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ADVANTAGES OF USING COMBINED AGGREGATES IN TILLAGE

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Abstract
The article describes the units used in pre-planting work on newly plowed land, which perform some operations sequentially and combine several operations and increase the yield of units by reducing fuel consumption and other costs by reducing the number of field transitions, improving the quality of soil cultivation and preventing moisture loss in it, Information on the advantages of combined aggregates and combined aggregates that allow timely planting and harvesting of crops are given.

Keywords: Combined aggregate, soil, machinery, technology, resource, problem, agricultural machinery, work yield, fuel consumption.

Introduction

0 Decree of the President of the Republic of Uzbekistan dated June 1, 2017 No PP-3027 "On measures for the re-harvesting of crops in areas vacant from cereal crops in 2017, the timely delivery of material and technical resources required for planting" made it possible to fully satisfy the needs of the population for food products, to provide them with affordable and high-quality agricultural products. One of the main directions of the development of agriculture in the Republic of Uzbekistan is the use of advanced methods of cultivation, regular, intensive and high yield with less labor per unit of the grown product. One of the most labor- and energy-intensive technological processes in the cultivation of agricultural products is tillage. It is known that in our country such crops as wheat and potatoes, which are sown in open field and as repeat crops on wheat-free areas, are sown on new, that is, directly on plowed land before direct sowing. At the same time, plowed land is prepared for follow-up planting, and then planting activities are carried out. At present, work is underway to prepare newly plowed land for planting gear BZTX-1.0; BZTS-1.0; BZSS-1.0 and disc TDB-3.0; CIS 3.0 climbs and various break-planes are being carried out separately on the MV-6, MV-6.5, VP-8 vehicles. However, this leads to deterioration of the physico-mechanical properties of the soil, loss of a lot of moisture from the soil, and an increase in fuel consumption and other costs.

Combined units for tillage of soil. By the example of preparing the soil for planting, the following types of problems and solutions can be indicated:Cultivation of the newly cultivated soil in the traditional way. On the plowed land with plugs, large bumps, pores appear and the field surface becomes insufficiently flat. In such lands you can not plant seeds qualitatively. Therefore, without overturning the soil on the plowed land, it is also necessary to make additional shallow tillage, softening it, leveling it. If some weeds appear on plowed land before the planting season, they should be removed from the bush, uprooted by the roots and thrown out of the edge of the field[3]. After heavy precipitation, a harsh can form if the air temperature becomes too high, which also needs to be disturbed. To reduce evaporation of moisture in the earth, it is necessary to loosen its upper surface. In farming on irrigated lands, work is carried out to remove weeds from the spacing of crop rows, soften the soil, etc. To enhance the development of hay on meadow lands, the surface is shallow softened. Currently, the leading place in the world practice is occupied by the development and application of energy and resource-saving technologies and technical means that increase soil fertility and environmental protection. Due to the widespread application of cultivation of agricultural crops on the basis of scientific technologies, the requirements for the quality of tillage are increasing dramatically. All technologies used must meet the requirements of modern agrotechnical requirements. Today, with the existing technologies of preparing the soil for planting repeat crops, such technological operations as plowing, leveling, boring, calving of lands are carried out separately and sequentially in the summer season in fields freed from autumn grain crops. The analysis shows that the existing shortcomings in the preparation of newly plowed land for planting can be eliminated by the development of a machine that performs all technological processes to prepare the soil for planting in one pass from the field (complete densification of the plowed field, adding leveling and grinding of the field surface, that is, providing full processing in one pass to it before sowing. The use of such a machine in pre-sowing cultivation on newly plowed lands allows increasing the yield of work, improving the quality of tillage and preventing moisture loss in it, timely sowing and harvesting of crops along with a significant reduction in fuel consumption and other costs due to the addition of technological processes and reduction of the number of field crossings of units. In this direction, researchers of our republic are developing machines that are combined. This resource-intensive combination machine, which prepares the soil for planting for repeat crops, is used in the pre-sowing cultivation of the land where repeated crops, grains and legumes, vegetables and melons, fodder and other crops are sown. The combined machine is unleashed in one pass from an unplowed field to a depth of 22-30 cm into the soil, grinds large shovels, smoothes and dense the field surface. The combined machine is aggregated with tractors belonging to 5-6 classes. The car's coverage width is 2.7 m. The combined machine for ploughed land consists of sheaths, planks and planks equipped with discs with working surfaces. The operation of the machine takes place in the following order: the slings overturned by the plug housings are first affected by disc snails. They grind the slings and grind them along the entire plough layer, then flatten the surface of the plow. After that, the soil is affected by plank gelding, which denses the surface of the plow at the required level, on which a moist layer is formed for the collection of moisture. The application of this machine in pre-sowing cultivation on newly plowed land allows increasing the yield of work, improving the quality of tillage and preventing moisture loss in

it, timely sowing of crops due to the addition of technological processes and reducing the number of field crossings of aggregates due to the significant reduction of fuel consumption and other costs. One of the important tasks is the development of multifunctional combined machines and devices with high quality and yield and for processing energy-resource-saving soils. In particular, much attention is paid to the development and application of combined machines for tillage that combine all technological processes to prepare the soil for planting in one pass from the field, along with non-tillage before planting.

Conclusion

In the existing technologies of soil preparation for sowing, it is desirable to use combined aggregates with the addition of several technological processes in one transition in order to prevent soil density, moisture loss, increase in work and fuel consumption as a result of technological operations such as leveling, boroning and threshing of newly plowed fields separately and sequentially. At the same time, the number of crossings in the field decreases, the productivity of cocktails increases, and the time for preparing the land for sowing is reduced.

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