



## Effects of Ingestion by Cattle on Germinability of Seeds of Three Different Browse Plants

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**Presenter Information**

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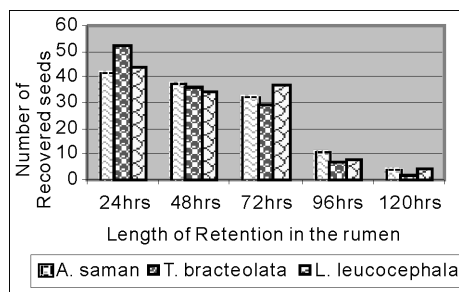
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**Key words :** ingestion, germinability, seeds, browse plants

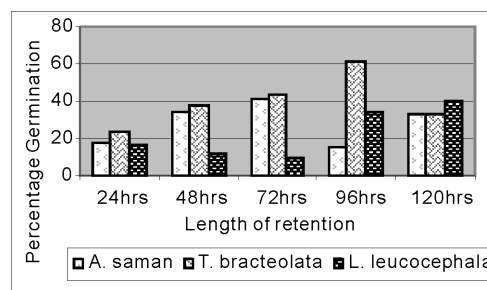
**Introduction** Animals consume the pods, the seeds ingested are passed out with faeces while others are digested by the animals. The survival of ingested seeds and recovery from ruminant faeces vary with plant species, seeds characteristics (shape, size and hardness), animal species and the proportion of the seeds in the diet (John *et al.* 1992).

**Materials & methods** The experiment involved three breeds of cattle namely White Fulani, N. dama and Muturu with three animals per breed. The animals were fed individually in the pen only once early in the morning with pods containing an average of 1000 seeds. The experimental animals were separated into individual pens where feed and water were provided ad libitum for easy collection of the faeces and to avoid any loss of seeds through grazing. The dung from the animals was collected consecutively for five (5) periods after ingestion (24, 48, 72, 96 and 120 hours). The faeces collected were dispersed in water and the seeds were sieved with 2mm mesh size sieve and planted in petri dishes. The data was analysed using Minitab computer Package (Minitab, 1998).

### Results & discussion



**Figure 1** Effects of length of retention on seed recovery.



**Figure 2** Effects of length of retention in the rumen on seed germination.

More than half of the seeds fed to the animals were not recovered. Most of the seeds recovered were before 96 hours. The seeds of *Tephrosia bracteolata* with the smallest seed size had the highest recovery at 24 hours (Figure 1). Also, almost all seeds of all the browse plants were excreted by the 96 hours when the percentage germination of the seeds increased drastically indicating that germination increases as length of retention increased while recovery reduced which agreed with report of Jolaosho *et al.*, 2006.

**Conclusions** The results of this study showed that ruminant animals benefit from the seeds when the pods were fed to them by digesting some of the seeds. Also, animals should be introduced to areas where the seeds of the legumes were needed within 96 hours.

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