

THE EFFECT OF SIEVE HOLES DIAMETER AND TYPE OF GRAINS ON SOME PROPERTIES MECHANICAL AND VOLUMETRIC OF HAMMER MILL .

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ABSTRACT

The experiment was conducted to evaluate the effect of sieves holes and different types of crop grain on some mechanical and volumetric of hammer mill properties attached with the grinding process using two levels of diameter for the sieves holes included 2.5 and 4.5 mm with three types of crop grain included barely, sorghum and maize, Specific Capacity and specific energy and the volumetric properties, Average particle size, standard deviation were studied. The experiment carried out using complete randomized design (CRD), with three replications in college of Agriculture / University of Diyala 2011- 2012. The Results were showed the fallowing: increasing of sieve holes change diameter from 2.5 to 4.5 mm resulted a lower significant effect in the Specific energy and a significant increase in specific Capacity and Average particle size and standard deviation. Types of crop grain got significant effect on specific Capacity and Average particle size and no significant effect in specific energy and standard deviation. the interaction between factors led to lower Specific energy 0.127 kw.h/kg with hole 2.5 mm and sorghum and the lower Average particle size 0.765mm and lower standard deviation 0.990 with hole 2.5 mm and maize and the highest Specific Capacity with holes sieve 4.5 mm and sorghum.

Key Words : grinders, grain grinding , Hammer Mill , Particle Size