

Corn stubble grazing by steers after mechanical grain harvest

2. Animal diet selectivity through grazing periods

JA Josifovich, OJ Scheneiter

Estacion Experimental Agropecuaria Pergamino, INTA, Buenos Aires, Argentine

Corn stubble grazing is a common practice in Argentina.

After mechanical harvest, corn residues, stalk, leaves, husk, cobs, some residual grains and spontaneous plants, specially *Cynodon* sp., *Echinochloa* sp., *Digitaria* sp., and sometimes *Lolium* sp. and *Stellaria* sp. are grazed for 50-60 days. To evaluate the grazing animal selectivity, oesophageal fistulated steers were used. There were two replications (paddocks) 1.5 hectare each continuously grazed for 56 days, at 3.3 head/ha using 245 kg initial weight no fistulated steers. In the first week (days 2-6), the fourth week (days 30-34), and the seventh week (days 50-54) oesophageal fistulated steers, 300 kg weight, were used to sampling. The fistulated steers were kept in a corn stubble field, near the sampling paddocks. Early in the morning they were fasted until 11 a.m., when they were located in the paddock for one hour for sampling, and fasted again until 4 p.m. for the new sampling. Two steers were used one day for one paddock and change the following day to the other paddock. Immediately after the sampling, the extrusas were processed. Samples were

divided several times to get subsamples of 3 g each. The hand separation of samples was done by flotation in water considering stalk, leaves and husk as corn plant fractions, parts of grain and parts of green plants. The different constituents were oven dried at 60°C for 48 hours and weighted. The statistical analysis was conducted by univariate procedure (SAS, 1988), transforming the data. From the table it is possible to see the high amount of corn grain in the extrusa the first week possibly due to the animal selectivity for grain, and the leafy part of the plants. Even in the fourth week the steers selected grain according to the amount that was in the field sampling. Only in the seventh week when the grain almost disappeared from the field the percentage of grain fell sharply, increasing the amount of stalks, leaves and husks. Spontaneous plants kept a steady level.

The little amount of grain present was possibly consumed by animals - and therefore not detected - because the final stubble evaluation (day 56, Josifovich and Scheneiter, 1996, Ann Zoot, 45, suppl.) was made after the seventh week (W7) (days 50-54) of testing with oesophageal fistulated animals.

| Fractions | Periods | | |
|----------------------------|---------------|-----------------|-----------------|
| | W1 (days 2-6) | W4 (days 30-34) | W7 (days 50-54) |
| Corn grain % | 41.4 ± 18.9 | 21.0 ± 17.1 | 2.9 ± 3.5 |
| Stalk, leaves and husk % | 44.1 ± 16.8 | 66.1 ± 23.6 | 82.9 ± 24.0 |
| Spontaneous green plants % | 12.9 ± 17.3 | 13.3 ± 16.4 | 14.3 ± 24.0 |