

DOI: <https://doi.org/10.37162/2618-9631-2022-4-96-113>

Agroclimatic conditions in the Republic of Tatarstan during 1966-2021 / Perevedentsev Yu.P., Pavlova V.N., Shantalinsky K.M., Mirsaeva N.A., Nikolaev A.A., Tagirov M.Sh. // Hydrometeorological Research and Forecasting, 2022, no. 4 (386), pp. 96-113.

The state of agroclimatic resources in the Republic of Tatarstan during 1966–2021 is considered. Using daily meteorological observations at 13 meteorological stations located on the territory of the Republic of Tatarstan and reanalysis data, the radiation characteristics (direct, total, and photosynthetic radiation), the sum of positive temperatures of the active phase of the growing season (the period average daily temperatures above 10 °C), the dates of 10°C average daily temperature crossing in spring and autumn (for Kazan CGMS station, the dates of 0, 5, 10 and 15°C average daily temperature crossing), the duration of the growing season are calculated. The characterization of the degree of aridity and waterlogging of the region is given using the Budyko dryness index, Selyaninov hydrothermal coefficient, and Sapozhnikova moisture index. An assessment of the biological effectiveness of the climate is given. A significant trend toward the aridity growth in the republic since 1976 has been revealed.

Keywords: solar radiation, average daily air temperature, growing season, sum of positive temperatures, climate change trend, dryness and waterlogging indices

Tab. 7. Fig. 5. Ref. 16.