DLF Seeds is a relatively new seed company in New Zealand, recently established in 2004. It is owned by DLF, a Danish farmer’s cooperative which began in 1906 and is the world’s largest seed company involved in the breeding, production and sale of temperate grass and clover species, and fodder beet.

DLF Seeds uniquely combines access to the world’s largest research programme in forage species, with a world-class plant breeding and testing programme based in New Zealand. This allows DLF Seeds to test the latest plant material and associated technology from around the world, and decide whether they add value to New Zealand’s unique climates and farm systems. At the same time, the New Zealand breeding programme also utilises the best local plant genetics available, often crossing with elite international plants, to produce cultivars that improve productivity in our conditions. This makes our motto very appropriate, “A world of seed innovation, right here”.

This Forage Variety Product Guide highlights some of our most successful varieties, all of which have passed intensive local testing, and several also being bred right here in New Zealand. I am sure these varieties will help to improve farm productivity. If you need any further information, please speak to one of our technical experts listed on page 18.

Tom Bruynel
General Manager, DLF Seeds Ltd.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansa</td>
<td>4</td>
</tr>
<tr>
<td>24Seven</td>
<td>5</td>
</tr>
<tr>
<td>Bronte</td>
<td>6</td>
</tr>
<tr>
<td>Jeta</td>
<td>7</td>
</tr>
<tr>
<td>Endophytes</td>
<td>8</td>
</tr>
<tr>
<td>Jackpot</td>
<td>9</td>
</tr>
<tr>
<td>Mona</td>
<td>10</td>
</tr>
<tr>
<td>Jivet</td>
<td>11</td>
</tr>
<tr>
<td>Perun and Perseus</td>
<td>12</td>
</tr>
<tr>
<td>Tower</td>
<td>13</td>
</tr>
<tr>
<td>Beet Trial summary</td>
<td>14</td>
</tr>
<tr>
<td>Kyros</td>
<td>15</td>
</tr>
<tr>
<td>Bangor</td>
<td>16</td>
</tr>
<tr>
<td>Feldherr</td>
<td>17</td>
</tr>
<tr>
<td>Enermax</td>
<td>18</td>
</tr>
<tr>
<td>Fodder</td>
<td></td>
</tr>
<tr>
<td>Where to get technical help</td>
<td>19</td>
</tr>
<tr>
<td>DLF Seeds Trial Sites</td>
<td></td>
</tr>
</tbody>
</table>
What is Ansa?

Ansa is one of the first diploid perennial ryegrasses to be released from DLF’s New Zealand breeding programme. It was bred specifically for our climate and the seasonal needs of farmers, and has proven to be very successful on a wide range of farm types.

Ansa has been selected for high tiller density, which improves persistence under grazing.

Ansa has excellent annual production. A key strength of Ansa is growth in winter and early spring, when it is more productive than most other cultivars (Yaldhurst, 2008).

Although proving to be popular with dairy farmers, Ansa is a perfect choice for other farm types where the best annual and seasonal production is required from a long-term pasture.

Ansa is now available with the new novel endophytes Happe or Edge to provide the insect tolerance you need on your farm (see page 8).
What is 24Seven?

24Seven is a new release from DLF Seeds New Zealand plant breeders, suited to all regions of New Zealand, and is available with two novel endophyte options. The novel endophyte Edge provides this grass with protection from black beetle, and other insects, without affecting animal production or health. Happe protects 24Seven from the same insects as Edge, but also porina (see page 8).

The production of 24Seven has been tested in several trials (4 completed, 10 current) across the country, in which 24Seven has never been beaten by other commercial cultivars. It also has unusually strong cool-season growth for such a late heading date (see graph below).

24Seven also produces stems and flower heads 24 days later than standard date cultivars, so it extends the period of high energy and protein content in pasture in late spring by almost one month.

### SPECIAL ATTRIBUTES
- Excellent annual production
- Good winter growth
- Tolerant of a wide range of insects
- Extended feed quality (+24 day heading date)
- Excellent animal performance and safety

24Seven (centre) in a dryland trial at Yaldhurst, June 2015.
Bronte was bred in New Zealand specifically for our climate and the seasonal needs of our farmers.

Bronte has been bred from persistent plants and has a relatively high tiller density and fine leaf for a highly productive ryegrass. This gives Bronte very good tolerance to grazing, an important characteristic for persistence, and makes it suited to a wide range of grazing styles and animal types. Bronte has a late heading date, but also strong growth in winter and early spring.

Bronte is now available with Happe endophyte for tolerance to black beetle, porina and many other insets (see page 8).
What is Jeta?

Jeta has set a new benchmark for high performance ryegrass pastures, and spearheaded the on-farm adoption of a technology that combines the cool-season vigour of Italian ryegrass with the robustness of perennial ryegrass.

Jeta is a tetraploid long-rotation ryegrass that has been extremely successful on many farms. Farmers love the speed of establishment, rapid winter and early spring growth (see graph below), palatability and utilisation, and excellent stock performance. It has also proven to have surprising persistence, even with dry conditions and intensive grazing.

Jeta can be grazed with all animal types, and used as highly productive pasture for four or more years.

Edge endophyte provides Jeta with tolerance to black beetle, root aphid, and Argentine stem weevil, making it suited to all regions (see page 8).

Jeta Edge is also an ideal grass for undersowing, with production benefits extended over several years.

“I’m sold on Jeta I wouldn’t use anything else! It has replaced a winter crop for us. We are getting between 4 and 5 years out of it and I could get 6 with good management.”

John McLennan
Tinui, Wairarapa
What is Edge?

Edge is a novel endophyte discovered in ryegrass and inoculated into several ryegrass cultivars. It has been tested and proven by independent scientists to provide tolerance to black beetle and Argentine stem weevil (ASW), as well as root aphid and pasture mealy bug. This means that ryegrass cultivars with Edge have good insect tolerance and persistence throughout the country, including the northern North Island. Edge has also been tested by independent scientists to confirm that it does not cause ryegrass staggers and does not affect animal performance.

What is Happe?

Happe is a breakthrough technology that many farmers will benefit from. It was discovered in a meadow fescue plant and successfully transferred by DLF scientists into ryegrass plants. Happe produces substances called lolines, which have a powerful effect on many insects. Independent research has proved that Happe provides tolerance to the same insects as Edge, but also to porina. Happe has been tested by independent scientists to confirm that it does not cause ryegrass staggers and does not affect animal performance.

Happe has been tested throughout the country with great success. One of the trials highlighted the advantage of Happe, when it improved production by an average of 21% in five different cultivars from December to May.

Pest tolerance of Edge and Happe endophytes

<table>
<thead>
<tr>
<th>INSECT</th>
<th>Happe</th>
<th>Edge</th>
<th>Standard</th>
<th>Without</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentine stem weevil</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>none</td>
</tr>
<tr>
<td>Black beetle</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>none</td>
</tr>
<tr>
<td>Root Aphid</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>none</td>
</tr>
<tr>
<td>Porina</td>
<td>none</td>
<td>none</td>
<td>[ ]</td>
<td>none</td>
</tr>
<tr>
<td>Pasture mealy bug</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>none</td>
</tr>
</tbody>
</table>

Scale of tolerance; [ ] to [ ]
What is Jackpot?

Jackpot is a new diploid Italian ryegrass bred by DLF Seeds in New Zealand. The breeding and testing programme aimed to develop a new fine-leaved cultivar with improved production in all seasons, and the ability to produce for two or more years in favourable climates.

Testing has confirmed that Jackpot is a top cultivar for production and survival. Farmers in the southern South Island and cooler parts of the North Island can expect 1-3 years of high production, and in the upper North Island it is ideal for undersowing or as a 1-2 year pasture. Its late heading date prolongs feed quality in spring.
What is Mona?

Mona is a new tetraploid Italian ryegrass bred by DLF Seeds in New Zealand. The objectives in the breeding programme and testing were to develop a cultivar with improved production in all seasons, and the ability to produce for two or more years in favourable climates.

Testing has confirmed that Mona at least as good as the best cultivars for production and survival.

An added benefit of Mona is its very late heading date. This extends the period in spring when farmers can graze or cut very leafy and high quality forage by up to one month. Winter and early spring growth is not compromised by the late heading.

Mona is ideal for undersowing into thin dairy pastures to boost production at a low cost.
What is Jivet?

Jivet is an annual ryegrass that is very quick to establish, has excellent winter and spring performance and improved feed quality in spring. Jivet has an excellent reputation for its high yields and high feed value of its silage, and is a preferred cultivar to maximise production between maize crops.

As Jivet is a premium grass, it is not as cheap as old cultivars, but is actually more profitable to grow. Trial data shows that Jivet can generate up to $800/ha more winter feed, at an extra cost of just $33/ha. The performance of cattle on Jivet is also excellent (see graph below).

“The cows just love Jivet. We have also tested the silage which shows just how good it really is. Jivet is the best annual we have used and we will keep using it.”

Roy & Lisa Willan
50/50 share-milkers, Richmond Downs area (near Matamata).
What are Perun and Perseus?

They are festuloliums — crosses between Italian ryegrass for winter growth, and meadow fescue for improved quality, tolerance to drought and insects, and extra persistence.

The meadow fescue component gives them a good balance of total energy, sugars and digestible fibre. They are highly preferred by animals, allowing high energy intake and performance. Both are ideal as a lamb-finishing pasture, or for high-performance dairy cows and beef cattle.

These two grasses are very productive, especially over winter and spring. They are used as longer-lived alternatives to Italian ryegrass, with similar pasture growth but improved palatability, stock performance, and summer survival.

Perun is available with Happe endophyte, and Perseus with Edge endophyte, for improved insect tolerance and persistence (see page 8).

“The palatability and production of Perun have been phenomenal. It bolts away while others have struggled.”

David Bain
Sharemilker, Tairei.
What is Tower?

Tower is a soft and palatable grass that overcomes many of the limitations of ryegrass, such as grass grub tolerance and persistence. Tower has very good total growth compared with standards, (see graph below) and is particularly productive from spring to autumn.

Tower is now available with Protek - a novel endophyte that is safe for animals, increases pasture production (+15%) and provides tolerance to black beetle. Tower Protek is tolerant to all major pasture insects, so is the best solution yet for sustainable and productive pastures.

**SPECIAL ATTRIBUTES**
- Palatable
- Persistent
- Insect tolerance, including grass grub and black beetle
- Productive
- Easy to manage

**APPLICATION**
- **ENDOPHYTE**
  - Protek or Nil
- **PERSISTENCE**
  - Very long-term
- **HEADING DATE**
  - Very late
- **ENVIRONMENT**
  - All classes of stock
  - All rainfalls and irrigation
  - Tolerant of grass grub and porina
  - Fertile soils
  - Tolerant of wet and flood-prone soils
- **SOWING RATES**
  - Pasture; 25-35kg/ha
  - DO NOT ADD other grasses

"Tower has really changed the growth rates on our young cattle, we are seeing an advantage of 0.3 kg/day over winter compared with Italian and perennial ryegrasses. The general health of the stock on Tower is amazing to see."

Ben Absolom
Rissington Station, Hawkes Bay
Riesling
Medium Leaf White Clover

Riesling is a high-performance white clover, with a medium to large leaf size and high stolon density.

As well as performing exceptionally in local trials, Riesling has exceeded expectations of farmers.

Riesling can be used as the sole white clover cultivar under most grazing methods, or can be mixed with Klondike when used on dairy farms.

SPECIAL ATTRIBUTES
• High yields
• Medium-large leaf
• High stolon density

APPLICATION
• GRAZING: All animals
• SILAGE
• SOWING RATES 2-4kg/ha

Klondike
Large Leaf White Clover

Klondike is a large-leaved white clover, perfect for mixing with high-producing grasses, particularly on dairy farms.

Klondike has excellent production relative to other cultivars, especially in late winter, early spring, and summer.

SPECIAL ATTRIBUTES
• High yields
• Large leaf
• High stolon density

APPLICATION
• GRAZING: Dairy & Beef
• SILAGE
• SOWING RATES 2-4kg/ha
What is Ceibo?

Ceibo is a new red clover cultivar, bred from persistent plants for increased feed production. It has improved cool-season growth which allows it to begin growth early in spring and to dominate grasses and herbs.

Ceibo has a very high leaf content and quality, and is suited to grazing and feed conservation. It is ideal for lamb-finishing, either as a pure crop or mixed with grasses or herbs.

Beet Trial Summary

In 2016, 20 cultivars of fodder beet were tested in nine sites (see graph below).

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Mean Yield (t DM/ha)</th>
<th>Relative to Kyros=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivage</td>
<td>90</td>
<td>94</td>
</tr>
<tr>
<td>Eamonn</td>
<td>99</td>
<td>93</td>
</tr>
<tr>
<td>Balance</td>
<td>86</td>
<td>85</td>
</tr>
<tr>
<td>Bergamo</td>
<td>88</td>
<td>85</td>
</tr>
<tr>
<td>Geronimo</td>
<td>92</td>
<td>94</td>
</tr>
<tr>
<td>DLFB45</td>
<td>88</td>
<td>87</td>
</tr>
<tr>
<td>DLFB49</td>
<td>90</td>
<td>92</td>
</tr>
<tr>
<td>1504</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>1584</td>
<td>84</td>
<td>83</td>
</tr>
</tbody>
</table>

The key findings from the beet trial are as follows:

- Yield is the main driver of the profitability of fodder beet cultivars.
- Performance of cattle is not affected by the type or cultivar of fodder beet used.
- Some cultivars produce 6 t DM/ha more than others, worth about $1500/ha.
Kyros is ideal for grazing, with good palatability, and high utilisation rates. Kyros is a modern hybrid mono-germ cultivar with high quality seed, excellent yield performance, and good feed value.

Kyros is the preferred cultivar where maximum yield of high energy forage is required for grazing, and is suitable for grazing with cattle, sheep and deer.

Farmers have successfully mechanically lifted Kyros when they have not needed to graze their total area.

Bangor is a recent release from DLF Seeds, but has been tested in New Zealand for three years in 15 trials, and has performed up to our high standards (page 15). It has also been used on many farms for two years.

Bangor is a mono-germ variety with a medium DM% bulb. It is ideal for grazing with all stock types and ages, and can also be lifted if needed.
Feldherr is a high-yielding fodder beet with a light orange bulb colour. It has a low bulb dry matter percentage, which some farmers prefer for grazing, especially with animals breaking new teeth, or older animals with fewer teeth, and species such as deer. Feldherr has a high proportion of the bulb out of the ground. Feldherr is a modern hybrid mono-germ cultivar with high quality seed.

Enermax was bred specifically for farmers wanting to lift, store and feed fodder beet to animals. It produces bulbs with consistent size and height, and high DM% to reduce transport costs and prolong storage life. A key advantage of Enermax is the low amount of dirt attached to bulbs, which reduces transport costs and increases feed value. Enermax is a modern mono-germ hybrid variety with high quality seed for consistent establishment.
Where to Get Technical Help?

DLF Seeds has four technical staff who can help answer any pasture and forage questions you may have. They welcome your phone calls or emails.

**Martin Johnson**
Upper North Island Regional Sales Manager

Mobile: 021 522 173  
Email: mj@dlfseeds.co.nz

**Rob Campbell**
Middle and Upper South Island Regional Sales Manager

Mobile: 021 841 330  
Email: rc@dlfseeds.co.nz

**Jeremy Fraser**
Lower South Island Regional Sales Manager

Mobile: 029 201 0075  
Email: jeremy@dlfseeds.co.nz

**Gavin Milne**
Technical Manager for DLF Seeds

Mobile: 021 413 602  
Email: gm@dlfseeds.co.nz
DLF Seeds conduct its research in two stages.

**Stage 1:** At our Yaldhurst Research Centre, the plant breeding team creates 80-100 new cultivars each year, and then evaluates their performance in trials under sheep grazing.

**Stage 2:** Those cultivars that perform in the top 10% are then sown in regional trials and measured for three years under grazing. We then produce and market only those cultivars that perform better than our current cultivars and leading industry standards.

Cultivars are also tested in the NFVT and Forage Value Index system.