

Comparative nutritive value of Chinese cabbage and Japan rape in murrah buffaloes

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Amongst the important oilseed crops grown in India, rapeseed and mustard ranks second after groundnut and thus, occupy an important position. Cultivation of Chinese cabbage has also been taken up in certain parts of the country. Although, these crops are grown mainly for oilseed but they also provide nutritious fodder for livestock. However, these crops are being grown without much consideration of production of nutrients per unit area per unit time in terms of animal performance. Keeping this in view, this study was conducted to compare the animal performance of Chinese cabbage against Japan rape fodder.

Chinese cabbage and Japan rape were grown under identical conditions at the experimental area of the University. Ten adult male Murrah buffaloes were included in the feeding trial and were randomly distributed in two groups of same age and weight. Each forage was randomly allotted to a group and fed as per the requirement (1976, NRC, NAS, Washington DC). The fodder were fed at the flowering stage. The feeding trial lasted for 19 days including five days of collection period. The records of daily intake, feed refusals and faeces were maintained. Simultaneously, data on green fodder yield per hectare were recorded.

The samples of forage, feed refusals and faeces were analysed for proximate principles (1990, AOAC, Washington, DC).

In Chinese cabbage, the per cent dry matter (DM) content was 12.96, CP 15.57, EE 3.76, CF 30.40, NFE 35.77 and Ash 14.50. Whereas in Japan rape, the per cent DM content was 11.48, CP 15.64, EE 5.00, CF 27.90, NFE 36.21 and Ash 15.75. The data on voluntary dry matter intake, nutrient digestibility, nutritive value and yield are presented at the end in tabular form.

The average daily DM intake was 2.01 and 1.96 kg per 100 kg body weight for Chinese cabbage and Japan rape. The digestibility of DM and NFE, and TDN contents of both the forages was almost same. The digestibilities of CP and CF were higher and that of EE were lower in Chinese cabbage as compared to Japan rape. Similarly, the DCP content was also higher in Chinese cabbage than in Japan rape.

The green and dry fodder yields were comparatively higher in case of Chinese cabbage resulting higher digestible nutrients per unit area. Thus, the Chinese cabbage had superior nutritive value as compared to Japan rape.

Particulars	Chinese cabbage	Japan rape
DM intake (kg/100 kg BW)	2.01 ± 0.07	1.96 ± 0.06
Digestibility coefficients		
DM	57.8 ± 1.4	56.9 ± 1.8
CP	73.2 ± 1.7	72.3 ± 1.8
EE	58.4 ± 2.2	67.7 ± 2.3
CF	68.3 ± 1.2	64.8 ± 1.6
NFE	45.9 ± 1.7	46.8 ± 1.9
Nutritive value (%)		
DCP	12.0 ± 0.2	11.0 ± 0.3
TDN	53.1 ± 1.1	53.6 ± 1.5
Yield (q/ha)		
Green fodder	416.0	374.0
Dry matter	53.9	43.2
DCP	6.4	4.7
TDN	28.7	23.1