

# We bid farewell to July with hot weather and a deficit of soil moisture

*Author(s):*

*Date: 30.07.2021 Issue: 7/2021*



At the beginning of July, the agrometeorological conditions were determined by hot weather with extremely high maximum temperatures, in places reaching 39-40°C, values that had an adverse effect on flowering and fertilization of vegetable crops (tomatoes, peppers, cucumbers, courgettes, etc.), as well as on pollen fertility in sunflower and early maize hybrids.

After the high temperatures during the first days of the month, a substantial change in the agrometeorological conditions occurred. During most days of the first ten-day period of July, the conditions were determined by unstable weather and mean daily temperatures close to the climatic norms. During this period significant precipitation was recorded, which impeded the wheat harvest, especially in Northeastern Bulgaria, where above-

normal June rainfall (Ruse –137 l/m<sup>2</sup>, Razgrad – 128 l/m<sup>2</sup>, Silistra - 179 l/m<sup>2</sup>, Dobrich – 137 l/m<sup>2</sup>, Shabla – 150 l/m<sup>2</sup>) caused waterlogging and, in places, flooding of the wheat stands.

During the first ten-day period of July, the vegetation of spring crops in most parts of the country, with the exception of the extreme western and southern regions, proceeded under conditions of good and very good soil moisture reserves in the 50 and 100 cm soil layer – over 80% of field capacity. In maize, depending on its earliness, different stages were observed: leaf formation, tasseling, tassel flowering and silk emergence in the earlier maize hybrids. In sunflower – mass flowering stage, in cotton – budding, in beans and soybeans – pod formation.

At the end of the month, the agrometeorological conditions will be determined by dry, warm and, at the end of the period, hot weather. The development of agricultural crops in most of the field areas will proceed under a deepening soil moisture deficit. The precipitation that fell during the second ten-day period of July was local. In places in the northwestern regions it reached and exceeded the monthly norms (Vratsa - 56 l/m<sup>2</sup>, Montana - 100 l/m<sup>2</sup>, Dragoman - 73 l/m<sup>2</sup>) and flooded agricultural areas. In most of Southern Bulgaria, the precipitation was of no economic significance, and the soil moisture reserves in the 50 and 100 cm layer were unusually low for the first half of the summer – in places below 50% of field capacity (Kyustendil, Sandanski, Lyubimets, Sliven). During the third ten-day period of July, the soil moisture deficit in most of the field areas will necessitate the application of increased irrigation rates for spring crops, which are in reproductive stages of their development and have increased requirements for soil moisture.

During the period, seed filling in sunflower will take place. In maize, different stages will be observed – from flowering and silk emergence in late hybrids to milk maturity stage (Plovdiv, Pazardzhik, Silistra) in early maize hybrids. In field beans, the ripening stage will proceed. At the end of July, the flowering stage in cotton will be observed.

At the end of July, under conditions of increased fire risk, the wheat harvest will be completed. So far, the wheat yields obtained at the agrometeorological stations of NIMH are higher than last year: 550 kg/da at the Dolni Chiflik agrometeorological station, 667 kg/da at Karnobat and over 750 kg/da at General Toshevo.

The meteorological conditions during the third ten-day period of July will limit the development of a number of fungal diseases, with the exception of powdery mildews on fruit trees, vegetable crops and vines.

During the third ten-day period of July, in fruit crops the control of the second generation of fruit moths should not be underestimated, and in vines and vegetable crops – the control of powdery mildews and mites.

Particularly in vines, the caterpillars of the second generation of the European grapevine moth are also dangerous.

During the period, plant protection treatments should be carried out during the cooler hours of the day with products having an appropriate pre-harvest interval, consistent with the ripening period of the crops.

*Source: NIMH*