Ingestion of Mindi (Melia azedarach) leaves by uninfected and H. contortus–infected Kacang goats

F.U. Datta¹ and J.V. Nolan²

¹Undana Research Institute, Jalan Adisucipto Penfui–Kupang NTT 85001, Indonesia
²School of Rural Science and Agriculture, Animal Science, University of New England, Armidale NSW 2351
alfredoud@yahoo.com

When given choices, sheep infected with internal parasites choose higher protein feeds presumably to compensate for increased protein requirements (Kyriazakis et al. 1994; Knox et al. 1997) and there is anecdotal evidence that parasitised ruminants show a preference for feeds with anthelmintic properties.

In West Timor and surrounding islands, farmers feed Mindi (a local name for Melia azedarach) leaves to their cattle during the dry season but seldom use it as a dietary supplement for goats. We made a preliminary in vitro study that indicated Mindi (Melia azedarach) leaves are relatively high in crude protein (about 21%) and also contain anthelmintic–like substance(s) that killed more than half of the Haemonchus contortus in a faecal larval culture.

A further study was then undertaken to explore alternative ways of feeding Mindi leaves (i.e. either fresh, or dried and pelleted) to goats as a strategy for managing H. contortus infections. The details are given by Datta et al. (2003). In the present paper, we report the patterns of ingestion of fresh Mindi leaves by the goats in the same experiment when infected with 300 H. contortus larvae twice weekly for the last 7 weeks of a 10 week experimental period.

We found uninfected goats ingested 300–400 g basal diet per day throughout the experiment, but intakes of infected goats decreased from about day 28 to less than 50 g/d between days 55 and 70. In contrast, the infected goats ate more (P< 0.05) Mindi leaves than their uninfected counterparts from around day 40 (when H. contortus infection was well established) with these differences increasing towards the end of the experiment (Figure 1). The higher intake in parasitised goats may indicate that the protein from the Mindi was alleviating a protein deficiency resulting from haemonchosis. Another possibility is that infected goats ingested relatively more Mindi because they were benefitting from the anthelmintic or other pharmacological substances in the leaves. We are currently investigating both possibilities.


![Figure 1](image-url) Intake of Mindi leaves by Kacang goats artificially infected from day 21 with Haemonchus contortus (▲) in contrast to non–parasitised controls (□). The goats were also offered fresh grass ad libitum in an adjacent feed container.