

ForageMax

Quality Grass Mixtures

 **DLF**
TRIFOLIUM
SEEDS & SCIENCE



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DLF-TRIFOLIUM SEEDS & SCIENCE

DLF-TRIFOLIUM focuses closely on the demands of customers as well as on the market trends of clover and grass seed. Offering one of the world's largest research and breeding programmes for both turf and forage, DLF-TRIFOLIUM is working continually to improve the quality and reliability of all varieties. To meet market expectations, these varieties are tested through a worldwide trialling network for adaptation to different climatic and environmental conditions.

DLF-TRIFOLIUM is the world's largest producer and distributor of grass seed. With subsidiaries in Denmark, Sweden, Holland, Belgium, UK, United States, France, Germany, Czech Republic, Russia, China and New Zealand, an extended distributor and customer network is sufficiently able to serve the markets worldwide.

MAXIMISE YOUR BENEFITS WITH FORAGEMAX

The professional livestock farmer must have eyes on many details. One of the most important single criteria for success is the ability to ensure a high amount of quality forage for the herd – all year round. Here no compromises should be made – the chain from seed to stable needs to be attended all the way.

DLF-TRIFOLIUM would like to be your preferred supplier of grass and clover seed for forage. With our intensive research and development programme, we are ready to meet the demands from a business that is constantly changing.

We are always interested in feedback from our costumers. If you have any questions or comments concerning our products, please do not hesitate to contact us.



Creating
forage varieties
with the highest
feed quality

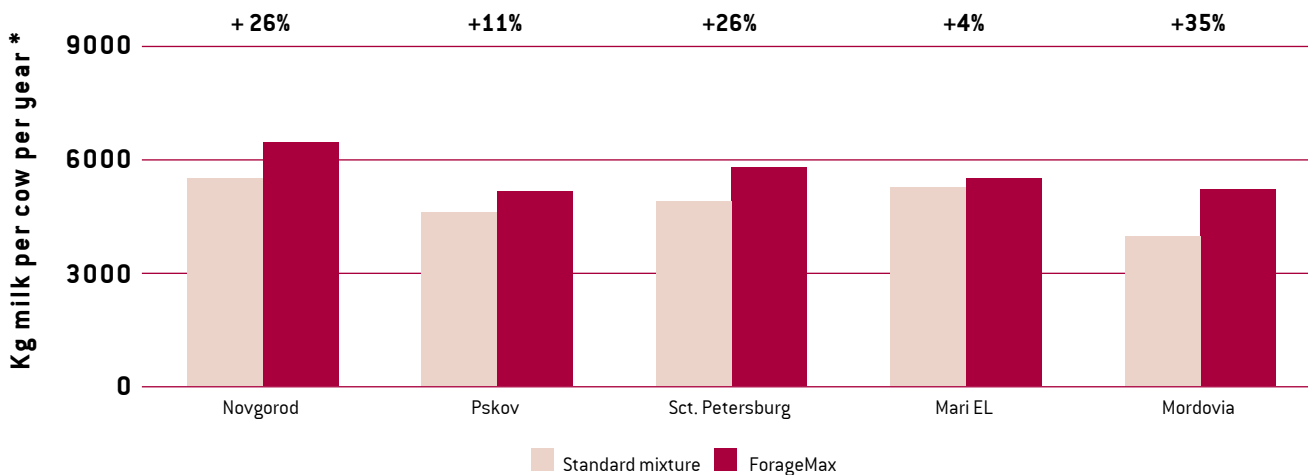
Foragemax – a strong idea

ForageMax is the result of many years of experience from trials and practical farming. DLF-TRIFOLIUM has, in cooperation with The Danish Agricultural Advisory Service, done a large number of tests and demonstrations in several countries in order to formulate the best mixtures – well adapted to local climatic conditions and demands for feed.

The introduction of new, high productive ForageMax mixtures on a farm has clearly demonstrated a significant increase in meat and milk production and a higher income to the farmer. And – most importantly – the success of ForageMax and the increasing market share since the introduction in 2002 has proven that the idea is strong and long lasting.



A CASE STUDY: 20% MORE MILK WITH VERSAMAX



* Practical experiences with VersaMax at five different farms in Russia – all yields calculated to a 300 day lactation period. Danish Agricultural Advisory Service and personal communication.

The species in ForageMax

10 different species are used when composing ForageMax mixtures. The idea is to create the basis for production of high quality forage without losing persistency and stress tolerance. In order to obtain this, ForageMax mixtures consists of 4-6 species, which are all chosen according to the intended use of the field.

The main species for obtaining high forage quality – and always represented by the newest varieties from our breeding – are Hybrid ryegrass, Perennial ryegrass and Festulolium combined with Red or White clover. In order to ensure stress tolerance and maximum persistency, some mixtures are supported by Timothy, Cocksfoot, Meadow fescue and Tall fescue.

Festulolium – a speciality from DLF-TRIFOLIUM

There are a number of very remarkable varieties of Festulolium from DLF-TRIFOLIUM. They can be divided into two main types:

- **Type ryegrass.** Crossing between Italian ryegrass and Meadow or Tall fescue. Appearance like ryegrass, but with better persistency. Examples: BECHVA, PAULITA, PERUN, ACHILLES, PERSEUS, LOFA.
- **Type Tall fescue.** Crossing between Italian ryegrass and Tall fescue. Appearance like Tall fescue = stress tolerant, better yield and quality. Examples: FELINA, HYKOR, FOJTAN.

A CASE STUDY: 1 MILLION EXTRA RUBELS IN SMOLENSK

“In spite of the fact that the pasture is established in 2002, we still use it intensively. During summer 50% of the diet for our cows is silage and the remaining part is pasture with VersaMax. In 2006, the average milk yield per cow was 7,500 litres, this is 400 litres more than 2005. One of the main reasons for this increase is the pasture with grass mixture VersaMax near to the farm. We are very satisfied with VersaMax.”

Dmitry Krasnov,
main livestock specialist
of Plemzavod im. Radischeva,
Smolensk region



Facts about Plemzavod im. Radischeva, Smolensk region

Total area with VersaMax pastures – 120 ha
 Number of cows in one division of the farm – 300
 Milk yield 2005 – 7,100 l/cow
 Milk yield 2006 – 7,500 l/cow
 The increase in yield gave farm additional income: 300 cows x 400 l/year x 8.5 RUR/l = 1,020,000 RUR (calculated)



A large pile of green grass is in the foreground, partially obscuring the lower part of a building. The building has a white, perforated metal roof that extends across the top of the frame. The sky is blue with some light clouds. The text "Our world is dedicated to grass" is overlaid on the grass pile.

**Our world is
dedicated to
grass**

ForageMax – starting right

To achieve a successful result and choose the right mixture for a new grass field, it is very important to consider the following:

- Type and quality of forage needed for the herd
- Soil type and climatic conditions
- The intended use of the field. Cutting, grazing or both
- The intensity of the use. High/low nitrogen level, number of years

Success in the grass field starts with a good establishment. Grass and clover seed are small and therefore very sensitive to unfavourable conditions in the seedbed. The aim is to establish a good, even and uniform sward with minimum 600 plants per m².

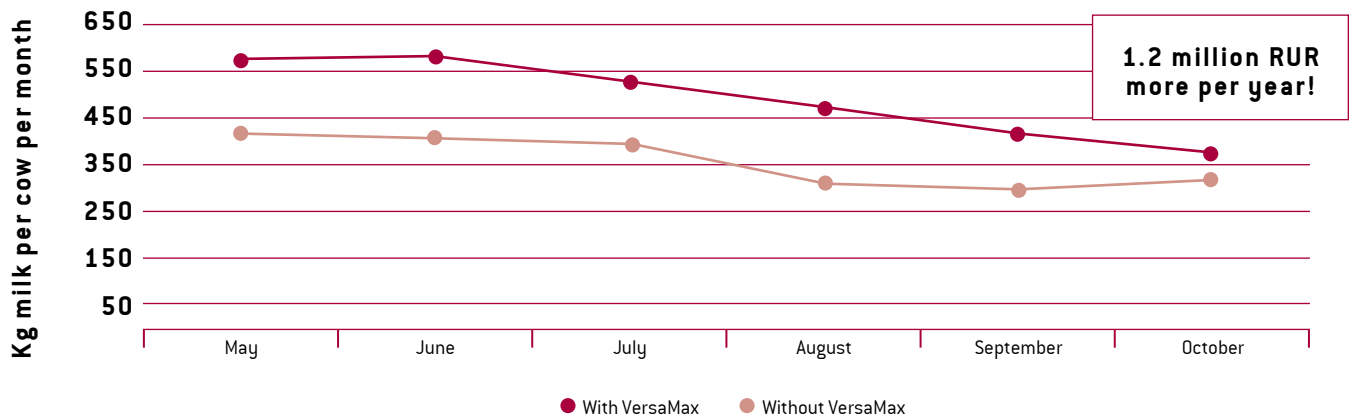
Sowing is most successful when done in spring or late summer as the conditions for germination – adequate

moisture and temperature in the soil – are normally the best. Each ForageMax mixture has a recommended seed rate. For sowing with a cover crop, the lowest of the recommended seed rates is sufficient, whereas the high recommendation is to be used, when sowing takes place without cover crop or under less favourable conditions.

Sowing of clover and grass seed must take place immediately after careful preparations (ploughing, harrowing and rolling). Seeding depth must not exceed 1 cm and driving must be careful – maximum 7-8 km per hour in order to do a proper and even job.

On page 10 and 11 you can read about the nine ForageMax mixtures and the detailed composition of each mixture.

A CASE STUDY: MONEY FROM GRASS IN MORDOVIA



The economical benefits are huge*:

Savings in the grazing period (250 cows in 155 days):

10 kg of grain silage per cow per day x 250 cows x 155 days = 390 tonnes of grain silage
 250 g of grain per cow per day x 250 cows x 155 days = 10 tonnes of grain

Earnings in the grazing period:

4.5 litres milk more per cow per day x 250 cows x 155 days = 175,000 litres x 7 RUR/l = 1,225 million RUR

Versamax on SHP «Cultura», republic Mordovia, 2005-2007.

Personal communication from husbandry specialist on SHP «Cultura», Alesksandr Elesin

** Economy calculations done by DLF-TRIFOLIUM*



ForageMax – descriptions

CUTMAX – YIELD AND QUALITY IN ONE

High amounts of high quality silage

CutMax is ideal for 2-4 silage cuts per year where quality of the harvested forage is essential. CutMax is recommended in a rotational system and should be renewed every 2-4 years. CutMax is available in two versions: The original, which includes cocksfoot, and the new CutMax II, where cocksfoot is replaced by festulolium. CutMax and CutMax II are suitable for cold and temperate regions as well as hot and dry areas.

GRAZEMAX – EXCEPTIONAL QUALITY OF FORAGE

For grazing by high producing milking cows

GrazeMax is designed for the intensive milk producer. It is a mixture of white clover and winter hardy varieties of perennial ryegrass and can under the right conditions produce a very high amount of quality feed for grazing animals. Summer production is good and GrazeMax should be renewed every 2-3 years. There is also a GrazeMax mixture for hot and dry areas based on palatable and digestible varieties of tall fescue.

PROTEINMAX – HIGH YIELD WITH LOW INPUT

Red clover in good company

ProteinMax is a short-term conservation mixture. More than half of the seed is red clover and the rest is festulolium and together they are forming a highly productive mixture with the potential of delivering a great amount of forage with a high content of protein. At the same time you can save both nitrogen in the field and concentrate in the stable. ProteinMax is mainly for cold and temperate regions and will give the best quality in a 3-4 cut system.

GRASSMAX – QUICK AND TASTY

Increase your output by over seeding

GrassMax is for overseeding in existing fields. The output of an oldersward can be increased dramatically by introducing new vigorous young plants. For GrassMax we use only the very quick establishing species like festulolium, hybrid ryegrass and tetraploid perennial ryegrass. These species have big seeds and fast germination that makes them able to compete with the existing plants in the field. We recommend overseeding in fields that are not renewed completely on a regular basis.

VERSAMAX – ROBUST AND MULTI FUNCTIONAL

All-round mixtures with high productivity

VersaMax is delivered in two versions. One mixture for cold and temperate regions, including white clover and ryegrasses, and one for hot and dry areas based on red clover, hybrid ryegrass and tall fescue. VersaMax is ideal for a combined management of conservation and grazing, where it can bring high yield with very good feeding value. It is recommended to change between cutting and rotational grazing.

COVERMAX – ROBUST AND HARDY

For extensive grazing and conservation under all conditions

CoverMax is a real tough mixture to be used where stress tolerance may be needed. CoverMax is designed mainly for permanent pastures, but is also very suitable for one or two early cuts for silage or hay. CoverMax consists of species that together combines ground cover, winter hardiness, drought tolerance and high productivity. CoverMax is ideal not only for cattle grazing but also for sheep and horses as it tolerates close grazing. The feed gained from CoverMax is tasty, but also able to supply the animals with the necessary fibres.

Mixture compositions

FORAGEMAX MIXTURES									
	CUTMAX	CUTMAX II	PROTEINMAX	GRASSMAX	VERSAMAX, COLD AND TEMPERATE	VERSAMAX, HOT AND DRY	GRAZEMAX, NOT EXTREME CONDITIONS	GRAZEMAX, HOT AND DRY	COVERMAX
UTILIZATION	Conservation	Conservation	Conservation	Overseeding	Combined management	Combined management	Grazing	Grazing	Mainly grazing
DURATION	2-4 years	2-4 years	2-3 years		3-5 years	3-5 years	2-4 years	2-4 years	More than 5 years
SEEDING RATE, KG/HA	25-30	25-30	25-30	25-35	25-30	25-30	30-35	30-35	30-35
RED CLOVER	15	15	55			10			
WHITE CLOVER, MEDIUM-LARGE LEAVED					10	5	10	10	
WHITE CLOVER, SMALL LEAVED					7		5		5
FESTULOLIUM, TYPE RYEGRASS	20	25	20	30					
FESTULOLIUM, TYPE TALL FESCUE		25	25						
HYBRID RYEGRASS				20		40			
PERENNIAL RYEGRASS, INTERMEDIATE TETRAPLOID	30	20		50	54		40	20	30
PERENNIAL RYEGRASS, LATE TETRAPLOID							45		
TIMOTHY	10	15			11				15
COCKSFOOT	25					20			
TALL FESCUE						25		70	25
MEADOW FESCUE					11				
RED FESCUE									10
MEADOW GRASS					7				15

% content of species in ForageMax mixtures

A CASE STUDY: 8,500 LITRES PER COW ON ROZHDESTVO FARM

The 2,500 cows on Rozhdestvo Farm do not complain about their diet. A major part of it consists namely of silage based on the CutMax mixture from DLF-TRIFOLIUM and with an average daily milk yield around 28 kg per head (8,500 litres per year), the herd really pays back the investment in good grass fields.

“We base the feeding on grass silage made in round bales, plus concentrates”, tells Aleksandr Fonk, chief agronomist at Rozhdestvo Farm near Moscow.

“Since 2003 we have been using CutMax from DLF-TRIFOLIUM on our 500 hectares with grassland, and we have never seen anything like these fields. In the past we only rarely have been able to get more than one cut from our previous Russian grass fields, but with CutMax we often get 4!!”

“Quality is very important. Therefore we try to obtain 4 cuts – never letting the grass grow higher than 30 cm before harvest. The fields look so good, that we have a joke saying, that we would like to eat it ourselves.”

Strong performances above and below ground

It is our pleasure to present you with our portfolio of superior, ready mixtures for the production of forage of the very best quality.

In this brochure you will find detailed descriptions of nine ForageMax mixtures that are adapted to a wide range of climatic conditions and uses.

Our focus is on creating the best result for the farmer by offering clover grass seed mixtures with the highest yield as well as outstanding forage quality. We are confident that there is a mixture that will suit your demands.



Headquarters:

Ny Oestergade 9 • DK 4000 Roskilde • Tel. +45 46 33 03 00 • Fax +45 46 32 08 30 • www.dlf.com • dlf@dlf.com

Contact:

Czech Republic • Tel. +420 556 756 130

Russia • Tel. +7 495 725 0931