Corn Nematicide Trial
Yield Results
2006-2010

Tamra Jackson
Extension Plant Pathologist
University of Nebraska-Lincoln
Avicta Nematicide Trial Results
2006 North Bend, NE

Yield

High population densities of lesion nematodes + others at lower densities

*All treatments also contained the seed treatment fungicides Maxim, Apron, and Dynasty.

*High population densities of lesion nematodes + others at lower densities
North Bend, NE
June 2006
Lesion nematodes*
Lance nematodes
Dagger nematodes
Stubby-root nematodes

* Farm average = 180 bu/A
Yield in small plots was as low as 30 bu/A
Root Injury

• Documented nematode pressure
  – September 2006 - >2,000 root-lesion nematodes/gram dried root
  – Other nematodes, such as lance, dagger, and stubby-root nematodes were also identified at this location
  – Other testing locations had less nematode pressure than this site
Avicta Nematicide Trial Results
2007 Shelby, NE

*All treatments also contained the seed treatment fungicides Maxim, Apron, and Dynasty.

*Low nematode pressure – few spiral and stunt nematodes
VOTiVO Nematicide Trial Results
2007 North Bend, NE

*All treatments also contained the seed treatment fungicides Maxim, Apron, and Trilex.

*High population densities of lance nematodes in some plots + others.

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.
VOTiVO Nematicide Trial Results
2007 Shelby, NE

Yield (bu/A)

Check: 143
VOTiVO + Exp 3 & 4A: 147
VOTiVO + Poncho 250: 148
Counter (AMVAC): 151

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.

*All treatments also contained the seed treatment fungicides Maxim, Apron, and Trilex.

*Low nematode pressure - only some spiral and stunt
VOTiVO Nematicide Trial Results
2009 North Bend, NE

*High population densities of stunt and stubby-root nematodes + others

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.

*All treatments had a base seed treatment fungicide combination of ipconazole and metalaxyl.
VOTiVO Nematicide Trial Results
2009 West Point, NE

*High population densities of lesion and spiral nematodes + others

*All treatments had a base seed treatment fungicide combination of ipconazole and metalaxyl.

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.

Yield (bu/A)

- Poncho 250
- Poncho 500
- VOTiVO 5 miu/seed + Poncho 250
- VOTiVO 1 miu/seed + Poncho 250
- VOTiVO 10 miu/seed + Poncho 250
- Counter 15G + Poncho 250
- Avicta (Syngenta) + Poncho 250
- Test Cmpd + Poncho 250
- Poncho 1250
- + VOTiVO 5 miu/seed
VOTiVO Nematicide Trial Results
2010 Aurora, NE

Yield (bu/A)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check</td>
<td>222</td>
</tr>
<tr>
<td>Poncho 250</td>
<td>231</td>
</tr>
<tr>
<td>Poncho/VOTiVO</td>
<td>226</td>
</tr>
<tr>
<td>Poncho 250 + Counter 15G</td>
<td>211</td>
</tr>
<tr>
<td>Avicta 500FS + Cruiser 5FS</td>
<td>222</td>
</tr>
<tr>
<td>Poncho 1250</td>
<td>222</td>
</tr>
<tr>
<td>Poncho 1250 + VOTiVO</td>
<td>218</td>
</tr>
</tbody>
</table>

*All treatments had a base seed treatment fungicide combination of ipconazole and metalaxyl.

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.

*Some lesion and spiral nematodes
VOTiVO Nematicide Trial Results
2010 North Bend, NE

Yield (bu/A)

Check  185
Poncho 250  177
Poncho/VOTiVO  195
Poncho 250 + Counter 15G  180
Avicta 50FS + Cruiser 5FS  195
Poncho 1250  187
Poncho 1250 + VOTiVO  199

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.

*All treatments had a base seed treatment fungicide combination of ipconazole and metalaxyl.

*High population densities of lesion, lance, stubby-root, and stunt nematodes in some plots
Avicta Nematicide Trial Results
2010 South Central Ag Lab

*All treatments except Check were inoculated at planting with *Fusarium* spp.

*High population densities of lesion and spiral nematodes + others*
Avicta Nematicide Trial Results
2010 North Bend, NE

*High population densities of lesion, lance, stubby-root, and stunt nematodes in some plots

*Treatment differences were NOT statistically different according to the Waller Duncan k-ratio t-test.
Conclusions and Interpretation

- **Testing conditions**
  - Fields pre-selected with documented nematode pressure
  - Small plots (30’ long x 10’ wide) replicated 6 times
- **Differences were often not obvious or measurable early in season**
- **Variability in nematode data and/or growing conditions may mask treatment differences**
  - High statistical variability (high CVs) due to random aggregation of nematode populations
  - Mixed populations
    - Nematode genera infect and cause damage in different ways
- **Interaction of other stresses**
  - Weather conditions
  - Nutrient imbalances
Acknowledgements

- Jae Behn, Technologist
- Casey Schleicher, Technologist
- Kim Miller, Technician
- Corn Pathology Lab Staff
- UNL South Central Ag Lab Staff