

Black field cricket added to pests deterred by GrubOUT® U2 endophyte

For those farmers whose pastures are severely affected by black field crickets, the news that the new endophyte GrubOUT® U2 protects host grasses from crickets, will be strongly welcomed.

After 15 years of research and development effort by Cropmark Seeds Ltd, the GrubOUT® U2 endophyte was launched last autumn and is available in the company's ready-to-sow Barrier Combo™ permanent pasture mix.

Cropmark's CEO Glen Jarvis says research conducted on behalf of the company has shown that crickets seem to be particularly sensitive to loline alkaloids produced by the GrubOUT® U2 endophyte contained in Barrier Combo™.

"The research has clearly shown that crickets won't eat grass containing lolines. There is a very strong feeding deterrence effect. This is a valuable trait for a pasture to have, given the fact that crickets can be a significant pasture pest in many parts of the country."

While black field crickets are found throughout the North Island and milder parts of the South Island, they are generally only of serious economic importance in northern areas of New Zealand – Northland especially. Damage to pastures can be significant, affecting establishing seedlings and established pastures, resulting in reduced pasture production and even plant death.

According to the AgResearch website 'Pestweb™', two crickets per square metre over one hectare will consume the equivalent of one sheep. In plague seasons, as many as 20-40 crickets/m² frequently occur and can cause losses of 30kg DM/ha/day. In dairy pasture an average density of 25 crickets/m² can be responsible for 2,000kg DM/ha/yr lost production.

The use of Barrier Combo™ pasture which contains the GrubOUT® U2 endophyte will provide a very cost effective and animal-safe tool against the damage caused by crickets, resulting in potentially greater long-term pasture yield and persistence.

But it is not just crickets that are affected by the GrubOUT® U2 endophyte. It has already been reported that the GrubOUT® U2 endophyte, which is the only endophyte to operate above and below ground, protects host grasses from grass grub, black beetle adults and larvae, porina caterpillar and Argentine stem weevil.

"Results in the field have been spectacular. In trials we have seen all other ryegrass / endophyte combinations wiped out by heavy infestations of grass grub and black beetle, whereas grasses containing the GrubOUT® U2 have been unaffected," says Jarvis.



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“The other exciting aspect is that the endophyte is safe to sheep, cattle and deer and does not cause grass staggers or heat stress. It has not yet been tested on horses or alpacas, and so Cropmark is stopping short of recommending it for them yet.”

“While some of NZ’s most serious insect pests don’t like eating Barrier Combo™ because of the GrubOUT® U2 endophyte it contains, livestock do. Experience throughout the country has shown that stock find it extremely palatable and will graze it preferentially over other ryegrass / endophyte combinations” Jarvis says.



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For best establishment the Barrier Combo™ pasture mix (which comes complete with medium and large leafed white clovers) should be shallow sown at a rate of 25kgs/hectare or more to a depth of no more than 1-2 cm, into a well worked, firm seed bed when soil temperatures are 12° Celsius or more.

Sowing into existing pastures is not recommended because it dilutes the effectiveness of the Barrier Combo™ mix.

