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THE INFLUENCE OF SOWING TIME AND STANDARDS ON THE QUALITY INDICATORS OF BALLET GRAIN SOWED AS A REPEATED CROP

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Abstract. The article analyzes the possibilities of growing millet (Panicum miliaceum L.) as a repeated crop, the main elements of cultivation technology, the effect of sowing times and standards on millet yield. It is noted that millet occurs when the sowing rate is 2.5 million seeds per hectare in the conditions of irrigated pastures of the Samarkand region on gray soils. Planting dates June 20 standards 2.5 mln. It was determined that the amount of protein in the seed was 13.5%, the grain type was 727.5 g/l, and the mass of 1000 grains was 7.72 g, and recommendations for practice were given.

Key words: grain, common millet, height, period, growth, yield, standard, seed, variety, soil.

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TAKRORIY EKIN SIFATIDA EKILGAN TARIQNING DONINING SIFAT KO‘RSATKICHLARIGA EKISH MUDDAT VA MEYORLARINING TA’SIRI

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Annotatsiya. Maqolada tariq (Panicum miliaceum L.) ning takroriy ekin sifatida yetishtirish imkoniyatlari, yetishtirish texnologiyasining asosiy unsurlari ekish muddatlari va meyorlarini tariq hosildorligiga ta’siri tahlil qilingan. Samarqand viloyatining sug‘oriladigan o‘tloqi bo‘z tuproqlar sharoitida ekish meyori gektariga 2,5 mln. urug’bo‘lganda tariqning bo‘lganligi qayd qilingan. Ekish muddatlari 20 iyun meyorlari 2,5 mln. urug’bo‘lganda oqsili miqdori 13,5 %, don naturasi 727,5 g/l va 1000 ta don massasi 7,72 g bo‘lganligi aniqlangan va amaliyotga tavsiyalar berilgan.

Kalit so‘zlar: don, oddiy tariq, bo‘yi, muddat, o‘sish, hosil, meyor, so‘k, nav, tuproq.

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ВЛИЯНИЕ ВРЕМЕНИ ПОСЕВА И СТАНДАРТОВ НА ПОКАЗАТЕЛИ КАЧЕСТВА ЗЕРНА БАЛЕТКИ, ПОСЕЯННОГО В КАЧЕСТВЕ ПОВТОРНОЙ СЕЛЬСКОХОЗЯЙСТВЕННОЙ КУЛЬТУРЫ

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Аннотация. В статье анализируются возможности выращивания метёлки обыкновенной (Panicum miliaceum L.) в качестве повторной культуры, основные элементы технологии выращивания, влияние сроков и норм посева на урожайность метёлки. Отмечается, что метёлка выращивалась в условиях орошаемых пастбищ Самаркандской области на серых почвах с

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нормой высева 2,5 млн семян на гектар. При сроках посева 20 июня и нормах 2,5 млн семян содержание белка составило 13,5%, качество зерна – 727,5 г/л, а масса 1000 зерен – 7,72 г, даны рекомендации по практическому применению.

Ключевые слова: зерно, метёлка обыкновенная, высота, срок, рост, урожайность, норма, всход, сорт, почва.

Introduction. Millet is cultivated on 32.9 million hectares of land worldwide, with an average yield of 9.1 centners/ha. Millet is most widely cultivated in Africa and Asia, with an area of 1 million 300 thousand hectares, an average yield of 8.5 centners/ha, and a total yield of 1 million 109 thousand tons. In Uzbekistan, millet is currently cultivated on 42 thousand 117 hectares, with an average yield of 7.5 centners/ha, and a total yield of 315 thousand 877 tons of millet grain.

In the context of global climate change observed in our republic in recent years, it is important to cultivate millet varieties that are more resistant to drought conditions than other grain crops and that can produce grain twice a year, and to obtain higher yields from them. Attention is increasing in our republic to repeated crops. In particular, there is very little scientific research on the cultivation of millet, which belongs to the second group of cereals, as a secondary crop. [1].

Millet is a valuable cereal crop, which is mainly grown for the production of grain (millet), sorghum and millet. Porridge made from it is famous for its taste and nutritional value. The grain contains twice as many vitamins B1 (thiamine) and B2 (riboflavin) as other cereals. Alcohol and starch are obtained from millet grains, and starch is converted into sugar in the body faster than that of rice. [3].

Millet grains are widely used in livestock and poultry farming, and vitamin-rich grass flour, granules and briquettes are prepared from the green mass. When millet grains are fed to chickens, their egg laying increases and their egg shells become stronger. Millet was one of the main food crops of the peoples of Central Asia before the spread of rice. Its grain contains a large amount of potassium, zinc, sodium, iodine, magnesium, bromine.

In recent years, the demand for grain, cereals, and livestock feed has been increasing day by day among the world and the republic.

Millet allows for late sowing and grain production, improves the development of microorganisms in the soil when rotating field crops. The protein accumulated in the grain is of high quality and can reach from 12% to 18% [2,7].

The average chemical composition of millet grain is: water 13.5% protein 11.2% fats - 3.9% carbohydrates 54.6% ash 2.5 [3,4].

Flour is made from millet grain, which is mixed with rye flour to improve its nutritional properties. Millet groats have high nutritional properties [6,8].

Research methods. The research included biometric measurements of plants, plant samples, laboratory analyses, phenological observations, and methodical manuals “Methods of conducting field experiments”, “Methodology of field experiments”, mathematical and statistical processing of data obtained from field experiments using the Microsoft Excel program (B.A. Dospekhov) using the dispersion method.

The purpose of the research is to determine and introduce into production the optimal sowing dates and norms that ensure the highest and highest quality grain yield from the Saratovskaya-853 variety in the conditions of repeated sowing in the irrigated pastures of the Samarkand region.

Research results. In our research, the highest 1000-grain mass was observed in the variants planted during the first sowing (20.06), with an average yield of 1.5 million tons per hectare. In the variant with 1000 seeds, the yield was 7.1 g, in the variant with 2.0-2.5 million seeds, it was 7.0 g, and in the variant with 3.0 million seeds, it was 6.9 g.

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A decrease in the 1000-grain weight of the variety was observed with a delay in sowing dates. In the variants planted in the second (5.07) sowing date, the 1000-grain weight of the variety was 6.0-6.2 g, while in the variants planted in the third (20.07) sowing date, it was found that the sowing rates in the first (20.06) sowing date were used, by 1.6-1.7 grams less than in the variants.

In our studies, the grain quality of the variety varied from 712.2 g/l to 728.2 g/l.

In the variants with 1.5 and 2.0 million seeds per hectare during the first sowing (20.06), the grain quality was 727.0 g/l, in the variant with 2.5 million seeds per hectare, it was 728.2 g/l, and in the variant with 3.0 million seeds per hectare, it was 726.3 g/l.

In the variants planted during the second (5.07) sowing, the grain quality was 721.0; 722.4 and 720.2 g/l, in accordance with the sowing standards.

A decrease in the grain quality of the variety was observed with a delay in the sowing date. That is, in the variants planted during the third (20.07) sowing date, compared to the variants in the first sowing date, it was 14.7; 14.6; It was found to be 15.1 and 14.1 g/l less.

In our studies, the highest protein content in the grain was observed in the variant with 2.5 million germinated seeds per hectare during the first sowing (20.06), where the protein content in the grain was 13.2%. This was 0.4% higher than the variant with 1.5 million germinated seeds per hectare, 0.3% higher than the variant with 2.0 million germinated seeds, and 0.5% higher than the variant with 3.0 million germinated seeds.

With a delay in the sowing date, the protein content in the grain decreased. In the second (5.07) sowing date, 1.5 million germinated seeds per hectare The amount of protein in the grain in the variant planted with germinating seeds was 12.4%, which was 0.8% less than the variant with the standard sowing for the first (20.06) planting period. Planting rate is 2.0 mln. in the case of sowing a grain of germinating seed, the amount of protein in the grain is 12.4%, 2.5 mln. 12.1%, 3.0 mln. and in the version planted with germinating seeds, it was 11.9%.

The amount of protein in millet grain decreased even more in the options planted in the third (20.07) planting period, where it was 1.0 in accordance with the planting standards compared to the options in the first (20.06) planting period; 1.1; 1.3; It was observed to be less by 2.5%.

In our studies, when analyzing the effect of sowing dates and rates on the length of the tiller and the number of grains in it, the longest tiller was 32.5 cm, and the shortest was 26.2 cm.

In the first (20.06) term, the length of the tiller on the main stem was 32.2 cm in the variant where the sowing rate was 1.5 million seeds per hectare, and in the variant where 3.0 million seeds were used, it was found that it grew longer by 0.4 cm due to the sowing rate. In the third (20.07) term, the sowing rate was found to be shorter by 5.7 cm; 5.9 cm; 6.0 cm and 5.6 centimeters compared to the first sowing term, according to the variants used.

It can be seen that when the sowing date was delayed by 15 and 20 days, the plants became shorter and the yield decreased.

When analyzing the number of grains in the row in our experiments, the highest number of grains was observed in the variant with 1.5 million germinated seeds per hectare in the first (20.06) sowing date, and this indicator also decreased with the delay in sowing dates. In the second sowing date, the number of grains in the row was 273.5 grains in the variant with 1.5 million germinated seeds per hectare, 273.3 grains in the variant with 2.0 million germinated seeds, 274.4 grains in the variant with 2.5 million germinated seeds, and 3.0 million germinated seeds. In the variant with the seeded seed, the number of seeds was 29 fewer than in the variant with the appropriate sowing rate at the first sowing date.

In conclusion, the most optimal sowing date for obtaining a high and stable grain yield of the Saratovskoye 853 variety, sown as a repeated crop on the irrigated pasture soils of the Samarkand

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region, is 20 June, with a sowing rate of 2.5 million grains per hectare. soft seed (21 kg) and late period on July 20, 3.0 million per hectare. It is recommended to sow seeds (25 kg).

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