

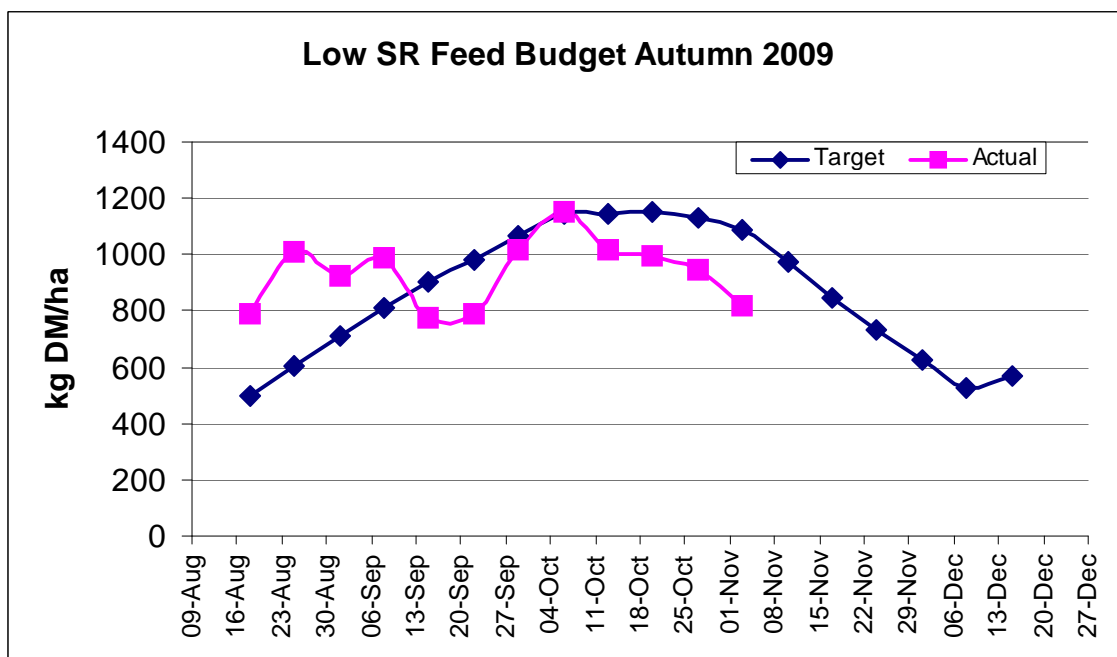
Low Stocking Rate Group (2.5 HF Cows/ha)

Critical Issues

- 1) **Maintain post-grazing height at between 5 – 5.5cm**
- 2) **Maintain rotation length at 30 days**
- 3) **Avoid poaching**

Situation

Figure 1. Autumn Feed Budget



- 1) As can be seen in figure 1, we are below target in terms of farm cover (820kg vs 1089kg).
- 2) 4kgs of concentrate is being fed per cow.
- 3) 42% of the farmlet is grazed. We started closing on the 10th of October. Our target is to have 60% closed in the first 30 days or 15% per week. At 42% closed we are slightly behind target.
- 4) To overcome this we have selected two paddocks with reasonably light covers (1000kg) to be grazed this week. As these are light cover we will move through them quickly, thereby increasing the proportion closed faster.
- 5) Cows are currently on 12-hour allocations and on/off grazing is being used when necessary to help avoid poaching.
- 6) Target rotation length is 30 days.
- 7) Pre-grazing yield is 1650kg
- 8) 4% of the herd is dried off so stocking rate is now 2.4cows/ha

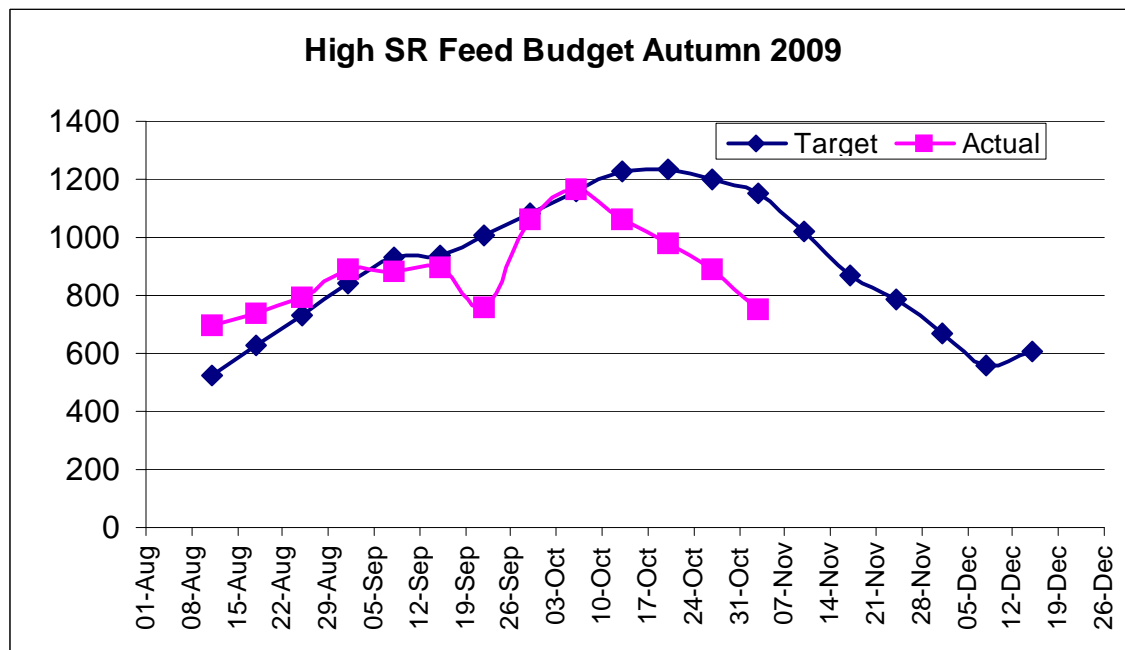
High Stocking Rate Group (3.3 HF Cows/ha)

Critical Issues

- 4) **Maintain post-grazing height at between 3 and 3.5cm**
- 5) **Maintain rotation length at 30 days**
- 6) **Avoid poaching**

Situation

Figure 2. Autumn Feed Budget



1. As can be seen in Figure we are below target in terms of farm cover (753kg vs 1149kg)
2. Cows are on 4kg of concentrate and 49% of the farmlet is now closed, which is just slightly ahead of target.
3. Pre-grazing yield is 1800kg
4. Target rotation length is currently 30 days.
5. 13% of the herd is now dried off so stocking rate is now 2.86cows/ha

Whole Farm Situation

1. Average soil temperature for the past week was 12.7°C, last week 11.7°C.
2. Total rainfall for the week was 69mm.
3. Average weekly growth this week was 23kg/day, average for the previous 3 years was 21kg/day.
4. Dry matters were 11.5% on Monday morning.
5. 250kg N/ha have been spread this year.
6. Latest milk quality test results from the milk processor are; Fat 4.97%, Protein 4.07%, Lactose 4.62%, SCC 161k, TBC 15k, Thermoduric 550, Sediment A.
7. Critical Short-term Actions:
 - a. Cows are currently on 12-hour allocations.
 - b. Maintain post-grazing height at desired level.

Curtins Farm Systems Fertility Performance 2009

The current farm system comparison study at Curtins Farm encompasses three alternative stocking rate treatments. The three stocking rates compared are Low (2.51 cows per hectare), Medium (2.92 cows per hectare) and High (3.28 cows per hectare) stocking rates for Irish dairy farms post milk quotas. The objective of the study is to quantify the impact of stocking density within systems of production based on grazed grass with minimal external feed supplementation. The target grazing intensity, in terms of post-grazing residual sward height for the low, medium and high stocking rate treatments was 5.5, 4.5 and less than 3.5cm, respectively over the season. Each group was managed separately and received a common level of concentrate supplementation. Early season grass growth in 2009 was below expectation and resulted in increased grazing severity for all treatments. Average post grazing residual height was 3.6, 3.4 and 3.3cm for the low medium and high stocking rates, respectively during rotation 1, while total feed allocation per cow per day was 14.0, 12.5 and 12.1 kg DM, respectively.

Table 1 below, outlines the influence of stocking rate treatment on reproductive performance during the 2009 breeding season. Breeding commenced on April 20th and finished on July 20th (13 weeks). Cows were bred to artificial insemination after morning milking using tail paint to aid heat detection. As evidenced from the Table 1, stocking rate had no significant effect on any of the reproductive variables measured. Reproductive performance and in particular pregnancy rate to 1st service and after 42 days of breeding across all groups was poor in comparison with target levels. While not significantly reduced, the poorer reproductive performance of the medium and high stocking rate treatments is consistent with their increased grazing intensity, reduced feed allowance and lower body condition score at AI when compared to the low stocking rate group. The provisional results indicate that the challenge for higher stocking rate systems will be to increase feed allocation in early lactation to achieve acceptable levels of reproductive performance while avoiding higher residual grazing height and pasture wastage.

Table 1. The Effect of Stocking Rate on Reproductive Performance

Stocking rate	Low	Medium	High	Significance
Calving date	22/02/09	24/02/09	21/02/09	NS
Submission rate (%)	87	74	80	NS
CSI (days)	77	80	82	NS
Preg to 1 st Serve (%)	48	37	44	NS
42 day in-calf rate (%)	65	57	54	NS
In-calf rate* (%)	80	74	78	NS
CCI (days)	94	105	104	NS

*13 week breeding season

EXPERIMENTAL PROGRESS REPORT AS AT SUNDAY, 01/11/09

Objective: To compare the biological efficiency of alternative calving date and stocking rate combinations for Irish spring calving pasture-based production systems

Herd Details	EBI (€)	MILK SI (€)	FERT SI (€)	CALVING SI (€)	HEALTH (€)
Average	112	59	45	20	-3

(November 2008 ICBF)

Calving Date Group Stocking rate Group	Early Calving			Late Calving		
	Low	Medium	High	Low	Medium	High
Stocking rate (cows/ha)	2.51	2.92	3.28	2.51	2.92	3.28
Mean calving date	9/2	12/2	11/2	26/2	24/2	22/2
Ear-tag Colour	White	Blue	Orange	White	Blue	Orange
Band Colour	Yellow	Yellow	Yellow	Blue	Blue	Blue

Week Details:						
Area allocated (m ² /day)	2400	2000	1800	2400	2000	1800
Farmlet cover (kg DM/cow)	341	323	264	341	315	247
Pre-herbage mass (kg DM/ha)	1650	1475	1800	1650	1475	1800
Residual grazing height (cm)	4.83	3.85	3.81	4.78	3.65	3.64
Diet (kg DM/cow/day)						
Grass						
Silage	0	0	0	0	0	0
Concentrate	4	4	4	4	4	4
Milk solids (kg/cow/day)	1.01	0.98	0.97	1.02	0.95	0.99
Milk yield (kg/cow/day)	13.1	11.7	10.9	12.8	12.6	12.0
% Fat	3.84	4.36	4.82	4.06	3.68	4.37
% Protein	3.98	4.19	4.29	4.04	3.99	3.98
Bodyweight (kg)	543	536	535	547	548	539
Condition Score	2.96	2.80	2.82	2.90	2.80	2.77

Cumulative:						
Milk solids (kg/cow)	404	365	345	373	342	358
(kg/ha)	1014	1066	1132	936	999	1174
Milk yield (kg/cow)	5232	4657	4428	4907	4591	4656
% Fat	4.18	4.35	4.26	4.04	4.02	4.24
% Protein	3.55	3.52	3.55	3.56	3.45	3.46
Days in milk	265	261	262	247	250	252
Total supplement fed (kg/cow)						
Concentrate	314	310	313	267	268	282
Silage	99	201	155	56	127	79
Conserved silage (kg DM /cow)	921	631	597	921	631	597
Bought in Silage (kg DM /cow)	417	417	417	417	417	417
Farmlet area (hectares)	9.17	7.87	7.01	9.17	7.87	7.01
Number of cows calved	23	23	23	23	23	23
Number of cows in group	23	23	23	23	23	23
Non-lactating cows	1	5	3	1	5	3

NB: These are raw data that have not been statistically analysed and, therefore, no definite conclusions can be drawn from them.