

3. Nutrient management

Drawing up a nutrient management programme will help farmers utilise farm wastes and purchased fertiliser efficiently, so that the appropriate amount of grass is grown without wasting costly nutrients and damaging the environment.

4. Grazing management

Adopting good grazing management systems will ensure that high liveweight gain per animal and per hectare is achieved from grazed grass.

5. Silage production

Proper planning for silage making will ensure that the appropriate quantity and quality of silage is harvested to meet the requirements of stock during the housing period.

How will the *Grass Challenge* be delivered?

The *Grass Challenge* will be a practical, 'hands-on' programme where farmers will learn from each other in groups on farm visits across Northern Ireland.

Group size will be limited to 12 to 15 farmers and the programme will be targeted primarily at producers who run suckler herds and keep the majority of their calves through to beef. Local Greenmount Beef and Sheep Development Advisers will facilitate the programme.

It is envisaged that it will take each group approximately five to six on-farm meetings per year over a two year period to complete all the units within the *Grass Challenge*.

The national awarding body, Edexcel, will accredit the *Grass Challenge*. For those farmers who are interested, there will be an opportunity to pursue this qualification by demonstrating that the *Grass Challenge* programme has been put into practice on their farms.

When will the *Grass Challenge* start?

The *Grass Challenge* will be starting in February 2002. Contact your local Beef and Sheep Development Adviser for more details.

Greenmount beef and sheep E-mail discussion list

Beef and sheep farmers throughout Northern Ireland can now contact each other and DARD staff using the Greenmount E-mail discussion list. The system provides farmers with the opportunity to learn from each other, develop business and commercial links

with other farmers and discuss common management problems.

When a member sends an E-mail to the discussion group, the message and all replies to that message will be distributed to all group members. This allows everyone to benefit from a range of experiences within the group, whereas normal communication

It indicates the likely financial benefit, expressed in £ sterling, of improving carcass weight, conformation score and reducing fat in line with the current commercial carcass pricing structure.

For example, a Charolais bull with a Beef Value of CH30 (in the top 10% for the Charolais breed) will pass on half of the benefit, that is £15 to each of his progeny compared with a bull CH0 which would not contribute any financial improvement to his progeny.

When comparing Beef Values it should be remembered that half of an animal's genetic merit comes from the sire and half from the dam. The Beef Values displayed with bulls at sales must therefore be halved when considering the economic advantage that will be passed to the progeny.

As part of a development project at Harper Adams University College, the performance of Limousin calves sired by either Ronick Hawk (LM 29 – top 10% in the breed) and Staveley Hurricane (LM 7 bottom 25% in the breed) were recorded.

The Ronick Hawk calves recorded significantly higher carcass weights than the Staveley Hurricane calves. They also recorded higher daily liveweight gains, slaughter weights, conformation scores and killing out percentage.

	Beef Value LM 29	Beef Value LM 7
Slaughter weight (kg)	631.6	609.3
Days to slaughter	486.7	481.9
Daily liveweight gain (kg)	1.19	1.16
Carcass weight (kg)	358.8	341.6

In this study the extra weight of the progeny from the high **Beef Value** bull more than compensated for the extra days feeding, leading to a £17.10 per animal higher margin compared with the progeny from the low **Beef Value** bull.

This study demonstrates that bulls with high **Beef Values** will sire calves that grow faster and produce superior grades and carcass weights more efficiently than progeny from bulls with a low **Beef Value**. This will be reflected in better prices for finished cattle or stores.

Selecting an AI bull with milk figures

The importance of breeding quality replacements for the suckler herd is becoming a major issue. On many farms the policy has been to sell off the best heifers, as they make the top prices as stores or finished animals, and retain the plainer ones for breeding.

A planned breeding policy is the first step in producing good quality replacement stock for the herd. This policy will involve identifying the best cows, or heifers, to breed from and mating them to a bull with good maternal traits. When considering breeding replacements emphasis should be placed on using bulls preferably with a 200 day milk EBV of +2. AI offers a number of advantages in this respect – selection of superior genetics, the ability to select a bull suited to the particular cow or heifer and using a bull with proven figures, including milk. The milk EBV, expressed in the catalogues as ‘200 day milk’, gives an indication of the potential milking ability of the bull’s daughters as replacement heifers.

In general, the Simmental breed has a reputation for good milk production and Simmental cross heifers bred from cows with good conformation should produce suitable replacements. Simmental bulls with potential for producing satisfactory replacements include Innerwick Atlantic and Wroxhall Extreme. Limousin bulls with good maternal figures include Cockleshell Olympus and Shire Milton. Information on suitable bulls useful for breeding replacements will be available from AI companies or your local Beef and Sheep Development Adviser.

Marketing topics

1. Outlook for young beef bulls

There has been a dramatic increase in the number of young beef bulls slaughtered in Northern Ireland during 2001. From January to October 36,809 entire males were slaughtered, compared to 14,400 during the same period in the previous year.

The first assumption from looking at these figures would be that this increase can be attributed solely to young dairy-bred bulls entering the system since the Calf Processing Aid Scheme closed in 1999. However, closer inspection of Livestock and Meat Commission carcass classification figures show that over 50% of these young bulls are being classified in grades superior to those attainable by dairy-bred bulls (E, U and R). A study of the figures also shows that there has been a commensurate decrease in the volume of steers slaughtered in the same period.

Whilst production of young beef bulls is technically attractive, producers should only embark on production of bulls if they have a definite pre-arranged market outlet. This situation can change over time but only one company currently offers contracts for registered suppliers. ABP Newry operate a scheme for Farm Quality Assurance Scheme (FQAS) continental bulls slaughtered at under 16 months. Animals must be between 270-380kg and fed a GM-free ration during the last 60 days. Premiums are payable for animals with carcass conformation E, U and R and fat class 3 or 4L.

2. Certified Hereford beef

Since its launch in September 2000, the Northern Ireland Hereford Breeders Association and WD Meats have collaborated to establish a producer base and a constant supply of eligible livestock for the Certified Hereford beef scheme. Over 1000 Hereford steers and heifers have been slaughtered at WD Meats Coleraine abattoir for Great Britain (GB) market outlets. Price premiums are available for FQAS steers (250-400kg) and heifers (230-380kg) sired by a registered Hereford bull. Animals must have a carcass conformation of E, U, R, and O grades and fat class 2, 3, 4L and 4H. Further information on the scheme is available from WD Meats or from the Hereford society.

To assist in quality improvement *Ai Services*, WD Meats and the Northern Ireland Hereford Breeders Association have selected the Hereford bull 'Bor Red Robin' to produce calves suitable for the scheme. *Ai Services* will offer semen for DIY and through their on-farm service.

Reducing scour losses in the suckled calf

Scour is the most common disease of young calves and causes up to half the deaths in calves less than one month of age. Even if calves recover, poor thrive, the cost of treatment and additional labour requirements add significantly to the overall financial losses associated with scour.

Causes of scour

Scour is actually the result of an upset in the normal flow of fluid in the intestine. This can come about from an over-supply of milk, giving rise to a mild nutritional

scour, or it could be caused by a germ leading to a more severe scour resulting in the calf becoming dehydrated and sick. The principle infectious causes of scour are:

1. Rotavirus
2. Coronavirus
3. Cryptosporidium
4. Salmonella
5. E-Coli K99

Whether or not a calf develops scour depends on two main factors:

- ? The quantity and quality of colostrum that the calf receives at birth;
- ? the amount and type of germs that the calf picks up from its environment.

Preventing scour in the young suckled calf

1. Ensure that all young calves get enough colostrum. Colostrum provides the calf with a rich source of antibodies that will protect it against the usual strains of disease found in the environment. A calf should receive 3.5 litres (6 pints) of colostrum within six hours of birth. Colostrum contains antibodies which protect the calf for up to three months from diseases such as scour and pneumonia. It also acts to line the gut, thus helping to prevent attack from germs.
2. Good on-farm hygiene is essential, as the newborn calf has no immunity against any of the diseases in the environment. If the level of disease in the environment can be kept low the calf has a better chance of being able to cope adequately with any infection that may be present.

3. Rapid treatment and isolation of sick calves is vital in the control of scour. Scouring calves quickly become weak and dehydrated. They should be taken from the cow immediately and treated with electrolyte solutions and other medicines as directed by a veterinary surgeon. As many of the germs which cause scour are very contagious, infected calves should be isolated and kept separate from other calves on the farm.
4. Vaccination of the cow is another useful tool in the prevention of calf scour. This involves administering the vaccine to the cow between 12 and 4 weeks before calving. Remember that all the protection is in the colostrum of the cow and to be effective the colostrum must be efficiently transferred to the newborn calf.

Always seek veterinary advice about the best way to treat and control specific scour problems on the farm.

Botulism in cattle

Botulism is a disease that occurs sporadically in cattle. In the last few years there has been an apparent increase in the number of cases. The disease is characterised by a slow progressive flaccid paralysis. The first signs in an affected animal may be muscle tremors, and poor co-ordination. Muscle weakness and paralysis are generally first seen in the hindquarters and then progress to the forequarters, the head and the neck. An animal may initially lie on its chest with its head turned towards its flank (as also seen in milk fever). While some animals are able to eat and drink until the very end, other

animals develop tongue paralysis and are unable to chew or swallow, the tongue may protrude and the animal may drool saliva. The animal is normally able to pass urine and faeces. Eventually the chest muscles become paralysed so that the animal cannot breathe.

Most affected animals die or are euthanased. If large amounts of toxin are ingested an animal may be found dead without showing any other signs of illness.

A toxin produced by the bacterium *Clostridium botulinum* causes botulism. All species of animals are susceptible. *Clostridium botulinum* is widely distributed in the environment and under conditions of low oxygen, high humidity, warmth and a suitable substrate, the bacteria will multiply rapidly producing the highly lethal toxin, which is then ingested.

The most common source of toxin on a farm is decaying organic (animal or vegetable) matter. *Clostridium botulinum* can grow and produce toxin in a variety of rotting feed. The bacteria can also grow in the carcasses of dead animals or birds. The toxin can be highly concentrated in carcasses and can persist for over a year. Carcasses containing the toxin may be eaten or the toxin may leach out from the carcasses onto pasture or bedding, or into feed or water.

There are no satisfactory laboratory tests for the disease. A diagnosis is normally made on the basis of the clinical signs and elimination of other causes.

At present there is no botulism vaccine licensed in the United Kingdom and other clostridial vaccines available in the UK will not protect an animal against botulism.

CHANGES TO PREMIA FOR 2002

Under Agenda 2000 proposals, further changes to premia payments and stocking density limits are scheduled for 2002 as follows.

Beef Special Premium

Maximum stocking density in 2002 is 1.9 LU/ha and in 2003 is 1.8 LU/ha

Rates of payment	Euro	(£)*
Bull	210	126.29
Steer	150	90.21

Suckler Cow Premium

Maximum stocking density in 2002 is 1.9LU/ha and in 2003 is 1.8LU/ha

Up to 40% of the claim can be made for heifers, for example, if total quota is 50, then up to 20 heifers can be claimed. There is no minimum heifer claim in Northern Ireland, whereas in the Republic of Ireland 15% of the quota must be claimed as heifers.

Rates of payment	Euro	(£)*
Suckler Cow Premium	200	134.71
Objective 1 Top-up	24	90.21

Extensification Premium

The stocking density limits for entitlement to extensification payments will be reduced from 2.0LU/ha to 1.8LU/ha and from 1.6LU to 1.4LU/ha. The rates of payment will increase as follows:

Stocking Density	Euro	(£)*
1.4LU/ha to 1.8LU/ha	40	24.06
Less than 1.4LU/ha	80	48.11

Slaughter Premium

Slaughter premium payment rates are set to increase as follows:

	Euro	(£)*
Payment for adult cattle	80	48.11

National Envelope

The national envelope for 2002 has been agreed as follows* to Heifer slaughter premium top-up of approximately £38.80/head.

Suckler Cow Premium top-up of £7.47/head.

* To calculate the premia payments in £ (stg) an exchange rate of 1 Euro = 62p has been used and 3% modulation has been applied.

In situations where the stocking density is close to the threshold, careful planning is critical to ensure that income from subsidies is optimised. Take, for example, the situation of a farmer with 80 hectares of eligible forage in his IACS form with the following stock:

480 Ewes claimed for Sheep Annual Premium;
 1 Bull
 60 Suckler cows claimed for Suckler Cow Premium;
 Selling all calves as stores at 12 months of age;
 Claiming first stage BSP on 30 bullocks.

Average stock numbers for extensification counts

Male cattle over 24 months	1
Female cattle over 24 months	60
Male cattle (6-24 months)	15
Female cattle (6-24 months)	15

BSP calculation

	LU
480 Ewes x 0.15	72
60 Suckler cows x 1.0	60
30 Bullocks (1 st stage BSP) x 0.6	18
Total	150

Stocking density = 150/80 = 1.875 LU/ha

This farm business is eligible for full BSP, SCP and SAP payments in 2002 but not in 2003.

Extensification calculation

	LU
480 Ewes x 0.15	72
1 Male (over 24 months) x 1	1
60 Female cattle (over 24 months) x 1	60
30 Cattle (6 months – 24 months) x 0.6	18
Total	151

Stocking density = 151/80=1.887LU/ha

This farm business will not be eligible for any extensification payments in 2002, as the stocking density is greater than 1.8LU/ha. The fact that this farm business would be ineligible for extensification payments would have a major impact on profitability, as extensification would amount to £2165 or £4330 depending on the rate of payment.