



Tropentag, September 19-21, 2012, Göttingen -  
Kassel/Witzenhausen

“Resilience of agricultural systems against crises”

## Feeding Rabbits and Cavies with Improved Forage Legumes in South Kivu, DR Congo

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### Abstract

In South Kivu Province, eastern part of the Democratic Republic of the Congo, farmers currently focus on small livestock, like poultry, cavies (*i.e.*, Guinea pigs) and rabbits, as a consequence of recent violent conflicts. After assessing the agro-ecological adaptability of improved forage legumes, four animal feeding trials were conducted with rabbits and cavies in a shed at Mugwahi farm in Nyangezi, South Kivu. Both species were fed according to traditional practice with available variable local feeds as control. Foliage of different adapted forage legumes complemented the local feeds at 25%. For rabbits, *Leucaena diversifolia* (trial duration 57 days) and *Desmodium intortum* (85 days) were used, while cavies received *Canavalia brasiliensis* (57 days) and *D. intortum* (85 days). One treatment with cavies complemented 10% of local feeds with a concentrate consisting of 25% palm cake, 1% salt and 74% rice bran (57 days). Feed acceptability and live weight gains were recorded. A relative palatability index (RPI) was calculated by dividing consumed feeds by the offered in relation to those expected to be consumed if all feeds were of equal palatability. Palatability evaluation showed that some local herbs, like *Ageratum conyzoides* (Asteraceae) and *D. intortum* were most appreciated by both rabbits and cavies. *L. diversifolia* was also well consumed by rabbits, and *C. brasiliensis* and concentrate by cavies. Mean weight gains of cavies fed *C. brasiliensis* or concentrate were  $2.1 \pm 0.8$  g and  $2.2 \pm 0.7$  g d<sup>-1</sup>, respectively, thus, substantially higher than that of the control ( $0.9 \pm 0.6$  g) d<sup>-1</sup>. This indicates that forage legumes can be a good alternative compared to concentrate that farmers need to purchase. Cavies fed *D. intortum* gained little weight ( $1.0 \pm 0.2$  g d<sup>-1</sup>), comparable to the control ( $0.9 \pm 0.6$  g d<sup>-1</sup>). Similarly, rabbits fed *L. diversifolia* did not achieve any difference over local feeds. These preliminary results show that there is scope in feeding rabbits and cavies with improved forage legumes. Further investigation is required to fully appreciate their potential role for use as small livestock species with respect to improving the livelihoods of poor smallholder farmers in DRC.

**Keywords:** Acceptability, animal nutrition, domestic cavy, tropical forages