

FAQ'S December 2009

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9th December, Blaencwmpridd Open Day

I can meet the energy requirements of my stock by growing quality grass silage or growing homegrown grain; how do I grow the protein they need?

Cereals like oats or barley, forage crops like fodder beet or maize and good quality grass silage can meet the energy requirements of stock but will not meet the protein requirements of growing stock. There are a number of options but good quality red clover leys grazed or ensiled, can be the key to meeting the protein needs of your stock from your own farm resources. It's the heifers and calves that need the extra protein compared to bulls and cows- really the growing animal rather than stock maintaining growth or finishing. If silage from red clover leys is cut, ensiled and made well then protein needs can be met. Aftermaths will also be available for finishing lambs and will potentially be able to support 300 grammes plus of daily live-weight gain. Those looking for alternatives have used mixtures of red clover, chicory and high sugar hybrid ryegrasses to achieve the growth they need from high quality forage. Dry matter intake is obviously important: forage crops like the rapeX kale hybrids eg 'Swift' contain up to up to 22% protein but intakes tend to be lower because dry matter content is around 7-10%. Red clover silage on the other hand with 18-22% protein, has an average dry matter content between 30-35%. However, it has to be said that there may be years when making high quality red clover silage is difficult and the farmer may have to rely on purchased concentrates in the form of balancers or straights in the ration. The pros and cons of the options for homegrown protein have to be weighed up for each farm situation bearing in mind particularly when the feed is needed, what type of stock are being finished and for what market, and does the land type lend itself to successful outwintering?

14th December, Llwyn Disc Gp (Llanddewibrefi)

What are IBERS plant breeders doing to mitigate climate change ?

Working with the Animal scientists at IBERS, the plant breeders are looking at developing further improvements in digestibility through high sugars in the grass varieties. In a mixed sward, these varieties will build on achievements to date to improve the utilisation of N in the rumen to efficiently produce microbial protein for use by the animal. There is work in progress that suggests that this can result in good reductions in methane produced by sheep. The breeders are also developing varieties of both grass and clover that are better able to both take up and use nitrogen and phosphorus in the soil. This will mean reduced losses to the water courses via leaching. In future, less fertiliser will be needed for the same level of production and with reduced levels of pollution to the air and to the water. It is not just grass and clover breeding that is done at IBERS, the oat breeding programme is also looking at improving the efficiency of digestion in the rumen and also in pigs and poultry. However plant breeding is a time consuming process and efficient farming with careful use of inputs be it feed, seed or fertiliser by farmers will enable emissions to begin to be reduced from agriculture.

11th December – Hendreseffion demonstration farm open day

Why is cutting date so important? The date at which a crop is cut is crucial to achieving the quality needed by livestock. Twin bearing ewes and finishing steers have much higher needs than dry suckler cows but if the silage quality is right, neither will need to be fed supplementary concentrates or feeds. A dry suckler cow will thrive on low ME and low protein silage which will supply maintenance needs. This is often produced from long term permanent pasture or 'agri environment' meadows, or from very mature good quality leys. To meet the higher demands of energy and protein for the productive stock, high quality silage from leafy leys with good clover is needed to give an ME above 10 and protein at 14-20%CP. Cutting date is only half the story, the length of time the crop has been shut up influences the plant maturity- a field where all the grass has gone to head (even in late May/June) will be stemmy, have low sugars and give a poor ME. Whether the crop is cut early or late it is still important to make the silage well and ensure a good fermentation.

What are the advantages of baled compared to clamp silage?

There are a number of pros and cons to baled silage. The key points are that bales have minimal capital outlay if a clamp needs to be built, losses of nutritional value are less; typically at between 5% compared with clamp silage losses of 25%. The greater flexibility of multi-cutting dates makes it easier to get the optimum cutting date for each crop harvested and it is possible to make off farm sales of any surplus. It's not all good news though; wet silages do not make good bales, it is often more time consuming to feed and there can be variability between bales. Each farm situation needs to be assessed from an economic, environmental and labour perspectives.

What are the pro and cons of square versus round bales? Square bales tend to have a more even 'packing' as they are made which gives better consistency across the bales. Because of their shape, square bales are far easier to stack and store and can be 'fed out' like a clamp unwrapping a section at a time. However the shape can mean that the corners are damaged and susceptible to spoilage. Because the bales are heavier, more power is needed to make them and fuel costs can be higher and the machinery is less manoeuvrable on smaller fields and sloping banks. Although recommended for round bales too, it is essential that square bales have at least 6 layers of wrap, thus adding to the cost per bale.

16th December, Llangyndeyrn Disc Gp (Llandyfaelog)

Why didn't my chicory work this year? I'm not trying it again!

Chicory may not work for a variety of reasons....not enough in the ley, poor management, poor soil nutrition and wet weather are among some of them. In a minority of years the weather may just be too wet for it to be grown and utilised well- bear in mind that it grows best where its deep taproot can grow down in dry conditions and it is generally a drought hardy plant. Largely because of its growth habit, grazing stock, get the advantages of increased mineral intake, anthelmintic properties and of course high protein forage. The growth and hence the quality of the plant needs to be monitored so that best use can be made of it- around 1- 1.5 kgs/ac in the mix at sowing is recommended and the sward should be grazed when the chicory gets to 20-25cm. If the field can be divided into paddocks and tightly stocked to graze through the crop and paddock quickly, then utilisation and recovery and subsequent utilisation is much improved.

What about clover? Where does that fit in?

Clover can be a very valuable part of a grass ley they provide protein forage and fix nitrogen. Choose a variety and leaf size that suits your system. Clover has been bred to suit different classes of stock and different management regimes, so there are small, medium and large leaf white clover varieties and diploid and tetraploid red clover varieties to suit a range of systems. Generally the smallest white clover leaf varieties are suited to sheep grazing, medium size leaf varieties to mixed sheep and beef systems and large leaf varieties to the dairy cow and for ensiling. White clover tends to last the length of the ley in contrast to red clover which has a shorter lifespan and suits short to medium term leys where silage is a priority.

If you are thinking of oversowing try broadcasting with a fertiliser spreader after hard harrowing the sward following heavy grazing or cutting. A successful method is to suspend a plastic lemonade bottle over the hopper with a hole in the lid and calibrate the flow and tractor speed so that you are applying around 1 to 1.5 kgs/ac. The best time to oversow is after a silage cut and well before Autumn and soil temperature and moisture is sufficient to give good establishment before the onset of winter. Remember clover has a very small seed, so check that the rest of the sward has enough ryegrass before oversowing clover alone- you may find that the sward is tired and would benefit from ryegrass too.. Like ryegrass, clover needs good soil fertility, so check your soil indexes (pH, P & K) are OK BEFORE spending money on seed.