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Method for forecasting the sunflower yield in the subjects of the European part of Russia and entire Russia with a lead time of 3–3.5 months / Strashnaya A.I., Tishchenko V.A. // Hydrometeorological research and forecasts, 2023, no. 1 (387), pp. 120-130.

A method is developed for forecasting the yield of sunflower seeds for the subjects of the European part of Russia and entire Russia based on ground observations of Roshydromet hydrometeorological stations. The sunflower yield was used according to Rosstat data in weight after processing. When developing the forecast method for the subjects of the Russian Federation, the predicted sunflower yield was considered as the sum of two forecasts: the forecast of the yield trend described by degree 1 and 2 polynomials and the forecast of yield anomalies (yield deviations from the trend) depending on meteorological and agrometeorological factors and most affecting the yield. The criterion for selecting parameters for the predictive regression prediction model for different subjects was a degree of influence of this parameter on the yield. The predictive regression model for calculating yields in entire Russia was developed on the basis of the principal component analysis using yields for federal districts expressed in yield deviations from the average long-term yield for specific districts.

The method for forecasting the sunflower yield was adopted as the main one at Hydrometeorological Research Center of Russia and for the subjects on the territory of the Bashkir, Volga, Crimean, Central Chernozem, Tatarstan, and North Caucasian administrations for hydrometeorology and environmental monitoring (the Volgograd, Rostov, Krasnodar, Stavropol regions, the Kabardino-Balkarian Republic).

Ключевые слова: sunflower, yield, forecast method, operational tests, accuracy

Tab. 2. Fig. 2. Ref. 8.