

1. ENDOPHYTE INSECT CONTROL

RYEGRASS, FESTULOLIUM & CONTINENTAL TALL FESCUE

Approved by NZPBRA Executive 22nd September 2020

Endophyte Brand	Argentine stem weevil	Pasture mealy bug	Black beetle	Root aphid	Porina	Grass grub	Field cricket
Diploid perennial ryegrass							
AR1	++++	++++	+	⁻²	-	-	Not tested
NEA2	+++	(++++)	+++	++	Not tested	-	Not tested
NEA4	+++	(++++)	+++	++	Not tested	Not tested	Not tested
AR37	++++ ¹	++++	+++	++++	+++	+	Not tested
Standard endophyte	++++	++++	+++	++	+	-	Not tested
Without endophyte	-	-	-	-	-	-	Not tested
Tetraploid perennial ryegrass							
AR1	(+++)	(++++)	+	⁻²	-	-	Not tested
AR37	(+++) ¹	(++++)	+++	++++	(+++)	+	Not tested
Without endophyte	-	-	-	-	-	-	Not tested
Italian and short term (hybrid) ryegrass							
AR1	++	(++++)	+	⁻²	Not tested	-	Not tested
NEA	Not tested	(++++)	+++	Not tested	Not tested	-	Not tested
AR37	+++ ¹	(++++)	+++	Not tested	Not tested	-	Not tested
Without endophyte	-	-	-	-	-	-	Not tested
Festulolium							
U2	++++	(++++)	++++ ³	++++	(++)	+++	+++
Continental tall fescue							
MaxP (AR584)	Not tested	Not tested	+++	(++++)	Not tested	(++)	+++
Without endophyte	-	-	-	-	-	-	-

Notes on Tables

- No control.
 - + Low level control: Endophyte may provide a measureable effect, but is unlikely to give any practical control.
 - ++ Moderate control: Endophyte may provide some practical protection, with a low to moderate reduction in insect population.
 - +++ Good control: Endophyte markedly reduces insect damage under low to moderate insect pressures. Damage may still occur when insect pressure is high.
 - ++++ Very good control: Endophyte consistently reduces insect populations and keeps pasture damage to low levels, even under high insect pressure.
 - () Provisional result: Further results needed to support the rating. Testing is ongoing.
- 1 AR37 endophyte controls Argentine stem weevil larvae, but not adults. While larvae cause most damage to pastures, adults can damage emerging grass seedlings. In Argentine stem weevil prone areas it is recommended to use treated seed for all cultivars with novel endophyte.
 - 2 AR1 plants are more susceptible to root aphid than plants without endophyte.
 - 3 Active against black beetle adults and larvae.