

As object of research sprouts of 18 grades of summer wheat *Triticum durum* L. served. Cultivation it was carried out at temperature 15 ± 1 °C and 20 ± 2 °C. For studying of influence of the temperature factor on development of the photosynthetic device of sprouts used following indicators: length of a plate and a vagina of the first sheet, the quantitative maintenance of pigments (a chlorophyll and b, carotenoids), a parity of pigments (a chlorophyll and b, a chlorophyll and carotenoids) in a plate of the first sheet of a sprout. On the basis of research of influence of the temperature factor on the quantitative maintenance of pigments in a plate of the first sheet of sprouts, it is established, that reaction of grades of firm spring wheat to change of a temperature cultivation mode is variety-specific. Grades for which higher maintenance of a chlorophyll is characteristic at cultivation temperature 15 ± 1 °C are allocated are grades the Luch 25, Krasnokutka 12, Annuschka, Kharkov 23, Elizavetinsky, Valentina, Gordeiformi 432, Saratov 57, Krassar, Orenburg 10, Nicolascha. It is established, that the temperature 20 ± 2 °C promotes increase in a parity of a chlorophyll a/b at sprouts of grades Krasnokutka 12, Memory Chechovich, Orenburg 10, Annuschka, Cubanka, Alejsky, Nicolascha, Luch 25. At other investigated grades in the given conditions the parity of green pigments decreases. It is established, that to temperature 15 ± 1 °C renders a positive effect on the carotenoids maintenance in a plate of the first sheet of grades Lilek, Luch 25, ND 600, Memory Chechovich, Bezenchuksky 210, Krassar. The temperature 15 ± 1 °C was favorable for growth and a plate, and a vagina of the first sheet of sprouts of grades Krasnokutka 12, NIK, Nicolascha, Orenburg 10, Memories Chechovich, NIK. For growth of the first sheet of other grades studied by us more favorable there was a temperature 20 ± 2 °C.