

ANALYSIS OF METEOROLOGICAL PARAMETERS DETERMINING THE CONDITIONS OF THERMOPHILIC CROPS CULTIVATION IN AGRO-CLIMATIC ZONES OF ALTAI KRAI ACCORDING TO DATA FOR 1960–2016

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The paper presents the results of a statistical analysis of basic agrometeorological parameters that determine the conditions of cultivation of thermophilic crops in the Altai Krai for the period 1960–2016. Trends of average annual air temperatures increase (by +0.3°C for 10 years) have been revealed for the Kulundinskaya dry-steppe and Priobskaya and Biye-Chumyshskaya forest-steppe zones of Altai Krai. The dates of stable transition of air temperatures through 0, +5 and +10°C, the dates of the onset of frosts (below –5°C) were specified, and the change in the sum of active temperatures and the Selyaninov hydrothermal coefficient were estimated during the growing seasons of 1980–2016. There was an increase in the duration of the growing season by an average of 10 days in the forest-steppe and by 7 days in the dry-steppe compared with 1960–1969. Analysis of the sum of the active temperatures for the growing season has shown the increase of the parameter by +10°C in average compared to the conditions of 1960–1969. The revealed climatic trends are generally favorable for the cultivation of confectionary sunflower in the Kulundinskaya, Priobskaya and Biye-Chumyshskaya zones. However, in recent years (2010–2017) a probability of late spring frosts (before 20th of May) and the number of days with frosts have increased on the background of an earlier onset of the growing season (April 12–19).

Keywords: regional climate change, agro-ecological monitoring, weather risks, farming technologies.