

## Feeding neem (*Azadirachta indica*) products to small ruminants as anthelmintics



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### Introduction

Present study was conducted to evaluate efficacy of neem (*Azadirachta indica*) products such as fresh leaves, seeds and bark as anthelmintics for ecto as well as endoparasites. The small ruminants (i.e. goats and sheep) are primarily reared extensively on the grazing land and tree leaves, which result in high occurrence of helminthic diseases, protozoan diseases (e.g. coccidiosis etc.) and are also exposed to mange, pediculosis and tick infestations. These parasitic diseases are being controlled by pursuing to regular and routine deworming using different anthelmintics like albendazole, levamisole, ivermectine, morantel etc. but they exhibit certain draw backs such as being uneconomical, suppressing growth rate and also producing some toxic effects in the animals, a few even at normal dosage level e.g. levamisol (Thilakan, *et al.*, 2002). Neem (*Azadirachta indica*) and its products can prove to be efficacious and economical in controlling parasitic infestations.

### Case History and Observations

Neem trees grow all over India and are evergreen and drought resistant. The neem seeds and leaves are used as unconventional feed supplements in livestock as well as in poultry rations. Though they contain nimbin, azadiractin and nimbioidol as anti-nutritional factors, these can be removed through overnight water treatment which also improves their palatability and nutritive value. The water treated neem products can be introduced gradually upto 10-15 percent with other relished feed stuffs in small ruminants. A total 30 goat species were examined for the incidence of gastrointestinal helminths from study area, village Bengabad of district Giridih (Jharkhand). Fresh neem leaves, seeds and bark were dried under the sun-shade, powdered and soaked in required quantities of water overnight. Aqueous extract of fresh leaves, seeds and bark were used @ 100 gram each dosage for 10 days. About 100 faecal samples were collected from selected goat species before and after supplementing neem products to the goats and examined for the incidence of gastrointestinal helminths in Class-I Veterinary dispensary, Bengabad by direct smear, sedimentation and floatation method. Egg per gram (epg) of positive sample was determined as per standard technique of Stoll's (Soulsby, 1982).

### Result and Discussion

Altogether, 100 samples, 30 samples examined which were before supplementing the neem products to the

goats and found that an overall incidence of 62 percent infection of G. I. parasites in goats. Rest samples of the goats after feeding the aqueous extracts of fresh neem leaves, seeds and bark at the dose rate of 100 gram each were examined and result revealed in reducing the faecal eeg count (epg). It was found that the incidence of G. I. parasites infestation is reducing with 49 percent, 42 percent and 38 percent for fresh leaves, seeds and bark, respectively after 10 days of feeding which is also supporting by Arunachal, *et al.*, 2002. Likewise, the spraying of their powder was found to be beneficial in controlling ectoparasitic infestations.

### Summary

Water treated neem products such as fresh neem leaves, seeds and bark etc. can be practically included in the ration of small ruminants upto the level of 10-15 percent as an effective measure to control both ectoparasitic as well as helmenthic infestations in the rural areas.

### References

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- [3] Thilakan N.J., Karunakran P., Mathivanan R. and Karunithi K. (2002) *Indian Journal of small ruminants*, 8(2) : 147-148.
- [4] \*Products of M/s KAPL Ltd., Bangalore.