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IMPACT OF REPEATED MUNG BEAN CULTIVATION ON SOIL RECLAMATION

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Annotation
The article is based on the data of modern science and experiments on mosses in the country and abroad, as well as on the results of research and observations carried out by the authors in scientific research.

Keywords; Mung bean varieties, coral crop rotation, agricultural technology, transplanting, number of irrigations, agrophysics.

Introduction:
Uzbekistan is one of the most agricultural regions in the world due to its natural climate and soil conditions. The basis of agricultural crops grown on irrigated lands of the republic are cotton and winter cereals. Every year, winter cereals are grown on more than one million hectares of irrigated land in the country. This means that once the winter wheat is harvested, it will be possible to grow the same amount of crops again. With this in mind, the focus on winter wheat-free areas as a secondary crop of legumes, grains and vegetables that meet the daily food needs of the population will further strengthen food security in the country and fully meet the needs of the population in agricultural products.

According to the Food and Agriculture Organization of the United Nations and the World Health Organization, more than 840 million people, or nearly one in eight, are malnourished, with more than 30 percent of the world's population malnourished and deprived of essential micronutrients and vitamins. is experiencing a problem.

In many respects, a balanced diet is one in which the food consumed is adequately supplied with the nutrients and quality necessary for the normal development and functioning of the human body, proper metabolism, health promotion, disease prevention, slowing down the aging process and prolonging life. depends on. These nutrients, vitamins and trace elements are found in large quantities only in legumes: moss, soybeans, beans, and can not be replaced by any other product. [3]

The role of legumes in increasing the fertility of such lands and improving the agrophysical and microbiological properties of the soil is great. When legumes are planted in cotton and other crops, they enrich the soil with organic matter and provide an additional nutrient base. At the same time, in early spring it is possible to get 400-500 quintals of fodder per hectare for livestock. The science of academicians D.N.Pryanishnikov and V.R.Williams is of great importance for the development of the theory of efficiency of leguminous crops.

In addition to working on the huge problems of agrochemistry, DN Pryanishnikov proved the role of green manures in increasing crop yields. In Central Asia, the interest in green manure began with the development of cotton growing.

When mosh is grown as a secondary crop in winter wheat, it can be harvested twice a year, yielding 60–70 s / ha from winter wheat and 15-20 s / s from mosh, which is grown as a second crop. s /. As a result, the efficiency of using 1 hectare of land will increase by 100% and net income will increase by 30-40%. The level of profitability will increase by 20-25% and the cost of production will decrease by 15-20%. [1]

Methodology:

Research on this topic The Bukhara branch of the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers conducted research on the cultivation of coral varieties of winter wheat in the conditions of alluvial, saline soils of ancient irrigated pastures.

The study was conducted according to the following experimental system (Table 1). Experimental variants alternate between years, with cotton planted in the first year of winter wheat, fall wheat planted in the first year, replanted in part of the winter wheat planted, and plowed as a control.

picture 1-2: The process of implementation in phenological observations in the Mosh plant.

1-picture 2-picture

The experimental options were placed in a series of 4 repetitions, each variant area being 500m2 (10x50).

table-1 EXPERIMENTAL SYSTEM

№	Mung bean varieties	Options	Pre-irrigation soil moisture (in% of ChDNS)	Annual mineral fertilizer rate, kg / ha
1	Marjon	irrigated with a furrow (control)	65-65-65	N-60, P-80, K-60
2		irrigated with a furrow		
3	Durdona	irrigated with a furrow (control)		
4		irrigated with a furrow		
5	Marjon	irrigated with a furrow (control)	70-70-65	
6		irrigated with a furrow		
7	Durdona	irrigated with a furrow (control)		
8		irrigated with a furrow		
9	Marjon	irrigated with a furrow (control)	75-75-65	
10		irrigated with a furrow		
11	Durdona	irrigated with a furrow (control)		
12		irrigated with a furrow		

Field experiments were carried out on the basis of "Methods of agrochemical, agrophysical and microbiological research in pollinated cotton fields" (SoyuzNIXI, 1963), "Methods of field experiments with cotton" (SoyuzNIXI, 1981) and PSUEAITI (2007). 7]

Soil work during the experiment:

- Before the experiment, soil sections (at a depth of 1.5 meters) are dug in 3 places along the diagonal of the pile, genetic layers are described and soil samples are taken from each layer, in which the amount of water-soluble salts (water absorption) is determined. [8]
- The water permeability of the soil for 6 hours was determined annually at the beginning and end of the experiment on all options.
- The boundary field moisture capacity of the soil is determined at the beginning of the experiment by framing an area of 2x2 meters.
- Soil moisture is determined systematically by drying in a thermostat before irrigation. Soil samples are taken and analyzed for every 10 cm of the 1.0 m layer in 3 turns in each variant.
- In determining the duration and norms of irrigation, according to the experimental scheme, the difference between the moisture content of the soil before irrigation was calculated according to the formula SN Ryjov.
- The amount of water supplied to the experimental field was calculated using Chipoletti (VCh-50) water meters and in drip irrigation using a sensor.
- changes in groundwater level are set in the experimental area

It was detected using 3 observation wells. The pipes are 40 mm in diameter and are installed to a depth of 2.5 meters. The lower 1.2-meter section of the pipes consists of galvanized holes, which are lined with a filter (kapron material). Groundwater levels are measured once every 10 days.

- The level of mineralization of groundwater in all observation wells is determined before and after the completion of saline leaching and at the end of the growth period, as well as the amount of dry residue, chlorine ions and sulfate.
- At the beginning of the study to determine the salt regime of the soil, at the beginning and end of the growing season of shade, soil samples were taken for each field and variant, the amount of dry residue, chlorine ion and sulfate was determined, (0-30; 30-50; 50-70 and 70 -100 cm.).
- The amount of humus in the soil layers 0-30, 30-50 cm before the experiment by the method of I.V.Tyurin, total amounts of nitrogen and phosphorus by the method of L.P.Gritsenko, I.M.Maltseva, by the method of nitrate nitrogen calorimeter, mobile phosphorus B. P.Machigin, and exchangeable potassium was determined by the method of P.V.Protasov.

- All agrochemical analyzes are carried out on the basis of "Methods of agrochemical analysis of soil and plants"

Discussion:

Since irrigated lands are the main source of demand, it is scientifically and practically based by scientists that the main method of its efficient use is to cultivate several times a year using it continuously throughout the year.

In particular, K. Eshmirzaev and others note that it is possible to increase the efficiency of arable lands through the cultivation of secondary crops in the valley, and by cultivating moss in these areas to get a grain yield of 15-18 ts / ha.

In irrigated eroded lands, repeated sowing of soybeans and moss after winter wheat enriches the soil with nutrients, improves its agrophysical and agrochemical composition, increases productivity and has a positive effect on next year's cotton yield.

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