



Persistence  
unearthed.

**Wrightson Seeds**

# Persistence unearthed.



Maintaining persistent and high producing ryegrass pastures is a problem on many dairy farms. Root feeding insects can weaken ryegrass plants and pastures may require resowing earlier than desired.

A key to pasture persistence has been unearthed with **AR37\* endophyte**.

AR37 protects ryegrass plants against four pasture insect pests common to Australian pastures including Pasture Root Aphid.

AR37 endophyte in **Extreme®** and **Base perennial ryegrasses** deters root insects so ryegrass plants remain dense and highly productive over a longer period.

Pasture Root Aphids have recently become recognised as a widespread and significant pest of ryegrass pastures severely limiting plant growth when plants are under moisture stress.



White waxy exudate indicating the presence of *Pasture Root Aphid*



Close up of *Pasture Root Aphid*



*AR37 endophyte ryegrass* (left) compared to *AR1 ryegrass* (right) after 3 years.

In trials conducted by PGG Wrightson Seeds, varieties with nil endophyte or endophytes that don't control Root Aphids have shown a reduction of up to 50% in autumn/early winter growth rates and a decrease in persistence (from 90% down to 10%) when compared with varieties with an endophyte that does control Root Aphid.

AR37 endophyte in **Extreme®** and **Base perennial ryegrasses** provide resistance against Pasture Root Aphid, Argentine Stem Weevil, Black Beetle, and Pasture Mealy Bug. This allows pastures to maintain high production from more persistent ryegrass plants in areas where there is higher insect pressure.





**Extreme® is a diploid perennial ryegrass that is medium-broad leaved, persistent and densely tillered. It has been bred for high dry matter production, cool season activity and very low aftermath heading.**

#### **Extreme® AR37 perennial ryegrass features:**

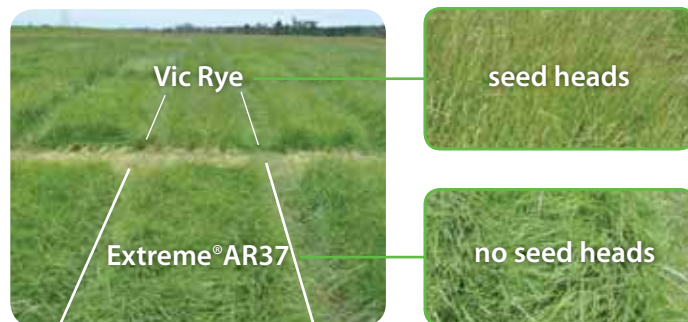
- very high dry matter production
- mid-season heading
- improved persistence (AR37 endophyte)
- strong cool season growth
- lowest aftermath heading cultivar available in mid-season heading class
- improved sugar (soluble carbohydrate) levels

#### **Aftermath Heading**

Aftermath heading (AMH) is the ongoing production of seed heads that occur in a grass plant, after the main flush of seed head production has taken place in spring. In mid-season perennial ryegrass cultivars for example, the main flush of heading occurs in November. If cutting or grazing removes these heads, the plant may produce further seed heads, called aftermath heading.

Seed heads reduce pasture quality (and therefore animal performance) and cause management headaches during late spring and summer.

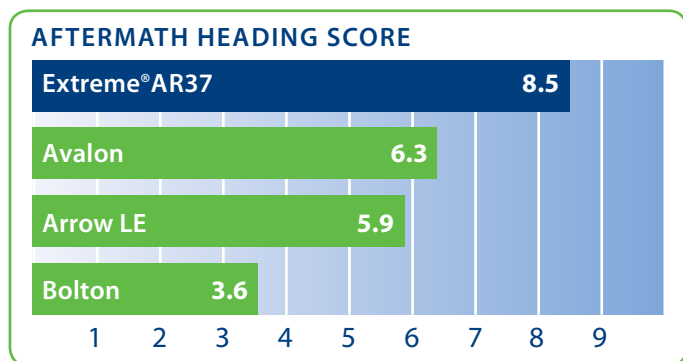
Low aftermath heading in ryegrass is achieved by compressing the seed head production into a short, sharp peak. Low aftermath heading cultivars then stop further seed head production and resume leaf production to produce a high quality grass sward as depicted below.



## Summer Quality

To determine the summer pasture quality of Extreme® the aftermath seed head production was visually scored. The average of these trials showed Extreme® had much less aftermath seed head production than other mid season diploid perennial ryegrasses.

Aftermath heading is scored on a scale of 1–9 where 1 = many seed heads and 9 = no seed heads.



Data is an average of visual scores of a Ballarat trial sown in 2006 and scored in February 2007.

## Dry Matter Production of Extreme®AR37

The following table shows that Extreme® with AR37 had better dry matter production relative to Extreme® with AR1 after year three of the trial. This is seen as the benefit of the AR37 endophyte.

### DRY MATTER PRODUCTION

	Year 1	Year 2	Year 3
Extreme®AR37	100	107	108
Extreme®AR1	100	100	100

Data is combination of 3 years dry matter from each of 3 trials at Ballarat sown in 2006, 2007 and 2008.

## Sowing and Establishment

Extreme® can be sown at 15-25 kg/ha with Superstrike® clover. It combines well with other components of a pasture mix (eg. Puna II chicory, Base AR37, Banquet®II).

## Grazing Management

Extreme® will produce and persist better under rotational grazing. Avoid hard set stocking during periods of stress (eg. droughts and low fertility).

For more technical information on AR37 including information on animal health go to [www.ar37.com.au](http://www.ar37.com.au)



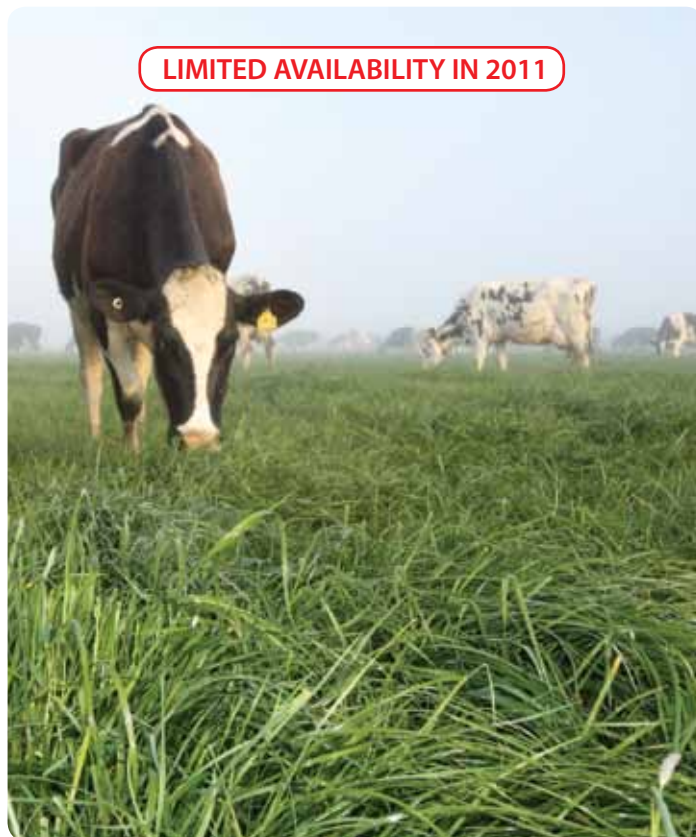


Base tetraploid perennial ryegrass is the newest release from the same breeding programme that delivered Banquet® II ryegrass. Base has unique attributes to aid persistence including AR37 endophyte.

Base was Australian bred and selected from high yielding, densely tillered plants that survived two years of severe drought under close grazing. Base pastures have low aftermath heading, maximising summer pasture quality and animal production.

#### Base AR37 perennial ryegrass features:

- very high dry matter production
- attributes for persistence
- very late heading variety
- improved persistence (AR37 endophyte)
- high tiller density
- low aftermath heading



# Plan your feed requirements now by contacting a member of our **National Sales Agronomy Team.**



**Northern NSW**  
**Allan Mudford**

0418 213 898

amudford@wrightsonseeds.com.au



**Northern Victoria**  
**John McKenzie**

0418 296 113

jmckenzie@wrightsonseeds.com.au



**Tasmania**  
**David Squibb**

0425 790 222

dsquibb@wrightsonseeds.com.au



**Central NSW**  
**Jonathon Tink**

0418 329 243

jtink@wrightsonseeds.com.au



**Western Victoria**  
**Dean Harrington**

0418 568 401

dharrington@wrightsonseeds.com.au



**South Australia**  
**Matt Ballantyne**

0418 667 294

mballantyne@wrightsonseeds.com.au



**Southern NSW**  
**David Phelps**

0408 313 240

dphelps@wrightsonseeds.com.au

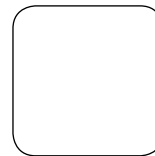


**South West Victoria**  
**Darrel Rowe**

Dairy specialist

0427 150 278

drowe@wrightsonseeds.com.au



**Gippsland**  
**TBA**

0418 513 156

kburke@wrightsonseeds.com.au



**Western Australia**  
**Kevin Williams**

0419 312 156

kwilliams@wrightsonseeds.com.au

## **Wrightson Seeds Australia Pty Ltd**

7-9 Distribution Drive, Truganina, Victoria 3029

PO Box 333 Laverton Vic 3028

## **Customer Service**

Free call 1800 619 910

Free fax 1800 619 940

\*For more technical information on AR37 including information on animal health go to [www.ar37.com.au](http://www.ar37.com.au), visit your accredited AR37 pasture seed advisor or call Wrightson Seeds on **1800 619 910**.

AR37 endophyte is protected by Australian patent 2004243789, Australian patent pending 2008200775, and Australian Plant Breeder's Rights Act 1994. Harvesting/propagating, re-sowing, and/or on-selling AR37 seed may infringe these intellectual property rights and may result in prosecution.

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