Neo Scientific Peer Reviewed Journal
Volume 5, Dec. 2022 ISSN (E): 2949-7752
www.neojournals.com

NEW TECHNOLOGY OF LAND PREPARATION AND COMBINED AGGREGATE IN POTATO FARMING

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Abstract:
The article describes the use of videocassettes and audiocassettes for teaching with the help of computer programs, listening to oral speech and controlling pronunciation, as well as the specific aspects of using a multimedia system.

Keywords:
multimedia, information-communication, technology, microphone, audio-systems, videocassette, audiocassette, optical compact discs

One of the main issues of the economic sectors of our independent republic is to fully satisfy the population's demand for food products, including potato products. Increasing the production of potatoes and further improving the well-being of the people on this basis is one of the most urgent issues facing agriculture. In the Republic of Uzbekistan, many organizational issues have been resolved in order to develop vegetable growing, potato growing at the level of demand. Joint-stock farms specialized in fruit and vegetable growing were terminated and farms were established. Earth has found its rightful owner. The yield of crops has increased sharply, the quality of products has improved.

After the independence of the republic, the task of protecting the food supply and satisfying the people's need for potatoes mainly at the expense of the products grown at home, that is, the task of sharply increasing potato production, was set.

Because potatoes are food, fodder and technical. In Uzbekistan, potatoes are mainly used for food purposes. Only unprofitable small, low-quality tubers are given to cattle.

Potato pulp is also a raw material for processing alcohol, starch, glucose and other industries.

One of the main factors to increase potato productivity and increase production is the correct selection of the crop variety, and the second is to prepare the land for planting at the level of high-quality agrotechnical requirements. Because if the soil is not properly treated before planting, i.e. if the soil is loose without soft content, potato seeds cannot be planted in a quality manner at the level of agrotechnical requirements. the desired yield is not obtained. This, in turn, leads to a decrease in crop productivity. Therefore, in countries where potato cultivation is developed, such as Russia, China, Poland, Holland, and Germany, great importance is attached to preparing the soil for planting potatoes. Each country has soil preparation and planting technologies suitable for their soil and climate conditions.

The results of scientific research conducted in Uzbekistan and the experience of advanced potato farms show that the yield of potatoes largely depends on planting them in soft, fine-grained soil. In the experiments of Y. Asatillaev, the yield of potatoes planted on soil

prepared by increasing the level of soil grinding by 20% increased by 17-20%. The increase in the yield of potatoes grown in soil with small lumps was also observed in the researches of R. Rustamov.

Currently, tillage machines used in cotton cultivation are used for potato cultivation due to the lack of aggregates that can fully meet the agrotechnical requirements for tillage before planting. However, the physico-mechanical properties of the soil of fields freed from grain and intermediate crops in the summer differ sharply from the physico-mechanical properties of the soil during spring cotton planting. Therefore, when the fields being prepared for planting potatoes in the summer are treated with soil tillers in the cotton growing system, it is not possible to prepare the soil to the level that meets the agrotechnical requirements in one pass, and the soil is treated several times with these machines.

The technology of soil preparation for planting potatoes and the system of used tillage machines are based on many years of experience of advanced agricultural production.

In the summer, when cultivating the land freed from fall grain and catch crops for planting late potatoes, the cuttings will grow due to the lack of soil moisture. In order to crush the formed pieces, 2-3 repeated processings are carried out with chisel-cultivators and disk harrows. As a result, the structure of the soil is damaged, it has a negative effect on its physical and mechanical properties, the duration of planting is extended, and it leads to an increase in material costs.

Therefore, the task of improving the soil tillage technology for planting autumn potatoes in summer, justifying the type of technical means and their parameters that reduce costs is urgent, and this task is important in agriculture.

Scientific research work in Uzbekistan on the creation of energy-saving technologies and combined agricultural machines that prepare the soil for planting potatoes in one go and meet the requirements of agrotechnics in terms of work quality is insufficient. In order to fill this gap, it is an urgent task to conduct scientific research, learn about the achievements on a global scale, and based on the analysis of the work done, to develop an energy-saving technology for planting potatoes in the soil and to create a combined unit.

The pre-sowing machines developed for the soil-climate conditions of Uzbekistan mainly meet the requirements of cotton agrotechnics in terms of performance. From the point of view of potato cultivation technology, when used before planting potatoes, it is not possible to prepare the soil for planting in one go. Even when the design of these machines is improved, the desired result cannot be achieved, that is, the requirement of potato agrotechnics is not fulfilled. The construction of the unit for preparing the soil for planting potatoes made by NPO VISHOM-NITI based on the machine-separator of the German company "Grimme" is more suitable for the working idea put forward by us. However, this machine is designed not only for preparing the soil for planting, but also for harvesting potatoes, and its construction is somewhat complicated. Therefore, the dimensions of the working bodies of this machine are determined and based on the Russian soil and climate conditions.

Based on the above-mentioned points, it can be said that before planting in the soil prepared by NPO VISHOM-NITI, it is necessary to check the operation of the processing unit in the

soil and climate conditions of Uzbekistan and determine whether the dimensions of the working bodies are suitable for the soil conditions. Therefore, we put forward this working opinion based on a thorough analysis of the shortcomings of this machine and based on the established agrotechnical requirements for soil treatment before planting. Soil compaction, direct operating costs, metal capacity, machinery type, and energy consumption can be drastically reduced if a pre-planting machine can prepare the soil for planting in a single pass.

In order to implement the working idea raised above, the future unit that works before planting in the soil should work according to the following technological scheme (Fig. 1). The main working bodies of the machine are mounted on a welded frame. Before planting, the tiller works in the following order. When the machine moves, the plow 3 cuts the soil layer of a certain depth and is transferred to the moving pin conveyor 4 through the transmission 11. Conveyor 4 sifts fine soil and throws it on the surface of the field, and directs the uncrushed pieces to the crushing drum 5. The cutting drum 5 squeezes the remaining cuttings into the spiked conveyor, crushes them with piles 6, and throws them back onto the field surface.

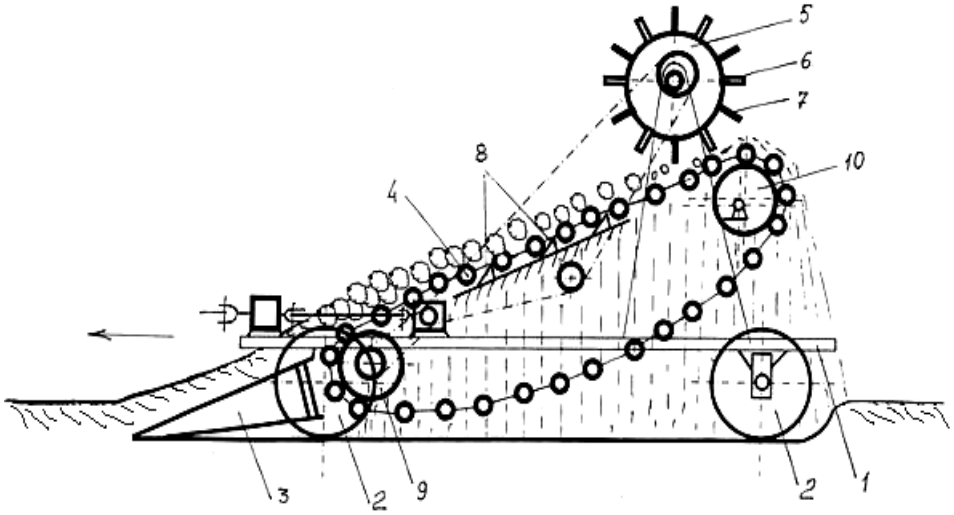

Figure 1. Tillage machine before planting technological operation scheme.

1- rama; 2-base wheels; 3-working body cutting the soil layer (lemex); 4-screw conveyor; 5-drum with a pile for crushing pieces; 6-piles; 7-plank on which pegs are fixed; 8-fixed balls shaking conveyors; 9-leading star; 10-leading star;

In potato cultivation, the use of a new technology of preparing the land for planting and the use of a combined unit that implements it ensures high-quality preparation of the soil for planting and the planting of potato crops in a short period of time, protects the soil from erosion and excessive compaction, and reduces the cost of labor and money. When the combined unit is used, the operating expenses for 1 hectare of land are reduced by 2.44 times.

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