Introduction

Throughout NZ, perennial ryegrass (*Lolium perenne*) is the grass of choice for permanent pastures. It establishes rapidly, yields well, tolerates a range of management practices and has a high nutritive value. It is also compatible with white clover offering an excellent all-round pasture for all grazing systems.

Perennial ryegrass cultivars differ in total yield, seasonal growth, and heading date and are available with different endophyte options. Endophytes are fungi that can assist plant survival (see page 62 for more details).

Rye grass is naturally a diploid plant, meaning it has two sets of chromosomes. Some cultivars are tetraploids, artificially developed by plant breeders to have four sets of chromosomes. Tetraploids have fewer, larger tillers, and are more palatable but less robust (see page 89 and 183 for more details).

Perennial ryegrass

<table>
<thead>
<tr>
<th>Most persistent</th>
<th>Perennial ryegrass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long rotation ryegrass</td>
</tr>
<tr>
<td></td>
<td>Hybrid ryegrass</td>
</tr>
<tr>
<td>Least persistent</td>
<td>Italian ryegrass</td>
</tr>
<tr>
<td></td>
<td>Annual ryegrass</td>
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</tbody>
</table>

Diploid cultivars

**Trojan**

Sets a new standard of performance by combining exceptional DM yield with strong growth in both winter and summer. *Trojan* provides a unique balance of features, including excellent persistence, good quality and late heading (+16 days), along with good resistance to rust and plant pulling. Available with NEA2 endophyte. (Refer also to the *Trojan* sheet on pages 8 & 9).

**Alto**

High performance, persistent, late heading (+14 days) ryegrass suitable for all farming systems. *Alto* is a fine leaved, robust cultivar with excellent persistence, along with high year-round yield and very good feed value, good resistance to rust and plant pulling. Available with AR1, AR37 or Without endophyte. (Refer also to the *Alto* sheet on page 7).

**Arrow**

Delivers high winter-early spring growth, while performing well in all seasons. *Arrow* combines early growth with a medium-late heading date (+7 days). It has a medium-erect growth habit allowing good clover compatibility, and has very good persistence. Available with AR1 or Without endophyte. (Refer also to the *Arrow* sheet on page 10).

**AberDart**

A UK-bred late heading (+15 days) cultivar. Good summer growth, but below average winter growth. Available with AR1 or Without endophyte.

**AberMagic**

UK-bred late heading (+19 days) perennial ryegrass. Better year round growth with a higher tolerance of rust. Available with AR1 or Without endophyte.
Perennial ryegrass cultivars

Diploid cultivars (continued)

**Ceres One50** Late heading cultivar (+20 days) with good autumn and winter production. Available with AR37, AR1 or Without endophyte.

**Ceres Kingston** Upright growth habit with standard heading date (-3 days) and good recovery from hard grazing. Lower yielding type. Available with Standard or Without endophyte.

**Grasslands Commando** Standard heading date (+1 day) cultivar with lower yields in winter and autumn. Suited to dairy, beef and high input sheep farms. Available with AR37, AR1 or Without endophyte.

**Expo** Densely tillered, late flowering (+21 days) perennial ryegrass with good cool season growth that is suitable for all classes of livestock. Available with AR1 endophyte.

**Extreme** Cultivar with standard heading date (+3 days) and good yield. Can suffer plant pulling on problem soils. Available with AR1 or Without endophyte.

**Grasslands Hillary** Re-selection from Ruanui, with standard heading date (+4 days). Bred for persistence under sheep grazing. Available with AR1 endophyte.

**Grasslands Kamo** Cultivar with standard heading date (+2 days) for situations with medium to low soil fertility. Available with AR37 endophyte.

**Indiana** European cultivar with less winter and spring growth than standard cultivars. Available Without endophyte.

**Grasslands Nui** Common cultivar first certified in 1975. Now superseded in yield, palatability and rust resistance by many other cultivars. Poor persistence in summer dry areas. Available with Low or Without endophyte.

**Grasslands Pacific** Older cultivar suited to soils with medium to lower fertility. Superseded in yield by many other cultivars.

**Grasslands Prospect** Fine leaved productive variety (+12 days), selected for a good spread of seasonal growth and persistence. Suitable for all farming systems that utilise AR37 endophyte. Available with AR37 endophyte ex harvest 2012.

**Grasslands Ruanui** Oldest cultivar, first certified in 1936. Out-yielded by every other cultivar. Susceptible to rust. Does not contain endophyte.

**Grasslands Samson** Older medium leaved cultivar with good disease resistance. In National Forage Variety grazing trials has been out-yielded by Arrow. Available with AR37, AR1 or Without endophyte.

**SF Stellar** Fine-leaved, mid-season maturing cultivar with low aftermath heading. Suitable for high production farming systems. Available with AR1 or Without endophyte.
Perennial ryegrass cultivars

Tetraploid cultivars

(For more information on tetraploids see page 89 or 183.)

Bealey

*Bealey* perennial ryegrass boosts animal production by combining several key elements: high winter and summer growth; high ME; the palatability of a tetraploid; very late heading (+25 days); good persistence and clover compatibility. Has excellent resistance to rust and plant pulling. Available with NEA2 or Without endophyte. (Refer also to the Bealey sheet on page 11).

Base


Grasslands Halo

Tetraploid that has a late (+25 days) heading date. Available with AR37 endophyte.

Impresario

European cultivar with less winter and early spring growth than standard cultivars. Available Without endophyte.

Quartet II

Very late heading date (+28 days). Available with Endo5 endophyte. Increased tiller density compared with Quartet.

Tetraploid cultivars are best sown at 30% higher sowing rates because they have larger seeds.

### Heading dates of perennial ryegrass cultivars*

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Days</th>
<th>Cultivar</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston</td>
<td>-3</td>
<td>Prospect</td>
<td>+12</td>
</tr>
<tr>
<td>Nui</td>
<td>0</td>
<td>Alto</td>
<td>+14</td>
</tr>
<tr>
<td>Commando</td>
<td>+1</td>
<td>Indiana</td>
<td>+15</td>
</tr>
<tr>
<td>Pacific</td>
<td>+1</td>
<td>AberDart</td>
<td>+15</td>
</tr>
<tr>
<td>Ruanui</td>
<td>+1</td>
<td>Trojan</td>
<td>+16</td>
</tr>
<tr>
<td>Kamo</td>
<td>+2</td>
<td>AberMagic</td>
<td>+19</td>
</tr>
<tr>
<td>Extreme</td>
<td>+3</td>
<td>One50</td>
<td>+20</td>
</tr>
<tr>
<td>Samson</td>
<td>+3</td>
<td>Expo</td>
<td>+21</td>
</tr>
<tr>
<td>Hillary</td>
<td>+4</td>
<td>Base (T)</td>
<td>+22</td>
</tr>
<tr>
<td>Impresario (T)</td>
<td>+6</td>
<td>Bealey (T)</td>
<td>+25</td>
</tr>
<tr>
<td>Arrow</td>
<td>+7</td>
<td>Halo (T)</td>
<td>+25</td>
</tr>
<tr>
<td>Stellar</td>
<td>+8</td>
<td>Quartet II (T)</td>
<td>+25</td>
</tr>
</tbody>
</table>

* Day 0 is typically around 22 October, but this can vary from year to year. See page 102 for more.