

“Proven on farm New Zealand wide”

- Available with **AR37** and **AR1** novel endophytes and LE
- Outstanding summer, autumn and winter growth particularly with **AR37**
- Excellent spring quality and summer leafiness
- Excellent use of summer irrigation or natural rainfall

PLOIDY	SUGGESTED SOWING RATE (kg/ha)	HEADING DATE	ENDOPHYTE	RUST TOLERANCE
Diploid	18-20	Late (+20)	AR37, AR1 & LE	Very high

Background

ONE⁵⁰ is a late heading diploid perennial ryegrass of medium leaf and tiller size. **ONE⁵⁰** is a high performing variety with particularly strong growth from summer through to winter. **ONE⁵⁰** has proven to be a robust and persistent option and is available in **AR37, AR1** and LE endophyte options.

ONE⁵⁰ is a cross of elite New Zealand genetics and genetics of north-west Spanish origin, producing a cultivar with exceptional leaf production through summer, and high drymatter production through autumn and winter. **ONE⁵⁰** has always demonstrated a stay green habit through dry summers, often obvious in trials at this time. These traits were also observed by Matthews *et al.*, (2012).

Production Data

Agricom values individual trials that are undertaken New Zealand wide and the data they provide. For us, while the results may have statistical limitations, they deliver invaluable information on the basis of the specific locations and conditions in which they are undertaken, especially from the experiences and anecdotal feedback received.

Multiple trial summaries offer a level of confidence that a result will be repeated. It is important to be aware that the number of trials a cultivar is summarised in relates to the confidence you can have that the data summary will not change with the addition of extra trials. Cultivars summarised from a least 8-10 trials are less likely to change than ones summarised from 3-4 trials.

ONE⁵⁰ is one of the most trialled cultivars in the New Zealand National Forage Variety Trials (NFVT). It was initially released with **AR1** endophyte and has been in 20 three year trials with this endophyte option. More recently **ONE⁵⁰** was released with the inclusion of the endophyte option **AR37**. This has been even more widely tested and to date has been in 25 trials. **ONE⁵⁰** has also been tested without endophyte (WE) five times. This makes **ONE⁵⁰** one of the most widely tested ryegrasses (with a variety of endophyte options) nationwide. It also makes **ONE⁵⁰** an ideal pasture cultivar with which to judge the value of different endophyte options for drymatter production throughout the country. **ONE⁵⁰** shows strengths in late spring, summer, autumn and winter (Table 1). While **ONE⁵⁰ AR1** is a competitive endophyte option, **ONE⁵⁰ AR37** is providing advantages in drymatter production over **ONE⁵⁰ AR1**, with particular significance in the autumn.



Production Data Continued.

Table 1: NFVT Summary 1991 – 2016 (August 2016) Perennial Ryegrass: All New Zealand Trials (yields by season as percentage of mean)

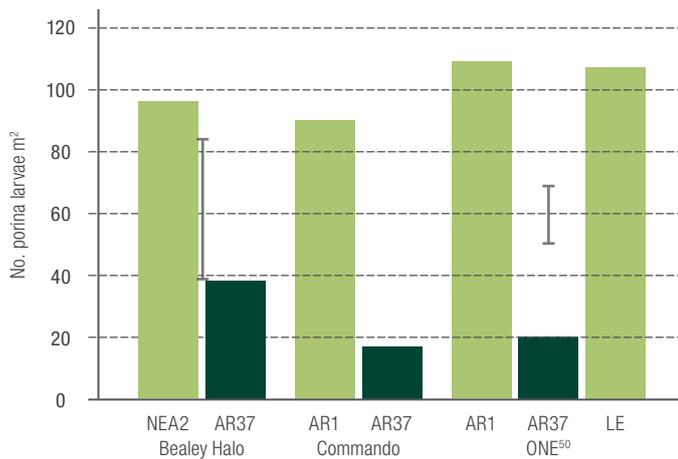
ENTRY	NUMBER OF TRIALS	WINTER		EARLY SPRING		LATE SPRING		SUMMER		AUTUMN		TOTAL	
		% of Mean	LSI	% of Mean	LSI	% of Mean	LSI	% of Mean	LSI	% of Mean	LSI	% of Mean	LSI
Trojan NEA2	14	116	3.3	108	2.9	106	2.6	110	3.0	106	3.5	108	2.4
Base AR37	9	113	4.0	103	3.4	104	3.2	109	3.6	112	4.1	108	2.9
One50 AR37	22	112	2.7	98	2.3	101	2.1	111	2.5	114	2.8	107	1.9
Excess AR37	4	114	5.8	101	5.0	103	4.6	109	5.3	108	6.0	106	4.2
Arrow AR1	13	108	3.4	108	2.9	105	2.7	105	3.1	105	3.5	106	2.4
Alto AR37	16	110	3.1	104	2.7	103	2.5	106	2.8	108	3.2	106	2.2
Request AR37	8	105	4.2	112	3.6	101	3.4	103	3.9	110	4.4	105	3.0
Prospect AR37	10	112	3.8	101	3.3	101	3.0	108	3.5	107	4.0	105	2.7
Ansa AR1	4	112	5.8	107	5.0	103	4.7	103	5.4	102	6.1	104	4.2
Ultra AR1	16	110	3.0	101	2.6	101	2.4	105	2.8	106	3.2	104	2.2
Matrix SE	11	107	3.6	104	3.1	101	2.8	102	3.3	105	3.7	103	2.6
One50 AR1	19	109	2.8	96	2.4	99	2.2	106	2.6	104	2.9	103	2.0
Alto AR1	27	105	2.4	102	2.1	103	2.0	103	2.2	102	2.5	103	1.8
Bealey NEA2	26	109	2.5	98	2.2	100	2.0	104	2.3	104	2.6	102	1.8
Halo AR37	18	106	2.9	94	2.5	99	2.3	106	2.7	107	3.0	102	2.1
Expo AR1	10	106	3.7	103	3.2	101	3.0	102	3.4	100	3.9	102	2.7
Rely AR37	4	94	5.8	102	5.0	101	4.6	98	5.3	111	6.0	102	4.2
Expo AR37	4	104	5.8	98	5.0	100	4.6	101	5.3	103	6.0	101	4.2
Base AR1	3	106	6.7	102	5.8	103	5.4	99	6.2	97	7.0	101	4.8
AberMagic AR1	4	81	5.7	95	4.9	104	4.6	106	5.3	99	6.0	101	4.1
Excess AR1	3	98	6.7	105	5.8	99	5.4	103	6.2	96	7.0	100	4.8
Samson AR37	6	100	4.7	103	4.1	99	3.8	94	4.3	102	4.9	99	3.4
Ohau AR37	4	99	5.8	104	5.0	99	4.6	96	5.3	94	6.0	98	4.2
Rohan NEA2	5	100	5.2	92	4.5	96	4.2	95	4.8	101	5.4	97	3.8
Bronte AR1	4	103	5.8	97	5.0	98	4.7	97	5.4	91	6.1	97	4.2
Samson SE	17	95	3.2	100	2.7	96	2.5	93	2.9	96	3.3	96	2.3
Stellar AR1	8	80	4.2	101	3.6	96	3.3	94	3.8	90	4.3	94	3.0
Nui SE	27	91	2.4	100	2.1	95	1.9	89	2.2	91	2.5	93	1.7
Pacific SE	6	90	5.1	100	4.4	96	4.1	88	4.7	91	5.4	93	3.7
AberGreen WE	3	59	6.7	85	5.8	100	5.4	90	6.2	79	7.0	87	4.8
AberMagic WE	6	58	4.9	82	4.2	99	3.9	85	4.4	82	5.0	85	3.5
Uncertified LP	6	85	4.8	94	4.1	89	3.8	79	4.4	74	5.0	84	3.4
Mean (kg DM/ha)	81	1091		2053		3565		3922		2742		13372	

LSI (Least Significant Interval) - If two means differ by more than the sum of their LSI, they are significantly different at the 5% level

Additional Data

ONE⁵⁰ AR37 has been so widely tested it has also proven itself in trials that have been influenced by insects, such as reported in Popay *et al.*, (2012).

Figure 1. Estimated Density of Porina Larvae in Two Tetraploid and Two Diploid Perennial Ryegrass Cultivars Infected with Different Endophytes in Trials at Woodstock in Canterbury Sampled in July 2011. Error Bar = LSD (5%)



Key Tips

- Ideally hard graze in November (regardless of seed head presence) to maximise summer quality
- Consider including **Relish** red clover to increase clover content, as **Relish** is more competitive and productive over time
- **ONE⁵⁰** benefits from late autumn nitrogen as it helps maintain its winter strong activity and assists with early spring vigour

Suggested Mixes

DAIRY PASTURE EXAMPLE MIX

	RATE (kg/ha)
ONE⁵⁰ AR37, AR1 or LE perennial ryegrass*	20
Mainstay white clover	3
Tribute white clover	2
TOTAL	25

SHEEP & BEEF PASTURE EXAMPLE MIX

	RATE (kg/ha)
ONE⁵⁰ AR1 or LE perennial ryegrass*	18
Tribute white clover	3
Relish red clover	4
Tonic plantain	1
Choice chicory	2
TOTAL	28

* It is not advisable to mix **AR37** and **AR1** varieties. **AR1** is not recommended for areas where black beetle, porina or root aphid are common problem pests. Grass seed should be Superstrike® treated where Argentine stem weevil, black beetle or grass grub are a risk to seedlings. For more information on **AR37** endophyte, visit ar37.co.nz.

For information on **ONE⁵⁰s** performance in the Forage Value Index from DairyNZ see www.dairynz.co.nz/fvi.