The uniquely different enhanced® ryegrass

matrix Enhanced® Ryegrass

MORE THAN JUST ANOTHER PERENNIAL RYEGRASS!

Matrix is a uniquely different enhanced® ryegrass variety of meadow fescue and perennial ryegrass parentage, having high ME and digestibility, combined with very high yearly yields, strong winter activity, and late heading for improved quality. A very dense, very persistent, general purpose variety. Has very good overall disease resistance, particularly to rust and net blotch.
Available with and without endophyte.

BENEFITS

- Very high yield performance over all seasons
- Suitable for new pastures and rejuvenating run-out pastures
- High Metabolisable Energy content
- High digestibility
- Very high palatability and stock preference
- Superior Dry Matter production
- Later heading (23 days later than Nui)
- Higher winter activity
- Fine dense, persistent growth habit
- Very disease resistant – especially leaf rust

SEASONAL PERFORMANCE OF LATE HEADING PERENNIAL RYEGRASS VARIETIES

Variety	Autumn	Winter	Spring	Summer	Total
Revolution AR1	107	109	106	106	106
Matrix	**104**	**114**	**103**	**107**	**106**
Bealey NEA2	103	103	101	108	104
Impact	99	109	99	101	101
Aberdart	98	79	111	102	101
Banquet	94	99	90	90	92
Impact AR1	94	87	90	86	89
Mean (kgsDM/ha)	3,486	2,964	5,991	5,365	17,806
LSD	172	193	253	322	804
CV%	17.5	23.1	15	21.3	16

Source: The above varieties were included in up to 25 Cropmark-run perennial ryegrass trials conducted on farms throughout NZ (1999-2007).

Matrix has shown outstanding yield results in industry-run trials in Autralia and New Zealand. Its performance in these trials has been backed up by Cropmark's own trial results. Based on these results Matrix is the clear choice for farmers wanting superior year-round yield performance.

AGRONOMIC TRAITS

Persistence	Heading Date (days c.f Nui)	Sowing Rate (kgs/ha)	Rust Resistance (1=susceptible, 9=resistant	Winter Activity	Growth Peak
5+ years	+23	15-20	9	High	Autumn - Spring

IMPROVED PASTURE QUALITY AND MORE ENERGY PER HECTARE

To achieve high stock performance, maintaining high pasture quality is essential.
The quality of a pasture is a combination of its level of digestibility, palatability, metabolisable energy and clean leaf area. Laboratory analyses have shown Matrix to have a higher digestibility and metabolisable energy content than the other grasses tested.
The combination of higher yield and Metabolisable energy results in higher ME/hectare – enabling higher livestock performance. And being 23 days later heading, Matrix maintains its quality for longer into spring.

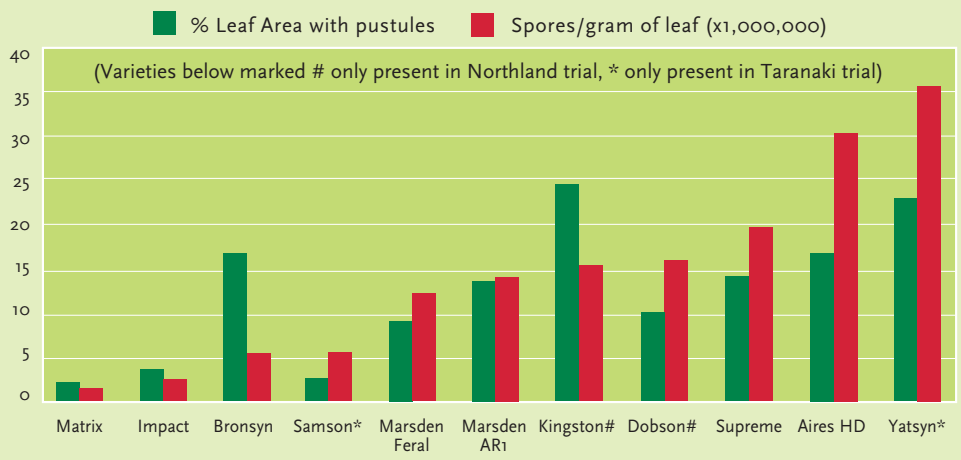
Variety	ME Content (MJME/kgDM)	Digestibility (%)	DM Yields (kg/ha/yr)	ME/ha (MJME/ha/yr)	Superiority of Matrix (%)
Matrix	**11.5**	**77.5**	**18,793**	**216,120**	**-**
Impact	11.3	76.2	17,984	203,219	6.3
Bronsyn	11.2	75.1	17,231	192,987	12.0
Aries HD	11.2	75.5	16,675	186,760	15.7

Source: DM yield results based on pooled summary of 22 Cropmark-run trials conducted at Ashburton, Burnham, Cambridge, Clinton, Darfield (2), Hamilton, Waipukurau, Takapau, Huntly, Invercargill, Palmerston North, Nelson, Ngatea, Otautau, Sheffield, Te Awamutu, Tariki, Hawera, Wanganui, Wellsford and Whangarei. ME and Digestibility results from 5 Cropmark run trials at Clinton, Darfield, Hamilton, Palmerston North and Te Awamutu.

CLEAN, HEALTHIER PLANT LEAF AREA

Plant disease can dramatically reduce DM yield and acceptance by livestock, resulting in lost animal performance potential. Very heavy selection pressure has been placed on disease resistance during the breeding development of Matrix, which can be easily seen by its clean, green leaf area in the paddock. Plant leaf analyses carried out by Plantwise, Lincoln, clearly show the superior rust resistance of Matrix compared to other varieties of perennial ryegrass.

TARANAKI & NORTHLAND RYEGRASS RUST INFECTION POOLED



Source: Cropmark cultivar evaluation trials, Taranaki and Northland. Plant leaf samples were analysed by Plantwise, Lincoln. The green bar is an indication of existing disease present; the red bar represents the number of spores present per gram of leaf which is an indication of the extent of possible future infection.

MORE PROFITABLE DAIRY PRODUCTION

Higher dry matter yield, and higher metabolisable energy per hectare enables higher stocking rates, and higher milk solids production. The net result of this is greater predicted profitability from Matrix pastures.

Variety	DM yield (tonnesDM/ha/yr)	Stocking rate (cows/ha)	Milk Solids Production (KgMS/ha)	Net Margin/ha ($/ha/yr)
Matrix	**16.6**	**3.7**	**1,352**	**3,320**
Impact	15.3	3.5	1,273	3,055
Bronsyn	14.6	3.3	1,209	2,890
Aries	14.2	3.2	1,165	2,810

Source: Agricultural Business Associates, Hamilton using 'Udder' computer simulation programme. Results were derived based on pooled average dry matter yields and laboratory analyses from 7 Cropmark-run 3 year trials (1999-2003), and a milk solids pay-out price of $3.70/kgMS.

HIGHER LIVESTOCK PERFORMANCE – SHEEP AND BEEF CATTLE

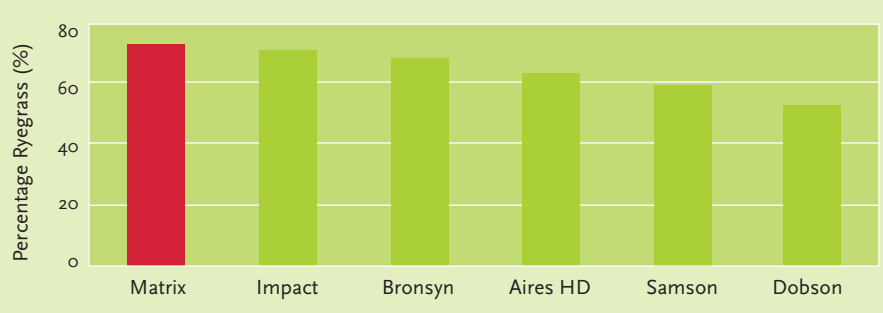
Higher stocking rates, more meat and wool production, and higher gross margins per hectare can be expected from Matrix, as a result of higher Dry Matter yields and more metabolisable energy production per hectare. The results speak for themselves...

	Matrix	Impact	Bronsyn	Aries
Total Meat (kgs/ha/yr)	**1,170**	1,077	1,002	963
Total Wool (kg/ha/yr*)	**120**	110	103	99
Total SU wintered (SU/ha)	**33**	31	28	27
Gross Margin ($/ha/yr)	**2,671**	2,452	2,295	2,201

** Does not include wool sold on prime lambs*
Source: 'Stockpol' computer modelling programme, of sheep and beef production, based on pooled DM yields from 7 sites around NZ and ME data from around New Zealand.

PASTURE PERSISTENCE

Matrix shows strong persistence across a range of sites, farm types and environmental conditions. It has very good tolerance of pasture pests such as Argentine stem weevil, black beetle, root weevil and mealy bug – pests that can eradicate pastures.



Source: Pooled pasture persistence as analysed in trials run by Cropmark Seeds in Northland, Waikato, Taranaki, Hawkes Bay, and Canterbury; 1999 - 2003.

CROPMARK SEEDS
only the best!