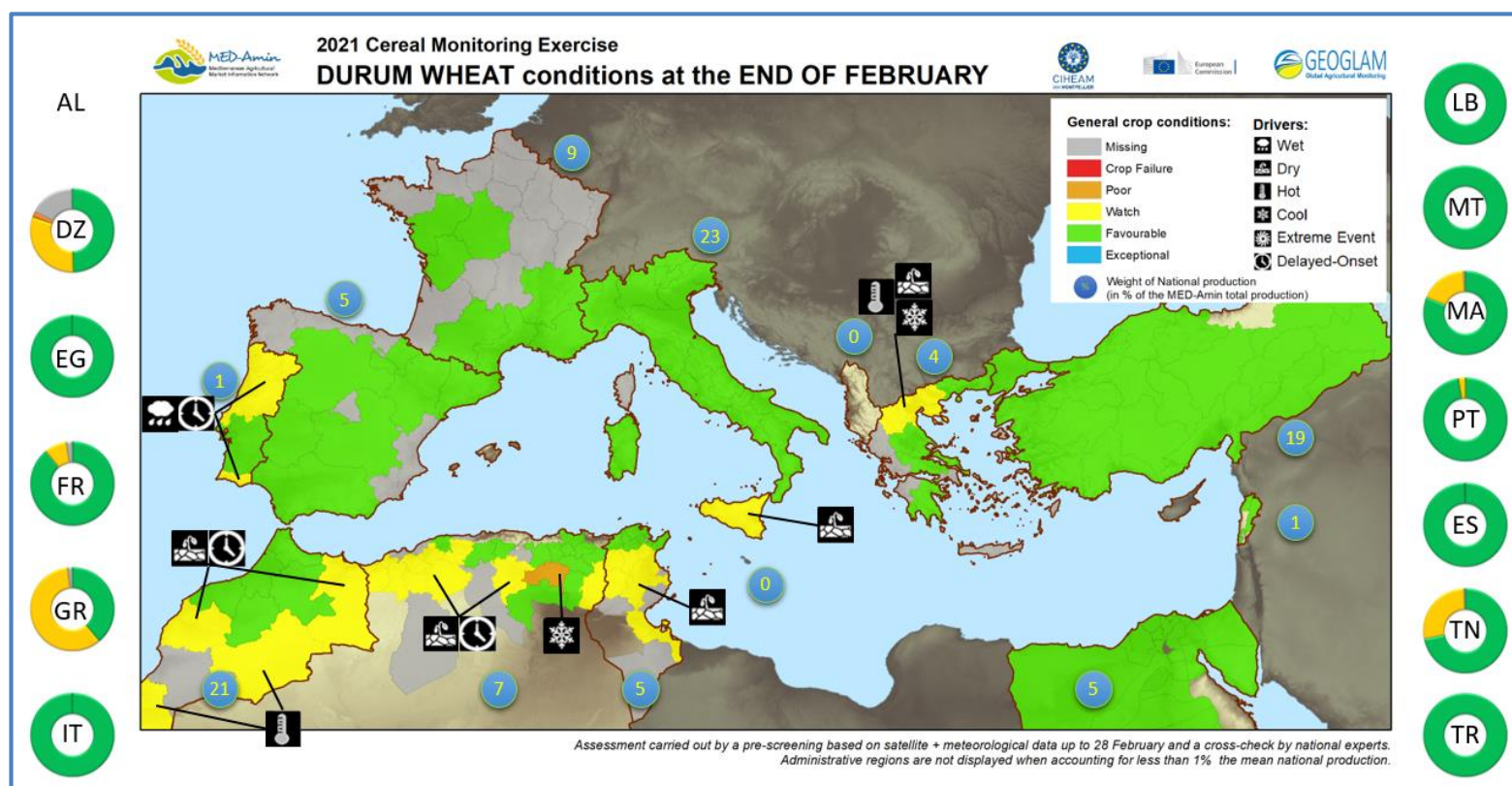
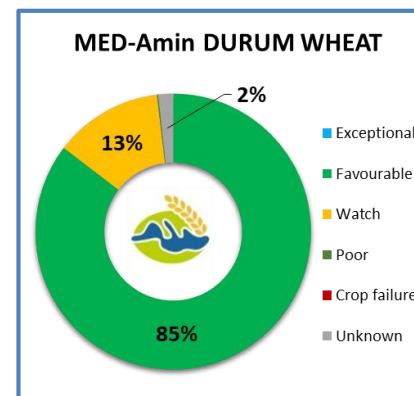
SOFT WHEAT supply potential is better preserved since the beginning of the campaign compared to the other winter crops, with a large majority under favourable conditions (92% of monitored areas, see pie chart beside on the right). Harvest expectations are positive at this stage in most of the productive regions.

For instance, all the soft wheat from **Turkey (TR)**, whose production accounts for 23% of MED-Amin production, is considered under favourable conditions at the end of February (see the corresponding pie chart for TR on the right side of the map below). In **Greece (GR)** (1% of MED-Amin production), the outlook for soft wheat is of concern: about 60% are considered to 'watch'. Please refer also to the National Highlights section below (p. 6).



DURUM WHEAT is a typical Mediterranean production (47% the World production), this **crop is developing under favourable conditions so far**. Most of the acreage in the MED-Amin region is growing under normal and/or favourable conditions. More than 10% are considered to 'watch' (see pie chart beside on the right).

In **Algeria (DZ)**, accounting for 7% the production in the MED-Amin area, crop conditions are mixed: the majority is 'favourable' (above 50%), a portion to 'watch' (above 30%) and a small part under 'poor' conditions (about 2%) to carefully monitor in coming weeks as flowering starts. In **Morocco (MA)**, crops are faring well, significantly better than the previous (negative) cropping season. A 'watch' conditions unfortunately prevail in some of the productive regions (18% of national durum wheat production). Please refer also to the National Highlights section below (p. 6).



National highlights³



Albania: So far, winter crop conditions are considered as favourable for meteorological conditions, since their planting, germination and normal vegetative development is performing well on the field, in particular in *Fier*. However, excessive rainfall, especially in January and February, delayed field preparation, and caused local floods. This may have locally hampered crop germination in some regions such as *Durrës*, *Lezha* and *Shkodra*. Wheat farmers have taken measures by opening and cleaning drainage channels to expulse excess moisture. 97.4% of the territory planted with cereals is in a favourable condition with the exception of 2.6% of the area planted with cereals that is considered under observation (Directorate of Policies & Programs, Ministry of Agriculture & Rural Development). So far, **winter crops are in line with 5-year average**.



Algeria: Climatic conditions at the start of the campaign were marked by a significant lack of precipitation during the months of September and October, creating a deficit of soil moisture which delayed the execution of the soil preparation and plant establishment. These conditions were particularly monitored in the Western and Central wilayas of the country (e.g. *Tlemcen*, *Tiaret*, *Batna*, *M'sila*, *Sidi Bel Abbes*, *Saida*). An improvement in weather conditions was noted from the return of the rains around the last decade of November, which gave cereal growers hope for the resumption of tilling-sowing operations in good soil moisture conditions. Conditions are overall below average and there is a potential risk for the final production of wheat and barley, with a slight delay in the vegetative stages for late sowing. Early crops like barley perform better compared to wheat. In the Eastern region, the start of this campaign (September and October) was marked by heavy rains (*Tébessa*, *Khenchela*, *Oum El Bouaghi*, *Constantine* and *Mila*) allowing good and on time ploughing-sowing operations. In *Batna*, crops suffered from a cold wave. At the time of analysis, **general crop conditions are of concern in Algeria**, but crops may still "recover" if conditions improve in most of the wilayas.



Egypt: **The overall outlook is favourable** thanks to noticeable seasonal rainfall and warmer-than-usual thermal conditions (heatwaves were frequent and particularly intense in mid-December, leading to overall record in the accumulated values). Satellite imagery shows average to above-average conditions for cereals, which indicates that there was sufficient water supply from irrigation to support adequate crop growth during the vegetative and reproductive stages of development.⁴

³ Highlights relating to each country are detailed in a section using a coloured background depending on the overall assessment of the situation: green if favorable, yellow if on watch

⁴ These information on crop conditions in Egypt, Greece and Italy was made available from the JRC-MED-Amin analysis and the latest JRC MARS Bulletin of March: <https://ec.europa.eu/jrc/sites/jrcsh/files/jrc-mars-bulletin-vol29-no3.pdf>



France: The planting campaigns at fall went well and on schedule thanks to favourable conditions. The planned acreage was able to be sown, resulting in an increase in planted areas compared to last year. Winter crops establishment was good thanks to good rainfall conditions. The heavy rains in the December - January period did not have a major impact on crops, except locally. However, unexpected heavy rains and floods in the South-West (mainly *Aquitaine* and *Poitou-Charente*) caused loss of plants, yellowing and nitrogen losses, justifying a deterioration of growing conditions in these regions, particularly for soft wheat and barley. A cold wave occurred in early February with little impact and little or no turnaround observed, except on spring barley sown at fall. Generally, plots have low grass pressure. As of February 28, “good” and “very good” [winter crops growing conditions](#) amount to 88% of the area for soft wheat, 84% for winter barley and 88% for durum, [slightly above the five-year average for the same date](#). They are also much higher than the values for the 2019-2020 cropping season, during which the growing conditions deteriorated significantly during the winter.



Greece: The season was characterized by above-average temperature in December and January which was beneficial for cereals growth especially in *Thessaly*. Precipitations were regularly distributed along the season. Germination and vegetative stages progressed under good soil moisture conditions. In *Central Macedonia*, the most productive region, the campaign is characterized by a slowdown in crop germination due to moderate drought and above-average temperature conditions in October and November. Two cold waves at mid-January and mid-February may have affected negatively winter crops in this region and *Western Macedonia*, setting biomass accumulation below the mid-term average and last year trend, leading to a [national outlook under vigilance / to watch](#).⁴



Italy: Crop growth was fairly delayed in November and December due to frequent rainfall events which slowed down biomass accumulation during the first vegetative stages. The winter crop campaign proceeds with exception for Sicily (southern Italy, one of the most productive region for durum wheat), where drier-than usual conditions occurred, with half of the average precipitation recorded. [In general, crops are progressing well, in line with an average season](#). If rainfalls occur during coming weeks, there is still room for an above-average year in Southern Italy.⁴



Lebanon: This year was characterized by warm temperature accompanied by well distributed and fairly abundant rainfall events along all the first half of the season. [Yield expectations are rather positive with a good level of production](#) according to farmers and increased wheat acreage versus the previous season, as wheat is cheaper to produce than other crops like vegetable and potatoes in this time of national crisis (CREAL). Rust disease pressure occurring on wheat might have a negative impact on yields as well as reduced access to fertilizers and selected seeds. During the quarantine period due to covid-19, the Ministry of Agriculture conducted field surveys to detect infestations of *Eurygaster* and

perform appropriate treatment on time. Cut roads, covid-19 induced restrictions and the collapse of Lebanese pound will likely affect negatively the production, transportation and exportation of cereals crops in Lebanon.



Malta: No extreme events are noted so far and general crop conditions are in line with averages.



Morocco: The 2020-2021 crop outlook has improved with the latest rainfalls in various regions of the country after dry months in Autumn.

So far, [the campaign runs far better than the two last years and in line with 5-year average](#). In addition to precipitations, a positive evolution of crop development is observed thanks to the operation of adequate maintenance works (chemical weed management and application of nitrogenous fertilizers) and the indirect benefits from dam reserves and groundwater levels, the Ministry of agriculture said. The heavy rains (locally followed by floods) which fell in the region of *Tangier-Tetouan* (probably linked to storm *Filomena*) in January did not affect crops. In *Fès-Meknes*, the development of crop biomass is very promising and significantly above average, including for late and direct sowing. Rainfalls were abundant especially in December (86 mm) and January (138 mm) following a harsh start of the campaign under very dry conditions. Temperatures were warmer than usual, and the duration of frost shorter. However, certain regions remain under to 'watch' status with rather poor conditions, in particular in *Marrakech-Safi* (e.g. Provinces of *Yousseoufia* and *Rehamna* where planting were hampered) and *Oriental*, where more than ¼ of the sown areas are under unfavourable conditions.



Portugal: Crop conditions have been very unstable in terms of temperature and precipitation. Autumn / winter cereals planting was impacted

by the precipitations in November – December, and had to be stopped when soil was soaked. January was characterized by very cold temperatures and dry conditions while the month of February, in mainland Portugal, was classified as very hot and very rainy. Root asphyxia is observed in low areas of *Alentejo*, *Beira Interior* and *Trás-os-Montes*, and caused planting delays in *Algarve*. However, [crops in Portugal show on average a normal vegetative development](#) so far. A cereal production in line with the previous 2019/20 campaign is expected.



Spain: So far, winter cereals are developing under normal to favourable conditions. The Storm *Filomena* hit Spain at beginning of January,

triggering an exceptional snow event in large parts of the country, especially in northern and central Spain. This period was accompanied by below-average temperature, which led cereals to gently slowed biomass accumulation but remained above-average values. In *Andalucia*, even though record hot temperatures hit the most productive region for durum wheat, the campaign follows the positive trend of last year thanks to fairly distributed rains along the half-season as plants start rising. Farmers are completing their fertilizer and herbicide applications in the cereal

areas without significant incidents, in particular in *Castilla y Leon*. **Wheat and barley are coming out of the winter with good potential, thanks to the rains of February**. Additional rainfall will be necessary in the near future to sustain the (to date) positive campaign.



Tunisia: The autumn rains were beneficial for all the governorates, especially in the northern region (*Bizerte, Beja and Jendouba*). However, the **return of dry conditions in Central regions might be of concern, especially for the 2021 production of barley** which is in vegetative development. Given that at the end of February we are still in the middle of the campaign, the lack of rain recorded in early 2021 can still be mitigated. More rainfall is needed in the coming weeks to sustain crop development and redirect the general outlook to average.



Turkey: Although there was a significant deficit of rainfall during the first half of the campaign, needed precipitation arrived at the beginning of 2021, especially in January, and **benefited to the emergence and a good development of winter crops so far**. Due to dry season at the beginning of the campaign, additional irrigation has been implemented in some crop producing areas. Re-evaluation of bioclimatic factors (temperature, rainfall, etc.) should be made in the following months as Turkey's critical stage for yield is still to come: if rainfalls go well, tillering will progress and yield will remain in line with average for wheat and barley. In *Central Anatolia*, there was no frost-kill damage from two cold waves in January and February thanks to sufficient snow cover but delayed plant development stage (still in emergence). However, some colour changes in barley crops have been observed locally due to cold sensitivity. Now plants are on average entering the tillering stage.

General methodology: The forecasting methodology is based on the monitoring of crop conditions using indicators derived from Earth observation, carried out jointly by the CIHEAM-IAMM and the Joint Research Centre of the European Commission (JRC). This allows detecting areas of concern, deviating from normal conditions, which are characterized using the GEOGLAM scale and nomenclature (see below). These pre-screened areas of concern, defined at a sub-national level, are then analysed, validated or completed by each National Focal-points of the MED-Amin network, taking into account feed backs from field observation and local experts.

Crop conditions legend (GEOGLAM scale and nomenclature):

- **Exceptional:** Conditions are much better than average at the time of reporting. This label can only be used between the grain-filling stages to the harvest stage (which started only in Egypt).
- **Favourable:** Conditions range from slightly below to slightly above average at the time of reporting.
- **watch:** Conditions are not far from average but there is a potential risk to final production. However, at this time it is considered that crops might still recover if conditions improve. This label may only be used between planting/early-vegetative stage and vegetative/reproductive stages.
- **Poor:** Conditions are well below average and are very likely to impact production with a harvest clearly below average.
- **Crop failure:** Crops have been strongly damaged, low yield and area reduction will strongly impact the production.

→ **Follow the evolution of the harvest forecasting:** Compare the evolution between three monitoring periods by staying tuned to the MED-Amin releases on <https://www.med-amin.org/fr/> and https://twitter.com/MEDAmin_network.

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