DOI 10.24419/LHI.2304-3083.2019.4.08

Influence of Weather Conditions on Rubus Caesius Fruitingin the Floodplain Forests of Thesteppe Pridonya

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Key words: *Rubus caesius, floodplain forests, group of forests types, weather conditions, fruiting of berry-field.*

The article devoted to research of influence of weather conditions of vegetation period on yield of Rubuscaesius in the main groups of types of floodplain forests of the steppe Pridonya[1].

Relevance of research is due to the fact that, yield and quality of fruits, growth and development of Rubus depends not only on the morphology of the species, but also on weather and climatic conditions, to which it is quite demanding. In this case, the limiting factor for the growth of Rubusis winter negative temperatures. Frost damages mainly the aboveground part.

The second significant adverse factor for it is considered drought, and especially prolonged, in combination with the action of high temperatures (heat), as well as dry winds [2].All this is typical for the steppe Pridonya especially in the summer period, including the Sholokhovskiydistrict of Rostov Region, where there were conducted experimental researches.

The authors has studied the indicators of yield of Rubuscaesius in the dominant groups of forest types over the five-year period (2012, 2013, 2014, 2017, 2018), considered the features of weather conditions of studied vegetation periods, as well as there was studied the nature of dependence of the Rubuscaesius yield on temperature indicators and precipitation by the months of vegetation periods.

The conducted research has shown, that maximum yield of Rubuscaesiusin in the plantations of all the considered groups of floodplain forest types was noted in 2018. At the same time, these values are very close in

oak forests of middle floodplains and black poplars near the riverbed (1,624 kg / ha and 1603 kg / ha, respectively), and in willow groves near the riverbed they are lower more than in 2 times (754 kg/ha).

The lowest yield of Rubus berry-field was registered by us in 2012. It should be noted that in willow gorves near the riverbed the value of yield are in 2.7 and 3.2 times lower than in oak forests of middle floodplains and in black poplars, respectively.

To determine the presence or absence of the connection of the Rubuscaesius yield with amount of precipitation and average monthly air temperature, we carried out a correlation analysis of these indicators in the studied groups of forest types.

The data of the correlation analysis indicate a high dependence of the Rubuscaesius yield on the amount of precipitation in almost all months of the vegetation period, except September and partially April. The influence of average monthly air temperature is great only in April and June in all other months – slightly or much below the average.

The maximum values of the correlation coefficient (r) were noted in April with temperature values (r = -0.76 – (-0.89) and in May with the amount of precipitation (r = 0.86–0.88). At the same time, the dependence of Rubuscaesius yield on average value of temperature in April is reverse, and on the amount of precipitation in May, it is direct.

References

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