



Pest Control Notes

Yolo, Solano, Sacramento Counties

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Alfalfa Stem Nematode Update

The alfalfa stem nematode is showing up as a serious pest of alfalfa again this year in many fields throughout the Sacramento and Northern San Joaquin valley. A high carry over of stem nematodes from last year along with ideal cool, wet weather conditions have favored pest outbreaks.

The stem nematode is a microscopic parasitic roundworm that feeds on the above ground portions of the plant. Feeding damage includes stunted plants with enlarged and discolored stems, swollen nodes, and short internodes. In severely infested fields the alfalfa shows very little if any plant growth and the stand has a dieback appearance. The plants should recover when the weather warms, but the first and likely second cutting yields will be significantly reduced.

Nematodes can be spread through many sources including irrigation water and movement of plant and soil debris. However, we suspect that hay-harvesting equipment also plays a major role in spreading this pest based on plant infection and field traffic patterns. For example, in newly infected fields, we see nematode-infected stunted plants in areas that are the width of a swather that extend into a field, but then the stand eventually improves with distance as the swather cleans out.

Pesticide trials in Colusa and Yolo Counties with winter and fall applications to infested fields showed reductions of stem nematodes in the soil, but no impact to yields. As a result, the alfalfa industry needs to focus on transiting to varieties that are highly resistant to stem nematode, which is about 3-years away.

Recommendations for managing stem nematode in alfalfa

Prevention: Avoid moving contaminated farm machinery or livestock from infested to clean fields. Harvest nematode-free fields before infested fields. Clean equipment using a high pressure washer or blower, or by cutting grass hay prior to moving back into alfalfa fields.

Cultural practices: Rotating with non-host crops such as tomatoes, sunflowers, and wheat on a 2 to 4-year basis will reduce alfalfa stem nematode populations (alfalfa is the primary host of this pest). Interplanting alfalfa with grass or other crops does not constitute rotation. The field needs to be free of alfalfa and of volunteers on berms during the rotation period.

Chemical control: No nematicides are registered for use against the alfalfa stem nematode.

Resistant varieties: The level of resistance to stem nematode in currently available varieties is not very high. Therefore, even the best varieties may become infected and develop symptoms during years with extended periods of wet, cool conditions. Plant breeders are currently working on developing highly resistant varieties (with at least 70% resistance), which should be available in about 3-years.

Upcoming meetings:

Know Your Risks, Plan for the Future, A Regional Forum for the Southern Sacramento Valley Farm Community

Tuesday, March 23, 2010, 9am - 4pm
Winters Community Center

Featuring:

- State Water Policy: Implications for Sacramento Valley Growers
- Regional Issues: Delta, Groundwater, Regulation
- Beyond Irrigation Technology: Soil and Crop Management for Maximum Water Efficiency
- Funding and Support Resources for Water Management

For more information see: <http://www.agwaterstewards.org> or 831-763-2111

Sponsored by the California Agricultural Water Stewardship Initiative

Alfalfa and small grains field day

Wednesday, May 19, 2010
Agronomy field headquarters, UC Davis

NEW Dry Bean Production manual

“Common Dry Bean Production in California,” a free downloadable publication at <http://anrcatalog.ucdavis.edu/Items/8402.aspx>. This manual features information on common dry bean varieties, fertilization, pest, weed, and disease management (including organic production), and harvesting and marketing practices. For Yolo County, our boron levels are generally too high to grow most dry beans. Boron levels in the range of 0.5-0.75 ppm will cause significant yield and quality losses to common beans and in the range of 0.75 to 1.0 ppm for limas.

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