Red clover silage can be fed to all kinds of ruminant livestock without any problems (the bloat potential of the fresh crop is lost once the crop is ensiled). However, to make the best use of the high quality protein available in red clover silage, it is important to mix it with other forage silages that are high in readily available energy in order to balance the protein and energy supply to the ruminant. This will maximise the conversion of forage nutrients into useful end products such as meat and milk and not into wasteful, polluting products such as urine.

Recent trials by the Aberystwyth University have shown that good quality silage can be made successfully from legume crops such as red clover, in clamps or in bales, and that there is little or no difference in protein preservation rates, dry matter intake and in vivo digestibility between the two ensiling methods.

Three further studies by IBERS (Institute of Biological, Environmental and Rural Sciences) show that red clover has the potential to significantly increase the milk production compared with grass silage alone and that the right mix of red clover to other forage can improve overall performance.

In another EU funded study across Germany, Sweden, Finland and UK looking at a range of leguminous crops (red clover, lucerne, white clover, lotus and galega) compared to grass, it was concluded that the most suitable species as a silage crop was red clover - unless there were drought issues, in which case lucerne may be preferable. Legume silage gave higher milk yields as a result of better forage intake characteristics of the legume.
STUDY 3

Comparing grass and red clover silages prepared in big bales and fed to a group of dairy cattle either as 100% grass, 100% red clover or as a 50:50 mix on a DM basis

- Red clover had significantly higher feed intake than grass alone
- The grass/clover mixture was only about 1 kg DM/cow/d higher intake
- Milk yields were significantly higher on the red clover silage compared to the grass alone
- Milk yields from the grass/clover mixture were only a litre/cow/d less than the red clover only but 3.5 l/cow/d greater than the grass only diet

The results of all these studies highlight the significant cost savings and increased milk production potential on dairy farms of incorporating red clover into the forage system.

Feeding facts

- Legume silage gives higher milk yields because of the better forage intake characteristics of the legume such as digestibility and its inherent higher protein levels.
- For maximum effect, these crops should be fed with concentrates or silage of a low crude protein content.
- Low protein concentrates offer potential savings in terms of concentrate inputs.

Also available in this series of factsheets:

Red Clover as a Silage Crop
Ensiling Red Clover

Go to www.silageadvice.com to download these factsheets and much more

About Silage Advisory Centre

The Silage Advisory Centre is an industry initiative aimed at promoting the benefits of baled silage as a modern grassland and forage management system and at providing forage conservation advice to farmers, contractors and other players with a direct involvement in baled silage production and grassland farming. For more information, please visit www.silageadvice.com