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Improvement of Basic Tools and Their Economic Processes in Agriculture

Khurramov Eshmamat Khudoyberdievich
Senior lecturer of the Department of Business Management and Statistics of Termiz State University

Annotation: When cultivating any agricultural crop, the main tillage is carried out, which is carried out according to the moldboard or non-moldboard technology. Deep basic tillage up to 30 cm is the most energy-intensive operation, it accounts for up to 40% of all energy resources used in crop production. Recently, in order to reduce the energy intensity of the main tillage, the technology of tillage to a depth of up to 16 cm with mulching of the upper layer has been widely introduced. If we combine the known technological operations, subject to the agrotechnical requirements (ATT) at different depths of the cultivated layer, then it becomes possible to achieve a new qualitative result that increases the efficiency of the main tillage.

I. INTRODUCTION

In order to provide all areas of the republic's agro-industry, which has developed significantly during the years of independence, especially agricultural production, with the most modern and perfect agricultural techniques, the production of such techniques in cooperation with advanced companies of foreign countries has been launched in our country.

At the same time, it can be pointed out that our state has created new directions for the use of equipment for farms, that is, it is possible to use their own equipment and the equipment of other enterprises and organizations on the basis of a contract.

At the same time, the mechanization of all areas of agriculture is considered one of the most important directions in increasing the welfare of the people.

The cultivation of agricultural products in our country is mainly carried out under irrigated farming conditions.

Inadequate water reserves limit the possibility of increasing the production of products in an ex-intensive way, i.e., at the expense of creating new arable areas. Full mechanization of agricultural production is one of the main tasks. The main goal of mechanization of agricultural production, simply put, is to reduce labor costs in the production of products.

It is known that in modern times, with the power of technology, any desert can be turned into a beautiful, green valley, but it is not out of the question that the opposite can happen at the same time.

Therefore, it is necessary to be extremely careful when using the equipment, we must not forget that the correct use of each tractor and agricultural machine, their correct use, knowing when and how to do each job is important for every specialist working in the field of agriculture.

Currently, the level of mechanization of agricultural crops in our country is low, this indicator is 70-75% in cotton growing, 85-90% in grain growing, 80-85% in fodder production, 70-75% in vegetable-polishing, and 50-55% in garden and viticulture. At the same time, the processing and storage of agricultural products is not up to the demand.

Of the agricultural products produced in our country, raw cotton and wheat grain are fully processed, but only 15...28% of fruits, grapes, potatoes, vegetables and sugarcane crops are processed.

In the use of techniques, it is necessary to use the most modern methods of increasing work productivity at the expense of improving their usage indicators, as well as to introduce new procedures and rules for the organization of work.

A tractor, self-propelled chassis, internal combustion engine and electric motors can serve as an energy source for agricultural production processes. Separate agricultural machines, tools and mechanisms are used to perform each job. A tractor, a mounter and other devices are used as auxiliary devices.

An agricultural unit equipped with a mechanical and electrical energy source is called a machine-tractor unit. Therefore, in the full mechanization of agricultural production, it is necessary to use tractors and agricultural machines that are suitable for the types of crops grown, farming methods (irrigated land), sizes of cultivated areas, soil (sandy, silt, stony) and climatic conditions, and to organize their efficient use. will be done.

Agricultural aggregates of various types and types are used for production work. They are classified according to their usage characteristics as follows:

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1) Depending on the method of performing the work - mobile, stationary and stationary;
2) Depending on the type of energy source - heat and electric engine;
3) Depending on the method of connecting the work machine to the energy source - trailer, suspension and semi-suspension;
4) Depending on the number of cars in the aggregate - single and multi-car;
5) Depending on the type of work performed at the same time - simple and complex;
6) Depending on the type of work to be performed - plowing, planting, etc.;
7) Depending on the method of transmission of movement to the working machine - the movement is transmitted from the power take-off shaft of the tractor, the wheel of the machine and a separately installed engine;
8) Depending on the installation of the working machine in relation to the tractor - it is installed in front of the tractor, behind it, and in combination;
9) Depending on the installation of working machines in relation to the height of the unit - symmetrically and asymmetrically installed;
10) The material is divided into aggregates with capacity and without capacity depending on the availability of storage capacity.

Therefore, according to the decision of the President of May 21, 2012 "On the program of modernization of agricultural production, technical and technological rearmament in 2012-2016" No. consists of:

a) re-equipment of car-tractor parks with high-quality agricultural machines;
b) mastering the production of new types of agricultural machinery whose power, productivity, energy consumption and other indicators meet modern standards;
c) modernization and technical re-equipment of agricultural machinery enterprises;
d) improvement of production and supply system of agricultural machinery;
e) increase and expand the quality of the service system;
f) is to train mature specialists for farms, machine-tractor parks and agricultural machinery enterprises and constantly improve their skills.

Implementation of these assigned tasks within the specified periods will play an important role in providing the population of our country with agricultural products in the future.

General rules on technical safety stipulate the following: working on tractors, combine harvesters and other agricultural machines is allowed to persons who have a special certificate and have received instructions at the workplace.

Before starting work, the mechanic must check the operation of all control mechanisms of the tractor at the required level. Field plots should be inspected and dangerous areas (pits, ditches, rocks and other less noticeable obstacles) should be marked with target stakes.

The following: work of sick and intoxicated persons in MTAs; working during thunderstorms and being in the unit; working at night in dim lights; when the unit is moving, perform adjustment work without the engine turned off or the working machine lowered to the ground; where aggregates are used, people are allowed to rest and sleep on fields, roadsides, plots, and straw mounds; they are not allowed to transport people in trailers attached to tractors and agricultural vehicles.

Before drawing up a business plan by the experts of each farm, on the basis of sample technological cards, practical technological cards are drawn up for each type of crop to be planted, taking into account the soil and climatic conditions of the farm, and expenses are calculated depending on which region the area corresponds to, and how productive it is.

The purpose of drawing up practical technological maps is: 1) to increase the level of mechanization of the crop cultivation process by effectively using advanced agro-measures and machine systems, taking into account the specific soil and climate conditions of the regions; 2) effective use of labor and material resources; 3) reduction of manpower, fuel, mineral fertilizers and mechanization expenses in product cultivation; 4) replacement of used equipment and equipment with cheaper types in order to reduce the cost of production; 5) consists in the wide use of composite (mixed) aggregates that perform several types of work in one pass.

It is known that sample technological cards for cotton cultivation in our country are compiled for 3 regions and serve as a guide for economic experts in drawing up practical technological cards.

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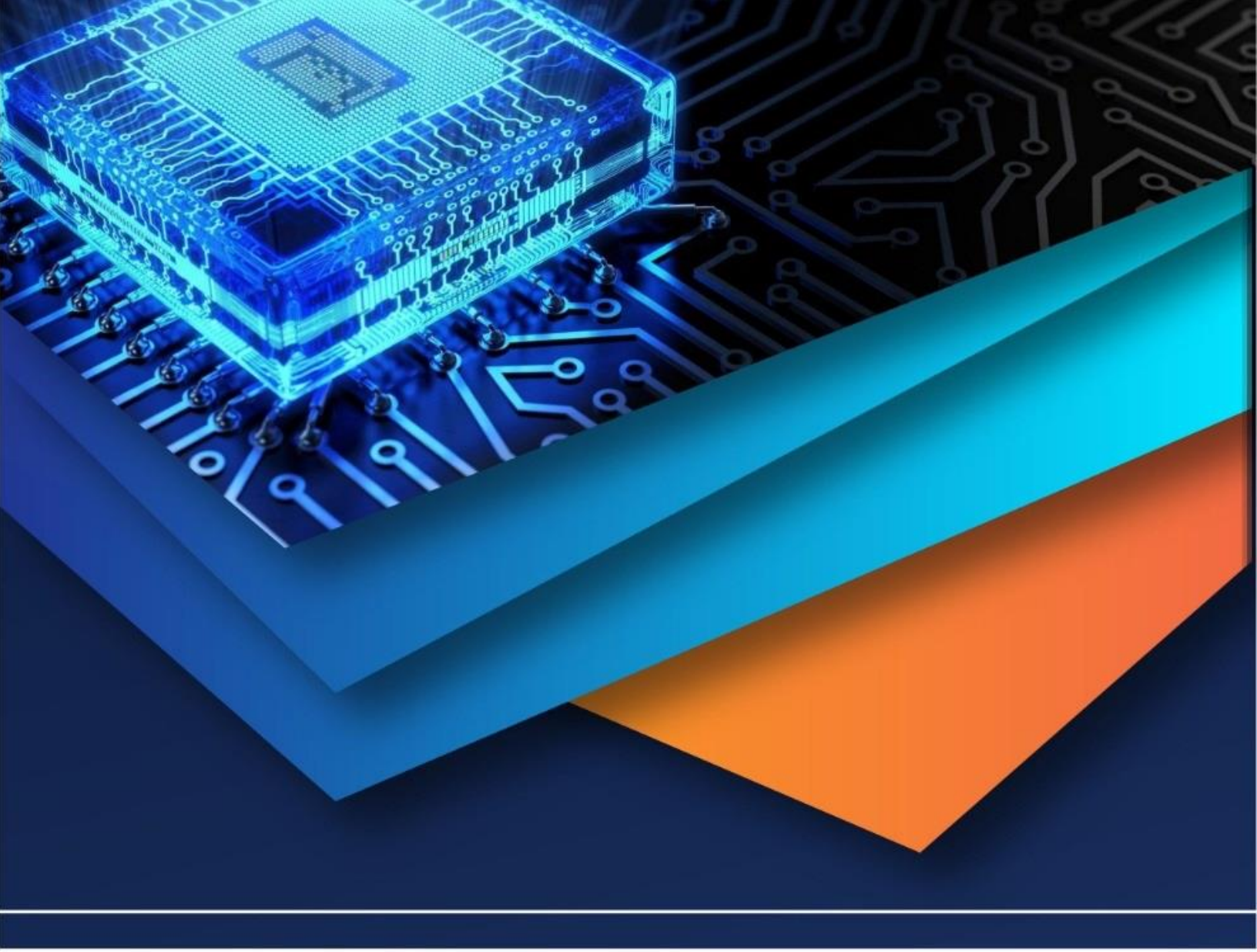

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