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THE IMPACT OF TECHNOLOGY ELEMENTS ON A COMPETITIVE RELATIONSHIP AND LEVEL OF HARMFULNESS OF WEEDS IN SOYBEAN CROPS

It is known that yield losses of soybean due to weeds are much higher than due to disease and pests. Weediness of crops is one of the most negative factors that reduces the effectiveness of all measures which are directed at improving of crop yield. There fore, weed control is one of the major problems of modern agriculture. Improvement of agrotechnical methods of weed control in soybean growing technology led relevance of our research.

The purpose of research is study the impact of various agrotechnical elements of cultivation, such as basic soil tillage, sowing methods and measures to reduce the level of weediness in agrocenosis using various methods of segetal species control on competitive relations and degree of harmfulness of weeds in soybean crops.

The field experiments were carried out at the experimental field of Poltava state agricultural research station named after M. I. Vavilov during 2008 – 2010 years. The study was conducted according to generally accepted methods.

It was established that under conditions of the Left-bank steppe of Ukraine among agrotechnical measures which direct at reducing of weeds harmful effect in soybean crops the provocation of weed germination before sowing and combination this measure with harrowing after weed germination provides reduction of competitive weed pressure on plants, reducing amount of weeds.

The calculations of correlation analysis between competitive ability of soybean plants and yield showed that plant competitive ability had a positive correlation with soybean seeds yield ($r = 0,81$; $r = 0,83$). Imultaneously correlation between competitive ability of soybean plants were strong inverse with the number of weeds ($r = -0,97$) in field with conventional row spacing and ($r = -0,84$) in field with wide row spacing.

Key words: soybean, elements of growing technology, competitive relationship, measures to weeds control, harmfulness of weeds.