

A Note on Oxalate Content of Some Unconventional Cattle Feed Samples

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Some plants and forage contain oxalate, which when present in high concentration may induce severe alkalosis, due to the break down of soluble (Potassium) oxalate by rumen mi-

TABLE 1

Oxalate content of some unconventional feeds (% on dry matter) basis.

Name of sample	Oxalate content
Isabgul (<i>Plantago ovata</i> , Forsk) lali (4)	0.486 $\pm$ 0.073
Deoiled safflower cake (4)	0.344 $\pm$ 0.042
Vilayati babul (<i>Prosopis</i> 'uliflora) pods	0.307 $\pm$ 0.051
Isabgul gola (4)	0.233 $\pm$ 0.025
Deoiled Sal (<i>Shorea robusta</i> , Geartn F.) seed meal (5)	0.204 $\pm$ 0.067
Mango seed kernel (4)	0.190 $\pm$ 0.098
Kodra husk (4)	0.160 $\pm$ 0.019
Kuvadia (<i>Cassia tora</i>) seed (4)	0.144 $\pm$ 0.009
Deoiled Rice bran (4)	0.112 $\pm$ 0.021
Sea weed (<i>Sargassum</i> Spp) (4)	0.103 $\pm$ 0.022

Figures in paranthesis indicate the number of samples analysed.

croflora (Talpatra *et al.* 1948 a) thereby impairing the assimilation of calcium (Gupta and Talpatra, 1970). In addition calcium may be rendered unavailable due to high degree of alkalosis as a result of oxalate break down. Continuous ingestion of small amount of oxalate may lead to renal damage or to development of urinary calculi. In view of the ill effects of high dietary oxalate on the health of animal, it was thought to undertake to study oxalate content of some unconventional feed samples.

Feed samples were collected from different sources and analysed for oxalate content by the method developed by Talpatra *et al.* (1948 b) and the results are given in table together with standard errors.

From the results it can be seen that oxalate level of the samples varied from 0.103 to 0.486 %. The values are below 0.5% and within the safe range and thus safe to be incorporated in animal feeds. Oxalic acids can be destroyed at much higher rate than is likely to be consumed by cattle through these feeds (Morris and Garcia, 1955). Jones (1967) reported that 0.4 grams of oxalic acid intake was toxic to a mule of 1000 lb. (453 kg) liveweight.

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