# Safeguard Wheat from Insect Damage and Yield Loss

# by treating with Cruiser Brand Seed Treatments

The increased popularity of reduced tillage programs combined with the phase-out of lindane have created an opening for wireworms to thrive. The shiny yellow larvae of click beetles, wireworms can reduce stands up to 80 percent. Yields start to go down after a field reaches 20 percent stand loss.

Because wireworms live underground, foliar sprays provide no control, but a quality seed treatment can help. Seed treatment insecticides, like Cruiser® seed treatment insecticide and CruiserMaxx® Cereals seed treatment insecticide/fungicide from Syngenta Seed Care, give plants a chance to develop root systems capable of taking up necessary nutrients and moisture, which allows them to better sustain any later attacks by wireworms.

"We were experiencing up to 80 percent stand loss in some areas from wireworm pressure," reports grower Mike Miller of J.R. Miller Farms in Ritzville, Wash. "Now that we've been using Cruiser, our wheat is not only protected against wireworms, but it's also healthier and emerges more quickly, which are my top priorities at the beginning of the season."

Because of the drastic rise in wireworm populations the past few seasons, Syngenta Seed Care is working with area agronomists to educate customers about the importance of increasing the rate of Cruiser within the labeled range. For heavy wireworm pressure, Cruiser should now be applied at 1 oz/CWT. For growers in the Northern Plains, CruiserMaxx Cereals can be applied at the simple rate of 5 oz/CWT through most conventional treatment technologies.

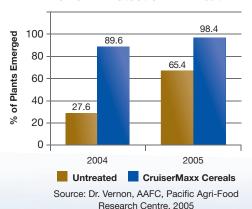
#### **Conditions Favored by Wireworms:**

- Cool, moist soils
- Fields just put into production after being in pasture or sod
- Long-term legume or grassy cropped fields
- Reduced tillage fields for their high organic matter and ample supplies of plant roots and seeds

#### **Damage Caused by Wireworms:**

- · Seed, root and stem feeding
- Reduction in plant stand up to 80 percent
- Patches of dead plants
- Yield loss

#### **Wireworm Protection in Wheat**







Years of research have shown that thiamethoxam not only helps suppress wireworm and other insect populations but also helps produce more vigorous plants with uniform emergence. This is known as the Thiamethoxam Vigor Effect and has been seen on a variety of crops across multiple geographies.

"Not only are we achieving wireworm suppression, but we've also seen the crop emerge up to three days faster," Miller explains. "And in the trials we harvested in fall 2009, we saw a 6.5-bushel-per-acre increase in fields where Cruiser was used at the 1 oz/cwt rate vs. untreated or Cruiser at the low rate."

## Performance Advantages from Cruiser Brands

- Superior seed-delivered protection against wireworms and other early-season insects.
- The active ingredient, thiamethoxam, is rapidly translocated throughout the plant, providing complete protection, and is active through both contact and ingestion.
- The Thiamethoxam Vigor Effect helps the crop develop a stronger root system, use inputs (water, nutrients, etc.) more efficiently, emerge more quickly and overwinter better.
- Consistent performance under a wide range of growing conditions.
- Cruiser is fully compatible with Dividend Extreme® seed treatment fungicide to protect against insects and diseases at the same time.
- CruiserMaxx Cereals also contains two fungicide active ingredients to battle tough diseases.

### Cruiser Produces Faster, More Uniform Emergence and **Delivers Wireworm Protection to Contribute to Better Yield**

Increasing the rate of Cruiser helps improve wheat stands under extreme wireworm pressure.

Syngenta trials evaluated 24 days after planting; 5 days after emergence. 2009.

Spring Wheat









Untreated

Cruiser 0.19 oz/CWT

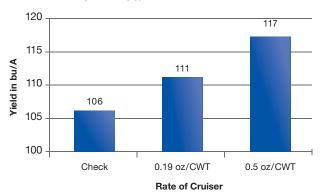
Cruiser 0.38 oz/CWT

Cruiser 0.57 oz/CWT

### 70 65 65 Yield in bu/A 60 57 55 50 0.19 oz/CWT 0.5 oz/CWT

Rate of Cruiser Note: all treatments included 2 oz/CWT Dividend Extreme.

#### Winter Wheat



Note: all treatments included 2 oz/CWT Dividend Extreme.





