Weed Control in Field Corn
2021

Eric P. Prostko, Ph.D.
Professor/Extension Weed Specialist
Dept. Crop & Soil Sciences
Herbicide Carryover or Soil pH

Soil pH = 4.7
*Treated vs. Non-treated*

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield Loss (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>56</td>
</tr>
<tr>
<td>2008</td>
<td>38</td>
</tr>
<tr>
<td>2009</td>
<td>47</td>
</tr>
<tr>
<td>2010</td>
<td>49</td>
</tr>
<tr>
<td>2011</td>
<td>31</td>
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<tr>
<td>2012</td>
<td>40</td>
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<tr>
<td>2013</td>
<td>24</td>
</tr>
<tr>
<td>2014</td>
<td>25</td>
</tr>
<tr>
<td>2015</td>
<td>27</td>
</tr>
<tr>
<td>2016</td>
<td>44</td>
</tr>
<tr>
<td>2017</td>
<td>16</td>
</tr>
<tr>
<td>2018</td>
<td>19</td>
</tr>
<tr>
<td>2019</td>
<td>21</td>
</tr>
<tr>
<td>2020</td>
<td>41</td>
</tr>
</tbody>
</table>
| Average | 34 |}

200 Bu/A X 0.34 X $4.00 = $272/A
What about harvest?
What about next year?
Field Corn Weed Control

Questions for you?

- What technologies are you planting?
  - RR, LL, Conventional, Enlist (2,4-D)?

- Do you need Counter?

- Is atrazine still working for you on pigweed?
  - Let's assume it does not

- What will be planted after the field corn?
A general plan of attack?

- **MUST START CLEAN!**

- Use 1 qt/A of Atrazine 4L PRE (or Dual II Magnum, or Warrant, or Outlook)

- Follow up with a **timely** POST program (V3-V5 stage) that includes an additional 1.5 qt/A of Atrazine 4L
  - *Roundup + Atrazine probably not good enough anymore!*

- Lots of options depending upon how you answered previous questions?
  - Liberty, Laudis, Impact/Armezon, Halex GT, Callisto, Acuron, dicamba, 2,4-D
Herbicide Timing Effects on Spray Coverage - 2020

- JD 4630
- 90’ boom length
- 20” nozzle spacing
- 10 GPA
- 32 PSI
- 11 MPH
- 8003EVS
- Roundup + Atrazine + Quest + Grounded
Herbicide Timing Effects on Spray Coverage in Field Corn - 2020

V4: 9-10” tall
20 DAP

V6: 14-16” tall
30 DAP
Herbicide Timing Effects on Spray Coverage (%) in Field Corn - 2020

- 20 DAP (V4)
- 30 DAP (V6)

(LSD 0.10 = 2.1)

Spray Card Height (in)

- 20 DAP (V4):
  - 19.9
  - 12.0
  - -39.6%

- 30 DAP (V6):
  - 18.3
  - 10.6
  - -42.1%

CN-06-20, Miller Co.
JD 4630, 90' Boom
20" Nozzle Spacing
10 GPA, 32 PSI
11 MPH, 8003EVS Nozzles
Roundup + Atrazine + Prowl Works Great For Me But........
Field Corn Weed Control - 2020

Roundup P-Max @ 32 oz/A
Atrazine @ 64 oz/A
Prowl H₂O @ 32 oz/A
Applied 26 DAP

NTC
Texas Panicum Control in Field Corn – 2020 (49 DAT)

Control (%)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>No Prowl</th>
<th>Prowl</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU + Laudis + ATZ</td>
<td>85</td>
<td>94</td>
</tr>
<tr>
<td>RU + ATZ</td>
<td>78</td>
<td>93</td>
</tr>
<tr>
<td>LIB + ATZ</td>
<td>67</td>
<td>88</td>
</tr>
<tr>
<td>Halex GT + ATZ</td>
<td>79</td>
<td>98</td>
</tr>
<tr>
<td>RU + Impact Z</td>
<td>62</td>
<td>90</td>
</tr>
</tbody>
</table>

Applied 38 DAP, V5 stage

LSD 0.10 = 9.2
CV = 8.89
Source: C. Cahoon (NCSU)
Does POST Applied Prowl Cause Field Corn Yield Loss??

- **CN-01-14**
  - LSD 0.10 = NS
  - CV = 12.32
  - 260 Bu/A
  - 274 Bu/A

- **CN-01-15**
  - LSD 0.10 = 27.9
  - CV = 7.2
  - 302 Bu/A
  - 352 Bu/A

- **CN-04-16**
  - LSD 0.10 = NS
  - CV = 10.6
  - 292 Bu/A
  - 316 Bu/A

- **CN-02-18**
  - LSD 0.10 = NS
  - CV = 8.98
  - 225 Bu/A
  - 211 Bu/A

- **Average**
  - 270 Bu/A
  - 288 Bu/A
Roundup P-Max II @ 32 oz/A
Laudis @ 3 oz/A
Atrazine @ 64 oz/A
Prowl H₂O @ 32 oz/A
Applied 19 DAP
Laudis 3.45SC @ 3 oz/A + Atrazine 4L @ 64 oz/A + Dual Magnum 7.62EC @ 16 oz/A + MSO @ 1% v/v
Field Corn Weed Control - 2020

Halex GT @ 58 oz/A
Atrazine 4L @ 32 oz/A
Induce @ 0.25% v/v
AMS @ 2.5% v/v
Applied 20 DAP
Field Corn Weed Control - 2020

Impact 2.8SC @ 1 oz/A
MSO @ 1% v/v
AMS @ 3 lb/A
Applied 19 DAP

NTC
Field Corn Weed Control – 2020
Roundup + Liberty

NTC

Roundup Powermax II @ 32 oz/A
Liberty @ 32 oz/A
Atrazine @ 64 oz/A
Prowl H₂O @ 32 oz/A
Applied 19 DAP

May 21
23 DAT
Field Corn Weed Control – 2020
Roundup + Liberty???

Roundup Powermax II @ 32 oz/A
Liberty @ 32 oz/A
Atrazine @ 64 oz/A
Prowl H₂O @ 32 oz/A
Applied 19 DAP
New(er) Products Being Tested

- **Sinate** (glufosinate + topramezone)
  - *AMVAC*

- **Impact Core** (topramezone + acetochlor)
  - *AMVAC*

- **Acuron GT** (bicyclopyrione + s-metolachlor + mesotrione + glyphosate)
  - *Syngenta*

- **Shieldex** (topyralate)
  - *Summit Agro USA*
Sinate - 2020

Sinate 2.57SL @ 21 oz/A
Atrazine 90DF @ 9 oz/A
MSO @ 1% v/v
AMS @ 3 lb/A
Applied 19 DAP
Impact Core - 2020

Impact Core 7.15EC @ 30 oz/A
Atrazine 4L @ 32 oz/A
NIS @ 0.25% v/v
AMS @ 2.5 lbs/A
Applied 19 DAP
Impact Core 7.15EC @ 40 oz/A + Atrazine 4L @ 32 oz/A + Induce @ 0.25%v/v + AMS @ 2.5 lb/A
Acuron GT 4.29SC @ 60 oz/A
Induce @ 0.25% v/v
Applied 20 DAP
Shieldex - 2020

Bicep Lite II Magnum 6SC @ 53 oz/A (PRE)

Shieldex 3.33SC @ 1 oz/A (26 DAP)
Atrazine 4L @ 16 oz/A (26 DAP)
Agridex @ 1% v/v (26 DAP)
Field Corn Lay-By
(16 GPA, 30 PSI, 3.7 MPH, Floodjet TK-VS2)
Post-Harvest Palmer Amaranth Populations **Must** be Managed!
Palmer Amaranth Burndown - 2019
(AMAPA 1-6” tall)

NTC

Gramoxone 3SL @ 32 oz/A
Tricor 4L @ 8 oz/A
Induce @ 0.25% v/v
Tropical Spiderwort/Benghal Dayflower (TSW/BD) After Corn Harvest (need tillage and/or 2 apps of Gramoxone or 2,4-D or Aim)
Post-Harvest Control of TSW/BD with 2 Applications (14 d apart) of Gramoxone (paraquat)

1 week after POST2
Questions/Comments?