Excellent season lately hampered by rain surplus and high temperatures

Winter cereal and spring barley yield forecasts are close to a record high; however, conditions observed towards the end of the cropping season were less beneficial, with warm temperatures during grain filling and a rain surplus foremost in western oblasts

This cropping season was marked by a rain deficit in autumn, an early start to spring with mild temperatures in February and March, and a substantial rain surplus in May and June. Winter crops and spring barley have been faring very well, due to the early start to spring and above-average temperatures since February, and farmers are starting to harvest in the south. Some summer crop sowings have been delayed due to the rain surplus observed in western oblasts, particularly impacting soybean and to a lesser extent grain maize.

Ukraine yield forecasts - June 2019 Bulletin

<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield (t/ha)</th>
<th>Avg 5yrs</th>
<th>2018</th>
<th>MARS 2019 forecasts</th>
<th>%19/5yrs</th>
<th>%19/18</th>
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</thead>
<tbody>
<tr>
<td>wheat</td>
<td></td>
<td>3.98</td>
<td>3.73</td>
<td>4.10</td>
<td>+2.9</td>
<td>+9.9</td>
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<tr>
<td>barley</td>
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<td>2.96</td>
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<td>+8.6</td>
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<td>winter barley</td>
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<td>3.31</td>
<td>3.35</td>
<td>3.33</td>
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<td>2.75</td>
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<td>grain maize</td>
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<td>7.64</td>
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<td>-8.4</td>
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<td>2.58</td>
<td>2.38</td>
<td>+9.8</td>
<td>-7.7</td>
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</tbody>
</table>

Note: Yields are forecast for crops with more than 10000 ha per country; figures are rounded to 10 kg
Sources: 2014-2018 data come from State Statistics Service of Ukraine. 2019 yields come from the MARS Crop Yield Forecasting System (CGMS output up to 10/06/2019)
Meteorological overview

This cropping season was marked by a rain deficit in autumn, an early start to spring with mild temperatures in February and March, and a substantial rain surplus in May and June.

- Long periods without any rainfall were recorded last autumn, following already dry conditions in the month of August.
- Temperatures were below average from November to the beginning of December, and then followed the seasonal average until the end of January.
- February and March were 2-4°C warmer than average.
- Since the beginning of May, a positive anomaly in temperatures has been observed in all eastern, central and southern regions of Ukraine, with temperatures 2°C above the seasonal average.
- A rain surplus, with twice the average cumulative rainfall, was observed in western Ukraine in May.
- Intense rainfall has been observed at the beginning of June in southern and some central oblasts.
Crop growth conditions

Cumulated fAPAR anomalies from 1 April to 31 May show a distinct negative anomaly in western and central Ukraine, related to the delays in sowing summer crops as a result of the rain surplus observed since the beginning of May. By contrast, the positive anomaly in the south and east of the country is related to the good conditions for winter cereal and spring barley growth this spring.

Winter and spring cereals

While good conditions were observed this winter, in that crops have not been exposed to frost and spring started early, the rainy weather in the west of the country in May and the warm temperatures currently observed have had a limiting effect on yield. Nevertheless, yield forecasts for wheat, winter barley and spring barley are close to record highs.

- Sowing conditions in southern oblasts (Mykolayiv’ska, Zaporiz’ska and Khersons’ska) were unfavourable due to a rain deficit last autumn, but above-average precipitation in December replenished the soil and ensured enough water supply during early spring.
- No exceptional winter cold spell was recorded and snow cover was thick enough to protect winter crops. Thus, survival rates for winter crops were particularly high and no relevant impacts of frost kill were observed or reported.
- Temperatures in February and March were largely above average, thus favouring early regrowth of winter cereals and early sowings of spring cereals.
- A rain deficit in the south was observed from mid-February to mid-April in the oblasts surrounding the Azov Sea, but no impacts have been observed and rainfall came on time to ensure further crop growth.
- The recent rain surplus in the western oblasts, and at the beginning of June in the south and east of the country, has had some local impacts. Excessive soil moisture in the west created some waterlogging the rain surplus was also coupled with above-average temperatures, increasing pest and disease pressure on winter cereals.
- Global radiation since the beginning of May is 10-20% below average in the western oblasts, also contributing to
development of diseases and lowering photosynthetic activity.
- Farmers are starting to harvest in the south and winter cereals are more advanced than in an average year, as temperatures since February have been 2°C above average.
- Temperatures are currently above average overall. In the south, wheat is entering the ripening stage and not expected to be impacted, but further north some wheat may suffer from a shortening of the grain-filling period.

Summer crops

_Sowings have been delayed due to the abundant rainfall observed in western oblasts since May. Yields are forecast using the trend._

- The rain surplus observed since the beginning of May in the western oblasts, with more than twice the average cumulative rainfall, delayed some sowings of grain maize and soybean. As a large proportion of soybean is cultivated in the west, this crop is the most impacted.
- Sunflower was the least impacted, as most of it is cultivated in the central and southern oblasts.

- The rain surplus observed since the beginning of May replenished soil moisture and will ensure good water supply for summer crops.
- Temperatures in May and June were favourable for the emergence of summer crops, but the lack of radiation slowed biomass formation in early sown summer crops in the west.
- The delays in sowing may expose the late sown crops to warm temperatures later this season and impact yields.
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Analysis and reports
R. Lecerf, I. Cerrani, L. Panarello, L. Nisini

Reporting support
Prepress Projects Ltd

Edition
R. Lecerf, B. Baruth

Data production
MARS4CAST – JRC D5-unit, WENR (NL), MeteoGroup (NL), VITO (BE)

Contact
JRCMARSBULLETIN@ec.europa.eu

MARS stands for Monitoring Agricultural Resources

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