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Cessation of vegetation in autumn crops

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In December, agrometeorological conditions will be determined by temperatures around and below the climatic norms.

After the short-term winter manifestations of the weather at the end of November, which led to a slowdown and, in places in Northern Bulgaria, to a cessation of the vegetation processes in the autumn-sown crops, an increase in temperatures is forecast at the beginning of December. In some of the southeastern and southern regions, the values of the average daily temperatures will exceed the biological minimum required for the vegetation of winter cereal crops and winter rapeseed.

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The expected cooling during the second half of the first ten-day period will halt the development of wheat, barley and winter rapeseed also in Southern Bulgaria.

During the second and third ten-day periods of December, the forecast temperature conditions will be within ranges that will maintain overwintering agricultural crops in dormancy. Exceptions are possible in some of the southernmost regions and along the Black Sea coast. In these regions, in the middle of the third ten-day period, there is a likelihood that conditions will arise for a short-term, undesirable resumption of vegetation processes in winter cereal crops, which would lead to a reduction of their winter hardiness.

At the end of December, the predominant growth stages of wheat and barley will be tillering and third leaf. The November-sown late crops will overwinter in the emergence phase and the initial stage of leaf formation.

During the month, the forecast minimum temperatures, in places down to minus 15°C, in conditions without snow cover and with more prolonged persistence, will pose a risk of winterkill to winter cereal crops that did not manage to enter the tillering phase during their autumn vegetation.

These values are above the critical thresholds for rapeseed crops, which will overwinter in the rosette stage (with 6–8 leaves).

In December, the expected above-normal precipitation will increase soil moisture reserves in the one-metre layer, and in a large part of the field regions they will reach levels close to the field capacity (FC).

Source: NIMH-BAS