Supplementation of on-farm goats using feed resources available in south-west Zimbabwe

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Introduction

Goats in the communal areas of Zimbabwe are primarily dependent on natural range for their forage requirement. During the dry season, when the quantity and nutritional quality of grazing in natural pastures is low, browse species form a major portion of food for goats,. In these areas goat productivity is severely affected by high kid mortality and low growth rates. Most of the goats in the drier regions kid in the dry season. In the smallholder sector farmers can lose more than 50 per cent of goat kids born in a year.

In the present study communal goat flocks were evaluated in terms of animal performance when supplemented with browse pods.

Area

The study was conducted in eight sites located in Matobo, Matabeleland South Province, at 21° S and 28°3′ E longitude, in the south-west of Zimbabwe. The district is in natural region IV, on a scale of 1 (high potential) to V (arid).

The vegetation is mainly *Colophospermum mopane* and *Acacia* species and other thorny bush species; and some perennial grasses provide ground cover. Rainfall is between 450mm-650mm and the altitude is above 900m. Drought cycles are common in this area. Soils are shallow, coarse clay and sand over reddish brown sandy clay from granite.

Animals

A total of 254 female goats were monitored during the dry season, August to October 2001. Only pregnant and lactating goats were monitored.

Farmers

A total of 66 farmers, resident at the eight sites, hosted the on-farm trials. Farmers fed the goats their own choice of pod supplement, mainly determined by availability. A few farmers did not supplement their goat and their flocks were regarded as control groups.

Measurements

Monthly weights were collected for both adults and their progeny.

Results

The results are presented in Figure 1 as an example of an extension message for farmers.

Does being monitored had twins. Kid mortalities were very low. Kid birth weights appeared high, probably because weighing was dependant on Matopos Research Station, who visited each site on a monthly visit. There was a weight difference between supplemented and unsupplemented does. In two of the areas does lost weight.

Farmers who fed their animals with pods (whole or ground with a pestle and mortar) expressed satisfaction in the condition of their animals. Further work is needed to quantify milk yield in both supplemented and unsupplemented does. Most households value the contribution of milk produced in excess of the requirements of the kids. Dry season supplementation has the potential to increase this.

Figure 1 Extension message

Dry season supplementation is necessary

Supplementation of goats in the dry season supports high growth rates

Browse trees produce fruits and leaves which are rich in protein

Fruits can be collected and stored for later use

Benefits

Increased kid survival

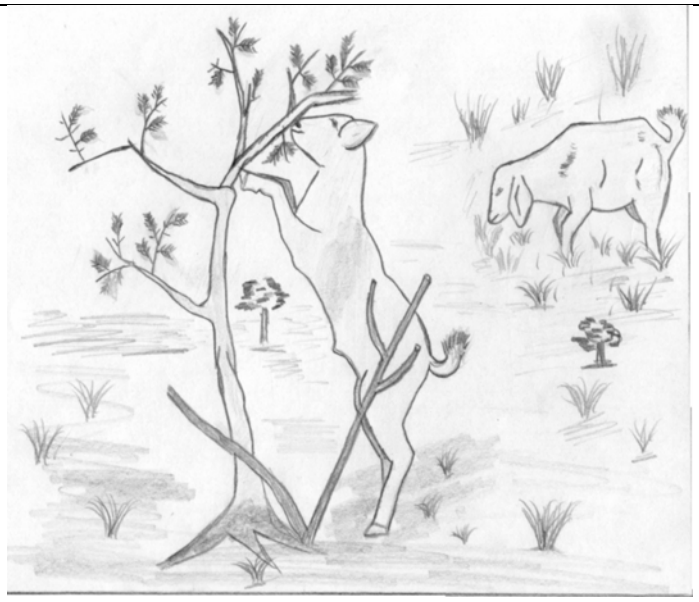
Increased milk production

Increased meat production

Cheap feed resource for farmers in the rural areas

Easy to process

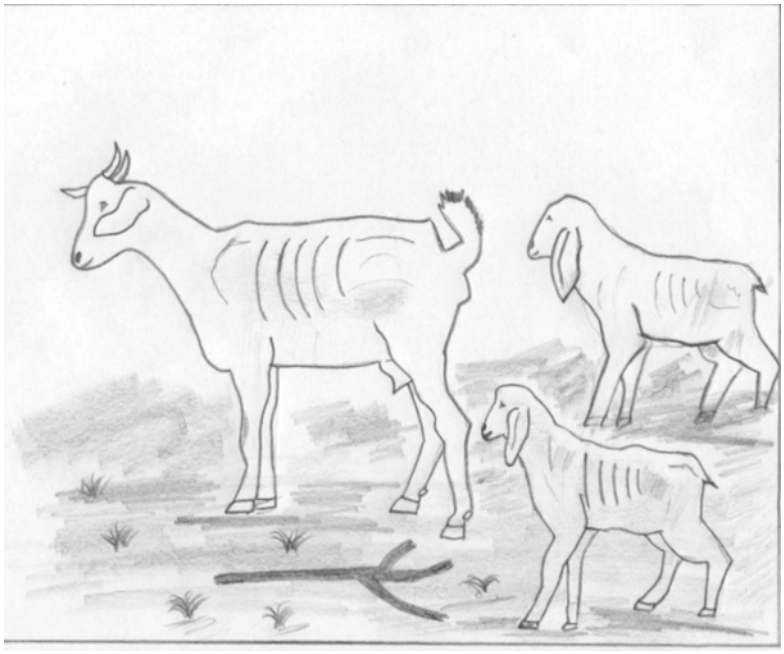
More value to natural resources



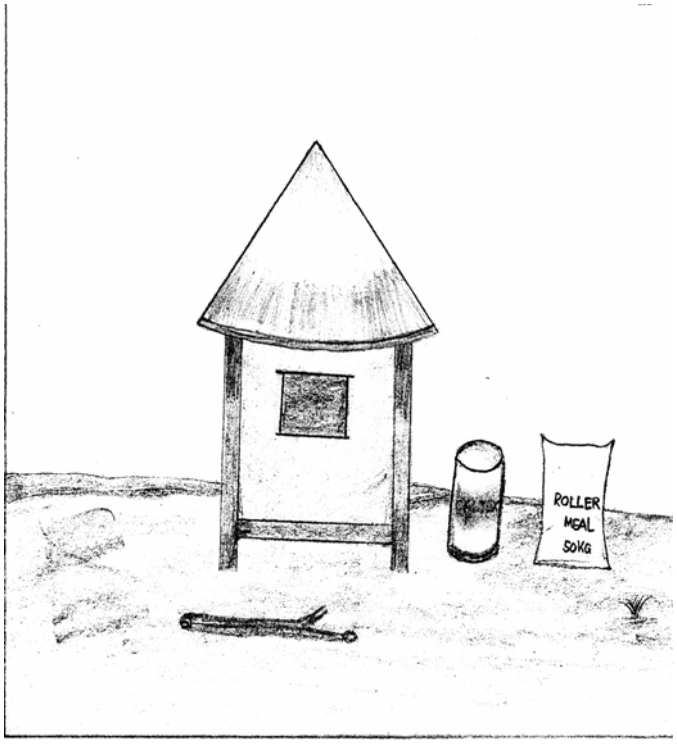
During the wet season goats feed on browse leaves and grass

1. A farmer picking browse pods during the dry season

2. Goats feeding on fallen browse pods

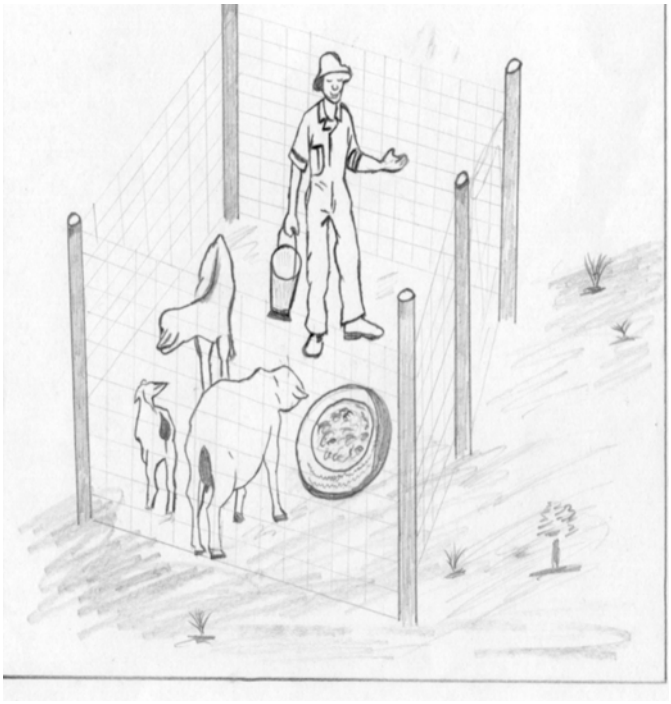


Goats kidding in the dry season when there is no feed: doe and kids in poor condition

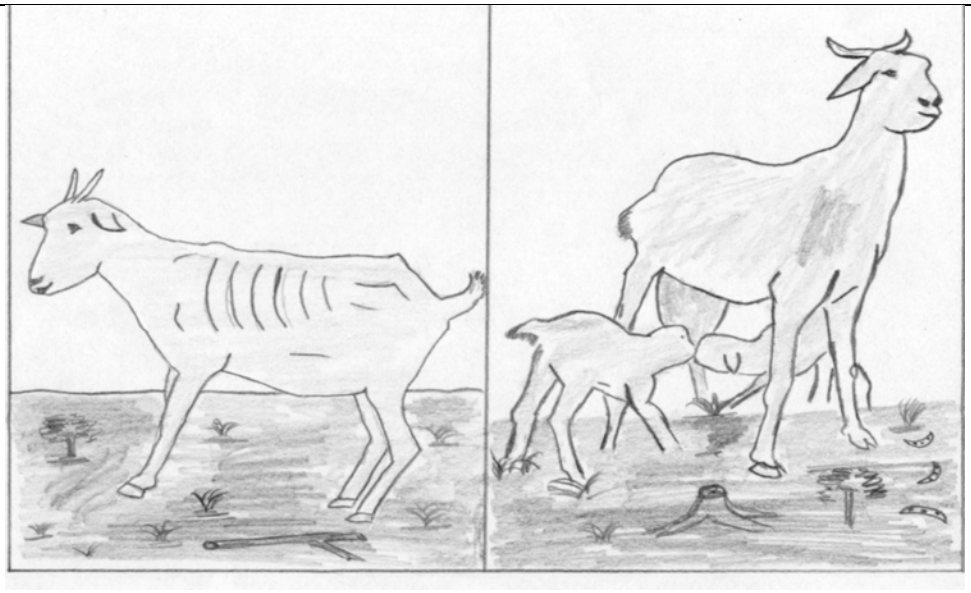


Pods collected can be stored in a granary/drum/plastic bag

Farmer processing pods: pounding (pestle and mortar)



A farmer feeding goats in a pen/kraal Ration: one handful of pods per adult goat



Goat not fed (lost all her kids)

Goat fed with pods (her kids survived)

Browse trees

isinga

uguwe

umtshatshatsha

iwohlo

umkhaya

ugagu

ihabahaba