

# ForageMax Newsletter



## Festulolium PERUN gave steers a weight gain increase by 29%

At Penfield Trial Station in Australia a grazing experiment including Festulolium PERUN and two varieties of Italian ryegrass, showed that PERUN was superior and gave 29% more live weight gain to Angus steers than the poorest of the two Italian varieties (daily weight gain: 1.80 kg/day for PERUN vs. 1.40 kg/day for Italian ryegrass Crusader). The main reason being the deeper root development of PERUN resulting in better heat and drought tolerance, combined with a better feeding quality than Italian ryegrass.

Read more about the Australian feeding trial on [www.seeddistributors.com.au](http://www.seeddistributors.com.au), Penfield Weight Gain Trials



## Grass solutions for a changing climate

Most experts agree that the climate is changing. More extreme conditions will appear – increasing temperatures and longer periods without rain will lead to more drought and salt stress in some areas and more and heavier rainfall will result in flooding in others. One of DLF's breeding goals is to select species and varieties that are able not only to survive but also to produce forage under more extreme weather conditions. Here are some examples from our forage portfolio:

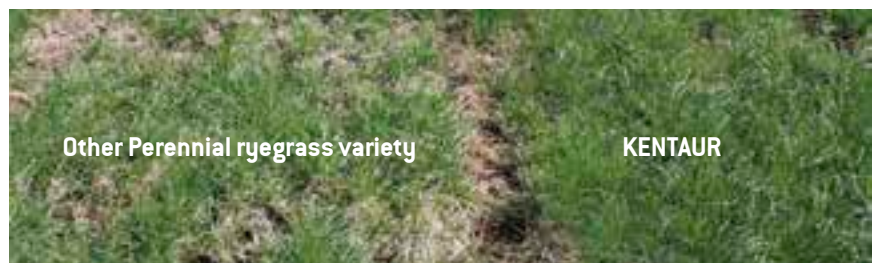


**Festulolium** has, due to the deep rooting system, a better drought tolerance than Ryegrass and a faster recovery when the rain returns. Flexibility and longer duration of green mass production was proven many times in farm conditions as well as in our own DLF trials on fields in Germany, the Baltic countries and Russia.



**Tall fescue KORA** has showed an addition of 10-30% to the forage yield in Finland compared to Meadow fescue, the traditional species used. This has led to a change in some of the grass mixtures used where Tall fescue is replacing Meadow fescue – even in the very north, close to the Arctic Circle.

**Tetraploid Perennial ryegrass KENTAUR, CALIBRA, MATHILDE and others** are showing very good winter hardiness. An example: After three winters in variety trials in central Sweden (see photo below), KENTAUR was by far the best surviving variety of Perennial ryegrass – moving the northern border for effective ryegrass productivity still further.



**FORAGEMAX**

by DLF-TRIFOLIUM

## Making quality silage

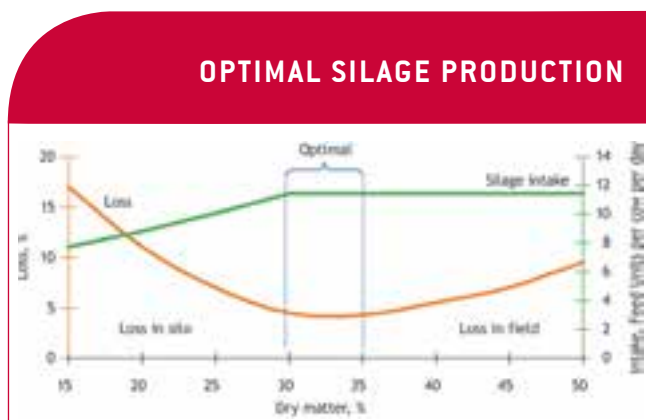
Preserving grass and clover grass as silage for winter feed is very well-known. If everything is done in the right way, a very large part of the crop can be secured for feeding animals, but if care is not taken in every detail of the process of silage making, large losses can occur.

### The silage making process must be

#### ON TIME, FAST and CAREFUL

To obtain the best compromise between yield and quality, the grass is to be cut at early ear emergence.

Allow wilting in the field by swathing and harvest the grass when dry matter content is 30-40%. Contamination with soil, dry dung, etc. must be avoided.



30-35% dry matter in grass or clover grass gives the highest intake by animals and the least loss in field as well as in storage.

In the stack or silo, speed is the key to success, but at the same time attention to detail must not be forgotten. Collect the crop as quickly as possible and spread it evenly in layers of maximum 10 cm. Then rolling with heavy tractor must continue until the stack has a firm surface and is free of air. Sealing quickly with plastic and a silo net – on the same day as the grass was harvested – is important.

The ensiling (fermentation) is completed after 3-4 weeks. A pH of 4.5 or below is good. Lactic acid content needs to be high, acetic acid moderate and butyric acid zero. The content of ammonium nitrate needs to be <8% of the total N. The anaerobic spore count must be low, good silage should have a “clean” smell of lactic acid and not of mould.

### How to protect forage quality in silage

Heating of silage happens mainly due to the growth of yeast and mold; fungi that grow well in the presence of oxygen. Certain molds produce harmful mycotoxins, which may reduce production and harm the health of animals. Losses up to 20% – or even more – may occur. First of all the silage making routine described above must be followed, but using a silage inoculant can support the process and make the silage more stable.

Inoculants typically work in two ways:

1) They speed up the fermentation process and reduce ethanol and ammonia in silage to help improve silage quality. A rapid pH reduction after sealing is crucial, and ammonia concentration is an important quality parameter in silage as it reflects the amount of protein being degraded during fermentation.

2) They improve stability in the silage at take-out. It is also important to maintain a low pH value after opening the silo. This will inhibit growth of spoilage microorganisms – symptoms being heating and bad smell and a significant loss of quality at the face of the opened clamp.

