

Newsletter 28th May 2012

June Bank Holiday

Smyths Daleside Feeds will be closed on Monday 4th of June, please place your order before Noon on Thursday 31st May.



SMYTHS DALESIDE FEEDS – COLD ROLLED MAIZE

Smyths Daleside Feeds pride themselves in the production of high quality Cold Rolled Maize, for inclusion in their coarse and blend rations. A trial carried out by UCD in 2009 had positive results. We feel that publishing their findings would make our customers aware of the benefits of Cold Rolled Maize in animal diets.



Cold Rolled Maize Trial

Spring 2009

Karina Pierce and Bridget Lynch

24th November 2009

karina.pierce@ucd.ie



Introduction

- UCD to look at whole grains passing/digestibility of diets containing high levels of cold rolled maize to beef animals
- Reports of grains being passed by animals fed high levels of cold rolled maize
- The Maize is dried maize grain which has been “ Conditioned” for rolling.

Information Provided

- Increasing numbers of farmers feeding this ration to large steers 600-800 kg bodyweight.
- Feeding Rates vary from 6-15 Kg/hd/day and there are numerous different feeding regimes as follows:
 - Ad Lib. With silage
 - Silage 10kgs plus 10-12kg Ration in a wagon mixer
 - Silage 5Kg plus 1-2kg straw plus 12-15kg ration in wagon mixer.
- Most of the problems are with the very high feeding rates with the larger animals, and is particularly noticeable in yards and bedded sheds, not so much in slatted sheds for obvious reasons

Lyons Trial:

- Animals of similar weight
- Bedded sheds
- Similar/higher intake of cold rolled maize

Materials and Methods

- 20 beef animals (steers - start weight approx. 690 kgs) fed as one group = one dietary treatment
- Animals were group fed with the concentrate portion of the diet coming from Smyths
- Concentrate, grass silage and straw were mixed and fed to animals once per day
- Animals in bedded sheds



Group Feeding Regime

Date	Silage (kgs)	Concentrate (kgs)	Total Wgt
Tues 7 th April	1100	92	1192
Wed 8 th April	1050	102	1152
Thurs 9 th April	950	130	1080
Fri 10 th April	840	154	994
Sat 11 th April	730	180	910
Sun 12 th April	620	205	825
Mon 13 th April	510	230	740
Tues 14 th April	400	255	655
Wed 15 th April	290	282	572
Thurs 16 th April	180	310	490
Friday 17 th April (2.5% BW)	187	381	568

Final Feeding Level (per animal)

Silage (kgs Fresh)	Concentrate (kgs Fresh)	Straw (kgs Fresh)	Total Weight (kgs Fresh)
10	18	1	29.0
Silage (kgs DM)	Concentrate (kgs DM)	Straw (kgs DM)	Total Weight (kgs DM)
2	15.5	1	18.5



Lab: TMR = 62% DM

15.5kgs concentrate/animal/day = 4.65kgs cold rolled maize/animal/day

700kg animal approx eating 2.5% of BW (DM)/day

Materials and Methods

- **Day 1/2:** Animals were weighed and put on their diets. Acclimitisation over a 7-day period
- **Day 28-32:** Faeces samples collected over a 3-day period and pooled for digestibility (DMD) analysis, whole grains passed and starch analysis
- **Day 31/32:** Animals weighed and experiment finished

Samples

- 1) Grains passing
- 2) Digestibility
- 3) Starch

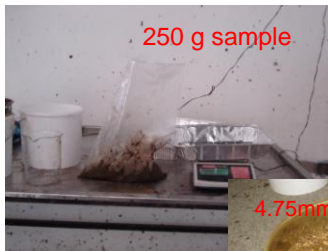
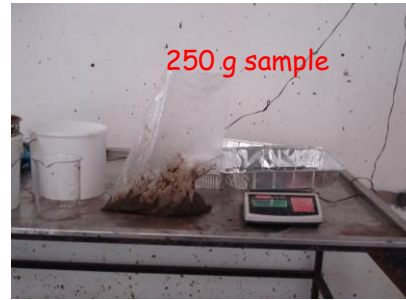
Faeces observed throughout experimental period for passing grains - no obvious signs of maize grains passing

Acid Insoluble Ash

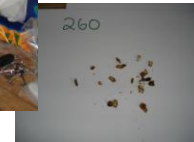
- AIA measures the digestibility of the diet
- Natural marker- measured in the feed and faeces
- Fresh faeces (approx 200-300 g per day) was collected over a 3-day period
- Total of 600-900g fresh faeces collected over the 3 days
- Dried in oven at 55°C for 48 hours, ground and sent to UCD lab for analysis

Grain Counting

- 300-400g FRESH faeces grab sample taken per day @ 9am
- Pooled and a subsample of 250g analysed
- Subsample was washed through a 4.75mm screen
- Remaining dried at 55°C for 48 hours



Grain Counting



Starch

- Ground faeces samples (split between AIA and Starch)
- Starch analysis kit purchased (Megazyme, Bray, Co. Wicklow)
- Allows for the measurement of total starch - cereal products
- Resistant starch also measured - no difference

Daily Gain and Feed Intake

- Estimated group intake of 18-20 Kg DM/day
- Approx. intake (DM) 2.5% of BW
- Starting live weight **690 Kg**
- Finishing live weight **726 Kg**
- **28** day experimental period @ adlib intake
- **1.28 Kg Average Daily Gain**



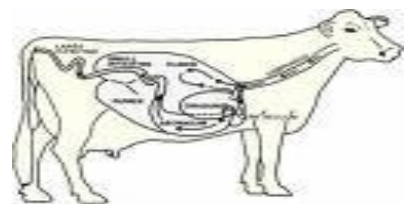
RESULTS

Starch

- 21.50% starch found in the feed
- 3.53% starch in the faeces (variability: 1-6%)

Digestibility

- DMD = 65.9%
- Starch = 94.24%



Grain Counts



- No whole grains evident
- Comments made during review of screenings:
 - 'Partial maize and barley shells' (415)
 - 'No whole grains some barley and maize shells' (260)
 - 'Some maize and barley shells' (282)

Grain Counting



Conclusions

- Maize grains passing not an issue in this experiment - high intakes of rolled maize
- Starch digestibility high
- DMD = Normal
- Grains passing were small cereal grains