

# Agrometeorological forecast for January 2019

*Автор(и):* Растителна защита  
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In January, the agrometeorological conditions will be determined by temperatures around and below the climatic norms, which will maintain autumn-sown crops and perennial plantations in dormancy.

Part of the winter cereal crops will overwinter insufficiently hardened, in early stages of their development (emergence, 2–3 leaves) – a consequence of the prolonged autumn drought and delayed sowing. A small share of the wheat stands ceased their vegetation at the tillering stage, which is the appropriate phase for overwintering.

During most days of the first ten-day period of January, the forecast cold weather, with low negative temperatures down to minus 15–18°C, and in the basins down to minus 20°C, will put the autumn-sown crops

and some perennial plantations to a serious test. Such air temperature values, in conditions without snow cover and with more prolonged persistence, will be critical for insufficiently hardened winter cereals, especially for stands in the emergence and third leaf stages. Minimum temperatures of this order will also pose a risk of winterkill to winter rapeseed. A significant part of the rapeseed stands, as a result of the moisture deficit, failed to form a rosette (of 7–8 leaves) during their autumn vegetation – a phase in which the plants have increased cold resistance. The forecast values below minus 16–18°C will be hazardous for the buds of vines, especially of table grape varieties, and below minus 18°C – also for the fruit buds of some shrub species (raspberry).

During the second and third ten-day periods, the agrometeorological conditions will be more dynamic. In Northern Bulgaria and the high fields, where precipitation is expected mainly in the form of snow, the autumn-sown crops will be protected by a permanent snow cover.

In Southern Bulgaria, precipitation in the form of rain and snow is expected, and in some places conditions will arise for the formation of an ice crust on the surface soil layer, which is a prerequisite for heaving of the crops and mechanical damage to the root system of the winter cereals.

In January, during the relatively warmer periods, along the Black Sea coast and in the Struma River valley, part of the autumn-sown crops will pass from deep to relative dormancy, but the likelihood of resumption of vegetative processes in winter cereals and rapeseed is low.

The expected precipitation during the month, around and above the norm, will increase the soil moisture reserves in the one-meter and deeper soil layers. After the prolonged drought at the end of autumn, there was a substantial increase in soil moisture reserves. In some places in Northern Bulgaria, at the agro-meteorological stations Băzovec, Knezha, Novachene, Nikolaevo, Pavlikeni, Targovishte and in the Upper Thracian Lowland – Plovdiv, Ivailo, for the winter cereals in the 50 and 100 cm layers they reached levels above 90% of field capacity (FC). Lower reserves, 70–80% of FC, are observed in part of the eastern and southwestern regions (Dolen Chiflik, Sliven, Kyustendil).

In January, more suitable conditions for pruning of fruit trees will occur during the third ten-day period.

*Source: NIMH*