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EFFECT OF GRANARY WEEVIL (*SITOPHILUS GRANARIUS* L.) ON PROTEIN PROFILES OF HARD AND SOFT WHEAT CULTIVARS DURING STORAGE

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Cereal grain losses caused by pests during storage, that reach elevated levels in some parts of the World, lead to a world-wide economic loss. The final consequences of insect infestation are nutritional loss and decreasing of end-use quality of cereal flour. The granary weevil, *Sitophilus granarius* (L.) is an important pest of stored cereals. In the juvenile stages, *S. granarius* grows within cereal kernels, each larva consuming about half of a wheat kernel. The objective of this study was to investigate the *Sitophilus granarius* L. effect on protein profiles of hard (Ceyhan-99 cv.) and soft (Eser cv.) wheat meals and their flours by using sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE) technique during storage. Hard and soft wheat kernels were infested with non-sexed *S. granarius* L. at a rate of two adults per kg, and stored for six months at 30±1°C and 70±5% relative humidity. The pest-free wheat sample was used as a control during storage. The infested wheat sample and its control were collected monthly, and after cleaning the granary weevils, they were tempered and milled into wheat meals and flours. SDS-PAGE results of both meals and flours of wheat cultivars generally indicated that *Sitophilus granarius* L. did not cause severe damage on their protein profiles during storage. Besides, towards the end of storage, the insect population, that greatly increased, caused minor protein depletions resulting decreasing protein band intensities between 116 and 97 molecular weights (MW) and 66 and 55 MW regions in both meals and flours.

Keywords: *Sitophilus granarius* L., wheat, storage, proteins, SDS-PAGE

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