COORDINATE SPATIAL INTENSITY ASSESSMENT PREPLANT TILLAGE

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The plant is becoming increasingly popular organic (biological) farming system. Its main advantages are high quality and safety of agricultural products, environmental improvement, maintenance and restoration of soil fertility through organic fertilizer to the soil earned green manure and plant residues left. The biological potential of soils Ukraine uses only 20 – 30 % and energy consumption for per unit of crop 2-2.5 times the energy developed countries.

With regard to lower operating costs, a large share of capacity in the sector contained cultivation and sowing. According to various estimates, now tillage, on average, spend 40 % energy and 25 % of the workforce, and approximately 500 thousand. Tons of fuel per year of the total field work.

In modern agricultural production tillage is performed by different systems and technologies that can be roughly classified as follows:

traditional or classic technique of cultivation (Full till), based on different solid plowing plow depth of 30 cm, then the ground is less than 15% of plant residues;

minimum tillage technology (Mini till), performed plows, disc implements a depth of 15 cm, then the ground is 15 to 30 % of plant residues;

technology of zero tillage (No-till), characterized by a complete lack of cultivation. Sowing direct sowing drills conducted in which to set seed disc share special variodysk that prorizuye furrow in the soil, which then enters the seed;

band technology tillage (Strip Till), combines the advantages of traditional technology and rruntozberihayuchoyi zero.

To perform process operations tillage is necessary to choose a rational structure of the AIT, which have high performance, low cost and operating expenses, ensure optimal conditions necessary for plant growth. Most likely, none of the existing technologies, multidisciplinary farmer will not be used as a single. It is

advisable to use differentiated soil where each culture, depending on specific conditions, or that use technology cultivation.

The purpose of research - installation costs and benefits of existing technologies preplant tillage and formation criterion-dimensional coordinate estimation of intensity effects on soil environment.

Results. We found that in today's biological and energy-saving agriculture, along with existing technologies preplant tillage as explained above, it is necessary to develop and implement in production machinery and equipment for the cultivation technology point (Point till). Using point-tillage would be best for growing vegetables and melons, planted square-cluster or cluster method. The distance between the plants, thus, can equal or exceed the width of the aisle. Compared with the technology Strip till, where it is processed strip along the length of the field, the technology provides Point till cultivation only certain points where the plant will be located. This enables the soil to a greater extent compared to the technology Strip till, reduce energy costs while simultaneously increasing the level of conservation of the natural soil structure.

Coordinate spatial assessment preplant tillage can be determined using intensity factor effects on soil.

Coordinate spatial intensity score preplant tillage makes it possible to compare existing technologies at a rate of intensity effects on soil environment.