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THE APPLICATION OF GLOK, WDG HERBICIDE AS A KEY COMPONENT OF INTEGRATED WEED MANAGEMENT IN TRITICALE CROPS

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Purpose. Currently, significant areas of triticale are planted following grain corn and sunflowers. Planting triticale after late cover crops, along with reduced tillage depth, contributes significantly to weed infestation in the crops, particularly with annual and perennial dicotyledonous weeds. The main method for controlling perennial weeds in fall cereal crops is the chemical method of the application of selective herbicides. The purpose of the present study was to evaluate the biological efficacy of the new herbicide Glok, WDG in controlling annual and perennial dicotyledonous weeds in triticale crops.

Materials and methods. Field trial to determine the biological efficacy of the herbicide Glok; WDG were conducted following the standard method for testing herbicides in crop fields. The experiment was set up in 3 replicates with plot areas of 22 m² on the experimental field of the Institute of Genetics, Physiology and Plant Protection, MSU. The triticale crop (Ingen 40 variety) was grown following a sunflower crop. The experimental treatments were as follows: 1. Control (no herbicide application), 2. Standard herbicide Omnera at 1 L/ha, 3. Herbicide Glok, WDG at 30 g/ha + Satelit at 200 g/ha and 4. Herbicide Glok, WDG at 40 g/ha + Satelit at 200 g/ha. The application of the herbicide products was done in tillering stage of the crop (BBCH 21-29) with spraying solution 250L per hectare. Two evidences of annual and perennial dicotyledonous weeds in triticale crop were performed. Evidences of weeds across variants and biological efficiency were performed according to methods accepted in the literature of speciality.

Results. In the treatments group where the study product was applied at the low dose (30 g/ha), weed control reached 81% at the time prior to harvest. The number of dicotyledonous weeds decreased more markedly in the variant where Glok, WDG was applied at a higher dose (40 g/ha), where a weed control level of 83.6% was recorded. The species most sensitive to the herbicide's toxic action were black night-

shade and wild mustard, which was controlled at a rate of 100% in all experimental variants with the application of herbicide Glok, WDG. The ragweed species were controlled at rates of 82.6% (30 g/ha) and 87.0% (40 g/ha) at the second survey, the number of weeds in the control plot increased to 96 per square meter. In the standard treatment, this index was 24 weeds per square meter, while in the Glok, WDG treatments at doses of 30 g/ha and 40 g/ha, respectively, the number of weeds decreased to quantity of 23 and 19 weeds per square meter.

Conclusions

1. The results of the research demonstrated that the tested herbicide Glok, WDG showed high biological efficacy in controlling annual and perennial dicotyledonous weeds in triticale crops.

2. The application of the herbicide Glok, WDG in triticale crops ensured 83.6% biological efficacy in weed control and contributed to the complete eradication of black nightshade and wild mustard.

3. No phytotoxic effects were detected in treatments with the herbicide Glok, WDG on triticale plants.

Keywords: herbicide, Glok, WDG, weed control, triticale.