

## Amino acid contents of field crickets fed chicken feed, cassava tops and a weed.



### AIM

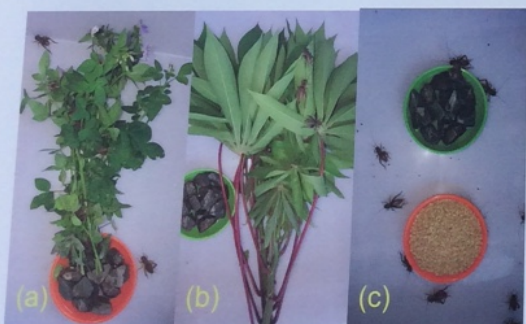
The aim of this study was to compare the content of lysine, methionine and cysteine in field crickets (*Teleogryllus testaceus*) fed chicken feed, cassava tops or *Cleome Rutidosperma* for 70 days.

### CONCLUSION

The study indicates that the amino acid profile of field crickets can be altered with diet and that cassava tops seem to be a good feed resource with respect to amino acid quality of the crickets.

### METHODS

- Diets were fed to nymphs for 70 days (4 replicates/diet, 20 nymphs/replicate).
- Crude protein content of chicken feed, cassava tops and *C. Rutidosperma* was 23.4, 22.2 and 28.6 % respectively.
- After 70 days, a pooled sample of crickets from each diet was dried and frozen (-20°C).
- Amino acid content was analysed by HPLC. Before analysis, wings and hind legs were separated from the body and were analysed separately from the bodies.



Crickets fed *Cleome Rutidosperma* (a), cassava tops (b) and chicken feed (c). Water was offered on plates with stones.

### RESULTS

- Methionine content was higher in crickets fed cassava tops than in crickets fed chicken feed and *C. Rutidosperma* (Table 1).
- There was a tendency for higher lysine, cysteine and cystine content in crickets fed cassava tops than in crickets fed chicken feed and *C. Rutidosperma* (Table 1).

Table 1. Lysine, methionine and cysteine+cystine contents (g/100 g dry matter) in crickets fed chicken feed, cassava tops and *Cleome Rutidosperma*.

	Chicken feed	Cassava tops	<i>Cleome Rutidosperma</i>	P-value <sup>1</sup>
Lysine	1.5 ± 0.2 <sup>a</sup>	2.6 ± 0.2 <sup>b</sup>	2.2 ± 0.2 <sup>a</sup>	0.08
Methionine	0.6 ± 0.1 <sup>a</sup>	0.9 ± 0.1 <sup>b</sup>	0.8 ± 0.1 <sup>a</sup>	0.04
Cysteine + Cystine	0.3 ± 0.1 <sup>a</sup>	0.4 ± 0.1 <sup>b</sup>	0.4 ± 0.1 <sup>a</sup>	0.09

<sup>1</sup>ANOVA was used to analyse differences between diets. The level of statistical significance was set to P < 0.05.