New Dimensions of Animal Feeding to Sustain Development and Competitiveness

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ABSTRACT PAPERS

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147 Observations on food and fodder traits in a wide range of cultivars of groundnut.

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Dual-purpose usage of groundnut in mixed crop livestock systems has prompted collaborative work between groundnut breeders and livestock nutritionists to explore opportunities for increasing the fodder value from groundnut haulms without detriment to pod yield. About 800 diverse cultivars of groundnut from ICRISAT groundnut improvement program grown in the off-season of 2001-02 were investigated for nitrogen, *in vitro* digestibility and ME content of the haulms. Significant ($P < 0.05$) differences between cultivars were observed for these laboratory quality traits, and nitrogen contents ranged from 1.20 to 2.26% (mean 1.68%), *in vitro* digestibility ranged from 51.7 to 61.1% (mean 56.3%) and ME content ranged from 6.9 to 8.8 MJ per kg. Pod, haulm and digestible haulm yields (haulm yield times *in vitro* digestibility) in tons per hectare ranged from 2.28 to 5.44 (mean 3.61), 1.32 to 8.31 (mean 3.07) and from 0.76 to 4.72, respectively. No negative relationships were observed between the haulms quality measurements and pod or haulm yield. Analysis of nine cultivars that had served as check entries in 2001-02 was repeated in the off-season of 2002-03. For these cultivars broad-sense heritabilities for haulm nitrogen content, *in vitro* digestibility, ME content and digestible haulm yield were 0.72, 0.72, 0.67 and 0.91, respectively. There is considerable scope for selection of groundnut cultivars that have superior pod and haulm yields, and haulm fodder quality. In addition, heritabilities for haulm fodder quality characteristics seem high enough to target further genetic enhancement towards cultivars combining superior food and fodder traits.

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