

REVIEW OF THE DOCTORAL THESIS

Title: **Applied Ecology of Stored – Product Pests**

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The subject of the doctoral thesis is very recent. Control measures of stored-product pests-arthropods include: chemical, physical, biological and cultural control. The general aims of this study are: control of stored-product pests, by using physical control „temperature“, bio-control „botanical insecticides“ and biological control „natural enemies“ which are considered safe methods for humans and the environment.

Presented PhD is design in eight chapters:

1st Chapter-introduction content literature data and problems with stored grain and stored-product pests. The stored-product ecosystem is a man made system in which determination is an ongoing process, resulting from interaction among physical, chemical and biological variables.

2nd Chapter content reviewed a literature that was used for interpretation general knowledge for the research programme deal with in this Ph.D. Thesis.

3rd, and 4th Chapter deal of research problem and aims.

5th Chapter of the Ph.D. thesis create three scientific papers and their content deals base of research work and adequate results of this Ph.D. Title of including papers:

5.1.1. Temperature-dependent population growth of three species of stored-product mites (Acari: Acaridida), where author Gamila Aspaly is on first place position and publish in Exp. Appl. Acarol., with IF.

5.1.2. The toxicity of bean flour (*Phaseolus vulgaris*) to stored-product mites (Acari: Acaridida), where author Gamila Aspaly is on third place position and publish in Plant Protect Sc, which is reviewed.

5.1.3. The suppressive effect of the bean flour (*Phaseolus vulgaris*) on five species of stored-product mites (Acari: (Acaridida), where author Gamila Aspaly is on third place position too, and publish in J.Econ. Entmol., with IF.

6th Chapter with conclusions that bring result of the first paper deal of the simulation of the rate of population increase under ideal condition, using real temperature records obtained from Czech grain stores, showed that the pest mite populations increase only during three and half months within a typical 9-month storage season in Central Europe. These results indicate that control of mites is recommended during the months when allergens are produced and pests reproduced i.e. from September to mid November and in May. *Do you think that this situation is the same in Libya or it is different? If it is different, can you assessment how long and in where month?*

In second paper was confirmed the suppressive effect of bean flour on stored-product mites that directly limits allergen production.

In third paper was conclusive effect of bean flour on different level concentrations (7) on five species of stored-product mites and the most sensitive species were *A. siro*, and *L. destructor* come after *T. butrescentiae*. The least sensitive was *A. ovatus*. *Would it be of practical use? How does legume proteins affect sense of taste and odour stored product?*

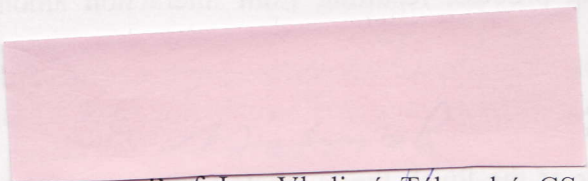
7th Chapter of References content 24 that are cited in 8th Chapter Appendix A Stored Product Pests arthropods in Libya.

I have following questions and comments concerning to the work:

- On page 13 is written:- Mites are very small insects of microscopic size, should be passage insects **arthropods**.
- On page 16 is cited Goura (1977) two times, but in references on page 53 are Goura in two different papers? In this case is necessary one paper highlight (1977a) and other (1977b).
- On page 58 waters is name and should be written with capital letter "Watters".
- On page 23 is written (Jayas, 2003) and on page 55 is written Jayas D.S. and White N.D. 2003 and what is right?

The cited comments do not diminish the value the doctoral thesis. The presented dissertation is clear and well arranged. The introduction is held ample and offers a good overview about the three scientific papers that qualify scientific capability submitted Ph.D. thesis. At the conclusion, I recommended the submitted doctoral thesis for it defence. I agree with conferring the academic title "Doctor" on Gamila S.A. Aspaly after successful defence of Ph.D. thesis.

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