

What are endophytes?

Endophytes are fungi which have evolved to live in harmony with ryegrass. They live inside the seed and plant, and produce natural compounds (or alkaloids) which protect plants from pests.

Why use them?

Endophytes enhance ryegrass yield and persistence by helping protect plants from a range of insects and other pests. In summer dry pastures, ryegrass with endophyte out-grows and lives much longer than ryegrass Without endophyte.

Why do you need to know about them?

Several strains of endophyte are available so it's important to know which is best for your situation. Choose the right endophyte and both your pasture and animals will benefit.

The original endophyte, called *Standard* endophyte (SE), depresses animal performance and causes summer ryegrass staggers. Newer endophytes are much less toxic to stock e.g. *AR1*, *NEA*, *NEA2* and *NEA4*. These greatly reduce the risk of staggers. *NEA12* and *AR37* endophytes have improved insect resistance but can cause staggers, although less frequent and severe than *Standard* endophyte.

What's its life cycle?

When you sow ryegrass seed containing an endophyte strain (e.g. *NEA*), resultant plants will always contain that endophyte. It stays inside the grass for the life of that plant. If you sow seed *Without* endophyte, those plants will never have endophyte. It does not transfer from plant to plant, or from soil to plant; it only transfers naturally from plant to seed.



