

Harvest analysis finds clear winner for rhizoctonia control in cereals

Broadacre
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Data collated from a 2018 trial in Western Australia has reinforced the value in targeted rhizoctonia root rot management for cereal growers.

The replicated plot trial at York measured untreated against treated, comparing Syngenta fungicides with the latest competitor-offering, using Scepter wheat.

Living Farm who conducted the trial found that UNIFORM® was the best fungicide for the control of rhizoctonia, on a site that had been inoculated to ensure even and high disease pressure.

A visual assessment of plants 87 days after sowing showed significant impacts to the roots on those control plots (see table below).

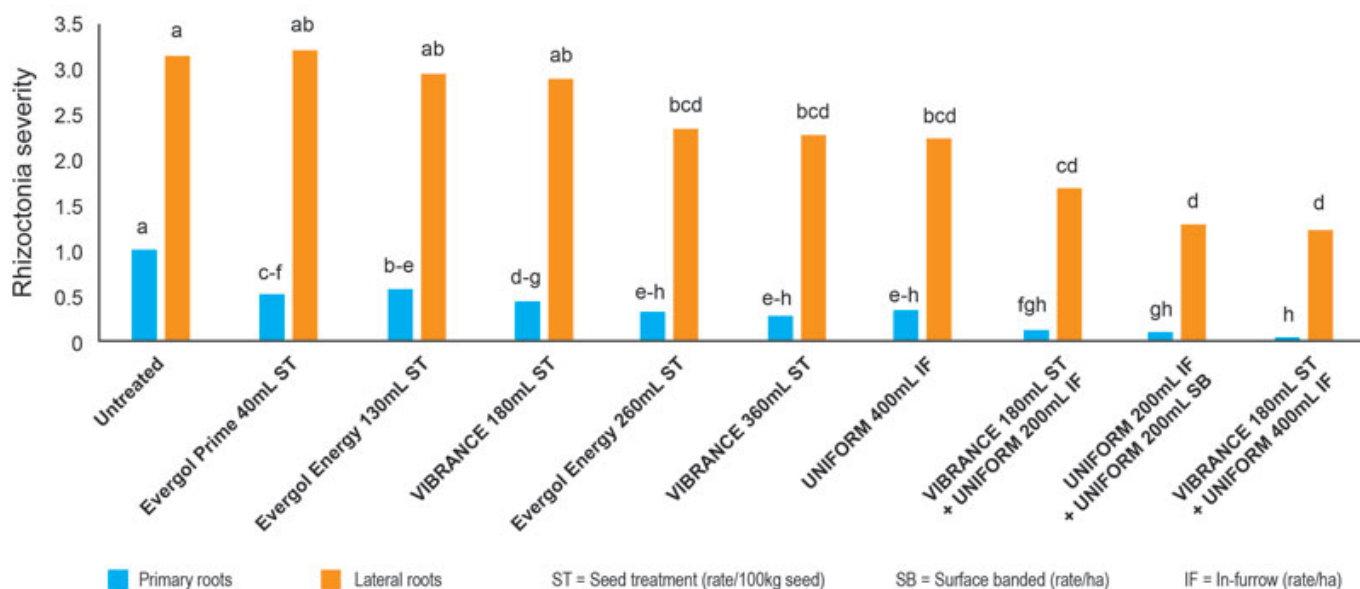
Visually, the best performing plants had received a split application of UNIFORM, 200ml/ha surface banded and 200ml/ha in-furrow.

The harvest data supported that visual assessment. While the untreated plots averaged 3.08 t/ha the split UNIFORM application boosted the yield to 3.75 t/ha; a better than 20% improvement.

Other important trial observations were that:

- The next highest yields were achieved by applying VIBRANCE on the seed in combination with UNIFORM in-furrow. The average yield improvement of these treatments averaged close to 12% above the untreated.
- VIBRANCE seed treatments were seen to significantly reduce rhizoctonia severity on the primary roots, in particular at the higher application rate (360 mL/100kg-seed). At the 360mL rate, this market-leading product will also provide control of a range of bunts and smuts in wheat, as well as pythium root rot.
- The addition of in-furrow or surface banded applications provided the lowest primary and lateral root severity.

Rhizoctonia severity (0 to 5) on primary and lateral roots in Scepter wheat 87 days after seeding. York, Western Australia 2018. Living Farm Trial No: LF180454



Observations on Rhizoctonia damage to the primary and lateral roots 87 days after seeding followed the trend for final harvest data. Higher yields were achieved with a seed treatment (VIBRANCE) plus UNIFORM and the highest yielding treatment and lowest root score severity was the split application of UNIFORM.

According to Syngenta Solutions Development Lead, Ben Parkin, rhizoctonia can be a vexing problem for growers and can be a real challenge to manage.

The most common form in broadacre farming systems, *Rhizoctonia solani* AG8, has a wide crop and weed host range. There are limited rotational options. At present no resistant cereal cultivars exist and the fungus can grow and survive in the soil on organic residues, even without a live plant host.

Widespread adoption of conservation tillage has reportedly compounded the problem. Traditional farming systems that relied on tillage seemed to provide some control by breaking up the network of rhizoctonia hyphae in the soil.

Mr Parkin said the registration of UNIFORM was the result of a successful collaborative research project between Syngenta, the South Australian Research and Development Institute, the University of South Australia and the Department of Agriculture and Food, Western Australia, with funding from the GRDC (Grains Research and Development Corporation).

Uniform at a glance

UNIFORM provides the only control of rhizoctonia in Australian wheat and barley crops. It also provides control of pythium, yellow leaf spot and stripe rust (up to 100 days) in wheat and barley crops.

Growers will find UNIFORM is a versatile product for seeding time. It can be applied in-furrow as a liquid or as a coated granular fertiliser and at variable rates depending on the machinery set up and the expected disease pressure, i.e.

- Applied with fertiliser in-furrow
- Applied as liquid in-furrow below the seed
- Spilt Application - liquid in-furrow plus a surface band

When applying UNIFORM, use a minimum separation of 15 mm from the seed. When applying with fertiliser, use the minimum distance recommended for the fertiliser.

Combined, UNIFORM and VIBRANCE® offer the broadest spectrum disease management in Australian wheat and barley. Together, they deliver an advanced root health and foliar protection package by protecting crops from the most economically significant seed-borne, soil-borne and foliar diseases.

Products:

Uniform

Vibrance