European Journal of Agricultural and Rural Education (EJARE)
Available Online at: https://www.scholarzest.com
Vol. 5 No. 01, January 2024
ISSN: 2660-5643

THE INFLUENCE OF PLANTING METHODS AND STANDARDS ON THE GROWTH AND DEVELOPMENT OF "DURDONA" VARIETY

Uzakov Gulomjon Okbutaevich
Head of the laboratory of the Southern Agricultural Scientific Research Institute

Article history:

Received: 07th November 2023
Accepted: 06th December 2023
Published: 07th December 2023

Abstract:

The article describes the effect of different planting methods and planting standards on the growth and development of the "Durdona" mash variety as a repeated crop in the light gray soils of the Kashkadarya region, and on the length of the growing season. The change in planting rate from 250,000 units/ha to 350,000 units/ha in the cultivation of mosh as a repeated crop caused the duration of the growing season to increase by 1-3 days. It was determined that the growth period of the variety was 88-90 days in the fully cultivated (plowed) variant, 89-91 days in the less cultivated (cheziled) variant, and 92-94 days in the non-cultivated (no-till) variant.

Keywords: Repetitive crop, mosh, Durdona, variety, planting method, planting rate, vegetation period.

THE LEVEL OF STUDY OF THE TOPIC. Moss is of great interest for introduction into agricultural production. With the development of farms, there are prospects for increasing its cultivated areas in the main and repeated crops as a main and joint crop. Cultivation of early varieties of mjsh allows for early harvest and allows fields to be cleared for replanting in time. at the same time, the problem of increasing soil fertility is solved, because as a leguminous crop, mosh helps to accumulate nitrogen in the soil due to the activity of nitrogen-fixing bacteria in its roots. The green mass of mash can serve as an additional source for feed production. the universality of the use of this crop shows its potential and importance for agriculture, as mash is considered as food, industry, protein, feed and green manure [1-3].

In many studies conducted abroad and in our country, the use of resource-efficient technologies such as minimal tillage in the cultivation of grain on irrigated land has a better effect on the development of microflora and microfauna in the soil compared to traditional tillage technologyit is possible to achieve high economic efficiency as a result of having a positive effect on productivity growth, saving fuel and other resources together with prevention of the erosion process [1,2,3,4;8;9].

RESEARCH OBJECTIVE. Development of agrotechnology for mash cultivation in a resource-efficient way in the conditions of irrigated light-colored gray soils of the southern region of the republic in the area freed from the autumn wheat crop.

RESEARCH METHODS. researches were carried out at the central experimental farm of the Southern Agricultural Research Institutein the field experiments, the "Durdona" variety of mosh was fully cultivated (ploughed), under-cultivated (cheziled) and uncultivated (no-till) in 250 shifts/ha, 300,000 units/ha and 350,000 units/ha. was planted at the expense of the amount of total NPK and mobile NPK in the soil, plant and grain, mass of 1000 grains was determined in the laboratories of the Southern Agricultural Research Institute. soil samples for analysis were taken according to the methods of "Metody agrokhimicheskih, agrofizicheskih i mikrobilochicheskih issledovaniy v polivnyx khlopkovyx rayonakh" (1963). amount of humus by the method of I.V. Tyurin (GOST-26213); nitrate nitrogen-ion selective method, GOST-13496-10; total nitrogen, phosphorus and potassium in one sample I.M. Maltseva, L.P. by Gritsenko's method; mobile phosphorus in 1% ammonium carbonate solution by the method of B.P. Machigin; by the method of P.V. Protasov in an alternating potassium flame photocalorimeter; water-soluble salts and dry residue were determined by the generally accepted method, GOST-26423-85, using a potentiometer in pH aqueous absorption. soil density in field conditions using a 500 cm3 cylinder according to the Kachinsky method; specific mass by pycnometric method; soil porosity in the calculation method; water permeability of the soil was performed by the Kaczynski method.

The field and laboratory experiments were carried out on the basis of the methodological manual of the All-Russian Research Institute of Plant Science (1985). Phenological observations and biometric analyzes were carried out according to the methodological manual of the State Commission for Testing Agricultural Crops (1989). study of plant growth and development, field fertility of seeds: during germination and before harvesting, in 0.5 m2 areas where constant observation is carried out in odd returns, 3 places located diagonally across the paddy field were counted.

Research results. in field experiments, mash seed germination was observed on June 28-29 (on average, 9-11 days), green leaf emergence was observed on July 2-4, and in the no-till option, seed germination was delayed by 1 day, and green leaf emergence was delayed by 2 days (Table 1).

also, branching was observed on July 1316, flowering on July 25-28, and it was found that there was no significant difference between planting rates. It was found that the seeding phase of the variety is on August 5-6 in tilled and plowed variants, and August 8-10 in the no-till variant.

Table 1
the effect of planting methods and standards on the growth and development of mash

№	Planting method	Planting rate	Sproutig	True leaf release	Branch out	Bloom	Bean-lash	to ripen	
								10%	75%
1	Ploughing	250	28 July	2 July	13 July	25 July	5 August	5 September	24 September
2		300	28 July	2 July	13 July	25 July	6 August	5 September	25 September
3		350	28 July	2 July	14 July	26 July	6 August	6 September	26 September
4	Planting	250	28 July	2 July	13 July	25 July	5 August	5 September	24 September
5		300	28 July	2 July	13 July	25 July	6 August	6 September	25 September
6		350	28 July	2 July	14 July	26 July	6 August	6 September	26 September
7	no-till planting	250	29 July	4 July	16 July	28 July	8 August	9 September	29 September
8		300	29 July	4 July	16 July	28 July	9 August	9 September	30 September
9		350	29 июн	4 July	16 July	28 July	10 August	10 Se September	1 October

The difference between 10% maturity and 75% maturity of the variety took 19-20 days. The change in planting rate from 250,000 units/ha to 350,000 units/ha caused the duration of the growing season to increase by 1-3 days. It was found that the growing period of the variety was 88-90 days in the fully cultivated (ploughed) variant, 89-91 days in the less cultivated (cheziled) variant, and 92-94 days in the non-cultivated (no-till) variant

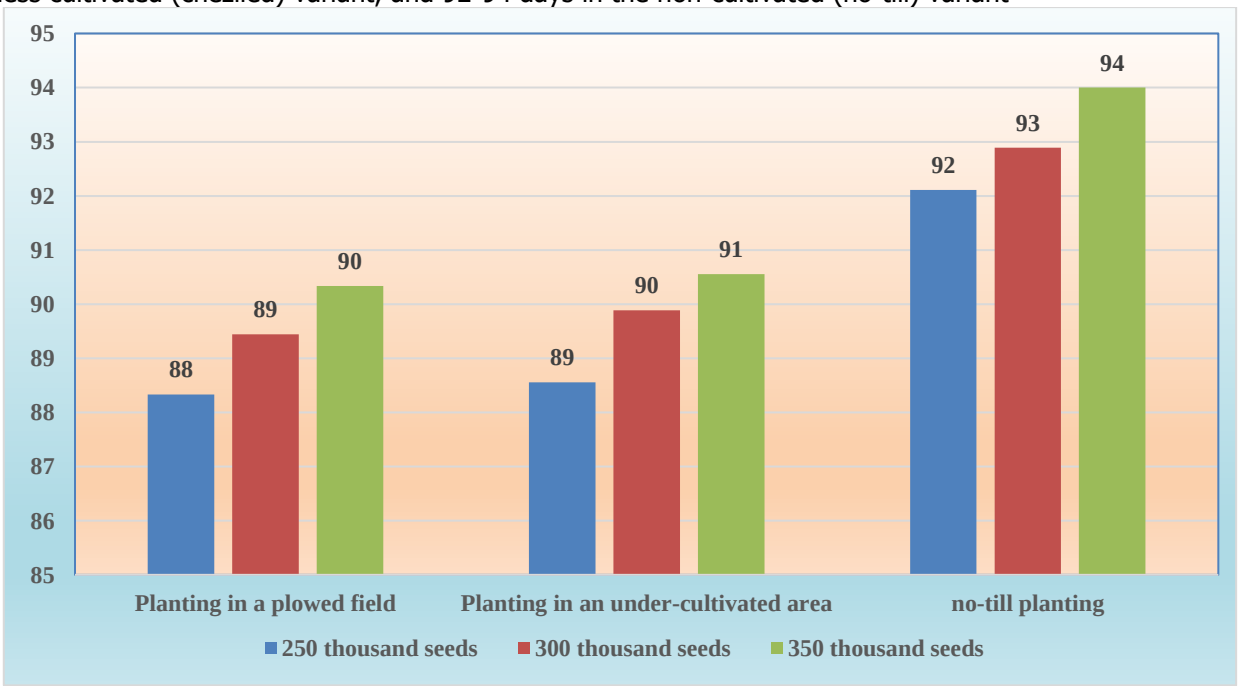

Figure 1. Changes in the growing season of mosh under the influence of planting methods and norms (2021-2023)

In conclusion, it can be said that in the conditions of light gray soils of Kashkadarya region, as a repeated crop, different planting methods and planting standards, the change of planting standards of mash variety "Durdona" from 250,000 units/ha to 350,000 units/ha will increase the length of the growing season by 1-3 days. reasowill beThe growing period of the variety is 88-90 days in the fully cultivated (ploughed) variant, 89-91 days in the less cultivated (cheziled) variant, and 92-94 days in the non-cultivated (no-till) variant.

LIST OF USED LITERATURE.

1. Mavlyanova R.F., Zuev V.I., Alimov J.A., Pirnazarov D.R., Kim V.V. rekomendatsii po teknologii vozdelivaniya ovoshnoy soi v Uzbekistane [Recommendations on the Cultivation Technology of Vegetable Soybean in Uzbekistan]. // Tashkent, 2008.- 25 p.
2. Mavlyanova R.F., Sulaymanov B.A., Boltaev B.S., Mansurov H.G. mung bean growing technology [Mung-bean Growing Technology]. // Recommendation [Recommendations]. - Tashkent: Nowruz, 2018. - 24 p.
3. Mavlyanova R.F., Sulaymanov B.A., Boltaev B.S., Mansurov H.G. introduction of innovative achievements in agriculture [Introduction of Innovative Achievements in Agriculture]. // Educational-methodical manual for farmers [Educational-methodical manual for farmers]. - Tashkent, 2018.- 15 p.
4. Nurbekov A. a guide to conducting soil-protecting and resource-efficient agriculture in Uzbekistan. - Tashkent, 2008. B. 9-11.
5. Ostanakulov T., Khalilov N. and others. Repeated crops are a source of fertility. -Samarkand, 2017.- B. 36-43.
6. Friedrich T., Kassam A., Thacher F. application of resoursosberegayushchego land and role of political and constitutional support // Nou-till and plodosmen-osnova agrarian policy support of resoursosberegayushchego land for intensification of sustainable production. Quick. doc. Maj. Nauch. conf. July 8-10, 2009. - Astana-Shortandy.: 2009. pp. 13-14.
7. Uzakov G. O. EFFECTS OF AUTUMN WHEAT PRODUCTION ON RESOURCE-EFFICIENT TECHNOLOGY ON GRAIN YIELD //Life Sciences and Agriculture. - 2020. - No. 1. – S. 27-31.
8. Uzakov G. O., Khalilov N. vLIYANIE SPOSOBOV, NORMY I SROKOV POSEVA NA UROJAYNOST I KACHESTVO ZERNA OZIMOY PShENItsY //Novosti nauki Kazakhstan. – 2017. – no. 3. - S. 188-196.