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Agenda 2000

The last Beef Bulletin in November outlined the main changes relating to the beef sector. Some additional details have been finalised as follows:

Slaughter Premium

There will be a premium for beef heifers at slaughter of approximately £20/head. This is in addition to the Slaughter Premium of £17/head which is payable on all cattle. To be eligible for the Slaughter Premium animals must be retained on the farm for at least two months and slaughtered within one month if sold live.

Extensification Premium

Entitlement to extensification is calculated on all cattle over six months of age plus the number of ewes on which Sheep Annual Premium (SAP) has been claimed. Payment depends on the stocking density:

Below 1.6 LU/ha - £42

Between 1.6 and 2.0 LU/ha - £21.

Stocking Density is calculated on the average Livestock Units (LU) for the calendar year divided by the eligible Forage Area (from the IACS form).

The Department will automatically calculate average cattle numbers (over six months of age) by taking six counts during the year using the APHIS computer system. These are then converted to Livestock Units using the following conversion factors:-

Suckler cows, bulls and all cattle over two years of age	1.0 LU
All cattle between 6 and 24 months	0.6 LU
Ewes on which SAP is claimed	0.15 LU

Table one: Relative feed values of straights and silage compared with rolled barley and soya meal

(Assume barley @ £95/ tonne and soya meal @ £150/ tonne)

Feedstuff	Protein content (%)	ME effective value (MJ/kg)	Relative value (£/t)
Grass silage (DM basis)			
High feed value	16.0	11.8	27 @25% DM
Medium feed value	15.5	11.2	22 @22% DM
Low feed value	12.4	10.6	19 @18% DM
Dried barley (14% mc)	9.5	11.4	95
Soya	46.0	11.6	150
Maize Gluten	18.0	10.9	100
Sugar beet pulp	9.0	10.6	89

Planning For Early Grass

Now is the time to consider making the provision for an early bite of grass, as a means of reducing the pressure on scarce silage supplies. Where practical, the driest fields on the farm should be selected and urea fertiliser applied at a rate of 2¹/₂ bags/hectare by mid February, if possible.

For more information on feeding strategies where silage is in short supply, please contact your local Development Adviser who will help you assess your options and draw up a feeding plan for the remaining winter months.

Breeding Replacements from the Beef Herd – update on progress at Greenmount

Breeding plan for 1998

In spring 1998, a Salers bull of good conformation and with Signet recorded figures (Table two) was purchased. Cuil Madrid is in the top 1% of recorded Salers bulls for beef value and in the top 10% for the 200 day milk trait.

Table two: Cuil Madrid’s Estimated Breeding Values

Bull	200 day milk (kg)	200 day growth (kg)	400 day growth (kg)	Muscling score (pts)	Muscle depth (mm)	Backfat depth (mm)	Beef Value
Cuil Madrid	0	+30	+41	+0.4	+0.4	+0.3	SA25

The criss-cross breeding policy, adopted at Greenmount College involves the Limousin and Salers breeds. Initially Limousin x Friesian cows are mated to a Salers bull and the heifers are retained as replacements. As their father was a Sales, these heifers will be mated to a Limousin bull and then in the future, heifers from this mating whose fathers are Limousin will be mated back to a Salers bull.

This criss-cross breeding retains hybrid vigour in the herd. The positive attributes of both breeds, the muscling of the Limousin and the maternal traits (milk, ease of calving and fertility) of the Salers will hopefully produce a good cow type for the beef herd.

Cow breeding performance

Of the 37 cows and six heifers served in June/July 1998, 41 calved producing 42 living calves. The herd achieved 0.98 calves per cow per year (42 calves from 43 cows to the bull), equal to 'best in class' benchmark. In June/July 1999, 39 (Limousin x Friesian) cows and four Salers x heifers were served. These were PD'd in early November and all but two cows were in calf.

Calf performance

Table three: Performance of 1999 born Salers x calves

Breed	Sex	Weight 09/09/99	Daily Live Weight Gain Birth- 09/09 (kg/day)	Housing Weight 02/11/99	Daily Live Weight Gain Birth-02/11 (kg/day)
Salers	Male	210	1.24	244	1.06
Salers	Female	185	1.17*	221	0.97

*excludes last two calves born which were on average 70 days younger than the rest of the calves.

Steers

Steer calf performance was excellent from birth to 09/09/99 @ 1.24kg liveweight/day but from 09/09/99 to housing, daily liveweight gain was much lower, at 0.63kg LW/day. This considerable decrease was observed despite a reasonable grass supply and calf creep being available.

The calves would not consume more than 0.75kg concentrate/day, which may have limited liveweight gains.

The steers will be finished at 22 months of age, at a carcass weight of 360kg and U/R3 grades. Target lifetime performance is 0.9kg/day DLWG. The carcasses produced will be suitable for the United Kingdom supermarket trade.

Comparison with 'best in class' benchmarks

Target = Steer calves @ six months old to weigh 250kg

Actual = Steer calves were:

in 1998 235kg (15kg below benchmark)
in 1999 235kg (15kg below benchmark).

Salers x replacement heifers

The 1998 Salers x heifers have an average birth date of 5/4/98, were bulled in mid June 1999 at 14½ months and will calve at slightly under two years old. Table four below shows target and actual performance for both the 1998 and 1999 calf crop.

There were four Salers x heifers out of Fuji Yama produced in 1998. In 1999, 17 Salers x heifers out of Cuil Madrid were born. However, the performance of only 15 are included in table four below as two are not suitable to go to the bull in June 2000 due to their late birth. On average, the 15 heifers were born on 25/4/99.

Table four: Performance of Salers x replacement heifers

Date	Activity	Age (days)	Weight (kg)		Target DLWG(kg/day)
			Target	Actual	
1998 Born Heifers					
05/04/98	Birth	0		40	
28/09/98	Housing	176	216	233	1.0 (birth to housing)
21/01/99	Weaning	291	331	338	1.0 (housing to weaning)
20/04/99	Turn-out	380	393	391	0.7 (weaning to turnout)
27/05/99	Pre-bulling	417	430	411	1.0 (turnout to bulling)
14/04/01	Pre-calving	700	628		0.7 (bulling to calving)
1999 Born Heifers					
25/04/99	Birth	0		42	
02/11/99	Housing	191	233	236	1.0 (birth to housing)
07/12/99	Weaning	226	268	265	1.0 (housing to weaning)
01/05/00	Turn-out	372	385		0.8 (weaning to turnout)
18/07/00	Bulling	450	463		1.0 (turnout to bulling)
14/04/01	Pre-Calving	720	650		0.7 (bulling to calving)

Comparison with ‘best in class’ bench marks

Target = Heifer calves @ six months old to weigh 210kg.

Actual = Heifer calves were :

in 1998 237kg (+ 27kg above benchmark).

in 1999 225kg (+ 15kg above benchmark)

Use ‘NK’ fertiliser for first cut silage

What are ‘NK’ fertilisers?

Nitrogen (N) is the key to grass growth, but adequate supplies of phosphorus (P) and potassium (K) are also necessary. In the past the most common fertilisers were ‘straight N’ (containing nitrogen only) and ‘NPK’ compounds and blends (containing all three elements). An ‘NK’ fertiliser is simply one containing only N and K.

[Phosphorus in fertilisers is expressed as phosphate (P₂O₅) and potassium is expressed as potash (K₂O)].

Why use ‘NK’ fertilisers?

Inputs of phosphate on intensively managed farms have far exceeded outputs for many years. Only a fraction of the phosphate in purchased feedstuffs is retained by the animal. Most is excreted, making slurry a rich source of this nutrient. Phosphate in the soil only starts to leach when levels rise above that required for maximum grass growth. The result is that most soils have adequate phosphate for grass production, and slurry is frequently sufficient to replenish any removed in grass cut for silage.

In contrast, potash is easily lost from soil and low soil levels are common, particularly under silage swards. It is thus frequently necessary to apply potash with nitrogen. Hence the need for NK fertilisers.

Table five: Fertiliser for first cut silage (kg/ha)

	N	P ₂ O ₅	K ₂ O
Total nutrients required	120	30	100
Nutrients from slurry:	20	30	60
Balance from fertiliser	100	0	40

As table five shows, the requirement is for an NK fertiliser. A range of such fertilisers is now becoming more widely available.

Typical NK fertilisers

N	:	P₂O₅	:	K₂O
24	:	0	:	8
21	:	0	:	14
25	:	0	:	13

You may well have to shop around for these fertilisers. But they are well worth looking for. Grass response to potash is almost as great as to nitrogen. Applying a straight N or a low potash fertiliser may result in significant yield reductions. Applying a NK fertiliser such as the above along with slurry is the most cost-effective way of ensuring good yields of grass for first cut silage.

Review of Cattle Carcase Quality in Northern Ireland between 1990 and 1999

Supply Chain Development staff have completed a study to evaluate if beef carcase quality has declined pre or post BSE and if so; to investigate possible reasons for this decline.

The study has shown a steady decrease in beef carcase quality as determined by conformation classification between 1990 and 1999 with the decline more pronounced between 1997 and 1999. The proportion of steers/young bulls receiving E, U and R conformation classifications has fallen by 26% (Figure one). This deterioration would have been greater had

dairy calves removed under the Calf Processing Aid Scheme been finished and included in the male slaughter data.

The proportion of heifers receiving E, U and R conformation classifications varied from 58% to 65% of total female carcasses. However, from 1997 to 1999 there has been a 25% decrease in these grades (Figure two). Carcase fat score has not declined on an annual basis. Between 1997 and 1999 there has been a 17% decrease in the number of steers and young bulls which received Fat Score three, and a 14% decrease in the number of heifers receiving Fat Score three.

Four main parameters impinge on beef cattle carcase quality. Breed of sire and dam, sex of animal, level and type of feed given during the finishing period and age at slaughter. Beef producers have encountered problems with Holstein genetics coming from the dairy herd.

To reverse this trend the Agri-Food Development Service recommends that beef cow producers follow a breeding program, which will improve cattle carcase quality.

