

# The cold spell at the end of the second and the beginning of the third ten-day period of January will preserve dormancy in overwintering agricultural crops

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After the recorded seasonally high temperatures in the middle of the month, which exceeded 14-15°C in many parts of the country, during the third ten-day period of January the agrometeorological conditions will undergo a substantial change. The forecast cooling at the end of the second and the beginning of the third ten-day period of January will preserve dormancy in the overwintering agricultural crops. The expected snowfall will form a snow cover over most of the field areas, which will provide protection for the autumn-sown crops from the forecast low minimum temperatures – in places down to minus 12°C. These values, in the absence of snow

cover, will be critical for the late-sown winter cereal crops that are in the emergence and initial leaf formation stages. As a result of the autumn drought and late sowing, the prevailing crops are overwintering at the three-leaf stage. A small part of the wheat and barley crops in places in the Danubian Plain (agrometeorological stations Novachene, Silistra) and in the Upper Thracian Lowland (agrometeorological stations: Pazardzhik, Plovdiv) are at the tillering stage – the appropriate stage for overwintering.

On Saturday, the cooling will begin with widespread precipitation, predominantly snow, and before noon in Southeastern Bulgaria and the extreme southwestern regions as rain. A snow cover will form, in most areas between 5 and 10 cm; in the Fore-Balkan and the Rila-Rhodope region, where there are conditions for significant precipitation, the thickness of the snow cover will reach 25-30 cm. In the Danubian Plain, Dobrudzha and Ludogorie, as well as on the mountain passes, there will be snowstorms and snowdrifts will form.

With the noticeable drop in temperatures, Добрич Online cites the expert opinion of Prof. Dr. Ivan Kiryakov from the Dobrudzha Agricultural Institute – General Toshevo on whether the crops are threatened by the cold. According to Kiryakov, the varieties that are widespread in Bulgaria can quite safely withstand -10 degrees, even in dry cold conditions. There is no serious danger, but the crops have hardly hardened because of the high temperatures. On the other hand, the high temperatures enabled the wheat to develop and tiller.

Ivan Kiryakov explains that usually dry cold threatens the crops. But his observations of the land in Dobrudzha, and not only there, are that there is a light snow cover under which the crops are moist and protected. „The temperature where the tillering node is located is about -2 degrees and it is protected“.

And even if the temperatures reach -15 degrees, the professor says that there is no threat to the plants. „All breeding lines, which later become varieties, undergo tests with us for winter hardiness in climatic chambers, where they are frozen down to -18 degrees. We do not have such lines that continue as varieties which cannot tolerate such a temperature. If there are such lines, we do not release them to become varieties“. Prof. Kiryakov explains that during the climatic testing the plants remain for 24 hours in the chambers in about 10 cm of soil, which is indicative of their resilience.

At the end of the next period, an increase in the mean daily temperatures is forecast, but they will remain within limits that will maintain the autumn crops in dormancy.

An improvement in the conditions for carrying out pruning in fruit crops is expected during the second half of the period. Pruning should start with the cold-hardy pome fruit species (apple, pear) and the older fruit-bearing trees. Where phytosanitary pruning is necessary, it is mandatory to disinfect the tools after each cut.

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