

BIOLOGICAL SEED TREATMENTS FOR ONION NECK ROT

Steve Roberts • s.roberts@planthealth.co.uk
Plant Health Solutions Ltd., Warwick, UK • www.planthealth.co.uk

Background

- Neck rot causes significant losses in stored onions with infection levels as high as 48% reported.
- It is caused by several species of *Botrytis*: *B. aclada*, *B. allii* and *B. byssoidea*.
- It can be seed-borne, so seed treatment with fungicides has been important for its control.
- There is currently a lack of approved seed treatments.
- This work aims to identify biological control agents (BCAs) with commercial potential as seed treatments for control of onion neck rot.



Evaluation

- A seed inoculation method has been developed which mimics natural infection: both external and internal inoculum.
- Infected seed was treated with a range of commercial and experimental BCAs.
- Seed tests do not give a good indication of the efficacy of BCAs, so transmission studies have been the main focus.



Transmission tests

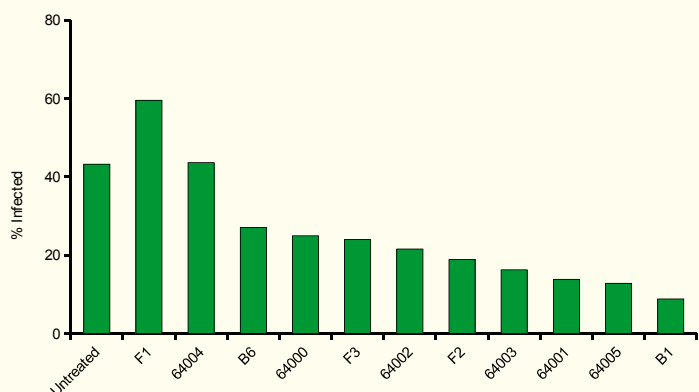


Treated seeds are sown in module cells in the glasshouse.



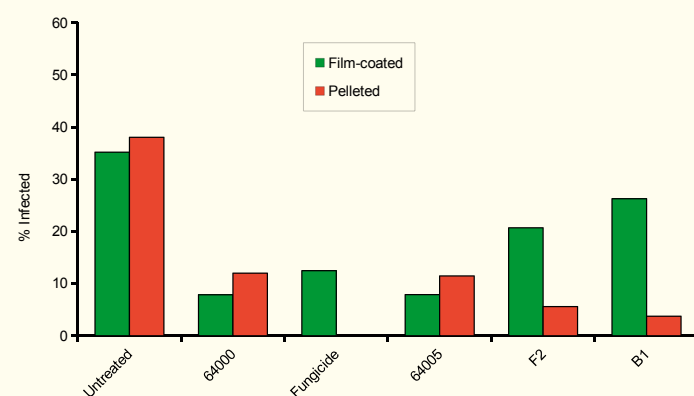
Leaves are harvested and checked for typical *B. aclada*.

Laboratory treatment



Laboratory scale treatments were used for initial evaluation of BCAs in transmission tests.

Commercial treatment



Commercial scale treatment with selected BCAs have given promising results in transmission tests.

Prospects

- Several promising treatments have been identified by transmission tests on both laboratory treated and commercially treated infected seed.
- The project has also been evaluating the same BCA treatments for the control of *Itersonilia pastinaceae* in parsnip.

