

PHENOLOGIC CHANGES IN PLUM TREE SPECIES IN THE CONTEXT OF CURRENT CLIMATE CHANGES

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SUMMARY

Climate changes are among the major challenges of our century. Globally, the long term analysis of climate changes and their biologic effect has shown that they have impact on species physiology, species distribution, organisms' phenology, biocenosis composition and dynamics (Parmesan si Yohe, 2003). Regarding the phenology, Sparks și Menzel (2002) stated that phenology is the ideal way to demonstrathe the effects of global warming on lively world. The same idea is also expressed by Chmielewski and Rötzer (2001), and by Walther and collab. (2002), who stated that phonologic observations are best quantifying the plants' reactions to climate conditions, and to their changes, respectively.

The paper aims at studying the phenologic changes occurred in plum-tree species, in the region of Oltenia. Nine plum tree cultivars were taken under study (the rootstock is Otesani 8), that are cultivated in a hilly area in Oltenia (Banu Maracine/Craiova). The vegetation phenophases have been recorded according to the reference stages that were worked out by Fleckinger J. The evolution of extreme temperatures: maximum and minimum that were recorded in Craiova, have outlined the fact that in the year 2007 those values were close to, or have exceeded the absolute values recorded in the area. It may be stated that in Craiova area, the year 2007 was a warmer year than normally, with quite weak precipitations during winter, spring and summer, and humidity excess during autumn months.

The flowering phenophase in plum-tree has developed during the period 1995-2001, between 30th of March (Valcean cultivar) and the first 10 days of May, with differences depending on cultivar and the combination cultivar/rootstock. The period between the beginning of flowering and the end of it is 10-12 days. Differences occur in cultivars. In the year 2007, the flowering phenophase has been developing between 27th of March (Valcean cultivar) and 10th of April (Dambovita cultivar), flowering time duration being 6-10 days. The earlier flowering in the year 2007 can be explained by higher average monthly temperatures, as compared to the period analysed. The results obtained are in accordance with those specified in the literature, ie the higher temperatures speed-up the phenophase development. By studying the environment factors' impact on fruit tree species' phenology, decisions can be made on placing the assortment in different culture areas, depending on the local ecologic conditions.

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