

## SUMMARY

Three isolates of *Aspergillus flavus*, *A. niger*, 4 isolates of *Penicillium caryophillum*, *P. funiculosum*, 3 isolates of *Alternaria alternata*, 3 isolates of *Stemphyllium verractosum*, 2 isolates of *Fusarium solani*, *Nigrospora sphaerica*, *Cladosporium herbarum*, *Chaetomium sp.* and *Rhizopus nigricans* were isolated from wheat grains.

The most virulent fungi for Sakha 69 cv. was *A. flavus* I and *F. solani* I followed by *P. caryophillum* while the least virulent fungus was *Chaetomium sp.* Concerning Giza 163 cv., isolates I and III of *A. flavus* were the most virulent followed by *A. flavus* II and *A. niger*. *Chaetomium sp.*, *C. herbarum* and *F. solani* II were the least virulent fungi.

*Alternaria alternata* was the most frequently isolated fungus followed by *A. niger*. On the other hand, the least isolated fungi were *Chaetomium sp.*, *C. herbarum*, *N. sphaerica* and *P. funiculosum*.

Grain moisture content of wheat cvs. was high at the end of storage period than the zero time. The percentage of grains infection was also high at the end of storage time. All tested grains of Giza 162 and 163 cvs. and 90% of Sakha 69 cv. grains were germinated well. Other cvs. Showed lower germination percentage.

The non-sterilized grains of cvs. Sakha 8, Sakha 61, Giza 163 and Giza 165 were more occupied by the fungus *Alt. alternata* than the surface sterilized ones. On the contrary, *A. niger* was more present in the surface sterilized grains of the 5 tested wheat cvs. than the non-sterilized one.

Grains stored in a closed warehouse still have the highest moisture content after 6 months followed by grains stored in metal silos. No significant differences were observed on the effect of storage method on

weight of 100 grains. Percentage of infection was highest in case of storage in a closed warehouse. No significant differences were found on the effect of different methods of storage and germination percentage.

*Aspergillus flavus*, *A. niger* and *Alt. alternata* can grow under the circumstances of the different storage method. Storage in metal silos was the best method for the growth of *A. flavus* and *A. niger*, while storage under a concrete shed was the best method for the growth of *Alt. alternata*.

The weight of 100-grain of Sakha 69 and Giza 163 cvs was decreased with the prolongation of storage time at the 4 tested temp. degrees (5, 9, 18 and 27°C).

Also, grain moisture content was decreased with the prolongation of storage time up to 4 months at 5, 9, and 18°C. At 27°C the apposite trend was found. Percentage of grain infection was increased with the prolongation of storage time at the 4 tested temperature degrees. Germination percentage was higher at 5°C than at 9 and 18°C. At 27°C the percentage of germination was decreased to 65% and 55% for cv. S 69 and G 163, respectively.

Low temp. degrees (5, 9, 18°C) were more suitable for the appearance of the associated fungi from wheat grains than the higher degree (27°C). At 5°C *Alt. alternata* showed the highest appearance from Sakha 69 cv. grains. *Aspergillus niger* was more active at 9°C, while 18°C was the optimum temp. for *A. flavus*. At 5°C *A. flavus* was active and showed the highest appearance for Giza 163 cv. while 9°C was the optimum temp for *A. niger* and *Alt alternata*.

Infection percentage was significantly increased with the prolongation of storage period. After 15 days storage at 9°C, the percentage of infection was raised from 0 to 20 % at 17% grains moisture