

Corn stubble grazing by steers after mechanical grain harvest 1. Stubble fractions changing through grazing periods

JA Josifovich, OJ Scheneiter

Estacion Experimental Agropecuaria Pergamino, INTA, Buenos Aires, Argentine

Amounts of corn stubble fractions were evaluated at the start of the grazing period, day 1 (T1), at the middle of the period, 28 days (T2), and at 56 days (T3) in the Argentine corn belt, where 60 day corn stubble grazing is a common practice.

Corn stubble mechanical harvest is composed by stalks 54 %, leaves 12 %, cobs 21 % and husk 13 % (Vetter, 1973). In our situation these fractions were: stalks 32.5 %; husk and leaves 28.7 %; cobs 4.8 %; grain 10.5% and spontaneous plants (*Cynodon dactylon*, *Echinochloa* sp., *Digitaria* sp., *Lolium* sp. and *Stellaria* sp.) 23.4 %. Corn was harvested with a five rows combine, 2.80m width.

There were two replications, 1.5 hectare each. The grazing was continuous using steers 245 kg initial weight, at 3.3 head/ha.

The sampling was done in each period, through five 3.5 x 0.58 m samples per

replications, across five rows.

Fractions were hand separated and dry matter calculated after 48 hours at 60°C. Mean and standard deviation for each fraction and sampling periods were calculated.

In the first period (0-28 days) grain, husk, leaves of dry corn plants and green spontaneous plants, which exceeded animal dry matter needs, were selectively grazed. In the second period (28-56 days) the deviation, due to error sampling, and some growth of spontaneous plants, can explain the amount present. As the fractions were exposed to rain and some trampling or natural rooting, as in the case of grain and besides animal consumption, there was a degradation process. During grazing period there were some growth of spontaneous plants, specially annual raygrass. The degradation of corn stubble after 60 days shows that it is not advisable to keep fattening steers grazing the fields for more than 55-60 days after harvest.

Fractions	Sampling days		
	T (day 1)	T 28 (days 28)	T 56 (day 56)
Kg DM/ha			
Husk and leaves	2000 ± 522	1498 ± 497	1439 ± 230
Stem	2262 ± 482	2223 ± 337	2331 ± 447
Cobs	336 ± 317	630 ± 499	339 ± 267
Grain	732 ± 370	5 ± 12	0
Spontaneous plant	1633 ± 649	548 ± 362	760 ± 363