

Fungicide Management of Rhizoctonia Canker and Black Scurf




Jeff Miller



Rhizoctonia Management


- Variety selection?
 - No evidence of high resistance with commercial varieties
- Plant clean seed
- Treat seed and/or soil with fungicides
- Promote rapid plant emergence



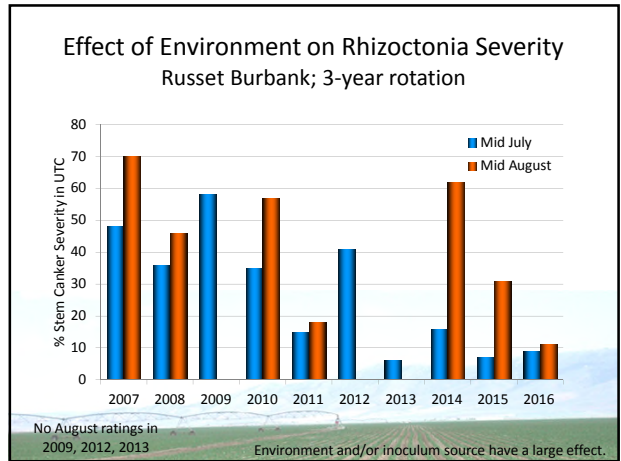
What is the best fungicide application method?

Seed – Best for treating seed inoculum?

In-furrow – Best for treating soil inoculum?



From Mike Thornton, University of Idaho



Not all *Rhizoctonia* is the same

AG-3 most common in potato

Anastomosis Group

	3-PT	2-2IIIB	4HG-I	4HG-III	5	A	R	Total
Black scurf	40	1	0	0	1	3	2	47
Stem canker	1	5	2	2	0	0	0	10
Stolon canker	0	0	1	0	0	0	0	1
Elephant hide	25	1	0	0	0	9	1	36
Growth crack and elephant hide	10	0	0	0	0	1	0	11
Potato rhizosphere soil	2	1	0	0	0	0	0	3
Corky spots	0	0	0	1	0	3	0	4
Total	97	8	3	3	1	16	3	131

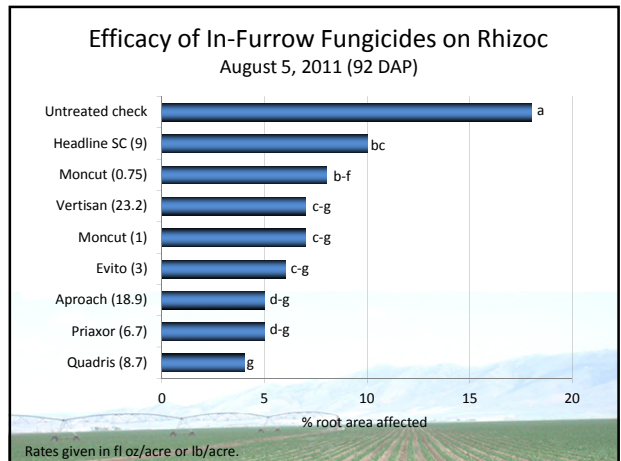
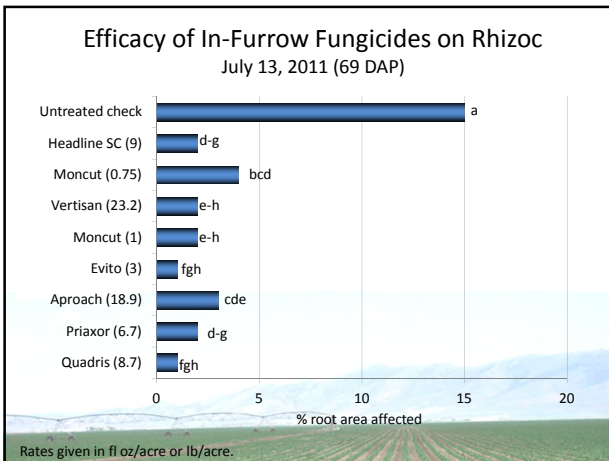
Muzhinji et al., 2015, Plant Dis. 99:1790-1802

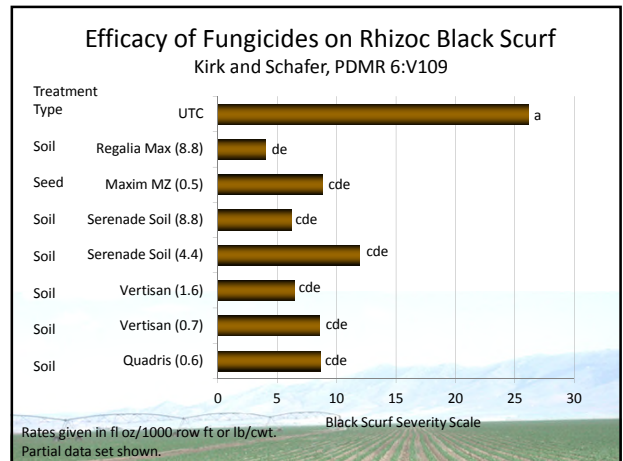
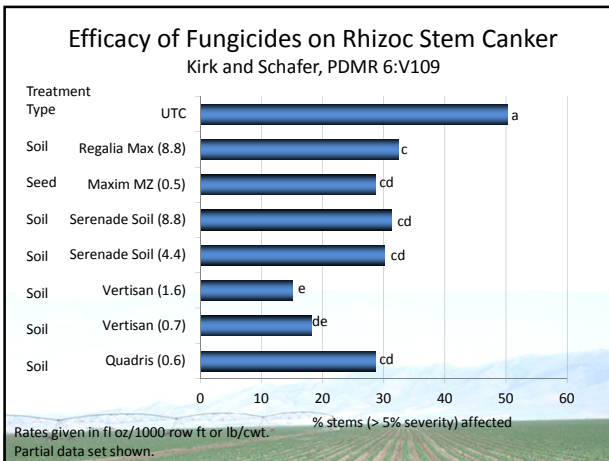
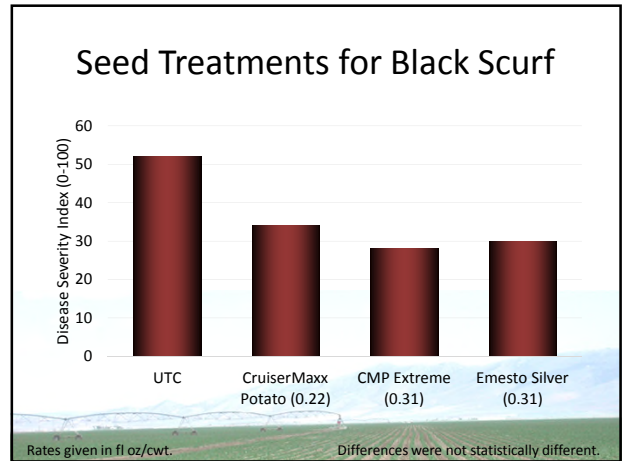
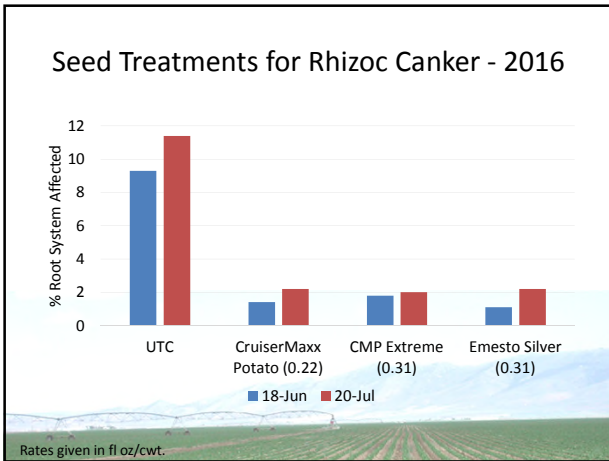
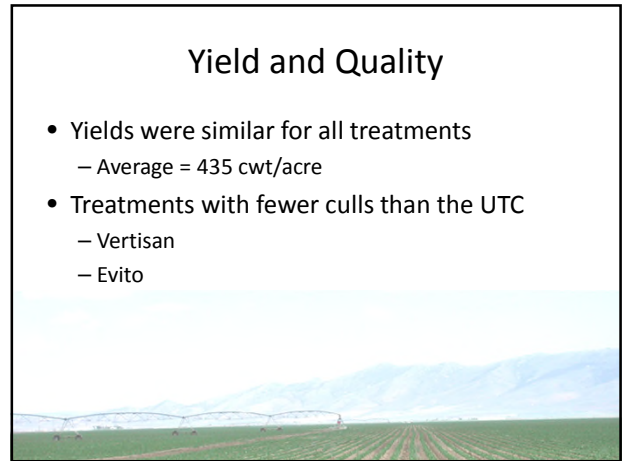
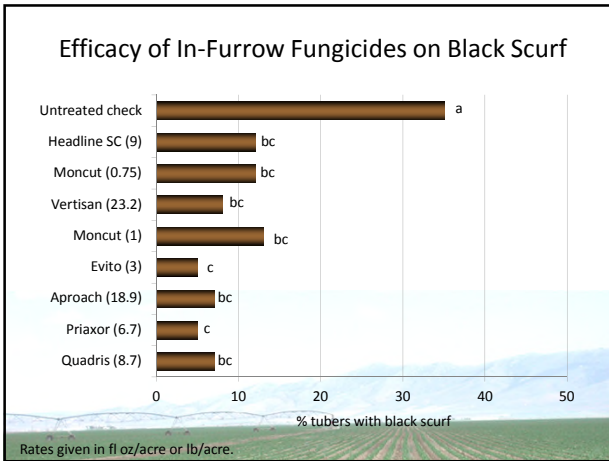
- ### Rhizoctonia Fungicides Options
- #### Seed Treatments

 - Fludioxonil
 - Maxim MZ, Maxim 4 FS
 - Spirato
 - CruiserMaxx Potato
 - Fludioxonil + Difenconazole
 - CruiserMaxx Potato Extreme
 - Flutalonil
 - Moncoat MZ
 - Penflufen + Prothioconazole
 - Ernesto Silver*

In-Furrow Fungicides

 - Elatus (Benzovindiflupyr + Azoxystrobin)*
 - Evito (Fluoxastrobin)
 - Moncut (Flutalonil)
 - Priaxor (Fluxapyroxad + Pyraclostrobin)
 - Quadris (Azoxystrobin)
 - Regalia Max (Extract of *Reynoutria sachalinensis*)
 - Serenade Soil (qST strain of *Bacillus subtilis*)
 - Vertisan (Penthiopyrad)
- *Newer, MRL issues as of Spring, 2017





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*MRL issues for some markets, Spring, 2017

Acknowledgments

- Idaho Potato Commission
- Arysta LifeSciences
- BASF
- Bayer Cropscience
- DuPont
- Gowan
- Syngenta Crop Protection