

## ABSTRACT

The nutrient composition of three edible acrididae species was studied. Wild edible grasshopper (*Ruspolia nitidula*, 'nseene'), desert locust (*Schistocerca gregaria*) and reared African grasshopper (*Acanthacris ruficornis*) were used to determine the effects of substituting grasshopper meal (EG) for fishmeal (FM) on growth, digestibility, carcass characteristics, and meat sensory attributes of improved indigenous chicken (n=150). Grasshopper meal (EG) substituted fishmeal at 0 (EG0), 25 (EG25), 50 (EG50), 75(EG75) and 100 % (EG100) in grower diets. A completely randomized design was used with 30 birds per treatment, 6 per cage (3 pullets and 3 cocks). The crude protein content of FM was higher than that of insect meal, but was similar among the insect meals. Feed intake decreased with increasing levels of EG but the daily weight gain was similar. The feed conversion ratio tended to improve with increasing replacement of fish meal by grasshopper meal. Carcass characteristics were not affected by the treatments. Sensory attributes of meat appeared to be improved slightly by feeding grasshopper meal. Grasshopper meal diets had higher crude protein digestibility than the control with fish meal. These results indicate that grasshopper meal could be used as a substitute for fishmeal in poultry diets..

**Key words:** *alternative, digestibility, fishmeal, insects, poultry, sustainable*