

Wheat Disease Fact Sheet No. 3

Management Program for Common Root Rot and Fusarium Foot Rot (Crown Rot)

by John E. Watkins, Extension Plant Pathologist

Cause and Occurrence

Common Root Rot

Fusarium Foot Rot (Crown Rot)

Cause: *Cochiobolus sativus* (*Bipolaris sorokiniana*)

Cause: *Fusarium graminearum*

F. culmorum

Occurrence: September to June, during periods of moisture stress

Key Symptoms

- Brown to black lesions on primary and secondary roots and subcoronal internode.
- Brown discoloration of crowns.
- Yellowing of plants in spring.
- Poor tillering.
- Scattered pockets of dead and dying plants in April.
- Spindly plants with small heads.
- Symptoms usually more acute on wind-prone hills and knobs.

Cultural Management Practices

- Plant adapted varieties for the geographic area.
- Plant into a firm, mellow seedbed. (Loose seedbeds promote disease.)
- Control weeds in summer fallow land. (Weeds deplete soil moisture which predisposes plant roots to infection in the fall.)
- Always plant good quality seed. (Bin-run seed is at higher risk.)
- Plant at the recommended date for your geographic area (*see map*). (Early planting or extended, warm fall weather promotes disease.)
- Cultural practices recommended for crown and root rot also reduce the risk of winter injury.

Fungicide Program

- Seed treatment fungicides provide an early window of protection in the fall against common root rot.
 - When selecting a seed treatment product, pick one that has activity against common bunt and loose smut as well as common root rot.
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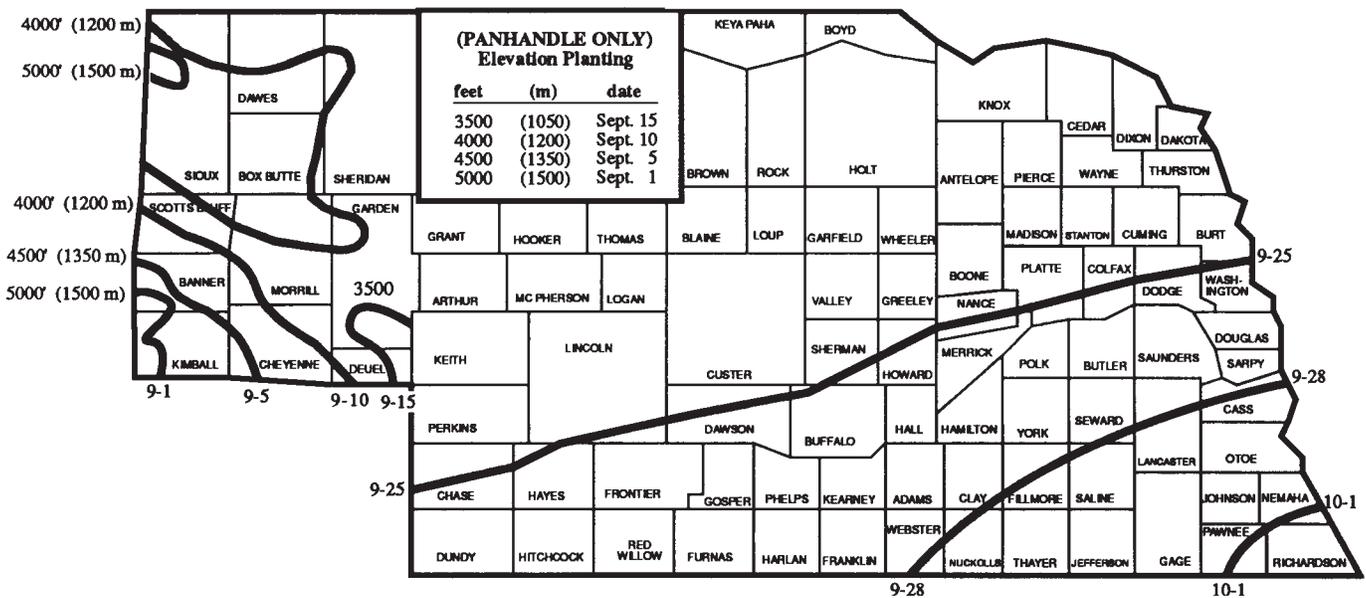
Examples of seed treatment fungicides registered for wheat with activity against common root rot*

- Vitavax Extra (carboxin + imazalil + thiabendazole)
- Dividend XL, Dividend Extreme and Incentive RTA (difenoconazole + mefenoxam)
- Raxil XT, MD and MD-W (tebuconazole + metalaxyl)
- Raxil MD Extra (tebuconazole + metalaxyl + imazalil)
- Asgrow Double RII, Flo-Pro IMC, and NuZone 10 ME (imazalil)
- Baytan (tridimenol)
- Raxil-Thiram (tebuconazole + thiram)

*Fungicides listed represent the best information available. No criticism is intended of products not listed, nor is endorsement by the University of Nebraska–Lincoln given to those listed.

Application

- Uniformly coat the seed when applying the seed treatment product.
- For drill box application, fill the drill box one-third full of seed, sprinkle one-third of the fungicide over the seed and mix. Repeat until the proper amount of fungicide has been added and mixed.
- Read and follow all label directions for mixing and application.



Suggested Seeding Dates for Winter Wheat in Nebraska

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