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Research Article

STUDY OF MUSH AGROCENOSE IN THE CONDITIONS OF THE KHORAZM OASIS

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Masharipov Adamboy Atanazarovich
Urdu., Dotsenti, Urganch Davlat Universiteti, Urganch Shahri, Uzbekistan

Bekchanov Shoxrux Raximberganovich
Urdu., 2-Kurs Magistranti, Urganch Davlat Universiteti, Urganch Shahri, Uzbekistan

ABSTRACT

This article provides information about the ecological state of agrocenoses of the Khorezm oasis and the impact of various agricultural technologies on the cultivation of mung bean, as well as the scientific and practical significance of the influence of environmental factors on the growth, development and productivity of mung bean.

KEYWORDS

Agrocenosis, ecological factor, soil, mush, agricultural technology.

INTRODUCTION

Maintaining, restoring and increasing soil fertility is one of the most important and urgent tasks in the agriculture of the Republic. The soil and climate conditions of our country allow to plant agricultural crops throughout the year and harvest 2-3 times a year. Therefore, to increase the ecological efficiency of the irrigated lands by increasing the soil fertility, the second half of the summer is effectively used, and in the system of growing grain crops twice a year, cotton and cob crops are planted, and in the rotation system, winter wheat is grown. may consist of mash cultivation as a repeat crop.

Mush is a valuable, medicinal, grain-producing plant that absorbs free nitrogen from the air with the help of nodule bacteria that live symbiotically in its roots and collects 50-100 kg of pure nitrogen per hectare of land.

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The annual norm of ng (30-40 t/ha) creates an opportunity to increase the natural fertility of the soil with the introduction of organic matter. During the second half of the summer, it has been proven that the productivity of cotton can increase by 50% or even more if it is grown as a repeat crop in the fall wheat field.

However, mosh is not equally effective in all soil and climate conditions of our country. For this reason, scientific and practical work on the influence of environmental factors on the growth, development and productivity of the mash crop in the agrocenoses of the Khorezm oasis has not been sufficiently studied.

Level of study of the problem. It is known that any agricultural crop removes a significant amount of nutrients from the soil during its growing season. After the plants are harvested, a certain amount of nutrients remains in the remains of their stems and roots. In addition, the residues of repeated crops quickly rot and turn into inorganic matter (Halikov, 2007).

It should be noted that the mash plant has been used as a recurrent crop in Uzbekistan for the past ten years.

However, its agrotechnics have not been fully scientifically studied, only the same: fertilizer standards, watering methods, seedling thicknesses, this plant has been planted and harvested. In this regard, B. Kholikov (2007) planted mung after wheat in typical gray soil conditions and obtained a grain yield of 17.4-18.3 s/ha.

Researcher S.T. In the experiments carried out by Negmatova, when the "Radost" variety of mosh was planted in the morning at the rate of 400,000 seeds per hectare of land, the yield was 19.3 s/ha, and the protein content of the grain was 27.5 %, the seed consumption was increased later (540,000/piece/ha) and the grain yield of mung beans planted at the beginning of August (1.08) was 14 s/ha, and a decrease in protein content (25%) was observed.

THE MAIN PART

In order to achieve this goal by determining the ecological features of the state of mosh agrocenoses in the conditions of the Khorezm oasis, the following are necessary: to reveal the main trends of agrophysical and agrochemical parameters of soils of agroecosystems and anthropogenic changes; reveal the influence of environmental factors on the main stages of plant growth and development; the tasks of assessing the ecological potential and productivity of agricultural agrocenoses were determined.

RESEARCH OBJECT AND METHODS

based on the data collected on the basis of agricultural agrocenoses, mush crops and applied agrotechnological measures, as well as on the conducted experiments. This, in turn, serves to determine the ecological characteristics of the state of winter wheat agrocenoses in oasis conditions.

RESEARCH METHODS

Soil water-physical and chemical analysis (Tyurin, Kachinsky, EC-Hanna meter (electrical conductivity meter)) was carried out on the basis of ecological (observation, comparison, experiment and modeling), placement of options according to field experience in carrying out research, ecological assessment methods.

The manuals "Metodika Gosudarstvennogo sortoispitaniya selskohozyaystvennih kultur" (Moscow, Kolos, 1964), "Metodi issledovaniy s zernobobovimi kulturami" (Oryol, 1971) were used for conducting phenological observations and calculations in repeated crops. The rest of the activities were

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conducted on the basis of methodological manuals of UzPITI.

All agrochemical analyzes were carried out using the manual "Metodi agrokhimicheskih analizov pochv i rasteniy" (Tashkent, 1977), "Metodi agrokhimicheskikh, agrofizicheskikh i mikrobilochicheskih issledovaniy v polivnih rayonakh" (Tashkent, 1963). Mathematical analyzes of the productivity of repeated crops and winter wheat were determined by the method of B.A. Dospekhov (1985).

Research results. During the period of individual development, mush passes a number of stages of organogenesis, and they are as follows: 1) swelling; 2) germination; 3) stem branching; 4) planing; 5) flowering; 6) formation of pods; 7) ripening; 8) full ripening.

Cabbage is one of the most heat-demanding crops. High temperature is required for normal growth and development of plants. The seeds begin to germinate at a temperature of 8-100C, but rapid and oblique germination of seeds is observed when the average temperature is 12-140C. the part may rot.

In this respect, planting mung bean as a repeat crop is very suitable for its heat requirement and fully germinates in 3-4 days. Optimum conditions for mash are created at a temperature of 18-220C. It blooms easily even in hot weather and the harvest is completed. It is advisable to have a temperature of 20-250C during the flowering and flowering period. Mush crop is heat resistant up to 45-47 degrees. Mush sprouts and an adult plant are very sensitive to frost, one degree of frost can kill it. Mush can withstand the heat of the day and the cool of the night, that is, sudden changes in the weather. The sum of the useful temperature for fast-cooking varieties of mosh is 18000C, for medium-cooking varieties it is 20000C.

Mush is a light-demanding plant. This type of legume is both a long- and short-day plant. The first period of growth, i.e. before flowering, is quite long. It is not advisable to grow mush in shady places (among gardens), because the joint spaces in the stem of mush grown in shady places are lengthened, the stem becomes thinner, the fruit parts formed in each bush decrease, as a result, its yield decreases. goes

Also, reducing the number of rows and increasing the number of plants on the field by an average of 350-400 thousand bushes when planting mush also leads to a decrease in mush grain yield. Moss is a self-pollinating plant.

Depending on the length of the growing season, cultivated mush is divided into the following groups: very early (75-90 days); medium (85-105 days); evening (100-115 days); are divided into very late (more than 115 days) groups.

The mush varieties grown in our republic are mainly mid-early and mid-late, and their growing period is 90-120 days. But it should also be taken into account that the climatic conditions of the year (temperature, humidity) have a great impact and can change the growing season by 10-25 days. In addition, the vegetation period of the plant depends on the altitude and latitude of the place. In the northern regions, the growing season is longer due to the longer days. Because mush is a short-day plant. When the seed is sown late (for example, in angus), the number of days of germination and growth of seedlings is reduced, that is, the growth period during repeated sowing is 10-15 days shorter than in spring.

Depending on the demand for moisture, mush belongs to the group of mesophytic plants. Mush seeds swell quickly, for this they require water in the amount of 90-92% of the dry weight of the seed. If moisture escapes

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from the soil where moss is grown, it affects the development and productivity of the plant. Mush requires less water for germination than other types of beans, and it germinates faster. Grass can appear 3-4 days after planting (in other types of beans, grass appears 6-12 days after planting). Although mung bean stands out in terms of resistance to heat, in any case, it grows slowly in dry soil. Therefore, keeping the soil in a healthy state is one of the most important conditions that affect the development and productivity of mush.

It is also not good to fertilize the soil too much. Otherwise, the ripening of the seeds will be delayed, as a result, it will be very unsuitable for storage. Even when it is used as seed, it does not work well.

Usually, mush is watered 4-5 times during the growing season, and those planted in the garden are watered 2-3 times during the growing season. 600-800 m3 of water per hectare is used for each irrigation. Mush sprouts cannot grow in dry conditions. Mush's demand for moisture increases in the post-flowering period, if the moisture content in the soil is less than 65%, the grain is crushed, the yield decreases, and biological nitrogen accumulation in the roots does not take place. Watering is stopped after the lower pods start to turn yellow.

According to its biological properties, moss is not demanding on the soil. It grows well in black, gray, grassy gray, sandy loam, sandy loam, and saline soils.

Meadow gray soils are the best soil for planting moss in Uzbekistan. Even if the soil is low in nutrients, it supplies itself with nitrogen with the help of bacteria in the moss root. Mush nodule bacteria can be found in all soils, because the activity of nitrogen-fixing nodule bacteria in its roots is high and the level of utilization of free nitrogen in the air is different.

It is also high in the soil, the reason is that the rhizobium phaseoli bacteria, which are unique to mush, are always present in all our soils.

The activity of tuganaks requires that the soil is porous, and that the moisture content is 70% relative to ChDNS. According to the obtained data, mush is more resistant to salt due to the fact that it has the ability to release excess salts accumulated in it.

CONCLUSION

In the conditions of alluvial soils of the Khorezm oasis meadow, on the lands irrigated as a repeated crop, cotton and grain crops increase soil fertility in the system of crop rotation, and the possibility of increasing the ecological efficiency of agrocenoses is created.

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