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EFFECTIVE METHODS OF CARE FOR SUNFLOWER CROPS

Abstract. Sunflower cultivation is relevant in the climatic conditions of Western Kazakhstan, characterized by high heat supply and a long growing season. In order to obtain a high yield of sunflower in the system of adaptive technologies, proper pre-sowing preparation of the soil and optimal sowing times are important. Weeds cause great damage to the sunflower crop. Having a powerful underground and aboveground mass, sunflower competes with weeds better than many other field crops. As the accounting data showed, in our studies of 2018-2020, the greatest contamination of sunflower crops was in the variants without the use of herbicides. So, on average for 3 years in the phase 2 of real leaves, when using the harrowing + pre-sowing cultivation (control) technology, there were 10.67 weeds per 1 m² with a raw mass of 31.22 g/m². According to research data, on average for 2018-2020, the highest oil harvest is set for the harrowing + pre-sowing cultivation option with roundup (2 l/ha) – 9.57 c/ha. When using 1 and 2 inter-row treatments combined with harrowing and pre-sowing cultivation, the oil harvest increased to 7.16-7.95 c/ha, which is more than the control by 0.92-1.71 c/ha.

Keywords: sunflower, weeds, cultivation, herbicides, yield, oil content.

Introduction An important factor in increasing the efficiency of crop diversification in West Kazakhstan and reducing the dependence of crop productivity on weather conditions is the expansion of crops most adapted to unsustainable humidification of plants such as chickpeas, Sudan grass, sorghum, corn and sunflower. Abroad, diversification of agriculture is considered one of the most important goals of greening European agricultural policy [1, 2, 3, 4, 5].

Sunflower cultivation is relevant in the climate of West Kazakhstan, characterized by high heat supply and a long growing season. In this regard, the development of adaptive technologies for sunflower cultivation is important in order to increase productivity and expand sown areas. In order to obtain a high sunflower crop in the system of adaptive technologies, the correct pre-sowing preparation of soil and optimal sowing time are important. The literature provides data on the possibility of cultivating sunflower without introduction or use of herbicides during the pre-season and during vegetation on sunflower, combating weeds by intensifying agricultural techniques [6, 7, 8].

Research methods. The research is carried out on the experimental field of Zhangir Khan West Kazakhstan Agricultural and Technical University. (Republic of Kazakhstan, Uralsk).

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The area of plots during cultivation of sunflower is 90 m², repetition is three times, location of plots is randomized.

According to the morphological characteristics of the genetic horizons of the profile and agrochemical parameters of the arable layer, the soil of the experimental site is characteristic of dry steppe zone of West