# **The importance of indigenous tree pods/fruits in goat diets: A review**. (Project number ZC0305)

J.L.N. Sikosana, Department of Agricultural research and Extension, Matopos Research Station, Private Bag k 5137, Bulawayo, Zimbabwe.

**Introduction** Most of the goats in Zimbabwe are found in the communal areas (smallholder farming systems) where feed availability is often sub-optimal (Sibanda, 1992). Most of the livestock especially goats depend mainly on the rangeland for their nutritional requirements, a situation unlikely to change. The rangelands are characterized by perennial grasses and *Acacia* species. *Acacia* trees and other browse species produce pods and leaves which could be harvested and processed as supplementary feed during the dry season for livestock including goats.

Feed is generally adequate in the wet season but inadequate in the dry season. This calls for strategies to bridge the feed gap between the dry and wet seasons. Pods could be used as a "stop gap" measure during the transition period from dry to wet seasons. Browse pods are high in nutritive value (Ncube and Mpofu, 1994) and can be used as supplements to low quality roughages.

**Distribution Acacia species in Zimbabwe**. In Zimbabwe, *Acacia* species are found in arid savanna (Natural regions IV and V) with a few in wetter regions (Timberlake,*et.al,* 1999). The most common *Acacia* species in Zimbabwe are *A. karroo, A.tortilis, A.nilotica, A. erubescens,, A.erioloba, A robusta, A geradii, A.rehmanniana ,A. sieberiana A galpinii, A nigrescens,* and *A Faidherbia alibida.* Other species include *Dichrostachys cinerea, Colophosperm mopane* and the genera of *Pilliostigma* and *Guibortia* .

**Importance of browse trees in Zimbabwe**. Timberlake, *et al,*(1999) have reviewed the use of *Acacia* species in livestock production. Both domestic livestock and wildlife utilize leaves, pods and young shoots from browse species. Browse trees produce nutritious pods that ripen and fall during the dry season when there is little forage apart from low quality forage. The crude protein of these pods ranges from 15-20 per cent. Pods are a useful and valuable supplement to goats during the dry season.

One of the major disadvantages of browse as a livestock feed is the presence of perceived anti-nutritional factors such as phenolic compounds, of which tannins represent a large part. Certain browse species have medicinal properties. The medicinal uses are based on the astringent property of tannins present in the roots and bark (Timberlake, *et. al* 1999).

**Farmers' perception on the value of pods**. Farmers are aware that goats are browsers, and that goats can only do well, where there is browse. The nutritive value is not well understood by smallholder farmers. Farmers' experiences on the use of browse pods have been documented by Kindness, *et.al* 1999 in a participatory rural appraisal report (Project R7351). During a visit, in July 2005, in one of the communal areas (Tsholotsho district), farmers had a lot of interest to know the nutritive value and ways of collecting the pods. Farmers promised to start a goat project for a nearby primary school and use the project to share experiences with others on feeding goats with pods. In some areas farmers have come up with by-laws prohibiting people to collect pods. The reason being that people were collecting pods for resale.

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**Knowledge gaps**:

- propagation of promising browse species
- balance between grass and browse trees fro grazing
- composite meal
- anthelmitic properties
- post harvest processing
- pods as feed for micro livestock.
- manual on feeding goats for the smallholder farmer

**Appendix:** Local names for different browse tree species

| Botanical name | Local names |
|---|---|
| *Acacia karroo* | *isinga/muunga* |
| *A.tortilis* | *umtshatshatsha/umsasane* |
| *A. nilotica* | *isanqawe/mubayamhondora* |
| *A.erubescens* | *uguwe* |
| *A.erioloba* | *iwohlo* |
| *A robusta,* | *umgamanzi* |
| *A geradii,* | *umkhaya* |
| *,A. sieberiana* | *umlaladwayi/rukato* |
| *A galpini* | *umthungabayeni/amukaya* |
| *A.rehmanniana* | *iphucula* |

| | |
|---|---|
| *A Faidherbia* | *muhunga* |
| *Dichrostachys cinerea* | *ugagu/mupangara* |
| *Colophosperm mopane* | *iphane/mupani* |
| *Piliostigmathonningii* | *ihabahaba/umusekesa* |
| *Guibortia .coleosperma* | *umtshibi/muchiva* |