Seed Treatments for Disease Control in Wheat


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Five Reasons to Treat Wheat Seed with a Fungicide

5. To reduce loose smut
4. To reduce powdery mildew
3. To reduce seedling disease
2. To increase germination
1. To reduce scab
Head Scab caused by the fungus *Fusarium* spp.
Scab on wheat
Wheat Scab Control

- There are no resistant varieties.
- Varieties differ in flowering times.
- Bury crop residue.
- Chopping down corn stalks helps.
- Practice crop rotation (not corn or grain sorghum).
- Foliar fungicides are not effective.
- Seed treatments provide some prevention.
Seed Treatment Fungicides

- **Seed rots & seedling diseases** (*Rhizoctonia, Fusarium*): captan, difenoconazole, fludioxonil, PCNB, tebuconazole, thiram
- **Damping-off diseases** (*Pythium* spp.): metalaxyl, mefenoxam
- **Smuts (loose smut)**: carboxin, difenoconazole, tebuconazole
- **A combination material is needed**, especially for adverse planting conditions or no-till.
Barley Yellow Dwarf Symptoms on Flag Leaf
aphids
BARLEY YELLOW DWARF (BYD)

- SPREAD BY AT LEAST 20 APHIDS SPP.
- MAJOR APHIDS: OAT BIRD-CHERRY, CORN LEAF, ENGLISH GRAIN, GREENBUG, AND RICE ROOT APHID
- FIVE PROMINENT STRAINS OF BYDV: RMV, RPV, MAV, PAV, SGV
- OVER 80 GRASS SPECIES ARE SUSCEPTIBLE.
Why Should Aphids be Controlled in the Fall?

- Aphids carry the Barley Yellow Dwarf Virus (BYDV), and young seedlings are very susceptible.
- Yield loss can be significant in some years.
- Once aphids feed on young seedlings, it is too late to control BYD.
- Scouting for aphids is difficult in the fall.
## BYD CONTROL IN WHEAT

With seed treatments of imidacloprid (Gaucho) insecticide  
WTES, Jackson, TN  1993-2001  
Yields in bushels/acre; rate in ozs./cwt

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<tr>
<td><strong>Untreated</strong></td>
<td>62</td>
<td>96</td>
<td>40</td>
<td>69</td>
<td>65</td>
<td>48</td>
<td>78</td>
<td>72</td>
<td>73</td>
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<tr>
<td><strong>1.0 oz</strong></td>
<td>66</td>
<td>99</td>
<td>44</td>
<td>68</td>
<td>59</td>
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<td><strong>1.5 oz</strong></td>
<td>67</td>
<td>103</td>
<td>50</td>
<td>63</td>
<td>62</td>
<td>58</td>
<td>78</td>
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BYD Control

- Avoid early planting.
- There are no resistant varieties.
- Use insecticides to control fall aphids.
- Spring aphids do not cause as much damage.