

Forage Newsletter

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GET THE BALANCE RIGHT AND INCREASE YOUR PROFIT

IMPROVE YOUR CATTLE'S HEALTH AND PERFORMANCE WITH DLF TRIPLE CROWN



Grass/legume mixtures and maize are perfect partners in cattle feeding rations

A large number of dairy cows are fed on a diet consisting mainly of maize. However there is a lot to be gained by adding grass or grass/legume to the feeding plan:

- Higher milk yield per cow
- Higher proportion of the feed can be produced on the farm
- More stable, robust and consistent feeding plan all year round
- Less risk of animal diseases related to feeding
- Higher profit for the farmer

Increase your profit with grass/legume

The economically optimal feed diet depends on various parameters; mainly on the potential yield level of maize, clover grass and Lucerne and on the actual prices on concentrates.

MAIN ROUGHAGE CROPS CHARACTERISTICS

SOURCE	MAIN CHARACTERISTICS	HOW TO IMPROVE THE DIET
Maize	High energy concentration (carbohydrates – mainly starch) Low protein content and cell wall content (NDF)	Protein: Soya concentrates, legumes. Fiber especially NDF: Grass, Lucerne, Straw
Perennial clover grass mixtures	High content of fiber (NDF) and protein (legumes in particular). Medium energy concentration	Energy: Maize silage, grain concentrates. Eventually more protein
Lucerne	Very high content of protein. Low energy concentration, low silage coefficient	Energy: Maize silage, grain concentrates. Silage additives

Maize silage is a good energy source but with low protein content, which needs to be compensated by adding large proportions of expensive concentrates. Grass/legume silage is a good protein and NDF source. Energy shortages could be compensated by adding grain concentrates into the diet.

The ideal solution is, however, to combine the two: Maize silage and clover grass or Lucerne. Analysis on farms clearly shows that a combination of maize and grass-legume silages in one diet gives the lowest milk production costs because it requires the lowest input of bought in concentrates to generate an effective, well-balanced ration.

THE BENEFITS OF A MIXED FORAGE DIET

SILAGE TYPE	FEED ANALYSIS PER KG DRY MATTER	NEED OF CONCENTRATES TO GET >10 MJ/KG DM AND 16% PROTEIN	COST OF CONCENTRATES
Maize	Protein: 9,1% Energy: 10,5 MJ	Soya cake – 3,5kg/cow/day Grain – 8kg/cow/day	€2,95 per day/cow
Combined maize/grass mixture	Protein: 14,0% Energy: 10,1 MJ	Soya cake – 2,5kg/cow/day Grain – 8kg/cow/day	€2,45 per day/cow
Economical difference when using combined maize/grass mixture silage			+ €0,5 per day/cow + €142,5 per cow lactation

Example of ration calculator for average milk productive cattle, produced by DLF-TRIFOLIUM and Danone/Unimilk specialists, Russia, 2011

Improve your cattle's health and performance with DLF Triple Crown

To help farmers select the top performing varieties that will deliver bottom line margin to their livestock enterprise, DLF-TRIFOLIUM has developed the DLF Triple Crown as a quality standard.



The DLF Triple Crown quality standard takes a holistic view of a grass variety by assessing all of the important characteristics that lead to improved animal output rather than simply focusing on one particular character that is more than often offset by a weakness in another.

- The first crown is awarded for **YIELD performance** i.e. dry matter and energy yield.
- The second crown is awarded for **FIELD performance** i.e. disease resistance and persistence.
- The third crown is awarded for **FEED performance** i.e. NDF, NDF digestibility, WSC (Water Soluble Carbohydrate) and protein.

The DLF Triple Crown is only awarded if a variety is performing consistently well in all three categories.

Why is NDF important?

Neutral Detergent Fiber (NDF) is the slowly digestible part of the carbohydrates (sugars) in plants. The content and digestibility of this is much more important to a ruminant than the rapidly digestible sugars known as Water Soluble Carbohydrate (WSC).



High NDF content

- Is important for the cows health and performance
- Improves the digestion and utilization of nutrients
- Stimulates the rumen function, stabilizes pH and adjusts the digestion process positive

High NDF digestibility

- Gives around 1/4 liter more milk per cow per day for each %-unit increase
- Increases the amount of forage metabolized by the rumen microorganisms.

This is the area that really differentiates DLF Triple Crown varieties from others and is the cornerstone of breeding developments and goals within DLF-TRIFOLIUM.



You cannot 'have it all' in one variety!

As a general rule, varieties that are higher in WSC are lower in protein and conversely varieties that are higher in protein are lower in WSC. In addition, varieties with high WSC also tend to be lower in NDF and NDF digestibility. On the other hand improved NDF digestibility results in significant energy gains as more cellulose gets converted to non-structural sugars. This in turn leads to improved output of meat or milk.

In most dairy situations grass is supplemented with high energy concentrates like maize silage, grain etc. In these circumstances grass has a vital, additional role to play as it is the single most important component of the diet in terms of rumen efficiency and health.

It is vital to assess a grass on its overall performance and not to just look at one or two characters in isolation. This would be like selecting an athlete to compete in a decathlon at the Olympics based solely on his or hers ability to run 100m.

DLF Triple Crown stands for a robust, credible and effective standard quality that measures a grass variety's all-round performance and value to the farmer.