

ĪSMŪŽA DIVDĪĢĻAPJU NEZĀĻU IZPLATĪBA LATVIJĀ ZEMGALES REĢIONĀ THE SPREAD OF SHORT-LIVED WEEDS IN LATVIA, REGION ZEMGALE



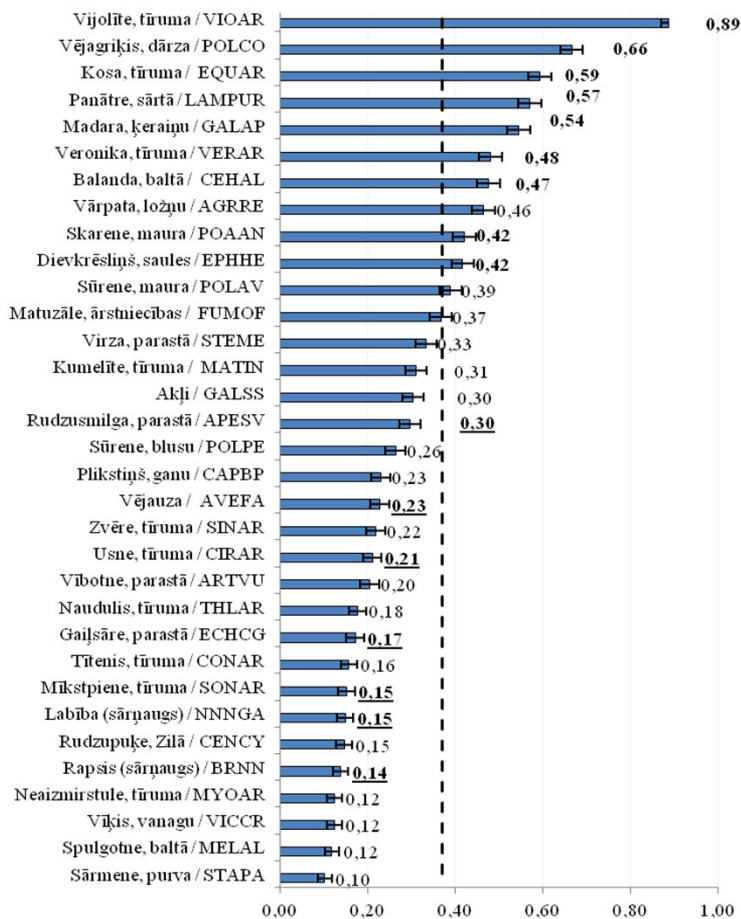
Dainis Lapiņš¹, Jānis Kopmanis¹, Indulis Melngalvis¹, Renāte Sanžarevskā¹,
Gundega Putniece¹, Aigars Putnieks¹, Aivars Jermušs², Dace Piliksere¹

¹ Latvijas Lauksaimniecības universitāte / Latvia University of Life Sciences and Technologies, ² LLU Zemkopības institūts / Research Institute of Agronomy

levads, materiāli un metodes / Introduction, materials and methods

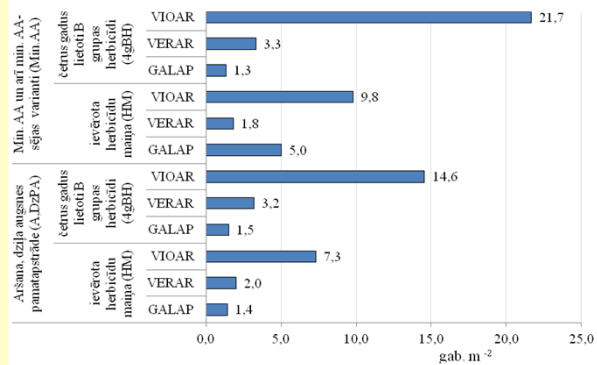
Directive 2009/128 / EC of the European Parliament and of the Council stipulated that all Member States of the European Union had to operate according to the principles of Integrated Pest Management as of 1 January 2014. The aim of the research was to explain the occurrence of field weed species and its changes in agroecosystem in the farms of Zemgale region, depending on the species of grain and forcrop, as well as the choice of technologies. Weed monitoring was conducted from 2013 to 2017. In order to perform weed monitoring in the research area, 12 different farms were randomly selected for uniform coverage of the area. In each of them, six crop sowing or planting fields were used for weed tracking. At the monitoring sites, weed tracking was performed according to the occurrence method (Rasins, Tauriņa, 1982). Recordings were made once in the vegetation period (Decade III of July - Decade II of July), determining the composition of the weed population, the dominant species and their distribution level in the volumes and plantings of various arable crops. Weeds are identified as far as possible to the species level, but where this was not possible, to the level of the family.

Rezultāti / Results



2. att. Nezāles lauka pupu sējumos Zemgalē / Weeds in field bean volumes. (foto R. Sanžarevskā)

It was found that in Zemgale the weed species could be divided into 4 following dominant groups according to their occurrence: 1) field pansy / 89% of all fields in all years /; 2) wind buckwheat / 66% /; 3) field horsetail, red dead-nettle, cleavers / distribution 59, 57 and 54% /; 4) field speedwell, goosefoot, couch grass, annual meadow grass and sunspurge with a prevalence of 42 to 48% of all fields in all years.



Apzīmējumi / Notation

A, DzPA Minimum soil treatment, 4 years Group B herbicides Min. AA Deep soil treatment, 4 years.
Group B herbicides
4gBH Minimum soil treatment, herbicides are changed HM Deep soil treatment, herbicides are changed

3. att. Vījoliņu (VIOAR) veroniku (VERAR) un ķeraīņu madaru (GALAP) skaita, gab. m⁻², izmaiņas ziemas kviešu sējumos Zemgalē monitoringa laukos atkarībā no augsnes apstrādes un sējas, kā arī herbicīdu izmantošanas izvēles vidēji 5 gadu laikā posmā.

Fig. 3. The number of violin, speedwell and goose grass, changes in winter wheat sowing fields in Zemgale, depending on soil tillage and sowing, as well as the choice of herbicides in the average of 5 years..

1. att. Nezāļu sugu sastopamība Zemgalē monitoringa laukos no 2013 līdz 2017. gadam (Wstat.) un salīdzinājums ar sugu vidējo sastopamības rādītāju. Lietots nezāļu latīniskā nosaukuma BAYERA kods.

Fig. 1. The incidence of weed species in Zemgale in the monitoring fields from 2013 to 2017 (Wstat.) and compared to the average species prevalence rate. The Latin for weeds is used BAYERA kods.

Secinājumi / Conclusions

But the year 2017 was characterized by increased precipitation, germination and also growing conditions were often unsatisfactory not only for crops but also for weeds. The wintering dicotyledonous weeds with the same distribution potential as the main dominance of field pansy were: field chamomile; shepherd's purse, common cornflower, field penny-cress, volunteer winter oil seed rape; field forget-me-not, forking larkspur, field speedwell. In warm winters in Zemgale also cleavers, the common fumitory, the red dead-nettle are overwintering. In order to successfully limit the spread of short-lived dicotyledonous weeds, it is necessary to carry out a herbicide replacement by years, which significantly reduces the prevalence of dominant dicotyledonous species. However, it should be noted that this is not the only measure to limit the spread of the weed species. First of all, it is related to cleavers. The exchange of selected herbicides should not be an excuse for replacing herbicides with a less effective active ingredient for weed control.

Pateicība / Thanks

PALDIĒS Zemkopības ministrijai par pētījumu finansēšanu un zinātniekiem LAAPC, Stendē un Priekuļos, kā arī zemnieku saimniecību vadītājiem par sadarbību. Paldies par līdzdalību un palīdzību nezāļu uzskaites monitoringa izpildē un datu apstrādē E. Kašam, R. Sanžarevskim, I. Kopmanei, A. Švartai un G. Jermušai.