45H29

First Clubroot Resistant Canola Hybrid for Western Canada

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Rating Scales – Disease Index

Incidence*severity/highest severity(3)
100*3/3=100  examples  100*1/3=33
University of Alberta greenhouse testing
Alberta Research Council indoor testing

Infested soil test

Susceptible check

45H29
Field testing – Leduc

Plant sorting on a Resistant hybrid by infection type

3 2 1 0
Race 3 clubroot testing of 45H29 vs. 45H26

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Location
# of plants rated

UofA 72  UofA 18  UofA 126  GH  ARC 40  FIELD  StA 225  Led 245

45H26  45H29

45H29
45H26
GH reaction to races 6 & 8 – University of Alberta

Race 6
Race 8

45H29
45H26
Granaat-
Universal
susceptible

Race 8
Race 6
Leduc and St. Albert 2008 - % of plants vs. infection type

Infection type

45H29

45H26
Characterization Summary
Clubroot

- 45H29 possesses a high level of resistance to Clubroot race 3 (race 2 present within UofA race 3 trials)
- No susceptibility to other races in GH trials – includes races 5 (within ARC inoculum), 6 and 8
Grower Recommendations

• Practice smart agronomics:
  ◆ Don’t shorten rotations
  ◆ Don’t approach this technology as a magic bullet
  ◆ Follow proper sanitation practices

• Follow the recommended 1 in 4 year rotation in fields where Clubroot presence has been identified:
  ◆ Fields under current restriction in affected counties.
  ◆ Cannot plant on notice land for 4 years.

• Keep weeds in check as some are alternate hosts.
Future outlook starting with 45H29: Sustainable Management & Stewardship

- Preventing soil movement
- Recommended rotation
- Resistance utilization & breeding

Profitable Canola Production
“Pioneer is committed to collaborating with local counties and government extension personnel in Alberta and western Canada to ensure the proper and appropriate stewardship of Clubroot resistant genetics so as to preserve the integrity of the technology and provide growers a set of best management practices in the integrated management of this disease”