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## **INFLUENCE OF TILLAGE SYSTEMS IN SHORT ROTATION CROP ROTATIONS ON THE POLLUTION OF WINTER WHEAT CROPS IN THE CONDITIONS OF THE SOUTHERN STEPPE OF UKRAINE**

**Anna KRYVENKO**, Doctor of Agricultural Sciences, professor department of plant protection, genetics and breeding, [kryvenko35@ukr.net](mailto:kryvenko35@ukr.net)

**Ivan KLIMCHYK**, Postgraduate department of defense, genetics and plant breeding

Odessa State Agrarian University, Odesa, Ukraine

**Svetlana POCHKOLINA**, Candidate of Agricultural Sciences  
Odessa State agriculture station ICSA NAAS, Odesa, Ukraine

Meta-observation – consider the infusion of different systems of the main soil cultivation in the fields in exchange for the browning of winter wheat sowing. It has been revealed that the greatest width of the Buryani in the pre-Traces is as follows: Yari (falopiya birch-shaped, sporish extreme, medicinal rut); wintering (Sophia's curls, savichain's grouse, ivy-shaped speedwell, field's tallaban, dead-nettle, chip's edmarenium); winter (metlyug zvichayny, hairy peas); bagatorichni (horn sow thistle, field birch). It is shown that, on average, over 2 years of tracking, fewer bourgeoisies were recorded after a pair of black ones (66.4 pcs./m<sup>2</sup>). 3.6% more bourgeois was harvested after winter vetch, 31.2% more after mixing peas with mustard and 57.1% more after mixing peas with grain. The previous investigations, however, had the same results for the browning of winter wheat sowings in two schemes: soil cultivation, and for police cultivation (PMMPM) and non-police cultivation (BMMBM). An increase in the number of bourgeois plants was established on the 2nd (97.0 pcs./m<sup>2</sup>) and on the 4th (113.9 pcs./m<sup>2</sup>) crops in the same area as the 1st (86.1 pcs./m<sup>2</sup>). In the 3rd crop, where oats were planted, there is a slight decline (59.7 pcs./m<sup>2</sup>) in the crops planted with all winter wheat crops. The highest degree of browning (83.3 pcs./m<sup>2</sup>) of winter wheat sowing was observed in the 4th crop. This is to note the great potential of the orbital ball of the soil.

In Ukraine there are over 1,500 species of bourgeois, of which 300 species are the most widespread, massive and difficult for rural areas. These bourgeois cause significant harm to their enemies, so they compete with cultivated vegetation for vital resources, such as water, living speech and sunshine [1].

Proper technology for soil processing, together with other agrotechnical approaches, is a key factor in the fight against weeds and ensuring the continued development of rural areas.

Meta-observation - consider the infusion of different systems of the main soil cultivation in the fields in exchange for the browning of winter wheat sowing. Research

conducted in 2021, 2023 on the fields of the Odessa State Rural State Research Station of the Institute of Climate-Oriented Rural State of the National Academy of Sciences.

On average, over the course of 2 years, the count of weeds on the crops of winter wheat, which was placed as the 1st crop after steams and peas for grain, shows that the first crop after steams has the lowest number of weeds (79.0 pcs./m<sup>2</sup>) is observed against the background of the shelf system of the main tillage, against the background of the non-shelf system, the amount was 3.4% higher than after shelf tillage. The excess of weediness of differentiated and shallow tillage (MMMMMM) in comparison with shelf tillage amounted to 15.4 and 17.2%, respectively. On average, the advantage of shelf-less tillage over shelf tillage is 3.6%. Shallow tillage had the highest weediness (105.2 pcs./m<sup>2</sup>), which was 12.9% higher compared to shelf tillage. On average, during the years of research, the least amount of weeds was recorded after a pair of black (66.4 pcs./m<sup>2</sup>). 3.6% more weeds were observed after winter vetch, 31.2% more after a mixture of peas with mustard, and 57.1% - after peas for grain.

In the experiments, almost the same results regarding weediness of winter wheat crops were obtained with two schemes of soil cultivation, namely, shelf (PMMPM) and shelfless cultivation (BMMBM). Although there is a slight tendency to reduce the number of weeds (1.2%) with tillage without tillage.

An increase in the number of weeds was detected on the 2nd (97.0 pcs./m<sup>2</sup>) and on the 4th (113.9 pcs./m<sup>2</sup>) cultures in comparison with the 1st (86.1 pcs./m<sup>2</sup>). In the 3rd crop, where oats were sown, there is a certain decline (59.7 pcs./m<sup>2</sup>) in comparison with all crops of winter wheat. The highest weediness (83.3 units/m<sup>2</sup>) of winter wheat crops was observed in the 4th crop. This indicates a large potential clogging of the arable soil layer.

The most common weeds in the experiments are still: sedges (fallopia birch, common spore, medicinal turnip); wintering ones (Sofia's curlew, common sorrel, ivy veronica, field plantain, deaf nettle, tenacious marigold); winter (common vetiver, hairy peas); perennial (pink thistle, field birch).

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### **ВПЛИВ ОРГАНІЧНИХ ДОБРИВ НА УРОЖАЙ І ЯКІСТЬ ПРОДУКЦІЇ ОГІРКА В УМОВАХ ПІВДНЯ УКРАЇНИ**

**Володимир КРИКУН**, здобувач другого (магістерського) рівня вищої освіти 2 курсу

ОП «Садівництво, плодоовочівництво та виноградарство», koreneva-z@ukr.net

Науковий керівник: **Григорій ЛАТЮК**, канд. с.-г. наук, доцент кафедри польових і овочевих культур, grilat@ukr.net

Одеський державний аграрний університет  
м. Одеса, Україна

Однією з провідних овочевих культур України є огірок, який сьогодні займає до 20% від посівних площ всіх овочевих культур і посідає за цим показником друге місце після капусти. Плоди цієї культури характеризуються надзвичайно цінними харчовими, дієтичними та лікарськими властивостями і заслужено користуються популярністю в населення. Однак, навіть зараз врожаї плодів огірка залишаються достатньо низькими і становлять у середньому в Україні близько 9-12 т/га. [4, с.44]