REPORT on Agroclimatic conditions

Pivdenne LLC

Culture: winter wheat, field A. Harvest 2021

Nikolaev region, Nikolaev district, village Pivdenni Rosy

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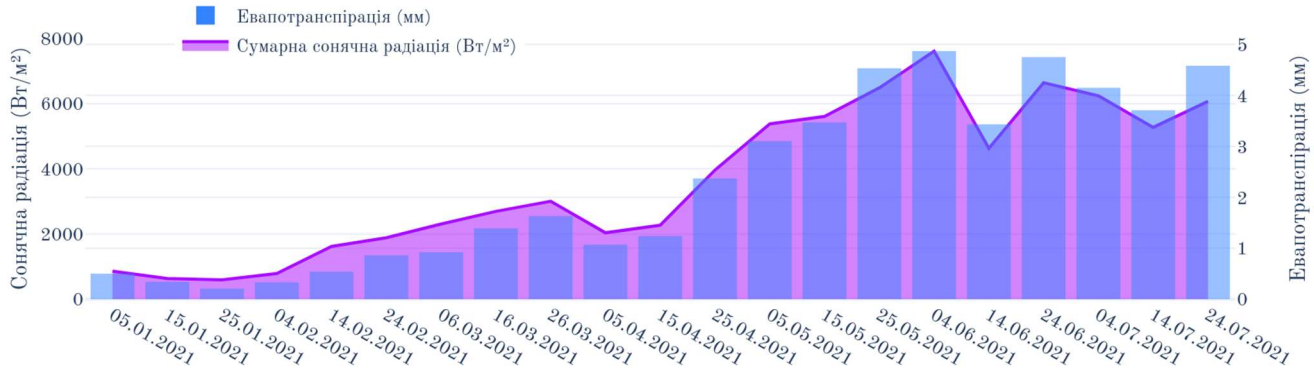
Weather and climate conditions are closely related to the agroclimate resources of the territory, the ratio of heat, humidity, light, which are necessary for the cultivation of crops. Analysis of weather and climate data of the test area showed that available soil moisture during spring vegetation of the crop in April - May 2021 was insufficient. In April it fell to 2 mm of precipitation, in May – to 1 mm. Along with this, the last freezes that took place in March were noted.

In general, it can be argued that the conditions of spring vegetation were not entirely favourable for the development of winter wheat crops due to insufficient rainfall. For the period of examination (beginning of the colossal phase), the crops are in good condition due to the fact that in the critical periods of the formation of generative organs, no high temperatures were observed, and the amount of moisture at the beginning of the stain positively affected the future grain harvest.

Diagram below: left - temperatures, blue columns precipitations, red line max temperature, blue line min temperature

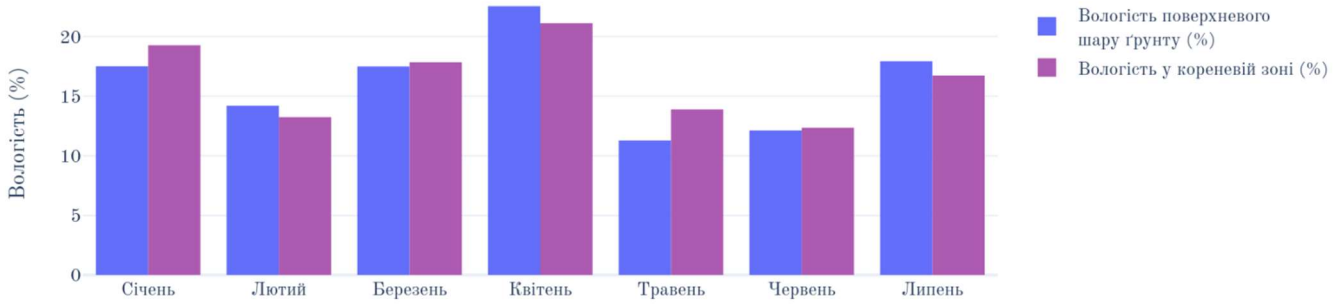
After examining evapotranspiration, it should be noted that its value in spring for winter wheat was 2.42 mm, which is almost twice below normal. That is, in the phases of active growth of winter wheat, moisture deficiency prevails, which under such conditions requires irrigation. Sufficiently high total solar radiation in the spring had a positive effect on growth processes and the formation of dry matter.

Diagram below: on the left Solar radiation, blue Evapotranspiration, violet Combined total solar radiation



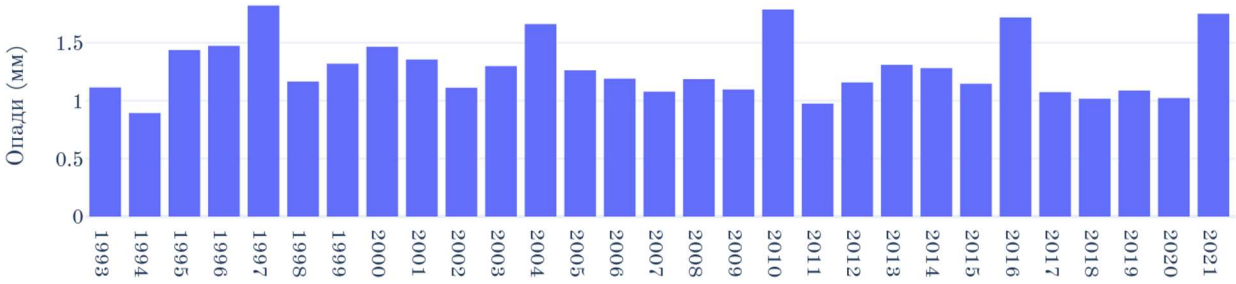
Humidity of superficial layer of soil and in the root zone of plants in April, that achieved 74,63, positively influenced on development of vegetative organs and forming of genesic organs of wheat winter-annual.

Diagram below: humidity on the left, Upper 5% soil humidity in blue, Root zone soil humidity in red



To predict yields, it is advisable to study the trend in precipitation from 1993 to 2021. Every 10 years, the total amount of precipitation per year decreases by 3%.

Diagram below: precipitation



The expert's conclusion: the analysis of the weather and climatic conditions of the test area showed that the amount of precipitation during the development of vegetative and generative organs of the crop had a significant (heaviest among other factors) impact on the formation of the crop.