



5- Salwa S. Pasha and Samah, A. Abd-Eltawab, (2022). The effect of different flours on *Tribolium confusum* and the effect of infestation on various food parameters. International Journal of Agriculture and Plant Science, 4(1): 74-80.

ABSTRACT: *Tribolium confusum* is a common associated pest that can be infested in a wide range of preserved products. The infestations causes to a significant loss of the food product. When infested six different food products (wheat 82%, El-Fayrooz white maize, crushed white maize, crushed barley, crushed oats, and crushed sorghum) by the confused flour beetle *T. confusum*. Crushed barley had the largest significant means of total *T. confusum* populations (larvae, pupa, and adult) with (289 individuals) followed by El-fayraoos white maize and wheat flour 82%. Conversely, Crushed oat and crushed sorghum had the lowest significant means of total populations (67 individuals/40 gm flour). Crushed barley flour had the highest percentage of weight loss (30.83%), while crushed sorghum and oat flours had the least weight loss. The findings reveal that insect populations and weight loss have a significant positive correlation. On other hand, the infestation effects on nutritional parameters of products, shown the moisture and ash of all infected samples were higher than the control. Crushed barley in control and infested samples had the highest percentage of ash, while wheat flour had the lowest. The infested samples, on the other hand, had a lower lipid content than the control samples; In comparison to the control, the higher protein level of all infested samples. This rise could be attributed to the nitrogenous waste left behind by insects. The highest percentage of carbohydrates loss in the infested samples was in crushed barley (85.43%); this could be due to that it was the most infested sample.

Keywords: *Tribolium confusum*, population's infestation, weight loss, chemical composition.