Now is the time to invest in pastures

Widespread rains across Australia coupled with record high beef and lamb prices, create ideal conditions for livestock producers to invest in better pastures.

Now is the time to increase on-farm returns with quality pastures. The investment has an enormous upside for higher profits in the years ahead.

The returns from new pasture varieties and purpose-bred forage crops in particular have never been more attractive.

The use of purpose-bred forage cereals such as Moby Forage Barley and Outback Forage Oats are a great way to spread the supply of high quality forage to animals.

The ability to plant Outback Forage Oats earlier while soils are warm allows them to produce quick feed in late autumn to get condition on animals. In so many cases, farmers are missing the early planting window by choosing to plant their oats crops in late autumn or winter. We tend to see a lack of feed produced by late planted oats over the winter period. This leads to feed shortages and having to increase hand feeding to maintain animal condition over this challenging time.

At Pasture Genetics we are recommending farmers to look at a different approach to meet feed requirements. The tradition of planting all oats has its negatives in winter, but adopting the split sow technique can address this deficiency. We recommend farmers plant a companion paddock down to Moby Forage Barley from April onwards typically into cooler soils. Moby Forage Barley has the ability to produce good volumes of high quality feed from sowing all the way through to maturity. Moby Forage Barley unlike other cereals will not show the lag period over the winter, instead it was bred to fill the traditional winter feed gap. Having split paddocks of both forages, will allow you to not only to maintain animal condition but to increase animal production through the entire season.

Going into spring, Moby reaches maturity first, so having the partner paddock of Outback Forage Oats that matures nearly 7 - 9 weeks later means livestock stocking rates are maintained or even lifted over the end of the season.

With these highly productive forage types, the spring burst allows for far higher stocking rates than the rest of the year, often higher than many farmers realise and sometimes enough to cut silage or hay too.

In many enterprises the use of forage cereals has also seen the adoption of companion pasture grasses and legumes in the blend. The hard seeded legumes if allowed to set seed will allow for natural regeneration over the following seasons. The addition of late season annual ryegrasses like Jivet, will instantly increase feed quality and allow for the late shoulder of feed when some cereals have completed their growth cycle. In most cases last spring rain will see Jivet continue growth even after a silage or hay cut.

Pasture Genetics is an independent 100% Australian owned forage company and one of the largest producers of pasture and forage crop seeds. The ongoing support of Australian farmers in using these varieties included in this 2017 Forage Advisor guarantees the continued investment and breeding work in Pasture Genetics for the best seed varieties bred and selected for the Australian environment and Australian farming systems.

ROB DAMIN
GENERAL MANAGER
Pasture Genetics Pty Ltd

COVER IMAGE:
‘Angus cow and calf on oats’
Mr. Joe Kovacek, Farm Manager of Western Sydney University

Pasture Genetics are so confident about our seed genetics and seed quality we will replace any of our proprietary lines at half the original purchase price if it fails to establish satisfactorily in the first thirty days.

• Replacement seed for crop establishment failures.
• Pasture Genetics is very confident about seed quality and provides our innovative Establishment Guarantee® program on all of our proprietary products.
• Unfortunately establishment failures can occur and if the crop needs to be replanted, Pasture Genetics will provide replacement seed at half the original purchase price.
• The Establishment Guarantee® program is available for the vital 30 day period after planting and provides growers with substantial savings if they need to replant their paddocks.
• Pasture Genetics is the only forage company in Australia to offer Establishment Guarantee®.

Goldstrike® is the premium seed treatment in the Australian market. The treatment process and technical advances with Goldstrike® are ongoing. Pasture Genetics Goldstrike® seed treatment range comes standard with the Nutrient Enhanced package. It includes a complete starter package with macro and micro nutrients.

• More reliable and stronger stand establishment.
• Proven effective nodulation and nitrogen fixation.
• Tougher, more durable protective seed coating.
• The ultimate in convenience, flexibility and confidence.
• XLR8 insecticide available on request.

PASTURE GENETICS SETS NEW BENCHMARK
1000 viable Rhizobia per seed on stored lucerne after 12 months and medic and sub clover after 6 months.
PONCHO® Plus Testing

**RANGER PLANTAIN**
PENFIELD RESEARCH STATION, SA

This site had problems with lack of moisture after sowing, with a very dry June there was a lot of crust ing over of the soil; the extra vigour and root development in the Poncho Plus treated Rang er Plantain allowed for quicker development and for the plants to become more established before adverse conditions and stress developed.

<table>
<thead>
<tr>
<th>Sown</th>
<th>Rate</th>
<th>Photo taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>20/5/14</td>
<td>14 weeks from sowing</td>
</tr>
<tr>
<td>Treated</td>
<td>9 kg/ha</td>
<td></td>
</tr>
</tbody>
</table>

**JIVET ANNUAL RYEGRASS**
KINGAROY, QLD

This site had high numbers of Red Legged Earth Mite, there was visible damage in all the untreated ryegrass plots; the Poncho Plus treated varieties showed very little to no signs of damage and a full and successful establishment.

<table>
<thead>
<tr>
<th>Sown</th>
<th>Rate</th>
<th>Photo taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>9/4/13</td>
<td>11 weeks from sowing</td>
</tr>
<tr>
<td>Treated</td>
<td>15 kg/ha</td>
<td></td>
</tr>
</tbody>
</table>

**ICON ITALIAN RYEGRASS**
TARA, QLD

This is a good depiction of the added vigour gained by treating seed with Poncho Plus; there was a very visible difference observed at this site with much improved establishment speed from the Poncho Plus seed compared with all untreated plots.

<table>
<thead>
<tr>
<th>Sown</th>
<th>Rate</th>
<th>Photo taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>12/4/15</td>
<td>4 weeks from sowing</td>
</tr>
<tr>
<td>Treated</td>
<td>15 kg/ha</td>
<td></td>
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</tbody>
</table>

**TOWER TALL FESCUE**
KADINA, SA

This site had very high numbers of Lucerne Flea present, which caused serious damage in most of the slower establishing grass species and legumes; the Poncho Plus treated Tower Tall Fescue was able to withstand the early lucerne flea pressure however the untreated Tower Tall Fescue was significantly affected in its growth and establishment.

<table>
<thead>
<tr>
<th>Sown</th>
<th>Rate</th>
<th>Photo taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td>23/5/14</td>
<td>14 weeks from sowing</td>
</tr>
<tr>
<td>Treated</td>
<td>15 kg/ha</td>
<td></td>
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</tbody>
</table>

Goldstrike® XLR8®
Seed Treatment

The XLR8® treatment includes Poncho Plus® as the main insecticide utilised as part of this package, which is applied directly to pasture grasses and legumes. Over many years research has confirmed that the addition of an insecticide to the seed before sowing significantly benefits the plant during establishment and early growth. The XLR8® treatment will protect emerging seedlings for 3–4 weeks after sowing against sucking and biting insects, like Red legged earth mites (RLEM) and Blue oat mite (BOM). The additional protection now with Poncho Plus® offers grass pastures protection from Cutworm, Yellow headed cockchafer, and African black beetle. Broadleaf pasture will also notice additional protection from Cutworm. Poncho Plus® also offers suppression against lucerne fleas in grass, broadleaf and brassica pastures.

This time period is critical for seedling establishment, and reducing the impact from insects is a key to successful pasture production. The benefits from XLR8® not only comes from the insect protection, but has also shown long term benefit with early seedling plant growth. This has been demonstrated with stronger root systems in seedlings, leading to higher overall pasture establishment and long term pasture production. The success with high plant populations is critical to firstly reduce impact from in crop weed infestations and leads to longer term biomass production. The XLR8® seed treatment comes standard on Pasture Genetics forage brassicas, herbs, phalaris, sub tropical grasses and premium proprietary lucerne lines. These plants have demonstrated excellent seedling performance when XLR8® has been applied. This has led to quicker seedling vigour and rapid growth in the critical establishment phase. The XLR8® Seed treatment can be applied on request to all seed products where registration is applicable.

PONCHO® PLUS COMPARISON CHART

<table>
<thead>
<tr>
<th>SEED TREATMENT</th>
<th>BARE SEED + FOLIAR SPRAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poncho Plus Broadleaf Pasture</td>
<td>Poncho Plus Grass Pasture</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**APPLICATION CHART**

- For emerging seedlings
- For established pasture
- For emerging weeds
- For established weeds
- For emerging pests
- For established pests
- For stressed plants
- For up to 4 weeks systemic protection for emerging seedlings
- For protection against some soil pests
- For low impact on beneficial species
- For targeted chemical placement

**PROTECTION CHART**

- Redlegged Earth Mite
- Lucerne Flea
- Blue Oat Mite
- Cutworm
- Yellowheaded Pasture Cockchafer
- African Black Beetle
- May offer Stress Bladex™ benefits
- Up to 4 weeks systemic protection for emerging seedlings
- Protection against some soil pests
- Low impact on beneficial species
- Targeted chemical placement

**STRESS BLADEX™ BENEFACTS**

- Increases growth
- Resists stress
- Enhances vigour
SOWsmart® AUTUMN BLENDS

SOWSMART COMPLETE LR MAKING A DENT IN THE HAY MARKET

Just south of Huyleton in the Mid north of SA, Richard Sanders has taken his hay enterprise to the next level adopting a new pasture blend allowing him access into new lucrative markets.

“IT GROWS SO THICK IT HAS REALLY GOOD WEED CONTROL”

“I gave the new SOWsmart Complete LR Blend a crack two years ago now, I could not get over the bulk that I cut,” said Richard. Richard targets the lucrative horse market of the Adelaide plains, Adelaide hills and surrounding areas. In 2015 a dry finish in his area, Richard still averaged 100 small bales and acre. “It is seriously right up there, the hay crop was standing waist tall. I’m very keen on going again,” Richard accounted.

Aside from the sheer biomass, there is a flow on effect, “It grows so thick it has really good weed control. The following year in our rotation the weed numbers are down,” said Richard.

The main attraction of growing the product is its demand, in this case there were no issues. “There is a definite place in the market, I’ve being told of cases where horses walk over Lucerne hay for my Complete LR hay. The demand is huge and so are the earnings for it, there is proven return on growing Complete LR,” he said.

WINTER MAX BLEND COMES HOME STRONGLY AT SOUTH COAST

Ashlie Mathie from Berry on the South Coast of NSW direct drilled the SOWsmart Winter Max Blend into a remaining millet crop in April this year.

“The SOWsmart Winter Max Blend was sown at a rate of 30 kg/ha with the addition of Calciplus lime. A crop lift product was applied after the pasture was established to really boost it along.”

The pasture blend of Icon Ryegrass, Jeannie Ryegrass, Turbo Persian Clover and Alexandria Berseem Clover established well, but in an extremely wet year the pasture went under water 3 times. “To my amazement the blend not only survived, the clovers really pushed through and the grasses followed,” explained Ashlie.

Mr Mathie said, “It was a year we could have been rice growers.”

“The blend came home strongly for us and along with grazing it we also cut 143 round and small square bales of hay off the 9 ha paddock.”

“We will be using the bales for the next winter to cover our winter feed gap which is well known about, so winter feed storage is critical for us.”

“A blend with the annual ryegrass program we are also sowing custom perennial blends which we are also very happy with.”

MEDIC HAYGRAZE LR THE PERFECT COMPANION FOR SHEEP IN MORUNDAH

Geoff Younger’s property, Sandside, near Morundah, NSW is a fantastic example of a mixed farming enterprise. Geoff was looking for an annual regenerating pasture system that would allow to maximise grazing opportunities particularly over winter.

“The paddock has had plenty of sheep in it and they just can’t keep up with Medic.”

“I put in 40 acres last year to start and only gave it a light grazing as I wanted it so seed down, it came up perfectly this season and I have grazed it harder this season.”

The main idea with the property was to successfully establish and get the blend to seed down for future years to come.

“This year I sowed 250 acres with another 400 acres planned for the 2017 season. The season has been great and the medic that I couldn’t graze due to being cut off by flood water was above the tyre on the ATV and still green in November.”

THE Paddock HAS Had PLENTY OF SHEEP IN IT AND THEY JUST CAN’T KEEP UP WITH MEDIC

Geoff also grows SOWsmart Beef and Prime Lamb Blend and Medic HaygraZe HR as there is available irrigation water on the property. “The Beef and Prime Lamb Blend has also been great, I had 1100 ewes on 90 ha since the end of April and had an 87% lambing rate, they were on that paddock until mid-October until I joined them.”

MAXIMUM WINTER GRAZING WITH ABILITY TO SEED DOWN AND REGENERATE WAS THE KEY FOR GEOFF YOUNGER, MORUNDAH NSW.

GRAZIER BLEND TARGETED FOR ROTATION WITH POTATOES

The Kadwell Potato Company uses the SOWsmart Grazier blend after a rotation of potato’s and with a paddock going back into pasture.

“We find the Grazier blend is a hardy mix of plants and clovers for our environment.”

As a dryland perennial blend, not many come with a stronger background than SOWsmart Grazier Blend, a mix of ryegrass, tall fescue and hard seeded clovers, this combination is designed to be in your paddock for a long time.

The Kadwell Potato Company sows the blend at a rate of 25 kg/ha and uses starter fertilizer at a rate of 125 kg /ha to push the pastures out of the ground.

“The blend establishes well and will grow in the mixed pH soils with no issues and provides quality feed in a tough environment”.

An example of this is a Grazier Blend sown at ‘Fairhall’, Grabben Gullen, in 2015, the year was only an average one and although the blend took a bit to get started, once established has given the paddock an ongoing feed base since then.

“We will continue to use the Grazier Blend as a base or a customised version as part of our program. It works for us and the country we are growing potatoes in.”

SOWsmart® Grazier Blend Ticks the Box for Long Term Persistence and CrookWell, NSW.

COMPLETE LR HAY FOR THE HORSE MARKET 3 DAYS POST CUTTING.

ASHLEY MATHIE, BERRY NSW, UTILISES SOWSMART WINTER MAX FOR GRAZING AND CUTS HAY TO FILL THE FOLLOWING SEASONS WINTER GAP SHORTAGE.

SOWSMART Grazier BLEND Ticks the Box for Long Term Persistence and CrookWell, NSW.
SOWsmart® pasture blends are ‘ready to sow’ proven pasture species. They are the product of on-going research and development of the Pasture Genetics forage crop programme. SOWsmart® aims to fulfill the requirements of farming with agronomically correct blends for high production pastures based within environmental and managerial constraints. SOWsmart® targets high livestock utilisation, due to high palatability and feed quality characteristics that result in better animal performance.

### BEEF & PRIME LAMB BLEND

**Rainfall 650mm+ / Irrigation**

**Condition stock, background beef & finish lambs**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Optima tetraploid</th>
<th>Impact Diploid</th>
<th>Impact Diploid Long</th>
<th>Impact Diploid Rotation Ryegrass</th>
<th>Jumbo White Clover</th>
<th>Raising White Clover</th>
<th>Rajah Red Clover</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>25 - 30 kg/ha</td>
<td>40%</td>
<td>35%</td>
<td>35%</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

This blend is ideal for the high rainfall and irrigation areas of Australia. SOWsmart® Beef and Prime Lamb has the best potential to produce high quality feed and condition stock all year round.

### GRAZIER BLEND

**Rainfall 550mm+ / Irrigation**

**Dryland intensive secure production**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Optima tetraploid</th>
<th>Jivett tetraploid</th>
<th>Perennial ryegrass</th>
<th>Valley diploid</th>
<th>Impact Diploid</th>
<th>Origin Winter Active Tail Fescue</th>
<th>Oatflow Sub Clover</th>
<th>Clare 2 Sub Clover</th>
<th>Cobra Balansa Clover</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>18 - 25 kg/ha</td>
<td>20%</td>
<td>20%</td>
<td>15%</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
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</tbody>
</table>

Based on the beef, prime lamb and wool farming system, this blend of perennial ryegrasses, winter active fescue, sub clovers, white and balansa clovers allows for excellent quality and dry matter production with secure persistence.

### WINTER MAX Blend

**Rainfall 450mm+ / Irrigation**

**Italian ryegrasses with bi-annual potential**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Jackpot diploid</th>
<th>Mona tetraploid</th>
<th>Turbo persian clover</th>
<th>Alexandro berseem clover</th>
<th>Cavalier spinless Burr medic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>25 - 30 kg/ha</td>
<td>35%</td>
<td>35%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

This blend is ideal for the high rainfall and irrigation areas of Australia. SOWsmart® Beef and Prime Lamb has the best potential to produce high quality feed and condition stock all year round.

### WINTER EXPRESS BLEND

**Rainfall 350mm+ / Irrigation**

**Fast winter feed, quick to graze**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Jivett tetraploid</th>
<th>Italian ryegrass</th>
<th>Turbo persian clover</th>
<th>Alexandro berseem clover</th>
<th>Cavalier spinless Burr medic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>25 - 35 kg/ha</td>
<td>60%</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

This blend is ideal for the high rainfall and irrigation areas of Australia. SOWsmart® Beef and Prime Lamb has the best potential to produce high quality feed and condition stock all year round.

### PERSISTOR BLEND

**Rainfall 450mm+ / Irrigation**

**Fully perennial, highly persistent**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Origin winter active tail fescue</th>
<th>Dalsa sub clover</th>
<th>Conveyor cocksfoot</th>
<th>Australia phalaris</th>
<th>Clare 2 sub clover</th>
<th>Bartolo bladder clover</th>
<th>Cobra balansa clover</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>18 - 25 kg/ha</td>
<td>20%</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

A blend of fully perennial and persistent cocksfoot, phalaris, winter-active fescue, sub clovers and balansa clover, designed for marginal rainfall grazing systems. This blend is designed to produce consistent feed for many years.

### DAIRY BLEND

**Rainfall 650mm+ / Irrigation**

**Intensive grazing, high lactation**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Impact diploid long rotation ryegrass</th>
<th>Optima tetraploid</th>
<th>Perennial ryegrass</th>
<th>Jivett tetraploid</th>
<th>Jumbo white clover</th>
<th>Raising white clover</th>
<th>Rajah red clover</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>25 - 30 kg/ha</td>
<td>40%</td>
<td>35%</td>
<td>35%</td>
<td>10%</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

This blend is ideal for the high rainfall and irrigation areas of Australia. SOWsmart® Beef and Prime Lamb has the best potential to produce high quality feed and condition stock all year round.

### WINTER FEED BLEND

**Rainfall 350mm+ / Irrigation**

**Bulk for winter production**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Tetraone tetraploid</th>
<th>Italian ryegrass</th>
<th>Turbo persian clover</th>
<th>Alexandro berseem clover</th>
<th>Cavalier spinless Burr medic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>25 - 35 kg/ha</td>
<td>70%</td>
<td>30%</td>
<td>10%</td>
<td>10%</td>
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</tbody>
</table>

A blend of tetraploid annual ryegrass, persian, berseem clovers and medic, offering a highly winter active, quick and high quality forage source. Suited to grazing and silage/hay.

### WINTER GAP FILL BLEND

**Rainfall 350mm+ / Irrigation**

**Serious winter production**

<table>
<thead>
<tr>
<th>Blend</th>
<th>Moby forage barley</th>
<th>Jivett tetraploid</th>
<th>Italian ryegrass</th>
<th>Cavailler spinless Burr medic</th>
<th>Bouncer hybrid forage brassica</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEEDING RATE</strong></td>
<td>60 - 85 kg/ha</td>
<td>75%</td>
<td>15%</td>
<td>7%</td>
<td>3%</td>
</tr>
</tbody>
</table>

This blend is ideal for the high rainfall and irrigation areas of Australia. SOWsmart® Beef and Prime Lamb has the best potential to produce high quality feed and condition stock all year round.

### Note

Establishment Guarantee does not apply to sub tropical grass blends and sub tropical grasses. Products in blends may change subject to availability.

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**SOWsmart® Autumn Blends**

- **BEEF & PRIME LAMB BLEND**
- **GRAZIER BLEND**
- **WINTER MAX BLEND**
- **WINTER EXPRESS BLEND**
- **PERSISTOR BLEND**
- **DAIRY BLEND**
- **WINTER FEED BLEND**
- **WINTER GAP FILL BLEND**
### SOWsmart: AUTUMN BLENDS

#### SOWsmart: MEDIC HAYGRAZE LR BLEND

**Rainfall 250 - 450mm**
- Low rainfall medic pasture E
  - Cavalier Spineless Burr Medic G 40%
  - Caliph Barrel Medic G 20%
  - Bindarica Button Medic G 10%
  - Silver Snail Medic G 10%
  - Cobra Balansa Clover G 10%
  - Bartolo Bladder Clover G 10%
  - **SEEDING RATE** 15 - 20 kg/ha

Blend of high dry matter producing, hard seeded annual legumes targeted at low rainfall zones.

#### SOWsmart: MEDIC HAYGRAZE HR BLEND

**Rainfall 450mm+**
- High rainfall medic pasture E
  - Cavalier Spineless Burr Medic G 30%
  - Silver Snail Medic G 30%
  - Clare 2 Sub Clover G 20%
  - SARDI Persian Clover G 10%
  - Bartolo Bladder Clover G 10%
  - **SEEDING RATE** 20 - 25 kg/ha

Highest yield potential of a medic hay and graze blend. Rapid seedling growth for outstanding winter production and a greater spring peak. For maximum bales of quality hay or silage choose SOWsmart® Medic Haygraze HR Blend. It has an upright growth habit to optimise yield and leafiness, producing hay and grazing that is high in protein.

#### SOWsmart: COMPLETE LR BLEND

**Rainfall 300mm+**
- Low rainfall grass legume E
  - Tetrono Annual Italian Ryegrass L71 G 65%
  - Cavalier Spineless Burr Medic G 15%
  - Caliph Barrel Medic G 10%
  - Silver Snail Medic G 5%
  - Cobra Balansa Clover G 5%
  - **SEEDING RATE** 20 kg/ha

Low rainfall grazers looking for grass/legume pasture for grazing and hay cutting. Suitable for sheep and cattle.

#### SOWsmart: ACID SOIL BLEND

**Rainfall 350mm+**
- Legume booster for Acid Soil Types E
  - Dalsa Sub Clover G 40%
  - Bartolo Bladder Clover G 40%
  - Zulumax Arrowleaf Clover G 10%
  - Cobra Balansa Clover G 10%
  - **SEEDING RATE** 10 - 15 kg/ha

Blend targeted at traditional acid soil types looking for blend to top up legume component in paddock. Can be direct drilled into existing pasture or broadcasted.

#### SOWsmart: QUICK FIX N BLEND

**Rainfall 325mm+**
- Maximum nitrogen input E
  - Dalsa Sub Clover G 34%
  - Clare 2 Sub Clover G 34%
  - Cavalier Spineless Burr Medic G 16%
  - Silver Snail Medic G 16%
  - **SEEDING RATE** 4 - 6 kg/ha

Quick Fix N Blend is the quickest and easiest way to restore the in-field pasture legume seed bank and nitrogen levels that have been depleted. It can also provide good stand-over feed.

#### SOWsmart: HDL BLEND

**Rainfall 400mm+**
- Persistent, low growth rate, high weight gain E
  - Zulumax Arrowleaf Clover G 30%
  - Bartolo Bladder Clover G 20%
  - SARDI Persian Clover G 20%
  - Clare 2 Sub Clover G 20%
  - Cobra Balansa Clover G 10%
  - **SEEDING RATE** 20 - 25 kg/ha

A high density legume mix suited to medium and higher rainfall zones that provides outstanding dry matter production and nitrogen fixation. A HDL break crop in rotation is also an effective and profitable way of managing herbicide resistant annual ryegrass. A vigorous SOWsmart® HDL Blend can contribute up to 50 kg/ha of nitrogen for subsequent crops, the equivalent of 100 kg/ha of urea.

#### SOWsmart: LUCERNE & CHICORY BLEND

**Rainfall 350mm+**
- Persistent high producing lucerne, combined with mineral rich, highly palatable long term chicory. This blend delivers good protein to energy rating driving high animal production.
SOWsmart® OVERSOW BLENDS

Feed gap benefits: The SOWsmart® Sub Tropical Legume range of blends have been targeted to improve production levels in our summer sub tropical grazing pastures. These blends will add winter/spring dry matter production and valuable nitrogen input to sub tropical pastures. The new Slopes and Plains Blend will allow you to set up your paddock based on a grass only establishment.

This offers you the ability to achieve correct broadleaf weed control then introduce legumes species as required. In most cases a vigorous legume pasture of 8 t/ha can produce up to 200 kg/ha of nitrogen in one year equivalent to just over 400 kg/ha urea.

We have added new options to this range with Beef Heavy Soils, Beef Light Soils and Tropical Coastal Blends. They are targeted at farmers looking for the complete summer sub tropical grazing pasture alternative. The ability to complement these grasses with long term hard seeded legumes can be achieved with this blend. Therefore increasing winter production and feed quality over this critical time.

### SUB TROPICAL BLENDS

#### SOWsmart® TROPICAL BEEF LIGHT SOILS BLEND

Rainfall 650mm+

<table>
<thead>
<tr>
<th>Light soils</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Katambara Rhodes</td>
<td>GX 25%</td>
<td></td>
</tr>
<tr>
<td>Gatton Panic</td>
<td>GX 25%</td>
<td></td>
</tr>
<tr>
<td>Premier Digit</td>
<td>GX 25%</td>
<td></td>
</tr>
<tr>
<td>L91 Lucerne</td>
<td>G 15%</td>
<td></td>
</tr>
<tr>
<td>Cavalier Spineless Burr Medic</td>
<td>G 10%</td>
<td></td>
</tr>
</tbody>
</table>

**SEEDING RATE** 6 - 12 kg/ha

The Beef Light Soils Blend have been developed to suit areas with lighter textured soils. The blend offers the grazer the ability to supply feed over the full growing season. When available moisture arrives there will be a flourish of growth to take full advantage of seasonal conditions.

#### SOWsmart® TROPICAL BEEF LIGHT SOILS BLEND

Rainfall 650mm+

<table>
<thead>
<tr>
<th>Heavy - light soils</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Calide Rhodes</td>
<td>GX 40%</td>
<td></td>
</tr>
<tr>
<td>Setaria Coated</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Signal Coated</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Gatton Panic</td>
<td>GX 10%</td>
<td></td>
</tr>
<tr>
<td>Aztec Atro Coated</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Renegade Red Clover</td>
<td>G 3%</td>
<td></td>
</tr>
<tr>
<td>Riesling White Clover</td>
<td>G 2%</td>
<td></td>
</tr>
</tbody>
</table>

**SEEDING RATE** 6 - 12 kg/ha

Blend designed for coastal sub tropical areas looking for complete tropical grass and legume option. Perennial species to allow for long term pasture phase.

#### SOWsmart® SLOPES & PLAINS BLEND

Rainfall 650mm+

<table>
<thead>
<tr>
<th>Heavy - light soils</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Premier Digit</td>
<td>GX 60%</td>
<td></td>
</tr>
<tr>
<td>Bambatsi Panic</td>
<td>GX 20%</td>
<td></td>
</tr>
<tr>
<td>Gatton Panic</td>
<td>GX 20%</td>
<td></td>
</tr>
</tbody>
</table>

**SEEDING RATE** 3 - 8 kg/ha

A grass blend suitable to most soil types. This blend allows you to focus on establishing the key backbone of tropical grasses. This enables for 1st year broadleaf weed control in crop, followed by pasture legume introduction once grasses have established.

#### SOWsmart® TROPICAL LEGUME OVERSEED BLEND

Rainfall 450mm+

<table>
<thead>
<tr>
<th>Heavy - light soils</th>
<th>5.0 to 7.0 pH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavalier Spineless Burr Medic</td>
<td>G 30%</td>
<td></td>
</tr>
<tr>
<td>Bartolo Bladder Clover</td>
<td>G 20%</td>
<td></td>
</tr>
<tr>
<td>Bindararoo Button Medici</td>
<td>G 20%</td>
<td></td>
</tr>
<tr>
<td>Silver Snail Medic</td>
<td>G 10%</td>
<td></td>
</tr>
<tr>
<td>Cobra Balansa Clover</td>
<td>G 10%</td>
<td></td>
</tr>
<tr>
<td>Zulumax Arrowleaf Clover</td>
<td>G 10%</td>
<td></td>
</tr>
</tbody>
</table>

**SEEDING RATE** 3 - 10 kg/ha

Sub tropical grass blends have become very popular as a permanent pasture alternative. The ability to complement these grasses with hard seeded legumes can be achieved with this blend. Therefore increasing winter production and feed quality over this critical time.

#### SOWsmart® MEDIC OVERSEED BLEND

Rainfall 350mm+

<table>
<thead>
<tr>
<th>Suitable for soil types 5.0 to 8.0 pH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavalier Spineless Burr Medic</td>
<td>G 25%</td>
</tr>
<tr>
<td>Silver Snail Medic</td>
<td>G 25%</td>
</tr>
<tr>
<td>Bindararoo Button Medic</td>
<td>G 25%</td>
</tr>
<tr>
<td>Caliph Barrel Medic</td>
<td>G 25%</td>
</tr>
</tbody>
</table>

**SEEDING RATE** 3 - 10 kg/ha

Blend of medics designed to provide high protein in your autumn and winter period in existing sub-tropical or native grass pastures. Excellent persistence and regeneration with hard seeded characteristics. Good seed set allows for strong germination in line with seasonal breaks.

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**DOES THIS HAPPEN ON YOUR PROPERTY IN WINTER?**

**SUB TROPICAL GRASSES DEMONSTRATING A LACK OF WINTER PRODUCTION AND FEED QUALITY DROP, LEADING TO POOR ANIMAL PERFORMANCE.**

Note: Establishment Guarantee does not apply to sub tropical grass blends and sub tropical grasses. Products in blends may change subject to availability.

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SUB TROPICAL GRASSES

NEW GOLDSTRIKE XLR8 TROPICAL GRASSES COATING AT 60%, OFFERS FARMERS MORE SEEDS PER KILOGRAM COMPARED TO INDUSTRY STANDARDS.

Pasture Genetics Goldstrike Seed Treatment has become a household name with the agricultural community where the success of planting pasture legumes is required.

Over many years this process has been refined to create the highest seed quality and rhizobial life in the Australian market. This season Pasture Genetics are pleased to offer the new Goldstrike treated sub tropical grass range.

The final product offers high germination percentages in grasses that are usually not seen in this segment. We offer a standard Goldstrike coating percentage of 60% across the range of Goldstrike Sub Tropical Grasses. This accurate coating percentage allows farmers to aim for high target populations factoring in germination and seed coat. We see this as a critical part of the agronomic package for farmers to achieve the best results from Goldstrike tropicals.

THE KEY TO INCREASING PRODUCTION FROM A TROPICAL GRASS PASTURE IS TO IMPROVE PLANT ESTABLISHMENT.

More plants established means greater biomass production each year. Trial work carried out by QDPI has shown that the establishment of pasture species such as Rhodes grass (Chloris gayana) treated with Gaucho® are generally greater than where untreated seed is planted.

Further trials investigated the effect of the Gaucho® seed treatment on both spiklet and caryopses preparations of Rhodes grass seed. The results were exceptional. In both trials near Goomboorian and South Side in Queensland, Gaucho® resulted in improved plant establishment with both seed preparations and with both varieties trialled.

QDPI TRIAL RESULTS

QDPI trial results show that the seed treatment Gaucho® resulted in significantly improved plant populations of Rhodes grass in 7 out of 8 treatments compared to the untreated.

EFFECT OF GAUCHO® ON PLANT POPULATION – RHODES GRASS

![Graph showing the effect of Gaucho on plant population compared to untreated seeds.]

**CALLIDE RHODES**

(Chloris gayana) GX

Rainfall 650mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Very drought tolerant
- Later flowering than Katambora
- Callide offers higher palatability compared to Katambora
- Standard with Poncho® Plus insecticide

**KATAMBORA RHODES**

(Chloris gayana) GX

Rainfall 650mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Very drought tolerant
- Good salt tolerance
- Tolerates heavy grazing
- Not adapted to acid, infertile soils
- Requires high fertility to persist
- Poor tolerance of waterlogging
- Standard with Poncho® Plus insecticide

**BAMBATSI PANIC**

(Panicum coloratum) GX

Rainfall 500mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Suits all soil types except heavy clays
- Requires moderate to high fertility
- Doesn’t like waterlogging
- Moderately drought tolerant
- Suits to grazing and cutting
- Standard with Poncho® Plus insecticide

**GATTON PANIC**

(Digitaria smutsii) GX

Rainfall 650mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Suits to light textured soils
- Tolerates acid soils
- Recruits well on lighter soils
- Very palatable
- Drought and frost tolerant
- Standard with Poncho® Plus insecticide

**PREMIER DIGITARIA**

(Digitaria sp.) GX

Rainfall 650mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Tolerates acid soils
- Recruits well on lighter soils
- Very palatable
- Drought and frost tolerant
- Standard with Poncho® Plus insecticide

**GATTON PANIC**

(Panicum coloratum) GX

Rainfall 500mm+

pH Range 5.5 - 8

GOLDSTRIKE SEEDING RATE 6 - 12 kg/ha

- Tolerates acid soils
- Tolerates heavy grazing
- Not adapted to acid, infertile soils
- Requirements high fertility to persist
- Poor tolerance of waterlogging
- Standard with Poncho® Plus insecticide

- Suits to self-mulching, black clay soils
- Tolerant of temporary waterlogging
- Tolerant of moderate soil salinity
- Cold tolerant and drought resistant
- High forage quality
- Standard with Poncho® Plus insecticide

**GOLDSTRIKE XLR8 SUB TROPICAL GRASSES**

- Sub Tropicals. This accurate coating percentage allows farmers to achieve the best results from Goldstrike tropicals.
MOBY BARLEY PROVING THE DIFFERENCE FOR WA WOOL PRODUCTION

In 2014 Don planted his first trial of Moby in a 15 ha paddock. “I’ve tried lots of different and new cereal options in my operation, ryecorn, oats, different barley varieties but Moby has the jump on them all,” reported Don. “The beauty of Moby Forage Barley is that you can sow it early and sow it dry, it grows good early feed off minimal moisture,” he said.

“I’VE NEVER SEEN ANYTHING LIKE IT, WE STILL HAD SO MUCH FEED”

Don sowed down a 50 ha paddock to Moby and strip grazed the paddock. “I went early again this year and grazed it heavy, heavier than anything else, it responded really well and grew back twice as thick.” Don sent in 450 pregnant ewes and lambed in the paddock. “After lambing we had 900 sheep grazing in the paddock and they couldn’t keep up with it, I’ve never seen anything like it, we still had so much feed,” Don acknowledged.

“We weaned the lambs on the Moby and they never took a step back, they were in the best condition and achieved 160% of the growth rates of Moby. The paddock did get wet, but because the Moby was well established it handled it well, with only a couple of small patches suffering from waterlogging. Peter said, “The growth of Moby Forage Barley was fantastic and I will definitely give it another go next year.”

Peter will utilize Moby as a part of his programme to clean up paddocks before permanent pasture. It has worked in well with Moby producing it’s feed early which takes pressure off of newly sown permanent pastures on the farm. The early bulk of feed also gives him the opportunity to cut the Moby paddocks for silage and then prepare the paddock for summer crop while there is still soil moisture available.

MOBY FORAGE BARLEY CLEAN UP IN YULECART VICTORIA

Peter Henry from Yulecart near Hamilton Vic, planted Moby Forage Barley for winter feed. The paddock was sown in early April at 80 kg/ha while the soil was still warm. Giving the Moby a head start on the cold wet winter that followed. The Moby jumped out of the ground and after 5 weeks Peter had 200 first cross ewes in the paddock which were rotated 10 days in and 10 days out.

The ewes lambed down in June/July with a great lambing percentage of 160%.

THE Paddock DID GET WET, BUT BECAUSE THE MOBY WAS WELL ESTABLISHED IT HANDLED IT WELL

The paddock did get wet, but because the Moby was well established it handled it well, with only a couple of small patches

MOBY BARLEY IMPRESSES WITH WINTER GRAZING IN NORTHERN TASMANIA

Moby Forage Barley has been used with impressive results over the past two seasons by Leon Quilliam at a property near Winnielesh, North East Tasmania.

Moby was planted from mid-March to mid-April on the property and had the ability to be irrigated to aid in establishment of the plant.

“The Moby was out of the ground within five days of sowing,” Mr Quilliam commented, with the first grazing being reached around 3-4 weeks post sowing. In all plantings to date Leon has also included Jeanne Tetraploid Italian Ryegrass and a small amount of both white and red clover and chicory.

The blend has enabled the paddocks to be grazed later in the season and into the following year, fitting nicely into the current cropping rotation on the property, consisting of Potatoes and Poppies before being sown into the Moby Blend.

The past two seasons have seen Mr Quilliam graze the areas of Moby, “Four to five times at least,” with the other components of the blend pushing late spring grazing further into summer.

Despite the impressive winter Dry Matter production that Moby has achieved in the area, Mr Quilliam has closely monitored the cattle and was also impressed by the animal growth rates achieved while grazing on the crop.

“The animals grazing the Moby Barley had better weight gains than any perennial pasture,” Mr Quilliam commented.
Outback Forage Oats are derived from South African, Australian and North American hay and grazing oat germplasm. Outback is selected for adaptation to the Australian agricultural environment. Outback is primarily a forage oat, developed to produce a large bulk of quality forage in autumn and again in spring. Outback can be grown in all areas suitable for growing oats and provides consistent grazing, for all classes of livestock, over an extended period. Outback is a mid to late maturing oat with distinctive dark green and broad leaves.

**Outback Forage Oats Key to Farms Success**

Brad Whatman wants to use pasture improvement to merge two dairy herds into one on his Southern Highlands farms in NSW. A thriving crop of forage oats is critical for the success of this approach.

“The plan is to run dry cows and heifers at Kangalono and do all the milking on East Kangalono but we need to increase feed quality and quantity so it’ll be a long-term process,” Brad said.

Brad direct drilled Outback Forage Oats in two blends: one with Jivet Annual Tetraploid Ryegrass and the other with Jeanne Tetraploid Italian Ryegrass in February after reading about the oats’ big leaf.

Brad said the oats’ quality and quantity of leaves were “phenomenal”.

“The oats were brilliant, the leaf was unbelievable and there were still oats there on the last grazing in late October,” he said.

Brad commented that, “The better your ryegrass is, the more milk you have.”

“At the end of the day, the cows were milking well and we peaked at 33 litres when our average is about 30 litres, so it was a good result,” he said.

Brad and his brother, along with their parents John and Lynne, upgraded the 15-a-side parallel dairy at East Kangalono to 20-a-side in February.

**Outback Forage Oats Deliver Quality and Quantity. The Leaves Were “Phenomenal” Said Brad Whatman, Southern Highlands, NSW.**

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**Outback Oats Fueling the Barossa’s Beef**

Upon the recommendation of a friend, Tim Semmler at Lyndoch in the Barossa valley, South Australia, tried Outback Forage Oats. “I’d seen him have a crack with them for a few years with good results. I figured I might as well give them a go too.”

Tim, a wine producer as well as grazier planted down a small area of forage oats in February.

“I got it in the ground about late April, I sent the stock in after it got up and the cattle definitely got stuck into it and grazed it” he stated. The cold winter didn’t limit production as the Outback grew away, “It was good, the big broad leaf and bulk plant really stood up. It grew nicely throughout the season and the cattle did really well on it”.

The ex-station country stock took a liking to the oats as well as performed too “They definitely gained a bit, they put on a lot of condition grazing the oats. I left them in a set stocking environment and the oats pulled away, I could definitely have used some extra cattle to keep on top of it.”

Tim looks to use Outback into the future “It just ticks all the boxes, I got pretty good results out of it.

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**Outback Oats Lifting Dairy Production**

Sean Durcan operates a dairy farm with his family at Mount Schank in SA’s South East, he has being planted Outback oats for high quality silage to feed his herd. “The Outbacks are sown with Popany vetch at a ratio of 30:50 to increase the dry matter cut and also improve the quality of the silage produced with the composition varying from season to season” he said.

“The late maturity and high forage yield is a definite advantage on this block that does suffer from waterlogging most years.”

Waterlogging limits the grazing options, so Sean has focused on forage production and the Outbacks have performed well under these conditions with high yields of good quality conserved fodder.

Sean sows the Outback blend on one of his lease blocks to conserve forage that is fed out to heifers and dry stock over summer and Autumn. “The high quality silage complements dry standing feed along with lower quality hay to maintain target growth rates, so cutting at an early growth stage of the oats is essential to the programme” Sean stated. The late maturity of Outback Forage Oats suit the site well, allowing for the paddocks to dry out enough to get silage machinery in without damaging the soil structure while the crop is still holding its quality to make good silage.

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**The Better Your Ryegrass Is, The More Milk You Have**

“Outback Forage Oats Deliver on Late Maturity and High Forage Yields for Sean Durcan.”

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**Forage Cereals**

Pasturegenetics, E = L = G = X = GX = XLR8
Forage Cereals

**TimoK VetCh**

*Vicia sativa*

- **Maturity (days)**: 100 - 110
- **Pod Shatter**: 0 - 2%
- **Flower Colour**: Purple
- **Min Rainfall (mm)**: 350
- **Hard Seed Level**: Soft
- **Seeding Rate kg/ha**
  - Dryland (pure): 30 - 45
  - Pasture Mixes: 10 - 25
  - Cereal Mixes: 15 - 35

**New release form SARDI Vetch Breeding program**

- Matures between Rasina and Morava (from seeding to full flowering 100 - 110 days)
- High yielding and rust resistant but is only moderately resistant to ascochyta blight
- Very good vigour at flowering
- Timok is ideally suited to grain production in areas with > 380mm rainfall/yr
- DM is similar to Morava in high rainfall (> 400mm), but 19% higher than Morava in low to medium rainfall regions (330 - 380mm)
- Better option than Morava, Rasina

**Cereal Grazing Trial PenField Research Station**

- Trial sown: 29/4/11
- 12 x ½ Ha blocks sown; 6 sown to Outback Forage Oats, 6 sown to Moby Forage Barley
- Both cereals sown @ 100 kg/ha
- Grazing start date: 24/6/11
- Grazing end date: 25/10/11
- Total trial length: 18 weeks (126 days)
- 20 Hereford steers used with an average weight of 232 kg
- 3 x 6 week grazing rotations
- Each 6 week rotation consisted of each ½ ha block being grazed for 3.5 days each
- Dry matter measurements taken before and after grazing with electronic pasture probe.
- Looking to explore differences in seasonal production and available feed over feed shortage periods and into peak growing season
- No other feed or supplements were supplied to the animals

**Total Growth Comparison (DM t/ha)**

<table>
<thead>
<tr>
<th></th>
<th>1st Grazing</th>
<th>2nd Grazing</th>
<th>3rd Grazing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moby</strong></td>
<td>2.7</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Outback</strong></td>
<td>1.6</td>
<td>1.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

**Average Weight Gain over 18 week period (kg/day)**

<table>
<thead>
<tr>
<th></th>
<th>1st Grazing</th>
<th>2nd Grazing</th>
<th>3rd Grazing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moby</strong></td>
<td>1.26</td>
<td>1.24</td>
<td>0.85</td>
</tr>
<tr>
<td><strong>Outback</strong></td>
<td>0.91</td>
<td>0.96</td>
<td>1.50</td>
</tr>
</tbody>
</table>

**Livestock Reaching New Performance Levels on Timok Vetch**

Previously, other varieties of vetch were used but their hard-seeded nature and low winter vigour allowed room for improvement. This season 24 ha was sown to Timok late in the program at 40 kg/ha, which will be harvested.

“The Timok has been very impressive, it will be a good fit for our business, replacing the current variety Rasina,” declared Phil.

In next year’s rotation Timok will be sown with a companion cereal for early feed. This year the Timok exhibited good winter growth competing with weeds achieving canopy closure before the other varieties. “The benefit is there for everyone to see,” said Phil. “We can clean our grass weeds setting us up for next year’s crop, we are improving soil fertility, fixating N as well as maintaining condition of our stock.”

**Note:** Expected total based on early (March/April) sown trials at Penfield Research Station, SA. Trial from 3 years; average of 5 cuts and final hay yield included.
Selecting the right variety for your paddocks

1. What do I want the lucerne in this paddock for? (hay or grazing, or dual-purpose)
2. When is the hay or grazing needed? (summer only, autumn and summer, etc.)
3. How long do I want the stand to last? (3 year rotation, permanent pasture, etc.)

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**LUCERNE VARIEtal SELECTION CHART**

<table>
<thead>
<tr>
<th>VARIETY</th>
<th>Q31 LUCERNE</th>
<th>L56 LUCERNE</th>
<th>GTL<em>60, L70, L71, Q75, L91, L52, ML99 MULTILEAF</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Establishment Vigour</strong></td>
<td>Good. Best sown alone - not recommended for winter sowing</td>
<td>Very good - suitable for cover cropping and pasture mixes with perennial grasses</td>
<td>Excellent - suitable for cover cropping and pasture mixes with annual pastures</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>95% summer, 5% winter</td>
<td>90% summer, 10% winter</td>
<td>80% summer, 20% winter</td>
</tr>
<tr>
<td><strong>Winter-Hardiness</strong></td>
<td>Very High</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Maturity</strong></td>
<td>Shorter growth. Delayed maturity for maximum cutting and grazing flexibility</td>
<td>Similar regrowth rates to most winter actives. Extended cutting schedule and grazing period</td>
<td>Fast regrowth. Early maturity</td>
</tr>
<tr>
<td><strong>Crown</strong></td>
<td>Below ground and broad - excellent grazing tolerance</td>
<td>Low and broader - good grazing tolerance</td>
<td>High and erect - strict rotational grazing</td>
</tr>
<tr>
<td><strong>Forage Quality</strong></td>
<td>Premium grade hay, chaff and silage</td>
<td>Very good quality hay, chaff and silage</td>
<td>Good quality hay and silage if given the best cutting management</td>
</tr>
<tr>
<td><strong>Adaptation</strong></td>
<td>Irrigation/coastal/cold climates. Best suited to medium and heavy soils</td>
<td>Dryland and irrigation. Suitable for soils ranging from deep sands to heavy clays</td>
<td>Dryland and irrigation. Suitable for most soil types</td>
</tr>
</tbody>
</table>

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**Q31 LUCERNE**

- Winter dormant (Medicago sativa) - EGX
- Winter Activity 3
- Min Rainfall (mm) 450
- SEEDING RATE kg/ha 4 - 8
- High Rainfall/Irrigation 10 - 20
- Hay Production 25 - 30

- Quickly been adopted as the leading hay and chaffing variety for premium markets
- A superior leaf retention trait and the highest nutritive value in retained leaf in feed and hay, combined with high yields and excellent quality for hay, chaff, silage and grazing
- Demonstrates greater persistence than winter active varieties; when persistence is more important than winter growth
- Bred for specialist irrigated haymaking, silage or chaff
- Where premium quality is required and where hay cannot be made in winter
- Ideally suited to leaders in forage quality
- Comes Standard with Goldstrike XLR8 Longlife treatment – (Poncho® Plus insecticide)
- Better option than Venus, Kaikura, Hunterfield, Sardi 5

- The master dual purpose graze/hay lucerne in Australia
- Exceptional seedling vigour
- Very high yields
- Exceptional forage quality
- New industry benchmark for persistence
- Flexible management option
- Highest levels of Multiple Pest and Disease resistance of any lucerne variety in Australia. Phytophthora Root Rot rating, HR+
- Semi-winter dormant (winter activity - 5)
- Ideal on a wide range of soil types
- Very good grazing tolerance
- Comes Standard with Goldstrike XLR8 Longlife treatment – (Poncho® Plus insecticide)
- Better option than Venus, Kaikura, Hunterfield, Sardi 5

**L56 LUCERNE**

- Semi winter dormant (Medicago sativa) - EGX
- Winter Activity 5
- Min Rainfall (mm) 350
- SEEDING RATE kg/ha 4 - 8
- High Rainfall/Irrigation 10 - 20
- Hay Production 25 - 30

- Selected for a broad and low set crown, high forage values, high ruminant palatability with high disease and pest resistance ratings
- Tested under an arduous series of strict grazing protocols over a number of years
- Ideally suited as a dual-purpose variety for grazing & hay operations
- Quick recovery after defoliation gives the ability to store plant energy into the crown
- Retain leaf through the drying and baling process
- Good adaptability to a wide range of soil types
- GTL*60 has demonstrated excellent grazing tolerance with 74% residual plants measured after 3 year grazing trial
- Comes Standard with Goldstrike XLR8 Longlife treatment (Poncho® Plus insecticide)
- Better option than Stamina GT6

**GTL*60 NEW LUCERNE**

- Winter active (Medicago sativa) - EGX
- Winter Activity 6
- Min Rainfall (mm) 350
- SEEDING RATE kg/ha 4 - 8
- High Rainfall/Irrigation 10 - 20
- Hay Production 25 - 30

- Offers higher disease and pest package compared to Aurora
- Superior forage genetics - higher leaf to stem ratio
- Minimum 90% germination standards exceeds current minimum certified standard for Aurora - 60%
- L70 seed production is derived from dryland seed production stands only. This is to ensure the dryland integrity and performance of L70, when utilised in standard cereal undersowing practices and marginal dryland grazing enterprises
- These attributes, combined with superior plant genetics, makes L70 an excellent new lucerne option over Aurora. This gives Australian farmers higher returns and extra confidence with the Establishment Guarantee® program that commons based lucerne cannot offer or compete against
**L71 New Lucerne**

- **Winter active (Medicago sativa)**
- **EGX**
- **Winter Activity**: 7
- **Min Rainfall (mm)**: 350
- **SEEDING RATE**: kg/ha
- **Dryland**: 4 - 8
- **High Rainfall/Irrigation**: 10 - 20
- **Hay Production**: 25 - 30

- The “Q” in Q75 signifies the variety has demonstrated superior quality characteristics in laboratory tests and animal feeding trials. Q75 has set a new benchmark in forage quality for the Australian lucerne industry with the highest forage quality, Relative Feed Value (RFV) and protein in the winter active group.
- Q trait reflecting high quality forage
- Highest forage quality in the winter-active group
- Dual purpose hay & grazing option
- High resistance to Multiple Pests and Diseases (MPR)
- Better persistence than most winter active varieties
- Excellent leaf holding capacity
- Comes Standard with Goldstrike XLR8 Longlife treatment – (Poncho® Plus insecticide)
- Better option than Genesis, Aurora, Sardi 7

**L70 v Aurora**

**Yield Results & Pricing Comparison**

L70 offers very competitive pricing to Aurora Lucerne and therefore similar to ha input seed costs.

<table>
<thead>
<tr>
<th>Variety</th>
<th>L70</th>
<th>Aurora</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Yield</td>
<td>18.5 t/ha</td>
<td>17.0 t/ha</td>
</tr>
<tr>
<td>Data Source</td>
<td>Pasture Genetics – 5 years, 4 Locations 46 cuts (Irrigated Sites)</td>
<td></td>
</tr>
<tr>
<td>Hay Returns/ha @ $200/ton</td>
<td>$3700/ha</td>
<td>$3400/ha</td>
</tr>
</tbody>
</table>

**TRIAL RESULTS**

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**EXTRA HAY RETURNS $300 HA/YR**

- **Seeding Rate**: Consult your local agronomist for area specific seeding rate recommendations.
Grazing Tolerant Lucerne Selections Trial
Pasture Genetics has taken the term ‘Grazing tolerant’, very seriously with its selection of new lucerne material. The ability to select plant germplasm through a 3 year intensive grazing trial, has proven critical to give farmers confidence in new lines coming through the Pasture Genetics research program. The strength of this trialling model will be replicated in the future with more selections being made with this key grazing tolerance trait.

Penfield Research Station
Sown 14/9/2011
Grazing from the 24/11/2011 to 23/11/2016

The trial protocol was established in conjunction with NSW DPI and IP Australia to give a measure of true grazing tolerance. After the lucerne was established it was grazed every 3 weeks (or when grazing was required) to a residual height of about 30mm.

Approximately 20 Merino wethers were used to graze the trial each time, this was the number of animals adequate to graze the trial down within at least a 3-4 day period so we could manage frequent grazing events but not expose the lucerne to extended periods of set stocking.

The basis of this grazing management was to make sure the lucerne was put under frequent grazing pressure, but not deliberately set stocked. In the first 3 year period the trial was grazed 32 times, and in the recent 2 year period was grazed 18 times.

Plant counts were taken initially and results have been measured based on the percentage of residual plant counts remaining after the 3 and 5 year periods.

Originally the trial was established at a dryland sowing rate of 4 kg/ha resulting in an average starting plant count of 37 plants/m², which suited our target of 30-40 plants/m² based on our average annual 420mm rainfall.

The results shown in the graph on this page now indicate the updated results after 5 years of the trial period which has shown some significant differences in the performance of varieties, and quite a variation in the results that were seen after the 3 year period was measured, in particular some of the Highly Winter Active material has distinctly dropped off in the recent 2 years.
Red clover thrives well in a wide range of soils except very light, acidic or waterlogged soil. It has a deep rooted system which makes it drought tolerant.

Red clover is an important component of clover/grass mixtures for one or two year conservation leys. In most countries with a temperate climate, red clover is widely cultivated and tolerates low temperatures during winter.

There are two main types of red clover. One being the true grazing tolerant type such as Rajah and the other preferential hay type such as Renegade. These types are based on the height of the growing point.

It is a traditional trait of most Balansa clovers to offer minimal grazing value over the winter period. This does lead to feed shortage if your paddock is a high percentage of Paradana balansa clover. Cobra Unlike other common types like Paradana offers very good winter growth. This is evident in photo above showing good cool season growth. The ability to carry higher stocking numbers in paddock with Cobra is a great strength to this product’s character.

Turbo Persian Clover with sprayed and unsprayed section. The high levels of Wimmera annual ryegrass are being controlled in crop by the vigour of the Turbo Persian and in crop grass herbicides to help with rotational break crop.

Turbo Persian Clover is proving to be an important part of the cropping rotation for mixed farmers Barry and Jacky Polack with their newly purchased block near Balmoral in Western Victoria. Barry has been looking for a legume to fit into the cropping rotation to provide a disease break, fix nitrogen and also allow for chemical options to control annual Wimmera ryegrass before going back into cereals. The farm can get wet and traditionally grain legumes are not grown in the area because of the high rate of failure. Turbo seemed to be the obvious fit as it can handle wet feet while producing high quality forage and has a late flowering date to put the hay cutting time further into the season when the weather will be better for curing hay.

The Polacks will be turning the Turbo Persian Clover into high quality hay to be marketed to the dairy industry. Barry has considered cutting the Turbo for silage as it would add to the ryegrass control, but will not go down this track unless the product is pre sold before cutting as the freight cost is high with silage and can put some customers off when travelling long distances. Barry is wrapped with the performance of Turbo and is planning to put in another 100 ha next season.

Turbo Breaks the Cycle of Resistant Ryegrass

Goldstrike treated Turbo Persian Clover is proving to be an important part of the cropping rotation for mixed farmers Barry and Jacky Polack with their newly purchased block near Balmoral in Western Victoria. Barry has been looking for a legume to fit into the cropping rotation to provide a disease break, fix nitrogen and also allow for chemical options to control annual Wimmera ryegrass before going back into cereals. The farm can get wet and traditionally grain legumes are not grown in the area because of the high rate of failure. Turbo seemed to be the obvious fit as it can handle wet feet while producing high quality forage and has a late flowering date to put the hay cutting time further into the season when the weather will be better for curing hay.

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Renegade (left) vs Rajah (right) demonstrating lower growing point for grazing tolerance

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<thead>
<tr>
<th>Clovers</th>
<th>Maturity</th>
<th>Min Rainfall (mm)</th>
<th>Hard Seed Level</th>
<th>Waterlogging Tolerance</th>
<th>SEEDING RATE</th>
<th>Flowering (days)</th>
<th>SEEDING RATE</th>
<th>Seedling vigour</th>
<th>Growth and Production</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cobra Balansa Clover</strong></td>
<td>Early</td>
<td>200</td>
<td>High</td>
<td>Excellent</td>
<td>4 - 6</td>
<td>EG</td>
<td>5 - 12</td>
<td>Low</td>
<td>Good frost tolerance</td>
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<td></td>
<td></td>
<td>EG</td>
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<tr>
<td><strong>Sardi Persian Clover</strong></td>
<td>Early - Mid</td>
<td>300</td>
<td>High</td>
<td>Excellent</td>
<td>5 - 8</td>
<td>EG</td>
<td>10 - 15</td>
<td>Low</td>
<td>Good cold tolerance</td>
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</tr>
<tr>
<td><strong>Bartolo Bladder Clover</strong></td>
<td>Early</td>
<td>105</td>
<td>High</td>
<td>Fair</td>
<td>10 - 14</td>
<td>EG</td>
<td>15 - 20</td>
<td>Low</td>
<td>Good cold tolerance</td>
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<tr>
<td><strong>Zulux Arrowleaf Clover</strong></td>
<td>Early</td>
<td>450</td>
<td>High</td>
<td>Poor</td>
<td>6 - 10</td>
<td>EG</td>
<td>10 - 15</td>
<td>Low</td>
<td>Good cold tolerance</td>
</tr>
</tbody>
</table>

- **Early maturing Cobra Balansa Clover** has the ability to offer very high volumes of high quality feed for silage or hay cutting purposes.
- Burr Burial Strength:
  - 1 = Very Weak
  - 9 = Very Strong
- **Hard Seed Level**:
  - 1 = Least Hard
  - 10 = Most Hard
RENEGADE
RED CLOVER
(Trifolium pratense)  EG
Leaf Type Large
Min Rainfall (mm) 650
Hard Seed Level Medium
Waterlogging Tolerance Fair
SEEDING RATE kg/ha Dryland 3 - 4
High Rainfall/Irrigation 5 - 8
• Excellent hay diploid type for top end forage
• High yielding
• Supreme feed quality
• Good persistence
• High protein
• Disease resistant
• Renegade Red offers excellent summer production to increase pasture volumes and quality
• Price competitive option to add instant legume to grass based pastures
• Better option than USA Red, Redqui, Clare

RAJAH
RED CLOVER
(Trifolium pratense)  EG
Leaf Type Medium
Min Rainfall (mm) 700
Hard Seed Level Medium
Waterlogging Tolerance Fair
SEEDING RATE kg/ha Dryland 3 - 4
High Rainfall/Irrigation 5 - 8
• Intermediate to late flowering variety
• True grazing diploid type with excellent growth recovery
• Productive in spring, summer and early autumn
• Very low oestrogen
• Suitable for grazing and fodder conservation
• Highly productive
• Improved grazing tolerance
• Good early production
• Better option than Colenso, Astrid

RIESLING
WHITE CLOVER
(Trifolium repens)  EG
Leaf Type Medium
Min Rainfall (mm) 700
Hard Seed Level Medium
Waterlogging Tolerance Good
SEEDING RATE kg/ha Dryland 3 - 4
High Rainfall/Irrigation 5 - 8
• Highly persistent and heat tolerant
• Dense leaves
• High stolon density
• Resistant to many diseases, nematodes and insect pests
• Strong root system
• Persists under heavy grazing
• Excellent long term performance
• Excellent companion species in high performance grass blends.
• Riesling offers long term perennial legume base to high rainfall/irrigation properties
• Better option than Vic Irrigation, Tahora, Mink

JUMBO
WHITE CLOVER
(Trifolium repens)  EG
Leaf Type Large
Min Rainfall (mm) 700
Hard Seed Level Medium
Waterlogging Tolerance Good
SEEDING RATE kg/ha Dryland 3 - 4
High Rainfall/Irrigation 5 - 8
• Large leaved ladino type, highly winter active cultivar
• High summer production
• Strong seedling growth
• Outstanding winter forage production for grazing and hay
• Excellent heat tolerance
• Tolerance to red legged earth mite
• Good persistence under animal grazing systems
• Offers real quality and punch to high performing grass based pastures
• Better option than Hafa, Kupu, Waverley

DALSA
SUB CLOVER
(Trifolium subterraneum)  EG
Maturity Early
Days to Flower 97
Burr Burial Strength 9
Min Rainfall (mm) 325
Hard Seed Level 9
Waterlogging Tolerance Poor
SEEDING RATE kg/ha Dryland 8 - 14
High Rainfall/Irrigation 15 - 20
• Sputed to acid to neutral soils
• High levels of hardseed and very strong seed burial
• Solid legume to act as backbone product in pasture blends
• Very good herbage production
• Outstanding seed production, with the largest of all Subterranean seed
• Regenerates better than most other strains of early to mid season maturity sub clovers
• Excellent burr burial strength to allow for maximum seed set going into future pasture phase
• Capable of long regeneration due to high hard seed level
• Better option than Dalkeith, Nungarin

HATRIK
SUB CLOVER
(Trifolium yanninicum)  EG
Maturity Mid
Days to Flower 114
Burr Burial Strength 5
Min Rainfall (mm) 450
Hard Seed Level 2
Waterlogging Tolerance Very Good
SEEDING RATE kg/ha Dryland 8 - 14
High Rainfall/Irrigation 15 - 20
• White seeded variety
• Suited to acid to neutral soils
• Suitable as a long term pasture option with forage grasses
• Tolerant to waterlogged or poorly drained soils
• Excellent seedling vigour
• High herbage production
• Good seed yields
• Vigorous growth
• Quality forage for grazing, hay or silage
• Suited to good dryland rainfall or irrigated country where long term Yanninicum sub clover is required
• Better option than Trikkala, Riverina, Gossa

CLARE 2
SUB CLOVER
(Trifolium brachycalycinum)  EG
Maturity Mid
Days to Flower 130
Burr Burial Strength 1
Min Rainfall (mm) 325
Hard Seed Level 2
Waterlogging Tolerance Poor
SEEDING RATE kg/ha Dryland 8 - 14
High Rainfall/Irrigation 15 - 20
• Suited to neutral to alkaline soils
• Excellent hay type
• Quick vigorous growth, early in the season
• Oestrogenic potency is low – safe for all classes of livestock.
• Seeds are typically 40% larger than other sub-clovers leading to excellent early vigour
• Resistant to Cercospora leaf spot, leaf rust, powdery mildew and subterranean clover mottle virus
• Some tolerance to clover scorch
• Less seedling damage from red legged earth mites
• Good tolerance to blue-green aphid
• Better option than Clare, Antass

OVAFLOW
SUB CLOVER
(Trifolium subterraneum)  EG
Maturity Late
Days to Flower 140
Burr Burial Strength 6
Min Rainfall (mm) 600
Hard Seed Level 2
Waterlogging Tolerance Poor
SEEDING RATE kg/ha Dryland 8 - 14
High Rainfall/Irrigation 15 - 20
• Suited to acid to neutral soils
• Excellent winter production
• Prolific seed producer
• Ability to extend feed production in late season areas where traditional spring rainfall continues
• Works well in pastures with dominance in early winter
• Highly nutritious feed
• Well suited to intensive pasture grazing systems
• High dry matter yields
• Large leaf type suitable for long season growth
• Better option than Goulburn, Denmark, Laura
FEATURES OF MEDICS
Medics are self-regenerating, annual clovers that grow in autumn, winter and spring above 250mm rainfall.
They are best suited to crop rotations on neutral to alkaline soils. Forage produced by annual medics is high in protein for the grazing animal. Even the dry seed pods on the ground over summer provide a protein feed for grazing animals to maintain wool and meat growth.

A VIGOROUS MEDIC PASTURE OF ABOUT 8 TONNES PER HECTARE CAN PRODUCE UP TO 200 KG/HA OF NITROGEN IN ONE YEAR, EQUIVALENT TO 400 KG OF UREA.

This increases soil fertility, resulting in higher production of grain and fodder crops in the future.
If established successfully and allowed to set adequate seed, annual medics will regenerate year after year.
This is due to their ability to produce hard seeds, a percentage of which break down each year.
This mechanism also gives the annual medics protection against drought and allows for good regeneration after 1-2 years of cropping.

- Can be sown dry into cereal crop stubble, prior to autumn rains.
- Medics have proven to be a great partner in dairy situations with ryegrass. They offer excellent winter production superior to other pasture legumes.
- They grow best on neutral to alkaline soils - soils with pH 6.0 to 8.5.
- Legumes which are capable of regenerating each year without reseeding. Seed pods lie on top of the soil during summer. Seed in these pods germinate and produce a pasture in the following autumn after rains commence.
- Soil fertility builders. Nitrogen is produced in the soil on the plant roots biologically. Roots and plant residues increase soil organic matter.
- Forage produced is high in protein whether used for grazing animals or for forage or silage.
- Drought tolerance and persistence over a wide range of soils and rainfall areas. Medics can germinate, grow, flower and set seed on as little as 80mm rainfall, spread over 2-3 months.
- Annual medics are sown with cereal crops in cropping rotations. However, they can be sown on their own for fodder production.
- During summer the dried plant residues and seed pods on the ground provide high quality forage of protein content around 10%.

A MEDIC GERMINATION FROM REGENERATED PADDock.

REGENERATED CAVALIER MEDIC 3 YEARS AFTER INITIALLY BEING SOWN. THIS HAS SINCE RESEEDED AGAIN AND OFFERED LONG TERM LEGUME FEED IN PADDock.

THE AGGRESSIVE SEEDING ABILITY OF CAVALIER SPINELESS BURR MEDIC DEMONSTRATED IN A SEED PRODUCTION PADDock IN FREELING, SA.

[Image of Medics and Forage]
Cavalier is a spineless burr medic with a relatively high percentage of soft seed compared to Santiago. It has high herbage and seed production. Developed to extend the role of annual medic, particularly in phase pastures, where higher levels of soft seed will result in more densely regenerating second year pastures. Cavalier is suited to farming systems with either a long-term or short-term phase. Cavalier can provide a sound base for pasture with a broader range of maturity, pest and pathogen tolerances, and hard seededness. This allows for the pasture to respond to various environmental fluctuations, and management practices.

CAVALIER SPINELESS BURR MEDIC TAMING THE ACIDIC SANDY COUNTRY OF INTENSIVE LIVESTOCK COUNTRY

Cavalier Spineless Burr Medic has proven to be the gift that keeps on giving for mixed enterprise farmers Jim and Sam Snodgrass. The father and son duo manage a 2200 ha property that encompasses cropping, wool production and fat lamb enterprises. Their farm struggled with glyphosate resistant ryegrass hampering their cropping sustainability. Jim sowed down ryegrass hampering their cropping sustainability. Jim sowed down to sowing the pastures to control weeds but we found it aided our livestock enterprise too, the medic is really easy to manage and has better herbicide options than other species. Cavalier exhibits good early vigour, “It doesn’t need a lot of rain to get a lot of bulk up, it has made an overall improvement to both out cropping and livestock production.”

The second-year, Cavalier was left to regenerate and had the new Cobra Balansa Clover added, “I was absolutely impressed how it regenerates from seed, we don’t have to sow pastures we can concentrate on our cropping programme,” Jim noted. “The sheep have definitely improved; we are getting heavier wool cuts and our fat lambs are fatter than ever. The two varieties complement each other really well, the sheep are much further ahead,” stated Jim.

Due to the number of trees in this particular paddock it has approximately 2/3rd grazing and 1/3rd cropping. Allan said, “Because of the low price of feed cereals it was more economical to put the whole paddock to pasture, especially with the high lambing price.”

With the paddock going into Faba Beans next year this will allow Allan and Peter to get a good grass knock down in the paddock and allow for the regenerating clover to come through in years to come. Many areas across Australia have struggled with achieving early winter vigour from sub clover based pastures. The photo demonstrates the quick growing nature of Cavalier Spineless Burr Medic after both crops were sown at same time. This early plant vigour allows crop to establish quickly to compete with weeds and attack from insects. Medic offer good reliable feed during the winter months and are very adaptable being planted with quick growing cereals like Moby Forage Barley and Jivet Annual Italian Tetraploid Ryegrass. These combinations allow for quick feed and high quality when most farmers are struggling to maintain and gain livestock weight.
BINDAROO

**BUTTON MEDIC**

(Medicago orbicularis) EG

- **Flowering** Early
- **Min Rainfall (mm)** 300
- **Hard Seed Level** 10
- **Waterlogging Tolerance** Poor
- **Dryland** 10 - 15

- Early flowering, self-regenerating annual forage legume with distinctive flattened, button-shaped pods
- Ideal legume to complement tropical grass based pastures
- Producer of larger quantities of seed than barrel medic in dry and marginal environments
- Well adapted to low rainfall and marginal zones
- Adapted to heavy and loamy textured alkaline soils in Queensland and north-western New South Wales, and alkaline sandy and loamy soils in southern Australia
- Semi-prostrate in habit, and flowers and sets seed readily under grazing
- High seed producer - grazing does not diminish its seed production, which can occur with other medic varieties, e.g. snail medic

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SILVER

**SNAIL MEDIC**

(Medicago scutellata) EG

- **Flowering (days)** 77
- **Min Rainfall (mm)** 350
- **Hard Seed Level** 8
- **Waterlogging Tolerance** Fair
- **Dryland** 15 - 18
- **High Rainfall/Irrigation** 18 - 25

- High levels of herbage dry matter yield and seed production
- Derivative of Sava bred by QDPI
- Excellent option in sub tropical grass pastures, where winter legume production is king
- Silver is relatively upright in growth habit, which allows the variety to compete effectively for light
- Early - mid maturity cultivar suited to regions of a min 350mm rainfall
- Good resistance to spotted alfalfa aphid and blue-green aphid
- Shown in field tolerance to Sitona weevil
- Excellent seedling and early vigour
- Better option than Sava Snail

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JAGUAR

**STRAND MEDIC**

(Medicago littoralis) EG

- **Flowering (days)** 90
- **Min Rainfall (mm)** 275
- **Hard Seed Level** 7
- **Waterlogging Tolerance** Fair
- **Dryland** 15 - 10
- **High Rainfall/Irrigation** 15 - 20

- New leaf holding gene to allow for longer levels of forage holding ability
- Higher dry matter production than conventional strand medic that are prone to leaf drop nearing seed formation
- Excellent plant vigour that allows for additional weed suppression and rebound from insect damage
- Outstanding performer on light sand and loam soils
- Jaguar offers excellent weed suppression helping with long term reduction in weed numbers in following crops
- Better option than Herald

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LYNX

**NEW 2017 BARREL MEDIC**

(Medicago truncatula) EG

- **Flowering (days)** 100
- **Min Rainfall (mm)** 300
- **Hard Seed Level** 7
- **SEEDING RATE** kg/ha
- **Dryland** 10 - 15
- **High Rainfall/Irrigation** 15 - 20

- New leaf holding gene to allow for longer levels of forage holding ability
- Leafy, vigorous and competitive, high quality and high yielding medic for medium rainfall, neutral to alkaline heavier soils
- Extremely high leaf to stem ratio, ideal for hay making enterprises
- Resistant to major aphid pests (spotted alfalfa and blue-green aphids)
- Improved seedling tolerance to red legged earthmite and lucerne flea.
- Excellent addition to long term pastures where winter production is paramount
- Better option than Paraggio, Mogul

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CAVALIER

**SPINELESS BURR MEDIC**

(Medicago polymorpha var brevispina) EG

- **Flowering (days)** 110
- **Min Rainfall (mm)** 350
- **Hard Seed Level** 7
- **SEEDING RATE** kg/ha
- **Dryland** 10 - 15
- **High Rainfall/Irrigation** 15 - 20

- Mid-maturing variety
- Flowering 90-95 days in regions with an average 350mm rainfall
- Successfully used in pasture systems with annual and Italian grasses to bolster winter grazing capacity
- Superior winter growth to sub clover therefore helping to fill traditional winter feed gaps
- An average of 15.8% soft seed in the first year
- Grows well on alkaline to slightly acid soils
- Good waterlogging and salinity tolerance - up to 8 D/sm
- Most adaptable medic in the Australian market
- Successfully grown in pH soils down to 4.5 CaCl in NSW
- Excellent grazing tolerance

---

CALIPH

**BARREL MEDIC**

(Medicago truncatula) EG

- **Flowering (days)** 90
- **Min Rainfall (mm)** 250
- **Hard Seed Level** 9
- **SEEDING RATE** kg/ha
- **Dryland** 10 - 15
- **High Rainfall/Irrigation** 15 - 20

- Earliest maturing aphid-resistant barrel medic
- Good annual production where long term persistence is sought after
- Good seedling and early vigour
- Moderate tolerance of soil boron toxicity
- Resistant to spotted alfalfa aphid and blue-green aphid
- High hard seed levels
- Suited to areas with as little as 250mm annual rainfall
- Replacement for Parabinga
- Better option than Parabinga

---

**Hard Seed Level:** 1 = Least Hard, 10 = Most Hard.
MOBY FORAGE BARLEY AND JIVET ANNUAL RYEGRASS PROVIDING LATE FEED OPTION

Justin Richards is a farmer located in South Gippsland, he operates a 400+ head dairy enterprise at Dumbalk. In such a high intensity industry, Justin requires maximum efficiency across his entire farm, relying upon its ability to produce high quality and reliable feed so that he isn’t depending upon external feed sources.

In June this season, Justin had some run down, degraded springer paddocks that needed to be over sown. His first choice was a Moby Forage Barley and Jivet Annual Italian Ryegrass blend. “The Moby Forage Barley was included because of its fast growing early to grazing nature that filled the winter feed gap. The Jivet was selected because of its ability to establish under the canopy of the Moby and provide a late feed option as the season carried on.” Justin explained.

“The Moby Forage Barley served as an early to graze option but also filled the requirement of high quality silage cut fish allowed the jivet to go to work,” added Justin. “After the silage cut, the Jivet punched through offering another grazing opportunity. The Jivet option provides flexibility with grazing ability to bank away bales of hay for next season feed depending how the season starts off before Moby is up for grazing.”

With floods going through the property on the 14th of September 2016, Leon is surprised that Jivet survived so well after going under 1m of water for about 36 hours and then staying waterlogged for weeks after. While waterlogging has really limited operations on these paddocks and delayed the application of fertiliser Jivet has continued to grow well and hold its quality. This looks to be a big difference from other similar varieties with Jivet expressing its true characteristics it is still very leafy and holding off going to seed. Leon is confident he will get good yields of high quality silage and can see a great fit for Jivet in his programme again next year. Leon planted Jivet on the 22nd of March while the soil was still warm to give it a good early start, he plants all of his annuals at 30 kg/ha which he said grows a heap more than previous years. The regrowth and recovery of the Jivet was selected because of its winter production and provides a late feed option as the season carried on.

Leon is confident he will get good results he got from the Jivet and plans to re-sow his sub clover paddocks being grazed 5 – 6 times before being locked up for silage.

Leon Lenssen chose Jivet Annual Italian Ryegrass to help feed over 1000 dairy cows on the property he manages near Purnum in south Western Victoria. The farm is sown to both perennials and annuals which helps him to get a balance between grazing and forage conservation, with annuals showing many extra benefits for forage conservation. Jivet was chosen for its excellent winter growth to give high value grazing with most paddocks being grazed 5 – 6 times between grazing and forage conservation. This helps him to get a balance to both perennials and annuals which helps him to get a balance.

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JIVET POWERING THROUGH A TOUGH WINTER

David Smith from Katunga, Vic, decided earlier in the season to grow Jivet Annual Italian Ryegrass because of its winter production and late heading date to get the most out of the season. David sowed the Jivet in mid-April due to dry autumn and high irrigation water costs.

“I needed a ryegrass that would keep up with my existing sub clover paddock, I ended up sowing it around 12 kg/ha to allow the sub clover to regenerate well in between the ryegrass.”

Jivet provided excellent feed over the winter period on David’s property. With a wetter winter/ spring period than usual, David explained that growing Jivet really helped keep enough green feed up to his dairy cows through what was a harsher winter period.

“I ended up grazing the paddocks 5 times over the growing period; it also allowed me to cut around 90 round silage bales from the 4 ha area. The regrowth and recovery from grazing/cutting the paddock was really excellent.”

After the Jivet is finished off he plans to re-sow his sub clover paddock again with it next year.

Forage Barley was included because of its fast growing early to grazing nature that filled the winter feed gap. The Jivet was selected because of its ability to establish under the canopy of the Moby and provide a late feed option as the season carried on.” Justin explained.

“THE MOBY FORAGE BARLEY SERVED AS AN EARLY TO GRAZE OPTION BUT ALSO FILLED THE REQUIREMENT OF HIGH QUALITY SILAGE CUT FISH ALLOWED THE JIVET TO GO TO WORK,” ADDED JUSTIN. “AFTER THE SILAGE CUT, THE JIVET PUNCHED THROUGH OFFERING ANOTHER GRAZING OPPORTUNITY. THE JIVET OPTION PROVIDES FLEXIBILITY WITH GRAZING ABILITY TO BANK AWAY BALES OF HAY FOR NEXT SEASON FEED DEPENDING HOW THE SEASON STARTS OFF BEFORE MOBY IS UP FOR GRAZING.”

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JIVET KICKS PRODUCTION IN WINTER AT PURNUM

Leon Lenssen chose Jivet Annual Italian Ryegrass to help feed over 1000 dairy cows on the property he manages near Purnum in south Western Victoria. The farm is sown to both perennials and annuals which helps him to get a balance between grazing and forage conservation, with annuals showing many extra benefits for forage conservation. Jivet was chosen for its excellent winter growth to give high value grazing with most paddocks being grazed 5 – 6 times before being locked up for silage.

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ANNUAL RYEGRASS GRAZING TRIAL
With Annual Italian Ryegrasses being a very large proportion of pastures sown in Australia each season, the target grazing trial was set up to look at actual animal performance in a grazing situation. The true advantage of later heading material such as Jivet and Winter Star 2 was evident in not only forage production, but animal weight gain performance. The ability to measure seed costs upfront compared to dollar return is very important in an annual production system. The results in this trial help to quantify this investment in higher performing grass products.

PENFIELD RESEARCH STATION
LIVEWEIGHT GAIN TRIAL 2012
• An irrigated 6 ha paddock was divided into 12 half ha sections. On the 8th of May, 4 of these sections were each sown with 3 different Tetraploid Annual Italian Ryegrass varieties: Jivet, Tetila and Winter Star 2. Sowing rate was 30 kg/ha
• 21 Angus x Hereford steers were split into 3 grazing groups of 7 steers, with an average starting weight of 245 kg
• The 3 groups simultaneously grazed each of the varieties throughout the duration of the trial
• The trial ran for 12 weeks, with an additional 4 week pre-trial grazing period, in which each block of each variety would be grazed in a rotation for a week every 4 weeks. The pre-trial grazing started the rotation off so blocks had an equal re-growth time; the measured trial period ran from the 27/8/2012 until the 19/11/2012 (84 days)
• Each group of steers spent equal grazing time on the 3 varieties
• No other source of feed or supplements were given to the animals

DISCUSSION
The trial protocol used was developed to remove any variables and limiting factors other than the ryegrass variety being grazed, so that it was ideally the only influencing factor into the differences of the animal’s performance. During the trial, measurements were not only taken for the weight gain information on the steers, but forage production and rate of consumption were analysed as well. This gave us data on the intake of the animals on the specific varieties, and the efficiency of the different forage in weight gains. One of the major goals was to assess the winter productivity of the varieties which was quite impressive, but as the trial continued to later in the season and into spring, we saw some quite dramatic differences in forage production and quality.

As the season progressed, the earlier maturing Tetila started to show head emergence and stem elongation, and responded a lot slower in regrowth to grazing; this lead to less overall productivity and reduced intake from the grazing groups.

The later maturing Jivet had more end season growth and animal performance due to its increased productivity during this time. It is clear that using a later maturing variety (18+ days to flowering later than Tetila) that you can achieve higher live weight gains due to better forage quality and overall yield in an extended season.

WEIGHT GAIN AND DRY MATTER PRODUCED

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<th>KG/DAY WEIGHT GAIN AVERAGE</th>
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<tr>
<td>Jivet</td>
<td>1.61</td>
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<tr>
<td>Tetila</td>
<td>1.40</td>
<td>8.90</td>
</tr>
<tr>
<td>Winter Star 2</td>
<td>1.55</td>
<td>9.80</td>
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1ST, 2ND & 3RD ROTATION (EACH ROTATION IS 28 DAYS)
1ST ROTATION - 27.08.12 to 23.09.12
2ND ROTATION - 24.09.12 to 21.10.12
3RD ROTATION - 22.10.12 to 19.11.12

SEASONAL AVERAGE KG/DAY WEIGHT GAIN

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<td>Winter Star 2</td>
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SEASONAL AVERAGE KG DM/HA/DAY

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<tr>
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<th>2ND ROTATION</th>
<th>3RD ROTATION</th>
</tr>
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<tr>
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<td>81.0</td>
<td>97.0</td>
<td>78.0</td>
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<tr>
<td>Tetila</td>
<td>71.0</td>
<td>86.0</td>
<td>39.0</td>
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<tr>
<td>Winter Star 2</td>
<td>79.0</td>
<td>94.0</td>
<td>74.0</td>
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<table>
<thead>
<tr>
<th>Time of Flowering</th>
<th>Jivet</th>
<th>Tetila</th>
<th>Winter Star 2</th>
</tr>
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<tbody>
<tr>
<td>Total DM/ha/Day</td>
<td>115%</td>
<td>100%</td>
<td>110%</td>
</tr>
</tbody>
</table>

Jivet (left) showing good growth while Tetila (right) is losing quality causing decline in animal production.
NEW MONA ITALIAN RYEGRASS HELPS DELIVER INCREASES IN THE VAT

Jonny Hofman and his wife Esther milk a farm of 400 cows in the south Gippsland area of Tarwin, VIC. The pair made the conscious decision to be more sustainable on their own farm and reduce their dependence on outsourced fodder. After considering their options, they opted to try the New Mona tetraploid Italian ryegrass.

They selected Mona because of its extremely late shoulder while not compromising on winter growth.

Jonny sowed the Mona in Mid-March and allowed his young stock on for the first grazing. This has helped the Mona set up for a fantastic growing season and allowed it to tilt out into a very strong plant. Mona has been grazed countless times through the winter months and in spring the rotation has been pulled back to two weeks. “Every time I put the cows into a Mona paddock they go up in the vat,” said Jonny.

“Keeping this high quality feed up to the milkers keeps up the liters.”

“While all the other grasses are starting to go reproductive, Mona is still producing high quality vegetative growth.” With the late season rainfalls, Jonny and Esther are looking forward to having the Mona Italian ryegrass provide their herd with quality feed right up until Christmas. This will mean less silage needs to be feed out and more fodder can be conserved for late summer period.

“Mona handled the dry conditions quite well,” and Glen was pleased with its response to grazing and overall winter growth.

NEW MONA AND JACKPOT SHOW TRUE COLOURS

In June 2016, Michael Finch over-sowed a Mona Tetraploid and Jackpot Diploid Italian Ryegrass blend into a 2 ha paddock on Finch Dairies at Albion Park on the south Coast of NSW. The dairy runs 250 cows on an intensive grazing rotation, so high quality fast growing feed is essential to the sustainability of the operation. Pasture Genetics’ two new varieties, Jackpot and Mona offer longer heading dates, 22 and 26 days respectively, which provides producers plenty of late season options.

“The Jackpot and Mona blend performed very well for us with our intensive grazing system. The paddock is split into three and 1/3 is grazed after each milking, which means the 250 cows give the paddock a real work out.”

The blend was really fast out of the ground over-sown at 50 kg/ha. “The heavier rate is required to handle the pressure the cows place on the pastures and providing bulk all season long.”

“We top dressed the pastures with urea after grazing to support the fast regrowth required for the short turn around and this blend certainly held up to that.”

“So we will be watching the blend with a keen eye into the future, but so far we are very happy with the way the blend has performed and will continue to use it again,” Michael declared.

MONA GOES THE DISTANCE IN SOUTHERN QLD

Glen Davis runs a dairy operation with his father Warren and brother Kerod at Lockrose in the Lockyer Valley, QLD. Always looking for something new to help increase the productivity of an already tightly run operation, Glen decided to give Mona Tetraploid Italian Ryegrass a go.

The Davis’ milk 180 cows and prefer Italian ryegrasses over annual ryegrasses for their improved heat tolerance and longer lasting season. Mona has not disappointed. “It established very quickly and has kept pace with other tried and tested varieties on the farm.”

With an 18-21 day grazing rotation maintained right throughout the season, Mr. Davis needs a ryegrass that can keep pace while maintaining quality for the ever important parameters faced in milk production.

Planted in mid-April, at 25 kg/acre, Mona did exactly that. Glen also side-dresses with urea after each grazing.

Winters can get very dry in the area, being in a summer dominant rainfall zone and this year was no exception. With no in-crop rain and relying solely on irrigation, Mona established very quickly and has kept pace with other tried and tested varieties on the farm.

“The new release Mona Tetraploid Italian Ryegrass has performed extremely well in its first season for Kevin Smith ‘Hilcrest Ayrshires’ at Borallon in SE Qld. Kevin and his family have dairy farmed at Borallon with one of the oldest lines of Ayrshires in Australia for more than 100 years and have seen many ryegrass varieties come and go.

“Hulk has been very good for a number of years but this new Mona has outperformed it,” Kevin said.

“Mona was planted in mid-April, broadcast into a prepared seed bed at 50 kg/ha with a starter fertilizer, harrowed, then rolled. Irrigation is supplied consistently via hand shift sprinklers throughout the duration of the season. Nitrogen fertilizer is then applied after each grazing to maximise production.

The Mona established very well and provided excellent feed quality through late Autumn, Winter and late Spring. Late season production and good utilization are key factors in selecting a variety to handle hot seasonal conditions late in the season. The Mona was still being grazed in late November/December.

NEW RELEASE MONA PRODUCES AND PERFORMS EXTREMELY WELL

“Kevin also oversees some areas of Calilde Rhodes grass in May with shorter seasoned ryegrass to provide quality feed through the winter months when tropical species traditionally shut down. Jivet Annual Ryegrass has performed quite well in this situation.”

“I will certainly be planting Mona in 2017.” Kevin said.
**JACKPOT ITALIAN RYEGRASS**

Peter Dent runs a beef and fodder operation in the West Gippsland area. Generally, Darnum’s rainfall is reliable through the months of October and November. Peter requires a ryegrass that will give him both extra grazing ability while also allowing him to put aside paddocks for silage and then hay production later in the season.

Jackpot is a brand new Diploid Italian ryegrass from Pasture Genetics. Jackpot is a fantastic option because it has an extremely late growth habit allowing high quality vegetative dry matter later into the season. This late maturity means that Peter gets fantastic quality in his silage bales and great regrowth for his hay cuts in late December. With Jackpot being a diploid ryegrass this allows Peter to graze slightly lower with his beef cattle and provides faster drying times for better harvest management and less harvest field losses.

While Jackpot is new to the Australian market, Pasture Genetics have been trialing it now for many years through both replicated trials and in paddock trials. It has a very fine leaf and an extensive tillering trait that allows higher stocking rates and fantastic overall growth rates. Jackpot has proven to be a fantastic option for Peter Dents property.

**JACKPOT OUTGROWS AND OUTLASTS OTHER RYEGRASSES IN DRY CONDITIONS NEAR TAREE**

As the old saying goes, when it rains it pours and when Stephen Geronn had to replant his pastures for the fifth time in a year due to flooding, he knew he had to make some big changes.

So he packed up and moved 50 kilometres to Wingham near Taree where he and his son Dean run their Holstein and Jersey Friesian herd on 700 acres of leased land, with daughter Jessica also milking before and after school and eight-year-old Arley helping Dean with calves.

“All my kids could put cups on by the time they were eight,” Stephen said.

“I’m a fourth generation dairy farmer, my father was a dairy farmer for 47 years and even when I was getting flooded out, we didn’t think about stopping, we just tried to work out a way to improve things which is why we moved.”

**SIX YEARS LATER AND STEPHEN HAS GONE FROM MILKING 100 COWS TO 160 WITH AN AVERAGE OF 24.5 LITRES PER COW A DAY**

He is hoping to increase his milking herd to 200 by January.

“We’re chasing more milk so we’ll increase the numbers rather than pushing the cows too hard for extra milk.”

Growing herd numbers means there’s a growing demand for grazing pastures and silage, but the rain stopped falling at Wingham.

This is where Pasture Genetics’s Jackpot Diploid Italian Ryegrass has been a lifesaver when the area has fallen well short of its usual 55 inch annual rainfall.

Stephen planted 60 acres of Jackpot instead of his usual Knight Italian Ryegrass after his seed supplier Pete Gosling saw good research results for it.

Stephen direct drilled Jackpot at 30 kg/ha where it displayed an excellent tillering ability to produce a thick, well branched ryegrass on first grazing. It was still growing in November when his other ryegrasses had gone to seed.

“We planted late February, but didn’t see a blade of grass and I thought we would have to replant because we just didn’t get any rain.”

Then we got five inches in deluges over two days and everything just popped out of the ground beautifully.

“It was thick ryegrass from the word go, it wasn’t finicky and the cows would go in and leave a bit of residue behind.”

**THE TURNAROUND WAS ABOUT 14-15 DAYS, WHICH WAS ABOUT TWO DAYS QUICKER THAN OTHER RYEGRASSES I’VE USED**

“Even though the season’s dried off and I can’t water some of the paddocks, the Jackpot’s still there and it’s hanging on and if we got another inch of rain, we’d get another cut of silage off it.”

Stephen said the Jackpot was competitively priced and that he will use it again instead of Knight because of the extra quality and quantity and its ability to keep on growing during a tough season.

“I’m really happy with the way it’s held up in the dry and our cows went up three litres every time we went into those paddocks, so I’ll definitely be sowing more next year!”

**PETER DENT MAKING HIGH QUALITY SILAGE ON HIS DARNUM PROPERTY.**

**STEPHEN GEMON WAS DELIGHTED THAT HIS JACKPOT DIPOID ITALIAN RYEGRASS WAS STILL GROWING WELL INTO NOVEMBER EVEN IN DRY CONDITIONS.**

**HIGH UTILISATION KEY WITH JACKPOT**

The new Jackpot Diploid Italian Ryegrass has impressed in its first season for dairy farmer Paul Roderick who milks 320 cows near Harrisville SE Qld. Paul and his family have been growing Icon ryegrass for 4 years with great success and in 2016 trialled the new very late flowering replacement variety Jackpot.

Jackpot was sown into a prepared seed bed on the 23rd April at 27 kg/ha with a starter fertiliser blend. Establishment was very good compared to some other tetraploid Italian varieties that were also planted around the same time. Throughout the season on a 22 day irrigated rotation, Jackpot maintained excellent growth and produced quality feed late into November/December.

The cows also performed very well on the Jackpot. Some of the other tetraploid varieties also tended to go reproductive early therefore reducing their quality and died out in late October with the hot humid conditions experienced each year.

Paul said his preferred ryegrass must have good palatability and utilisation with minimal residual grass left after grazing is the ideal situation and longevity into late November/early December.

“If Jackpot replaces Icon in 2017 than I will be planting more of it from what I have seen so far.”

**STEPHEN GEMON WAS DELIGHTED THAT HIS JACKPOT DIPOID ITALIAN RYEGRASS WAS STILL GROWING WELL INTO NOVEMBER EVEN IN DRY CONDITIONS.**

**PAUL RODERICK, HARRISVILLE SE QLD IMPRESSED WITH THE PASTURE UTILISATION OF JACKPOT.**

**JAMBER JERSEY’S HIT THE JACKPOT IN JAMBEROO**

“As a new variety onto the market, we were more than happy to trial both Jackpot and Mona”. “Very happy,” was the first reaction of Owner/Operator Rob Wilson of Jamber Jersey’s in relation to Jackpot Diploid Italian Ryegrass. Both varieties were sown on 2.5 ha of his Jamberoo Dairy on South Coast of NSW.

Both Jackpot and Mona Italian Ryegrasses were sown at 40 kg/ha, with no fertiliser late in May. The Jackpot as well as the Mona were also treated with XLR8 - Poncho Plus, which gave the seed the insect protection while germinating and continuing for a month after emergence.

The dairy runs 250 cows on an intensive grazing system, so high quality and fast growing feed is essential. “The Jackpot was a real standout for its bulk density of feed. I am very happy with the bales we have cut off the Jackpot. Overall, we cut 26 large round bales off the first cut, and then a further 15 round bales off the second cut. Now as we move into December it is ready to cut again.”

The later heading dates give producers plenty of late season options, such as grazing, cutting for hay and or silage. “The Jackpot still has not gone to head in late November, which is a fantastic result.”

We will be moving into a bigger Jackpot Diploid Italian Ryegrass program in 2007. **JACKPOT WAS A REAL STANDOUT FOR ITS BULK DENSITY OF FEED ON JAMBEROO DAIRIES.**
Pasture grasses
Italian Ryegrass Grazing Trial
Penfield Research Station

- An irrigated 6 ha paddock was divided into 12 half ha sections. On the 6th of May, 4 of these sections were each sown with Icon Diploid Italian Ryegrass, Crusader Diploid Italian Ryegrass and Perun Festulolium.
- Sowing rate was 30 kg/ha.
- 24 Angus steers were split into 3 grazing groups of 8 steers, with an average starting weight of 225 kg.
- The 3 groups simultaneously grazed each of the varieties throughout the duration of the trial.
- The trial ran for 16 weeks, in which each block of each variety at least would be grazed in a rotation for a week every 4 weeks.
- No other source of feed or supplements were given to the animals.

### Feed Tests

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<tr>
<th>Cultivar</th>
<th>Icon</th>
<th>Crusader</th>
<th>Perun</th>
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<tr>
<td>% NDF</td>
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<td>49.9</td>
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<tr>
<td>ME (MJ/kg)</td>
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### Varietal Selection Chart

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<th>Perun Festulolium</th>
<th>Tall Fescue</th>
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<tr>
<td>Establishment</td>
<td>8</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Spring Growth</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Summer Growth</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Digestability</td>
<td>7</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Winter Hardiness</td>
<td>6</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Drought Resistance</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Persistency</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

Characteristics measured 1 to 9 where 9 is better resistance, growth, digestibility etc.

### Average Kg/Day Weight Gain

<table>
<thead>
<tr>
<th>Average Kg/Day Weight Gain</th>
<th>1st Rotation</th>
<th>2nd Rotation</th>
<th>3rd Rotation</th>
<th>4th Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icon</td>
<td>1.9</td>
<td>1.3</td>
<td>1.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Crusader</td>
<td>1.6</td>
<td>1.2</td>
<td>1.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Perun</td>
<td>2.0</td>
<td>2.0</td>
<td>1.7</td>
<td>1.4</td>
</tr>
</tbody>
</table>

### Seasonal Average Kg DM/ha/day

<table>
<thead>
<tr>
<th>Average Kg DM/ha/day</th>
<th>1st Rotation</th>
<th>2nd Rotation</th>
<th>3rd Rotation</th>
<th>4th Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icon</td>
<td>75.0</td>
<td>80.0</td>
<td>77.0</td>
<td>65.0</td>
</tr>
<tr>
<td>Crusader</td>
<td>71.0</td>
<td>82.0</td>
<td>75.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Perun</td>
<td>67.0</td>
<td>74.0</td>
<td>70.0</td>
<td>70.0</td>
</tr>
</tbody>
</table>

In 2016 the Perun endured some extremely hot conditions in the establishment phase and the irrigation frequency was hindered with supply issues. However, Damon said it, “survived and thrived,” throughout the winter and into the spring, summer period. Perun managed correctly can continue to produce quality feed into December when all other annual ryegrass varieties have shut down. The milkers appear to consistently utilise all available dry matter and leave minimal residual pasture after each grazing.

In 2017 Damon is intending to plant approximately 32 ha with Perun and also introducing Balance Chicory, GTL60 Lucerne and red and white clovers into part of the system to increase quality and improve late season production.
Tetotine™
TETRON™ TETRAPLOID ANNUAL ITALIAN RYEGRASS
(Lolium multiflorum/westertolows) $E$

- Heading Date (days): +5
- Lifespan (years): +9
- Min Rainfall (mm): 350
- SEEDING RATE
  - Dryland: 10 - 15
  - High Rainfall/Irrigation: 25 - 30

Tetron originated from the same source of germplasm as the well known Tetila ryegrass. Tetron has later maturity than Tetlia and consequently higher nutritive value (crude protein and metabolisable energy) for longer into spring. Tetron may be used for grazing, silage and hay production.

Tetron is also suitable for direct drilling into existing pastures due to its quick to establishment rate. It is extremely frost resistant and has excellent cool season growth making great winter feed.

- Quick start and fast growing
- Annual by nature
- Suitable for grazing, silage or hay production
- Strong winter growth
- High levels of soluble carbohydrate and metabolisable energy
- Excellent annual performance
- Better option than Tetlia

Jivet
JIVET TETRAPLOID ANNUAL ITALIAN RYEGRASS
(Lolium multiflorum/westertolows) $E$

- Heading Date (days): +18
- Lifespan (years): <1
- Min Rainfall (mm): 600
- SEEDING RATE
  - Dryland: 10 - 15
  - High Rainfall/Irrigation: 25 - 30

The flowering date of Jivet is +22 days longer than Tetlia and +4 over Winter Star which offers additional feed and higher dry matter production late into the season. A longer growth period allows for additional milkings and stock carrying capacity.

- Late maturing Tetraploid Ryegrass
- Excellent option in good dryland or irrigation ground where the extension of spring summer growth is required
- Rapid establishment/winter activity
- Ability to respond to late season rainfall where most rye grasses will not continue
- Exceptional feed quality. One of the highly sourced products for top farming systems
- High animal performance
- Excellent rust and disease tolerance for areas where typical rye grasses struggle under climatic pressures
- Better option than Winter Star 2, Maximus

Jackpot
JACKPOT NEW 2017 DIPLOID ITALIAN RYEGRASS
(Lolium multiflorum) $E$

- Heading Date (days): +22
- Maturity: Late
- Lifespan (years): 2 - 3
- Min Rainfall (mm): 700
- SEEDING RATE
  - Dryland: 10 - 15
  - High Rainfall/Irrigation: 20 - 25

Jackpot is a new Diploid Italian Ryegrass bred by DLF Seeds‘ Australasian breeding program. It was bred to replace the long standing favourite Icon Ryegrass. 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 has successfully out yielded Icon by an outstanding 26% and Knight by 9%. Jackpot’s late heading date prolongs feed quality for a greater opportunity to increase overall total production.

Excellent option for farmers looking for top end production, quality and manageability. Jackpot is set to make big inroads into the Australian Italian Ryegrass market setting new levels of farmer satisfaction.

- Late flowering +22 days which give excellent long season production
- Replacement for Icon Ryegrass in 2017
- Fine leaved cultivar with improved growth in all seasons
- Increased yield advantage over Icon Ryegrass by 26% and 9% over Knight
- Jackpot will be setting new levels of farmer satisfaction into the future

Mona
MOMA NEW 2017 TETRAPLOID ITALIAN RYEGRASS
(Lolium multiflorum) $E$

- Heading Date (days): +28
- Maturity: Late
- Lifespan (years): 2
- Min Rainfall (mm): 700
- SEEDING RATE
  - Dryland: 10 - 15
  - High Rainfall/Irrigation: 25 - 30

Mona is a new Tetrone Italian Ryegrass bred by DLF Seeds‘ Australasian breeding program to replace Jeanne. 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 has successfully out yielded Jeanne by an outstanding 34%.

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 a month. In many irrigated or high rainfall zones, the ability to carry the production through late in the season, will be of great advantage when high quality silage and hay supplies can be stocked piled. Mona’s winter and early spring growth is not compromised by the late flowering, which usually occurs in late flowering Italian rye grasses.

- Very late flowering +28 days which give excellent long season production
- Commercial testing in 2016
- Increased yield advantage over Jeanne Ryegrass by 34%
- Winter and early spring growth is not compromised by the late heading which usually occurs in Italian Rye grass
- Lateness allows for larger bulkier silage and hay cuts to build on farm feed requirements
- Ability to produce for two or more years in favourable conditions

Perun
PERUN TETRAPLOID FESTULOLIUM
(Festuclulium braunii) $E$

- Heading Date (days): +12
- Lifespan (years): 2 - 4
- Min Rainfall (mm): 700
- SEEDING RATE
  - Dryland: 15 - 20
  - High Rainfall/Irrigation: 25 - 30

- Inter species cross combining 80% Italian Rye Grass with 20% Meadow Fescue
- Offers the quality trait from the Italian rye grass plus the adaption and root depth of the Meadow Fescue
- A wider adaption of soils and rainfall zones that in the past have not been able to sustain straight Italian Rye Grass
- Longer summer shoulder that provides good quality when feed quality traditionally drops
- Very good disease resistance
- Crossed to prefer to be sown in warmer soil conditions experienced in the early autumn or break
- Excellent option for stitching into existing pastures such as lucerne or tall fescue
- Weight gain increase over Crusader by 29% - Penfield grazing trial

The blend of Turbo Persian, Cobra Balansa and Alexander Berseen Clovers, were grazed hard on three occasions and also had a cut of silage taken off it of too. “I am very happy with the quality of the feed Perun is providing and I will use it again next year on some lower lying areas of the property,” the Manager said. “The cows really hammered it and grazed it really evenly, they didn’t leave a lot in the paddock at all. Surprisingly within three weeks they were back grazing it again.”

Tetron”, Jivet, Jackpot & Mona Heading Date: Perun Heading Date:
- Tetron: 0 Days = Tetila annual rye grass
- Jivet: 0 Days = Tetila annual rye grass
- Jackpot: 0 Days = Penfield grazing trial
- Mona: 0 Days = Penfield grazing trial

Perun Performing Strong at Jamberoo
Jamberoo Jersey’s incorporated the use of Perun Festulolium into their dairy paddocks to increase spring and summer feed in traditional wetter winter paddocks.

The deeper rooted nature of Perun was very easy to pick as the soil profile was drying out in later spring, “Perun is performing very strongly for us,” said the Manager of Jamberoo Jersey’s.

Italian Rye Grass Upstairs Festucce Downstairs
Root System Perun Enabling Plant to Access Deeper Subsoil Moisture and Nutrients.
**RYEGRASS ENDOPHYTES**

The choice of endophyte is often more important than which variety you use, because endophyte has a large effect on the persistence and production of ryegrass pasture, but also animal performance and safety.

In all districts where perennial ryegrass has been grown, insects that feed on the grass have become well established. Which insects are found on farms depends on climate, with some species requiring mild winters (e.g. African Black Beetle), but many are found from Tasmania to Queensland (e.g. Cockchafer species, Argentine Stem Weevil, and Root Aphid).

The good news is that endophytes can provide protection from these insects, thereby improving persistence and production. The bad news is that some can also cause ryegrass staggers, reduce palatability and stock performance, and even severe lameness.

Two new endophytes have been discovered and then tested over many years and will be available to Australian farmers.

**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>High</td>
<td>Very High</td>
<td>Very High</td>
<td>none</td>
</tr>
<tr>
<td>Black Beetle</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>none</td>
</tr>
<tr>
<td>Root Aphid</td>
<td>Very High</td>
<td>High</td>
<td>Medium</td>
<td>none</td>
</tr>
<tr>
<td>Porina</td>
<td>Very High</td>
<td>none</td>
<td>Low</td>
<td>none</td>
</tr>
<tr>
<td>Pasture Mealy Bug</td>
<td>Very High</td>
<td>Very High</td>
<td>Very High</td>
<td>none</td>
</tr>
</tbody>
</table>

**AUSTRALIAN ENDOPHYTE TESTING**

Pasture Genetics are committed to bringing only the very best products to the Australian market. As part of this commitment it is important that all cultivars and endophytes are rigorously tested prior to commercial release through our in-house trialling programs.

As a result of this commitment, Pasture Genetics are extensively testing both Happe and Edge endophytes against all current commercially available endophytes in the Australian marketplace. This testing is being carried out across four sites, two located in Northern Tasmania and a further two located in Gippsland Victoria, and have aimed to assess several different characteristics including animal grazing preference, grazing recovery, persistency and tolerance to regional pests such as Root Aphid and Argentine Stem Weevil.

Preliminary results have already been collected from all sites, with exciting outcomes being observed in relation to pest tolerance and grazing preference when compared to products already available in the Australian market place.

Pasture Genetics are pleased to announce the limited release of these new pasture endophytes throughout 2017/2018 seasons.
PERENNIAL RYEGRASS GRAZING TRIAL

Perennial ryegrass is a pasture base that is vitally important to Australian farming systems. It provides feed over long periods of the year that is of very high quality, but lack of early production in the establishment year can be a problem feed gap for some systems. This trial assessed the animal performance over a range of different mid to late season diploid perennial ryegrass to see which had not only the highest dry matter production, but also the highest live weight gain conversion in the paddock using a realistic grazing model.

PENFIELD RESEARCH STATION

LIVEWEIGHT GAIN TRIAL 2015

- An irrigated 6 ha paddock was divided into 12 half ha sections. On the 18th of May, 4 of these sections were each sown with Ansa AR1 Diploid Perennial Ryegrass, One50 AR37 Diploid Perennial Ryegrass, and Impact 2 NEA2 Diploid Perennial Ryegrass.
- Sowing rate was 30 kg/ha.
- 30 South Devon steers were split into 3 grazing groups of 10 steers, with an average starting weight of 334 kg.
- The 3 groups simultaneously grazed each of the varieties throughout the duration of the trial.
- The trial ran for 12 weeks, in which each variety at least would be grazed for a 4 week duration by each group of cattle.
- No other sources of feed or supplements were given to the animals.

DISCUSSION

Throughout the duration of the trial, all varieties were exposed to the same environmental conditions and assessed equally being grazed simultaneously by the 3 grazing group; one group on each variety at any time. Also with each cattle group grazing each different variety for a 4 week rotation each, this allowed us to exclude the differences in the grazing performance of the different cattle groups from being a variable factor. The trial focused on the true variable being the variety of ryegrass that was being grazed. During the trial, measurements on dry matter production of the varieties were also taken, as well as samples taken for feed quality analysis.

All varieties established well, initially the trial was first grazed around 12 weeks after sowing. The stocking rates in this trial were slightly higher than we had used in previous versions of this model, and the cattle grazed the perennial ryegrass evenly and well. High levels of weight gain were achieved on all the varieties. Ansa AR1 and Impact 2 NEA2 produced more dry matter in the first two grazing rotations with One50 picking up production in the third grazing rotation. Ansa AR1 consistently achieved a higher level of weight gain throughout the rest of the year; however this trial was run only as a short term assessment of later winter and early spring production.

FEED TESTS

<table>
<thead>
<tr>
<th>ME (MJ/kg)</th>
<th>ANSA AR1</th>
<th>ONE50 AR37</th>
<th>IMPACT 2 NEA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Crude Protein</td>
<td>25.30</td>
<td>21.00</td>
<td>22.10</td>
</tr>
<tr>
<td>% NDF</td>
<td>36.80</td>
<td>39.20</td>
<td>38.30</td>
</tr>
<tr>
<td>% Digestibility (DM)</td>
<td>88.90</td>
<td>80.00</td>
<td>88.40</td>
</tr>
</tbody>
</table>

Average results from feed test info taken prior to grazing throughout the trial (3 tests).

1ST, 2ND & 3RD ROTATION (EACH ROTATION IS 28 DAYS)

- 1ST ROTATION 21.08.15 to 18.09.15
- 2ND ROTATION 18.09.15 to 16.10.15
- 3RD ROTATION 16.10.15 to 13.11.15

TOTAL AVERAGE KG/DAY WEIGHT GAIN

<table>
<thead>
<tr>
<th>CULTIVAR</th>
<th>KG/DAY WEIGHT GAIN AVERAGE</th>
<th>DM T/HA PRODUCED TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansa AR1</td>
<td>1.45</td>
<td>4.50</td>
</tr>
<tr>
<td>One50 AR37</td>
<td>1.31</td>
<td>4.20</td>
</tr>
<tr>
<td>Impact 2 NEA2</td>
<td>1.39</td>
<td>4.30</td>
</tr>
</tbody>
</table>

AVERAGE KG/DAY WEIGHT GAIN

<table>
<thead>
<tr>
<th>AVERAGE KG/DAY WEIGHT GAIN</th>
<th>1ST ROTATION</th>
<th>2ND ROTATION</th>
<th>3RD ROTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansa AR1</td>
<td>1.45</td>
<td>1.53</td>
<td>1.58</td>
</tr>
<tr>
<td>One50 AR37</td>
<td>1.39</td>
<td>1.35</td>
<td>1.20</td>
</tr>
<tr>
<td>Impact 2 NEA2</td>
<td>1.39</td>
<td>1.47</td>
<td>1.30</td>
</tr>
</tbody>
</table>

AVERAGE KG DM/HA/DAY

<table>
<thead>
<tr>
<th>AVERAGE KG DM/HA/DAY</th>
<th>1ST ROTATION</th>
<th>2ND ROTATION</th>
<th>3RD ROTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansa AR1</td>
<td>45.00</td>
<td>52.00</td>
<td>54.00</td>
</tr>
<tr>
<td>One50 AR37</td>
<td>45.00</td>
<td>58.00</td>
<td>51.00</td>
</tr>
<tr>
<td>Impact 2 NEA2</td>
<td>45.00</td>
<td>58.00</td>
<td>51.00</td>
</tr>
</tbody>
</table>
**PASTURE GRASSES**

### VALLEY DIPLOID PERENNIAL RYEGRASS

**E**

- **Heading Date (days)**: -7
- **Maturity**: Early
- **Lifespan (years)**: 7 - 10
- **Min Rainfall (mm)**: 550
- **SEEDING RATE kg/ha**: 10 - 15
- **Dryland**: 8 - 14
- **High Rainfall/Irrigation**: 20 - 25

- Kangaroo Valley germplasm - excellent persistence
- Extremely vigorous winter and early spring production
- Suited to marginal perennial ryegrass areas of 550+mm rainfall
- Widely adapted, semi-erect growth habit and is very deep rooted
- Frost tolerant and hardy cultivar, able to withstand periods of drought
- Summer dormant to enhance long term persistence and establishes well to produce good early feed
- Excellent companion option with early seeded sub-clover or medic
- Ideal for sheep enterprises with excellent pest and disease resistance
- Black beetle and argentine stem weevil. Tested and proven to have tolerance to the novel endophyte
- Insect tolerance - available in 2017 with the ar1 endophyte package

### DRYLANDER DIPLOID PERENNIAL RYEGRASS

**E**

- **Heading Date (days)**: -17
- **Maturity**: Early-Mid
- **Lifespan (years)**: 7 - 10
- **Min Rainfall (mm)**: 550
- **SEEDING RATE kg/ha**: Dryland 10 - 15

- High winter activity/summer dormant
- A leafy and well tillered derivative of Victorian Perennial Ryegrass germplasm
- Drylander responds quickly to autumn rain, is frost tolerant and with its excellent early cool season growth, provides good winter feed
- Suitable for fringe areas of perennial ryegrass usage
- Extremely vigorous winter and early spring production
- Maintains a high level of persistence in pastures
- Better adapted to Australian hot dry summers
- Drylander seed is produced and harvested only from dryland production seed crops to maintain its Dryland survivability integrity
- Better option than Everlast, Camel, Mendian

### JETA HYBRID TETRAPLOID LONG ROTATION RYEGRASS

**E**

- **Heading Date (days)**: +10
- **Maturity**: Mid
- **Lifespan (years)**: 5 - 7
- **Min Rainfall (mm)**: 700
- **SEEDING RATE kg/ha**: Dryland 12 - 15

- Jeta is the first of the endophyte ryegrasses to be released from the DLF Seeds Australian breeding program. Jeta is a long rotation ryegrass: a cross between perennial ryegrass (80%) to provide persistence, and Italian ryegrass (20%) for increased winter growth.
- ARI endophyte package
- Fast establishing
- Very high yielding
- Reliable early and late season growth
- High disease resistance
- Successful in a range of climates and grazing methods
- Production of an Italian with the persistence of a perennial
- Excellent pest and disease resistance
- Will be available with new generation tetraploid perennial ryegrass: a cross between perennial ryegrass (80%) to provide persistence, and Italian ryegrass (20%) for increased winter growth.
- ARI endophyte package
- Edge endophyte package limited supplies 2017

### ANSA NEW DIPLOID PERENNIAL RYEGRASS

**E**

- **Heading Date (days)**: +14
- **Maturity**: Mid
- **Lifespan (years)**: 5 - 7
- **Min Rainfall (mm)**: 700
- **SEEDING RATE kg/ha**: Dryland 10 - 15

- Ansa is a high-performance perennial with very good annual production. Its real strength is in winter, when it yielded better than 10 of the 11 cultivars it was tested against. This makes Ansa an ideal choice for farms wanting to maximise pasture supplies in winter and early spring.
- • 14 day maturity ideal to meet and manage feed requirements
- • Excellent seedling vigour for quick pasture establishment
- • High winter performance – unique to only a few perennial ryegrasses
- • Ability to target feed production in winter when high quality forage options are limited
- • Ideal ryegrass to use in high performance based systems
- • Very densely tillered to offer excellent grazing characteristics
- • ARI endophyte package
- • Edge endophyte package limited supplies 2017

### IMPACT DIPLOID LONG ROTATION RYEGRASS

**E**

- **Heading Date (days)**: +21
- **Maturity**: Late
- **Lifespan (years)**: 5 - 7
- **Min Rainfall (mm)**: 700
- **SEEDING RATE kg/ha**: Dryland 10 - 15

- Impact flowers +21 days later than Nui Ryegrass
- Densely tillered, fine leaf ryegrass that heads later in spring remaining leafy and digestible when others go dormant
- Impact has good persistence similar to perennial ryegrass
- Very fine and densely tillered
- Excellent winter production with late season shoulder based on moisture availability, therefore delivering extended periods of high quality grass forage going later into the spring/summer period
- Low level of aftermath heading therefore reducing the impact of staggered ear emergence reducing feed quality
- Low Endophyte type

### 2/SEVEN NEW DIPLOID PERENNIAL RYEGRASS

**E**

- **Heading Date (days)**: +24
- **Maturity**: Late
- **Lifespan (years)**: 5 - 7
- **Min Rainfall (mm)**: 700
- **SEEDING RATE kg/ha**: Dryland 10 - 15

- Excellent annual production
- Good seasonal growth - Although 2/Seven has a very late heading date, unlike some other cultivars, there is no penalty for winter and early spring production
- Persistence traits - 2/Seven has a high tiller density and strong ground cover, which are the key characters needed for ryegrass to tolerate grazing pressure in both dry and wet conditions
- Extended feed quality (+24 day heading date) This gives farmers that extra period of high energy and protein pasture to improve animal production and slaught quality
- Low after-heading
- Impact tolerance - Available in 2017 with the novel endophyte Edge. It has been tested and proven to have tolerance to black beetle and Argentine stem weevil.
- Will be available with New Happe endophyte in 2018

### OPTIMA TETRAPLOID PERENNIAL RYEGRASS

**E**

- **Heading Date (days)**: +26
- **Maturity**: Late
- **Lifespan (years)**: 5 - 7
- **Min Rainfall (mm)**: 700
- **SEEDING RATE kg/ha**: Dryland 10 - 15

- New generation tetraploid perennial ryegrass
- Densely tillered with high quality nutritious broad leaves
- Secure production under intense grazing
- A growth pattern for high feed herbage production in both winter and summer
- Significant advantages in feed quality and animal intake, ideal for high production systems
- Excellent past and disease resistance
- Maintains the late maturity required for high production in Australian climatic conditions
- Low endophyte type
- Better option than Banquet, Bealey, Quartet, Barberia

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ANSA PERENNIAL RYEGRASS AT THE FOREFRONT OF PRODUCTION

Damien Finnigan has turned to Ansa Diploid Perennial Ryegrass for high quality dairy pasture on his farm at Drumborg near Heywood in Western Victoria. As the manager of the newly acquired farm, Damien is keen to get the farm productivity up and renovating pastures with improved varieties will be key to the success of the farm while keeping the feed costs down.

“Ansa was chosen for its very high tiller density which will help the pastures through wet winter conditions with high stocking rates and set good tiller numbers to survive through the dry summer conditions. While it is only the first year of Ansa on the farm, it is already showing the high tiller density setting it up well for the summer,” said Damien. This coupled with a good fertiliser programme and the correct grazing management will help the Ansa paddocks persist and be productive over the long term.

Damien’s farm is set up for rotational grazing to maximise growth of the pastures with a combination of annual ryegrass, perennial ryegrass and fescues. “It is important for the perennial paddocks to be managed well over summer to maximise persistence, with paddocks only being grazed for short periods of time and only at the 3-leaf stage.” Damien is also putting in Rebound Forage Millet and Bounty Forage Sorghum to take the pressure off the farm over summer to feed out less silage and buy in less hay.

NEW PERENNIAL GRASS OPTIONS TO FIT MARKET REQUIREMENTS

For beef producer Graham Smith from Robertson in NSW, there is a plethora of environmental challenges. From cold wet winters to late springs, Graham has always been in pursuit of the answer to his feed challenges.

Last season Graham opted for an Ansa Diploid Perennial Ryegrass and 24Seven Diploid Perennial Ryegrass blend. “Robertson experiences very wet, cold winters however the insect pressure on new pastures can be quite heavy and cause lots of damage throughout the highlands,” explained Graham.

“We still have cockchafer in our paddocks and we’re working on managing them still.”

The 8 ha paddock was sown at 30 kg/ha combined with a starter fertilizer at 125 kg/ha. “The Ansa, 24Seven Diploid Perennial Ryegrass, Tower Tall Fescue and clover custom blend, has certainly met all the year round requirements,” Graham added. “Grazing management has been the key with 3 lighter grazing by 20 cows and calves since sowing as well as a silage cut which produced 25 tonnes of high fodder from the left over standing pasture.” Graham said “It has been a fantastic result for us.”

Using safe endophyte grasses and XLR8 seed treatment – Poncho Plus’ insecticide, has really given the pastures the best opportunity for both fast establishment and long term paddock survival.

Graham said, “I am happy with the way the blend has performed for us, considering the insect pressure, the blend has certainly given us some good feed.”

ORIGINAL IMPACT THE OBVIOUS CHOICE

With a tough summer and large areas of cockchafer damage, Richard Downes needed a cost-effective option to over sow dryland pastures on his dairy farm near Camperdown in Victoria. The original Impact Long Rotation Ryegrass was a great option with its high tiller density and proven persistence it seemed the obvious choice to get the dairy pastures producing quickly. With the level of pasture decline across the farm the option just wasn’t there to spray out paddocks and suffer the lag before they came back into the rotation, so over sowing with a cheaper grass like Impact seemed to be a good compromise.

Richard also used Impact in a more conventional re seeding programme for paddocks coming out of brassica crops over summer. The summer crop paddocks are sprayed out and worked up to provide a good clean seed bed giving the new pasture a great start. Putting the summer crop in gives Richard a couple of chances to clean up the weeds before going back into long term pasture. The tiller density of Impact in Richards paddocks will help out compete the weeds and producing a mass of tillers in the spring gives the pasture its best chance of survival over summer, ensuring a highly productive pasture into the next year.

ANSA PERENNIAL RYEGRASS

John and his son George De Palma purchased a property south of Cobram in 2013. Once they relaser graded some old ground they decided that they wanted to sow down a permanent pasture. With flood irrigation and the pending high water prices in the last couple of seasons they were chasing a perennial grass that had the ability to weather and persist over their hot summer months if it didn’t have the ability to irrigate it.

Ansa Diploid Perennial Ryegrass was sown in April 2015, with the extra knock down control before sowing this allowed the Ansa Ryegrass and Jumbo White Clover to get established really well. Ansa is the only permanent pasture on the property, so it was the ‘go to’ paddock since being sown.

With a hard start to its first year of establishment that saw low rainfall throughout northern Victoria and high irrigation prices, then backed up with a wetter than usual 2016 winter/spring period Ansa Diploid Perennial Ryegrass has put up with heavy grazing and tough growing conditions whilst still providing excellent growth and dry matter production for John and George.

AS SOON AS IT HAD ANY GREEN COVERAGE ON THE Paddock, IT GOT THE COWS PUT STRAIGHT ON IT

“Ansa Ryegrass has been such a great all round option for our farm, it provides growth through all seasons,” explained George.

ANSA PERENNIAL RYEGRASS WAS SOWN IN APRIL 2015.

SAFE ENDOPHYTES AND SEED TREATMENTS HELP TO MAINTAIN PASTURE LONGEVITY AT ROBERTSON, NSW.

RICHARD DOWNES SELECTED IMPACT FOR ITS HIGH TILLER DENSITY AND PROVEN PERSISTENCE.

GEORGE DE PALMA INSPECTING HIS ANSA RYEGRASS THAT WAS SOWN IN APRIL 2015.
**SUPERIOR GROUND COVER OF TOWER COMPARED WITH QUANTUM, BOTH 2 YEARS UNDER GRAZING**

Tower is a continental tall fescue that has a soft and palatable leaf and is being released after excellent performance in production trials. The late heading date and palatability of Tower makes it ideal for farmers wanting to achieve high animal performance. Tower is suited to most animals, but will have greatest benefit where high performance is required from stock (e.g., dairy cows, beef and lamb finishing), and persistent pasture is also required. Tower has a relatively fine leaf and high tiller density, giving it good tolerance to the close grazing that occurs in dryland climates. Tower has very good total growth compared with other tall fescues and is particularly productive from spring to autumn. Tower is a breakthrough cultivar for users of tall fescue. In the past, cultivars have had strengths in persistence, production, or quality—but never all three. Tower has been proven to have improved pasture production and quality, but the density and low growing point means Tower is also very likely to be very persistent.

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**Tower Tall Fescue now comes available with Nil and the new Protek Endophyte package from DLF Seeds**

Protek is a novel tall fescue endophyte.
- Safe on cattle and sheep - not suitable for horses.
- Produces lolines;
  - Affect insects above and below ground, enhance growth and drought tolerance.
- Increases tolerance to insects;
  - Black beetle.
- Increases pasture production (+15%).
- Improves pasture persistence.

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**CONVOY COCKSFoot DEMONSTRATING EXCEPTIONAL SEEDING VIGOUR IN COMPARISON TO AMBASSADOR COCKSFoot. THE ABILITY TO GET COCKSFootS UP AND ESTABLISHED QUICKLY ESPECIALLY ON LIGHTER SOIL TYPES IS CRITICAL TO PASTURE DENSITY. THE NEW CONVOY COCKSFoot HAS BEEN SELECTED FOR THIS EARLY PLANT VIGOUR TRAIT.**

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**TOWER SUMMER ACTIVE TALL FESCUE**

(Festuca arundinacea)  
- Heading Date: Very Late  
- Lifespan (years): 10+  
- Type: Continental  
- Min Rainfall (mm): 600  
- Dryland SEED RATE: 15 - 20 kg/ha  
- High Rainfall/Irrigation SEED RATE: 30 kg/ha  
  - Soft leaf type with palatable and high quality feed  
  - Tolerates dry summer periods better than ryegrass  
  - High tiller density allows it to create a strong structure above the soil, reducing soil damage when grazing  
  - Very active rhizome growth (lateral roots) that allows it to spread and dominate wet ground  
  - Tower is also the best option for land that is prone to saturated or flooded soils  
  - Late maturity in spring with strong summer growth  
  - Available with Protek Endophyte package on request  
  - Better option than Quantum, Advance, Jesup

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**ORIGIN WINTER ACTIVE TALL FESCUE**

(Festuca arundinacea)  
- Type: Mediterranean  
- Min Rainfall (mm): 550  
- SEEDING RATE: 10 - 15 kg/ha  
- High Rainfall/Irrigation SEED RATE: 20 - 25 kg/ha  
  - Mediterranean type tall fescue (Winter active, Summer dormant, will not grow following “false breaks” over summer  
  - Exceptional winter growth from autumn to spring and is truly dormant over summer  
  - Soft leaves and low endophyte encourage high stock performance  
  - Tolerant of droughts, seasonal water logging and saline conditions  
  - Better option than Resolute, Fraydo, Flecha, Prosper

---

**CONVOY NEW 2017 CONTINENTAL COCKSFoot**

(Dactylis glomerata)  
- Type: Continental  
- Min Rainfall (mm): 500  
- SEEDING RATE: 4 - 6 kg/ha  
- Dryland  
  - High Rainfall/Irrigation: 6 - 10 kg/ha  
  - Conveyor is an early/mid maturing soft leaf cocksfoot variety  
  - Excellent tolerance to acid soils  
  - Rapid seedling vigour  
  - Highly palatable with good dry matter production  
  - Good autumn and winter growth, summer growth in northern areas  
  - It has demonstrated very good heat tolerance that gives it excellent strength in drought conditions  
  - Early/mid season maturity gives it the robust nature to handle tough Australian conditions  
  - Replacement for Ambassador  
  - Better option than Porto

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**AUSTRALIS AUSTRALIAN PHALARIS**

(Phalaris aquatica)  
- Type: Prostrate  
- Growth: Semi Winter Dormant / High Summer  
- Min Rainfall (mm): 450  
- SEEDING RATE: 3 - 5 kg/ha  
- Dryland  
- High Rainfall/Irrigation: 6 - 8 kg/ha  
  - Derived from original Australian Phalaris ‘True to Type’  
  - High yielding and long-term productivity, drought tolerant  
  - Excellent palatability  
  - Tolerance to acid soils  
  - Low summer dormancy  
  - Tolerates wet & waterlogged soils  
  - Can withstand periodic flooding  
  - Good tolerance to moderately saline soils  
  - Well adapted to set stocking or rotational grazing  
  - Better option than Australian
TOWER AND L56 PROVIDE HIGH QUALITY FEED WITH FLATTER PRODUCTION CURVE

Tower summer active Tall Fescue has been used on Graeme Hamilton’s heifer grow out block at Yahl near Mount Gambier to provide high quality feed with a flatter production curve than the annual pasture that was growing previously. The highly productive perennial pasture is a 50:50 blend of Tower and L56 Lucerne which gives a deep rooted pasture sward that can access moisture and nutrients that have been washed deep into the soil profile. Graeme knew that lucerne would grow on the site as it used to have strong stands of Hunter River, but he also wanted a quality grass component to give the pasture some guts and reduce the bloat risk, especially over summer when storms can freshen the lucerne up quickly and annual grasses have finished growing.

The Tower / L56 pasture blend is well suited to the sandy loam soils of this site, however there has been a concerted effort to improving soil fertility to maximise production and persistence. Because Tower Tall Fescue is summer active when moisture is available it has been growing valuable feed out of the traditional growing season flattening the growth curve and better meeting the requirements of the dairy heifers utilising it.

WE SPECIFICALLY AIMED FOR A BLEND TO FLATTEN PRODUCTION CURVE, UTILISE DEEP ROOT SYSTEMS TO ACCESS MOISTURE AND REDUCE HAND FEEDING

This has greatly reduced hand feeding of stock on the out block for Graeme and his staff reducing the cost involved and also freeing up time for better managing other parts of the business.

TOWER DELIVERS ON PRODUCTIVITY AT CROOKWELL

Productivity is king on Garry Kadwell’s Grabben Gullen Road property, as he believes high inputs in, results in excellent returns coming out of the paddock and this is certainly the case when he decided to sow new release Tower Tall Fescue into his pastures for higher weight gains.

Grabben Gullen is in the heart of the southern tablelands, so extremely long cold winters are a given, with little to no plant growth over winter due to the very cold soil temperatures and minus degrees days. There is typically no growth before late September, with the season lasting through to mid-May.

For this reason, Tower Tall Fescue is a great fit into our environment and performs very strongly throughout the spring, summer and autumn periods. Its 1 metre deep root system allows the plants to source the available deeper moisture over the spring and summer compared to a ryegrass with its very shallow root system, transpiration rates are lower which equates to a much better survival over hot summers.

Garry sowed the Tower Tall Fescue in 2014 at a rate of 25 kg/ha, with a starter custom blend fertilizer to provide the newly established pasture with fuel. The Tower established very well and provided a lot of feed to my production over the last two years.

“I have been very happy with Tower’s performance to date and have plans to plant more in the future.”

TOWER HITS THE MARK ON GARRY KADWELL’S PROPERTY CROOKWELL, NSW. HAVING DEEP ROOTED NATURE AND ABILITY TO HANDLE COLD WINTERS.
FORAGE - BRASSICA, CHICORY, PLANTAIN, MILLET & SORGHUM -

A GOOD PERFORMER EVEN IN A TOUCHY YEAR

Spring sown forage brassicas have provided an important source of summer forage for Wayne Hooper’s sheep at Bathurst, NSW. In the past years he has grown several varieties of forage brassica and in 2015 he tried Bouncer for the first time. Bouncer is a leafy turnip cross Chinese cabbage which grows rapidly in spring but also can provide forage to meet winter shortfalls.

Wayne’s average annual rainfall is about 630mm which is relatively evenly spread across the year making this area very suited to dryland production of Bouncer Forage Brassica. In 2015 rainfall in spring and summer was well below average but Wayne was still pleased with Bouncer’s performance.

“I was really impressed at the speed at which the Bouncer established and the short time to grazing, despite it being a really dry and hot spring,” said Wayne. Time to first grazing of Bouncer can be as little as four weeks and even in tough springs will be ready by eight weeks. After grazing it recovers quickly and continues to provide large quantities of leafy forage.

The Bouncer provided good quantities of feed and I had no animal health issues, such as nitrate poisoning, which can be a problem when grazing other forage brassicas.”

Bouncer seed comes treated with XLR8 (Poncho® Plus insecticide) to help protect the brassica from any early insect attack.

“I am looking forward sowing Bouncer again this year to provide spring and summer forage for my sheep.”

IMPRESSION ANIMAL PERFORMANCE OBSERVED ON SUBZERO AT DELORAINE

For Andrew Costello, forage brassicas were instrumental in providing his stock with good feed through an especially dry period. Andrew runs a self-replacing Merino flock with Angus cattle on his property near Warwick in south-east QLD. This was his second year of growing Subzero and Bouncer, having had good results the previous season.

After initially growing turnips some years ago, Andrew wanted something with a similar feed value that could return after grazing unlike turnips. Subzero and Bouncer Hybrid Forage Brassicas had been recommended, and were direct drilled at 5 kg/ha in early April with around 120 kg/ha super, into minimal moisture. He got an excellent establishment and Andrew was, “Pleased with how they survived the tough, dry conditions.”

Having been grazed twice, Mr Costello said the regrowth after grazing was good, particularly considering there was very little in crop rain until June. “They were lugged to the ground and re-grew pretty well; and I mean it was hammered!” The crop was also side dressed with 50 kg/ha urea post grazing.

Andrew liked the fact they provided a protected feed source for his stock in a very hot and dry period when all other feed sources were diminishing, as he discovered the local population of kangaroos didn’t like to graze the crop!

Overall, Andrew was pleased with how the varieties hung in and responded well once they received moisture and he was impressed with how well his stock did do on them.

Mrs Eastley commented that at one point throughout the season she recalled thinking she would get another draft of lambs from the mob in approximately 2 weeks however found that she had more finished than she thought.

“They put on easily 1 kg/ha/week and I was impressed at how well they went on the crop, coming off clean with minimal crutching required before delivery to market.”

Mrs Eastley was impressed with the older stock that had already been introduced. The paddock was continually grazed with lambs, finishing on one point throughout the season with minimal crutching required applied to the crop post sowing.

Mrs Eastley monitored the crop closely when comparing it to other varieties grown on the property and was, “Thrilled at the fact that I didn’t lose one lamb on the crop,” despite the occasion loss in other areas.

Mrs Eastley commented that at one point throughout the season she recalled thinking she would get another draft of lambs from the mob in approximately 2 weeks however found that she had more finished than she thought.

“They put on easily 1 kg/ha/week and I was impressed at how well they went on the crop, coming off clean with minimal crutching required before delivery to market.”

Feed Analysis results

<table>
<thead>
<tr>
<th>CROP</th>
<th>CRUDE PROTEIN</th>
<th>ME % M/KG</th>
<th>NDF % DRY MATTER</th>
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<tbody>
<tr>
<td>Subzero</td>
<td>27</td>
<td>14.6</td>
<td>22.6</td>
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<tr>
<td>Winfred</td>
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<tr>
<td>Greenland</td>
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<tr>
<td>Leafmore</td>
<td>14.5</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>Bouncer</td>
<td>16.6</td>
<td>14.6</td>
<td>21.4</td>
</tr>
<tr>
<td>Balance</td>
<td>24</td>
<td>13.3</td>
<td>27.8</td>
</tr>
</tbody>
</table>

BOUNCER HYBRID FORAGE BRASSICA
(Brassica napus) EX
- Leafy rape
- Kale x Turnip hybrid
- Subzero has the ability to withstand 0°C frosts and retain green leaf
- Early maturing 8-9 weeks but can be left until 13 weeks before grazing
- Multiple grazing / high quality feed
- High forage yields
- Subzero can be sown in spring or autumn with potential to carry through to winter
- Excellent regrowth after frequent grazing, making it one of the most persistent forage brassica cultivars while retaining leaf and stem quality, with active regrowth throughout cool seasons, including frost periods
- Comes Standard with XLR8 treatment – (Poncho® Plus insecticide)
- Better option than Puna 2, Grouse, Chico, Commander

SUBZERO HYBRID FORAGE BRASSICA
(Brassica napus) EX
- Leafy rape
- Kale x Turnip hybrid
- Subzero has the ability to withstand 0°C frosts and retain green leaf
- Early maturing 8-9 weeks but can be left until 13 weeks before grazing
- Multiple grazing / high quality feed
- High forage yields
- Subzero can be sown in spring or autumn with potential to carry through to winter
- Excellent regrowth after frequent grazing, making it one of the most persistent forage brassica cultivars while retaining leaf and stem quality, with active regrowth throughout cool seasons, including frost periods
- Comes Standard with XLR8 treatment – (Poncho® Plus insecticide)
- Better option than Puna 2, Grouse, Chico, Commander

BALANCE CHICORY
(Chlorium intybus) EX
- Long term chicory
- Rapid establishment and excellent winter growth
- Autumn or spring sowing option
- Useful as a hard grazing option in a rotational system
- Excellent weight gains
- Pasture mix option
- Good protein to energy rating
- Resistant to diamondback moth and white butterfly
- Comes Standard with XLR8 treatment – (Poncho® Plus insecticide)
- Better option than Puna 2, Grouse, Chico, Commander

RANGER PLANTAIN
(Plantago lanceolata) EX
- Performs well in all ranges of fertility
- Strikers faster than grasses
- Good water use efficiency
- Highly palatable and provides excellent stock nutrition and performance
- Good all year growth and higher cool season growth
- Well balanced levels of crude protein, energy and minerals
- Higher levels of Ca, Na, Cu and Bi than grasses and some clovers
- Excellent increases in weight gains and decreased dagginess when used in a mix
- Comes Standard with XLR8 treatment – (Poncho® Plus insecticide)

BOUSTA RADIISH
(Raphanus sativus L) E
- Can be grazed from 6-8 weeks
- Boust Radish will quickly grow a closed canopy a full month before oat and rye cover crops. This effectively blocks the sun and aids in weed suppression during the winter weed season.
- Bousta has an aggressive root system that aids in busting open hard pans. Soil types that are common in broad acre paddocks
- Boust Radish produces more root mass than mustard crops or oil seed radish and has 2 to 4 times the number of roots as cereal or grasses.
- Best practise to be grazed or sprayed out on first flower
- Soft seeded type

BOUNTY FORAGE SORGHUM
(Sorghum bicolor x sudanese) E
- Early/Mid Sorghum x Sudan grass hybrid
- Good cool soil tolerance
- Excellent early vigour with prolific tillering characteristics
- Suitable for sheep and cattle grazing enterprises
- Makes good quality slage and hay
- Low prussic acid potential
- Plant on 16°C and rising soil temperature
- Offers a new package with improved cold tolerance, early vigour and prolific tillering characteristics. Bounty is a good all round forage option for grazing, silage or hay
- Ability to graze quickly for farmers is important and this key trait was critical in Bounty’s selection
- Aggressive tillering after grazing, results in an overall increase in dry matter production, Bounty can then be either continually grazed, ensiled or taken through as a quality baled hay product
- Spring option only

CALIBRE BMR SORGHUM
(Sorghum bicolor x sudanese) E
- Early to mid maturing, Brown Mid Rib sorghum x Sudan grass hybrid
- 12 gene BMR now delivering new high quality in the forage market
- Low Lignin = highly digestible feed
- Lignin is indigestible in ruminants
- Reducing the lignin results in higher feed intake and improved weight gains. The traditional types that have wide stems also have high levels of lignin
- Calibre BMR offers this reduction trait that will give you better grazing, silage and hay results than conventional types
- An increase in milk production by up to 20% has been achieved with the BMR trait
- Spring option only

REBOUND FORAGE MILLET
(Echinochloa Escolenta) E
- Fast growing summer grass
- Safe, good quality palatable feed
- Ideal in hot summer and high temperature regions
- Fast regrowth after grazing or cutting
- Combines well with other summer active varieties such as red clover or brassica
- Plant on 14°C and rising soil temperature
- Spring option only
- Better option than Shirohie, Jap
**Pasture Herbicide Options**

<table>
<thead>
<tr>
<th>Forage Barley</th>
<th>Broadsword®, Canvas 750 (MCPa amine), LVE 600 (MCPa ester), Comet® 400, Lontrel®, Lontrel Advanced®, Starane Advanced®, Tordon 242®, Paradigm®, Amicide Advance 700®, LVE Agritone®, Agritone®, Broadside®, Boxer Gold®, Cadence®, Dual Gold®, Replane®, Unity®</th>
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<tr>
<td>Forage Oats</td>
<td>Achievet®, Arcade®, Axial®, Boxer Gold®, Dual Gold®</td>
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<tr>
<td>Lucerne</td>
<td>Broadstrike®, Raptor® WG, Bentley®, Skipper, Lontrel Advanced®, Comet® 400, Lontrel®, Starane Advanced® (up to 300 mL/L or in established lucerne), 2,4-DG, Gesaprim®, Region®, Gramoxone®, Spray Seed®, Flurinul®, Bronoxynl®, Diuron, Simazine, Clav 350SL®</td>
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<tr>
<td>Bladder Clover</td>
<td>Exert® 520, Factor®, Elantra Xtrame®, Burst®, Kerb®, Verdict®, Sequence, Gesaprim®, Fusiade®, Gramoxone®, Spray Seed®, Flurinul®, Diuron, Simazine, Clav 350SL®</td>
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<td>Arrowleaf Clover</td>
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<td>Balansa Clover</td>
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<td>Ryegrasses - Annual, Italian, Perennial</td>
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<td>Forage Millet</td>
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<tr>
<td>Forage Sorghum</td>
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<tr>
<td>Vetch</td>
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**REGISTRED CHEMICAL FOR USE IN PASTURE SPECIES**

**BROADSHEET CONTROL**

**GRASS CONTROL**

**NEW PASTURE HERBICIDE OPTIONS GUIDE**

**BAYER PRODUCTS**

Jaguar®, Tigrex®, Precept®, Velocit®, Broadleaf Options®, Sencor® 480G®

*Please contact Bayer for variety specific information regarding Tigrex® and Jaguar®. Please contact Bayer before applying any product to pasture or forage crops to be used for export

**BASF PRODUCTS**

Raptor® WG, Spinnaker®, Sharpen® WG

**CROP CARE PRODUCTS**

Agrytone MA, T-Rex®, Bentley®, Igran®, Canvas 750 (MCPa Amine), LVE 600 (MCPa Ester), Unity®, Comet® 400

**SIPCAM PRODUCTS**

Ecopari®, Skipper, Elantra Xtrame®, Burst®, Tordon 242B®, Kerb®, Verdict®, Boxer Gold®, Tordon 242B®

**DOW AGROSCIENCES PRODUCTS**

Atrazine, T-Rex®, Bentley®, Igran®, MBCA 250, Amine 625, Atrazinag®, Achieve®, Evert®, Factor®, Clav 350SL®, Unity®, Comet® 400

**SYNGENTA PRODUCTS**

Atrazine, T-Rex®, Bentley®, Igran®, MBCA 250, Amine 625, Atrazinag®, Achieve®, Evert®, Factor®, Clav 350SL®, Unity®, Comet® 400

**NUFARM PRODUCTS**

Atrazine, T-Rex®, Bentley®, Igran®, MBCA 250, Amine 625, Atrazinag®, Achieve®, Evert®, Factor®, Clav 350SL®, Unity®, Comet® 400

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**PASTURE HERBICIDE OPTIONS**

**WEED CONTROL**

<table>
<thead>
<tr>
<th>Registered Chemical for Use in Pasture Species</th>
<th>Broadsheet Control</th>
<th>Grass Control</th>
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<td>Forage Barley</td>
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<td>Balansa Clover</td>
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<td>Persian Clover</td>
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</tr>
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<td>Red Clover</td>
<td>Exert® 520, Sequence, Burst®, Kerb®, Verdict®, Clav 350SL®, Raptor® WG</td>
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<tr>
<td>Berseem Clover</td>
<td>Exert® 520, Sequence, Burst®, Kerb®, Verdict®, Clav 350SL®, Raptor® WG, Elantra Xtrame®</td>
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<tr>
<td>White Clover</td>
<td>Exert® 520, Sequence, Burst®, Kerb®, Verdict®, Clav 350SL®, Raptor® WG, Elantra Xtrame®</td>
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<tr>
<td>Sub Clover</td>
<td>Exert® 520, Sequence, Factor®, Elantra Xtrame®, Burst®, Kerb®, Verdict®, Gesaprim®, Fusiade®, Gramoxone®, Spray Seed®, Flurinul®, Diuron, Simazine, Clav 350SL®</td>
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<tr>
<td>Medic</td>
<td>Gesaprim® (Perennial Ryegrass only), Gramoxone® (Perennial Ryegrass only), Spray Seed® (Perennial Ryegrass only), Parapar (Perennial Ryegrass only)</td>
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<tr>
<td>Ryegrasses - Annual, Italian, Perennial</td>
<td>Gesaprim® (Perennial Ryegrass only), Gramoxone® (Perennial Ryegrass only), Spray Seed® (Perennial Ryegrass only), Parapar (Perennial Ryegrass only)</td>
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<td>Festuclium</td>
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<td>Tail Fescue</td>
<td>Gesaprim® (Perennial Ryegrass only), Gramoxone® (Perennial Ryegrass only), Spray Seed® (Perennial Ryegrass only), Parapar (Perennial Ryegrass only)</td>
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<td>Cocksoot</td>
<td>Gesaprim® (Perennial Ryegrass only), Gramoxone® (Perennial Ryegrass only), Spray Seed® (Perennial Ryegrass only), Parapar (Perennial Ryegrass only)</td>
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<td>Phalaris</td>
<td>Gesaprim® (Perennial Ryegrass only), Gramoxone® (Perennial Ryegrass only), Spray Seed® (Perennial Ryegrass only), Parapar (Perennial Ryegrass only)</td>
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<tr>
<td>Forage Brassica</td>
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<tr>
<td>Plantain</td>
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<tr>
<td>Chicory</td>
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<tr>
<td>Forage Millet</td>
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<tr>
<td>Forage Sorghum</td>
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<tr>
<td>Vetch</td>
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</tbody>
</table>
**SOWsmart® SPRING FAST FEED BLEND**

**Time to graze 6 - 8 weeks**

- Bouncer Hybrid Forage Brassica
  - 50%
- Balance Chicory
  - 50%

**SEEDING RATE** 5 kg/ha

**First to spring sow and first to graze.** Developed to fill the early feed gap prior to when other spring and summer crops are up to grazing stage. Potential first grazing as early as six weeks from sowing. The benefit of this combination of brassicas is high quality feed fast when you need it so finishing stock are putting on condition.

**SOWsmart® SUMMER FEED BLEND**

**Time to graze 6 - 8 weeks**

- Height to grazing 30 – 40cm

- Rebound Millet
  - 70%
- Balance Chicory
  - 10%
- Subzero Hybrid Forage Brassica
  - 10%
- Renegade Red Clover
  - 10%

**SEEDING RATE** 20 – 30 kg/ha

**Summer Feed Blend provides good quality production with the balancing flore source of millet in the paddock with the brassicas. It is capable of keeping cows in lactation and weight gains on steers through the high summer temperatures.**

**SOWsmart® SPRING GRAZE BLEND**

**Time to graze 10 – 12 weeks**

- Outback Forage Oats
  - 70%
- Balance Chicory
  - 10%
- Subzero Hybrid Forage Brassica
  - 10%
- Renegade Red Clover
  - 10%

**SEEDING RATE** 35 – 50 kg/ha

**Based on summer feed, but allowing for earlier sowing by replacing the millet with forage oats.** Enabling the use of late winter sowing, into moisture, guarantees a solid early start for this high yielding blend. Ideally suited for carrying stock from pastures through to stubbles.

**SOWsmart® SPRING FINISHING BLEND**

**Time to graze 10 - 12 weeks**

- Subzero Hybrid Forage Brassica
  - 60%
- Balance Chicory
  - 20%
- Renegade Red Clover
  - 20%

**SEEDING RATE** 5 kg/ha

**An excellent quality, high production blend, where superior levels of animal performance is required. Ideal for finishing late prime lambs or yearling steers. Best suited to situations where management and inputs are at a high level to achieve high weight gain livestock performance.**

**SOWsmart® BRASSICA BLEND**

**Time to graze 8 - 10 weeks**

- Subzero Hybrid Forage Brassica
  - 50%
- Balance Chicory
  - 20%
- Bouncer Hybrid Forage Brassica
  - 20%
- Balance Chicory
  - 10%
- Renegade Red Clover
  - 10%

**SEEDING RATE** 5 kg/ha

**Brassica Blend has the ability to offer high quality forage and enhance the value of standing dry feed when managed correctly. Ideally, stock require access to run off paddocks for best animal performance.**

**SOWsmart® LUCERNE & CHICORY BLEND**

**Time to graze 8 - 10 weeks**

- L71 Lucerne
  - GX 80%
- Balance Chicory
  - X 20%

**SEEDING RATE** 4 - 6 kg/ha

**Persistent high producing lucerne, combined with mineral rich, highly palatable long term chicory.** This blend delivers good protein to energy ratio ensuring high animal production weight gains for beef and prime lamb production. **SOWsmart® Lucerne & Chicory reduces biotrisk while enhancing the production values of lucerne pastures.**

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**FOR FURTHER TECHNICAL INFORMATION**

**QUEENSLAND**

Michael Christensen 0430 821 029

**SOUTHERN QLD & NORTHERN NSW**

Hugh Graham 0427 255 292

Adam Little 0499 022 554

Tom Robertson 0429 146 817

Dean Lombardozzi 0425 871 968

Jim Francis 0419 995 416

John Heard 0499 660 069

Ian Freebairn 0427 241 448

James Cook 0430 353 006

David Barnett 0429 999 155

Rehn Freebairn 0417 711 905

**PASTURE GENETICS WAREHOUSE DEPOTS ARE LOCATED IN:**

- Toowoomba, Tamworth, Dubbo, Wagga Wagga, Canberra, Nowra, Tatura, Warragul, Ballarat, Launceston, Adelaide and Perth.

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