

Višegodišnje praćenje utjecaja klimatskih promjena na brojnost populacija skladišnih štetnika

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Sažetak

Posljedice klimatskih promjena sve više se uočavaju kako tijekom vegetacije i uzgoja žitarica i uljarica, tako i tijekom njihova skladištenja. Povišene ljetne temperature zraka i na našem području direktno uvjetuju pomicanje rokova žetve, te porast temperature zrnene mase. S jedne strane, smanjuju su troškovi sušenja i dosušivanja, dok s druge strane, povećava se potreba za ulaganjem u sisteme umjetnog hlađenja zrna. Ovako toplu uskladištena zrnena masa lako je podložna intenziviranju negativnih fizioloških procesa, te predstavlja idealan medij za razvoj skladišnih štetnika, što direktno uvjetuje veće troškove u zaštiti uskladištenih proizvoda. Cilj ovog rada je prikazati rezultate faunističkih pregleda uzoraka pšenice, kukuruza, ječma, soje i suncokreta iz skladišnih objekata s područja Slavonije i Baranje na prisutnost štetnika u ovisnosti o klimatskom promjenama. Ukupno je analizirano 234 uzorka pšenice, 167 uzoraka kukuruza, 90 uzoraka ječma, 90 uzoraka soje i 104 uzorka suncokreta. U pšenici dominiraju prašne uši - *Liposcelis* spp. (37,92%), a iz reda Coleoptera hrđasti brašnar – *Cryptolestes ferrugineus* (Steph.) (23,11%). U ječmu su najzastupljenije prašne uši - *Liposcelis* spp. (48,21%) te grinje - Acarina (39,83%), a iz reda Coleoptera, rižin žižak - *Sitophilus oryzae* (L.) (10,48%). U kukuruzu dominira hrđasti brašnar – *C. ferrugineus* (Steph.) (25,8%) te kukuruzni žižak - *Sitophilus zeamays* (Motsch.) (23,22%). U soji su determinirani bakrenasti moljac - *Plodia interpunctella* (Hübner) (44,44%) i rižin žižak - *S. oryzae* (L.) (33,33%), dok su najzastupljenije vrste u suncokretu kestenjasti brašnar – *Tribolium castaneum* (Herbst) (29,51%) te surinamski brašnar – *Oryzaephilus surinamensis* (L.) (22,43%). Determinirane vrste skladišnih štetnika ubrajaju se u najznačajnije gospodarske štetnike uskladištenih poljoprivrednih proizvoda, te predstavljaju glavne uzročnike gubitaka kakvoće i količine uskladištenih žitarica i uljarica. O tome, koliko budemo bili stručni i spremni, te voljni uložiti i investirati u nove načine sigurnijeg skladištenja, ovisit će i uspješnost čuvanja i kvaliteta hrane.

Ključne riječi: skladišni štetnici, klimatske promjene, žitarice, uljarice

Long time recording influence of climate change on stored pests populations

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Summary

The effects of climatic changes have been progressively pronounced during the period of vegetation, production and crop storage. Increased summer temperatures in our area could be result of global warming that directly delay the time of harvest, and increase grain temperature. Although the expenses of drying and re-drying become lower, there is an increasing awareness for investment in the systems for artificially-cooled grain. Such warm stored grain is easily exposed to intensifying negative physiological processes in grain, and become an ideal medium for development of stored pests, which directly causes higher expenses in stored product protection. The aim of this paper is to present the faunistic review of wheat, corn, barley, soybeans and sunflowers samples from storages in Slavonia and Baranja, to the presence of pests, depending on climate change. We analyzed 234 samples of wheat, 167 samples of corn, 90 barley samples, 90 samples of soybean and sunflower 104 samples. In wheat, the highest population was of *Liposcelis* spp. (37.92%) and from the order Coleoptera, rusty grain beetle – *Cryptolestes ferrugineus* (Steph.) (23.11%). In barley *Liposcelis* spp. dominated (48.21%) and also mites Acarina (39.83%) were present. From the order Coleoptera, the most represented species in barley was rice weevil - *Sitophilus oryzae* (L.) (10.48%). In corn the most abounded species was also rusty grain beetle – *Cryptolestes ferrugineus* (Steph.) (25.8%) followed by maize weevil - *Sitophilus zeamays* (Motsch.) (23.22%). In soybean most often were found Indian meal moth - *Plodia interpunctella* (Hübner) (44.44%) and rice weevil – *Sitophilus oryzae* (L.) (33.33%). The highest population in sunflower had red flour beetle – *Tribolium castaneum* (Hbst) (29.51%) and saw-toothed grain beetle – *Oryzaephilus surinamensis* (L.) (22.43%). Determined species of storage pests are among the most important economic pests of stored agricultural products, these are the main causes of loss of quality and quantity of stored cereals and oilseeds. Efficiency of food preservation and maintenance of the quality depend on our professional attitude and readiness, as well as on our will to invest in new modes of safer storing.

Key words: stored pests, climate change, cereals, oilseeds