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Earth Working Technologies, Driving The Land

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Abstract: *To create favorable conditions for cultivated crops, mechanical impact on the soil with the working bodies of machines and weapons is called land (soil) cultivation. By tilling the soil, its water-physical properties, air, heat and nutrition regimes are improved, favorable conditions are created for the growth of plants. This article provides information about tillage technologies and tillage.*

Keywords: *processing, chisels, plows, turners, layers, chipping casing.*

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The ratio of large and small capillary pores in the soil is adjusted to the required level. The porosity of the soil increases during treatment, and the loss of moisture to evaporation decreases. When the mola is pressed, the soil becomes denser and moisture rises from the lower layers. Porous soil heats up well and retains heat well. Thanks to the cultivation of the soil, favorable conditions for the activity of microorganisms are created, and the decay of organic residues is accelerated. Roots of weeds are combed and removed with the help of harrows and chisels, and their reduction is achieved; Pests and diseases are also eliminated to a certain extent after processing.

The tasks of tillage are as follows:

1) Providing a deep arable layer and a favorable granular structure of the soil;

2) Elimination of weeds, pests and diseases;

3) Destruction of perennial weeds;

4) bury organic waste and fertilizers at the required depths;

5) Protection of the soil from water and wind erosion and elimination of their consequences;

6) Quality preparation of soil for planting and creation of favorable conditions for seed germination, etc. The soil is also cultivated during work such as applying fertilizer to the ground, mixing it with the soil, leveling the ground, and removing the soil. A positive solution to these tasks will help to accelerate agriculture - to increase the productivity of each irrigated and dryland hectare.

Plowing is defined as overturning, loosening and crushing of the workable layer by more than 135°. In this case, the structure of the arable layer changes dramatically, fertilizers and plant residues are buried to certain depths, nutrients are evenly distributed in the arable layer, and weeds are eliminated. The soil layer is plowed under plows. Lernex plows can have cylindrical, screw, semi-screw, elliptical (cultural) and other shapes. The shape of the tiller determines the quality of tillage. In 1797, the Bailey plow with a screw tip was invented in England. This initial plow simply turned the layer 135° and did not serve to fertilize the soil. On the other hand, the plow with a cylindrical overturner, which was created later in the Czech Republic (1827), did not overturn the layer as it

should. In 1870, the German blacksmith Rudolph Sack invented the elliptical tipping plow, taking certain parts of the semi-screw and cylindrical tipping tips. Such a revolution was called a cultural revolution. A cultural plow is widely used in plowing the soil. Above the main body of the plug, a small body is installed, the same shape as it, and the coverage width is equal to 2/3 of it. The auger drops the upper sod layer to the bottom of the agate, and the main body pulls the lower layer up and overturns it. Cultivation of soil with a plow is called cultural plowing. Driving quality is also strongly influenced by the speed of movement of the unit. The optimal efficiency is achieved by moving the unit at a speed of 5.4-5.8 km/h. That is, the duration of driving is selected depending on the soil conditions of each place and the agrotechnics of the cultivated crop. The land is mainly plowed in autumn. But in some places it is also plowed in spring. The quality of plowing is that the agrotechnical period of its transfer is observed, the unit moves along a straight line and provides the specified depth, the soil is plowed to the same depth in all parts of the field, plant residues are completely buried, It is evaluated by indicators such as the absence of unplowed areas and plows, the quality of plowing of turning areas, and the flatness of the field. If these agrotechnical requirements are fully met, the land is very well cultivated (9 points), satisfactory (6 points) if only three are not provided, and unsatisfactory (3 points) if most are not provided. The difference in driving depth should not exceed ±(2-3) cm. This depth is checked in several places in the field using a special egat gauge. Uncultivated, i.e. undercultivated areas should not exceed 0.2%. If there are more than 5 slats with a diameter of more than 5 cm per 1 m 2 and 10% of the plant remains are not visible, the land is considered to be of poor quality. Lands where the plane of the plow surface is reached as much as possible, and the number of egates and marzas are few, are considered to be plowed with high quality. Currently. IUI-3-35 and IT,ll;-3-35 double-layer, rrOH-3-45 rotary plug, general purpose IUIH-3-35, used in rocky soils IlKY -4-35, replaceable case IUIH-6 Plows such as -35, IUIH-5-35 are used, IlH,ll;-4-30 disk plow is used for plowing the soil of cholipoya checks (Fig. 9).

9- rasm. ПД-3-35 qo'sh yarusli plug.

Driving methods and techniques. The land is mainly plowed in two ways: rotary and flat. A circular drive starts in the middle or edge of a certain area of land and ends again in the middle or edge of it. The plug is not removed from the working position at the turning points. In this case, the land is not plowed with quality, that is, the plowing depth is not the same in all parts of the field. Driving quality increases when the field is plowed in sections. Therefore, the field is divided into several boards. If the plug passes through the middle of the board, and when it reaches the end, it starts from the right turn of the second pass, the overturned layer falls on top of each other and forms a rnarza. This is called a driving position. If the plug drives past the right edge of the board and turns

left at the end, an edge is formed in the middle of the board - it is called a driving edge. Driving depth and speed. The depth of soil plowing is usually 28-30 cm and even deeper. The driving depth depends on soil fertility, profile structure, mechanical and chemical composition. Low productivity and new lands are plowed to a depth of 20-22 cm in the first years of cultivation. Later, by deepening by 2-3 cm, the lower layer with less humus is gradually added. Shallow plowing is done to prevent sand and gravel from reaching the surface in areas where the gravel and sand steps are close.

Autumn plow. Plowing the land in autumn is one of the main agrotechnical activities necessary for good growth, development and abundant harvest of plants. In this case, the water in the soil sometimes freezes and sometimes melts on cold and warm days, and ensures the crushing of cuttings. On the land plowed in the fall, the water permeability of the soil improves, a lot of moisture accumulates, favorable conditions for microbiological processes are created, weeds die, pathogens and pests are eliminated, planting It will be possible to transfer within the terms. It is also much easier to prepare the land for planting in spring. High-quality autumn plowing increases crop yield by 10-20% compared to spring plowing, the crop ripens early and with good quality. 80-90% of the cotton crop is 1st and higher grades.

Arable land can be divided into three types according to its condition: fallow, fallow, and grassland. It is easy to plow the land freed from inter-row crops: due to continuous tillage, there is little plant residue and the soil is soft. After picking cotton, if the field is cleared of cotton with the help of aggregates, the land will be plowed with quality. Due to the fact that there are relatively more dense meadows in the lands freed from grain crops, it is somewhat difficult to plow them. Soil quality is cultivated when soil moisture is 40-50% of its full moisture capacity. When dry or wet soil is plowed, palaxa keksak is formed. November is the most favorable period for autumn plowing in the northern region of Uzbekistan, from November 15 to December 15 in the central part, and from November 20 to December 15 in the southern region. Depending on the soil conditions, the soil can be plowed to a depth of 30-35 cm. IUI-3-35 type plugs are used for plowing the ground in two layers. In this case, the upper layer (0-15 cm) is removed downwards, and the lower layer (15-30 cm) is removed upwards.

Plow types. Dry farming is practiced in most of the mountainous and sub-mountainous regions of Uzbekistan. Grain and fodder crops are grown here.

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