



VEG VIEWS

For Stanislaus County July 2009



53rd Weed Day 2009 - July 16 - Buehler Alumni Center, UC Davis

Weed Day is an annual event that provides an opportunity for pest control advisors, farm advisors, chemical company cooperators, college faculty and students, and regulatory officials to learn about current weed science research at UC Davis. The event begins with a morning bus tour to the campus research fields to view demonstrations and current research studies in terrestrial and aquatic weed control. Lunch and afternoon presentations will be indoors.

- **Agenda:** http://wric.ucdavis.edu/education/2009%20Weed%20Day%20agenda%2006_24_09.pdf
- **To Register:** follow the link at <http://wric.ucdavis.edu/education/weeday09.html> for online registration OR to print a registration form that can be mailed or faxed.
- **Registration Fee:** \$50.00 (registration payment received by 7/9/09) \$75.00 (registration payment received after 7/9/09) \$15.00 (student fee--must provide student ID at check in). Registration fee includes handout material and lunch. Class size is limited, so early enrollment is suggested.
- **Continuing Education Credit:** This course is approved for 5 hours of PCA, OAC, and QAL credit.

For more information, contact the UC Weed Research and Information Center. e-mail: wric@ucdavis.edu; phone: (530) 752-1748.

Spinach & Other Vegetables as New Hosts of *Impatiens Necrotic Spot Virus*

Steven T. Koike, UCCE - Monterey County

Impatiens necrotic spot virus (INSV) is an important thrips-vectored plant virus that infects many plants worldwide. Historically, INSV was primarily a pathogen of ornamental crops. However, researchers in various regions recently have been finding INSV problems in vegetable crops that previously were not considered hosts. Such findings are being made in California as well. In the fall of 2008, researchers (Hsing-Yeh Liu and Beiquan Mou, USDA-ARS) made the first documentation of INSV on spinach in California (Salinas Valley). Previously, we confirmed that INSV was causing significant problems in Salinas Valley lettuce, also a first report for our state. Symptoms on spinach consisted of stunted plants, interveinal yellowing, a general chlorosis, and a thickening and distortion of the spinach leaves. Some leaves may also develop areas that turn brown and die (necrosis). Confirmation of INSV in spinach requires various serological and molecular tests and cannot be made on the basis of symptoms alone. INSV in spinach was found in experimental field plots; thus far, this virus disease has not been found in commercially grown spinach.

INSV is a plant-infecting virus placed in the tospovirus group. INSV is vectored from plant-to-plant only by the thrips insect. Most research, including our lettuce INSV studies conducted in the Salinas Valley, indicates that INSV is vectored only by the western flower thrips (*Frankliniella occidentalis*). However, other work indicates that some other species (*F. fusca*, *F. intonsa*) could also vector INSV. Only thrips in their larval stage are able to acquire the virus via feeding on infected plants; they then can carry and transmit the virus for the remainder of their lives. There is presently no evidence that INSV is seedborne in spinach or other crops.

The trend of finding INSV in new plant hosts is apparently continuing. Elsewhere in the country there are new reports of INSV on pepper, potato, and peanut. In California, we are investigating INSV in celery, faba bean, pepper, and radicchio.

It is not known whether INSV will be an important problem on spinach, or if infected spinach could serve as a source of vectoring thrips for lettuce or other crops; however, growers, PCAs, and field personnel should be aware of this new report and inform us if virus-like symptoms are observed on spinach.

Neonicotinoid Insecticide Products to be Re-Evaluated by CDPR

Following the receipt of an adverse effects disclosure regarding imidacloprid in 2008, the director of the CDPR has decided to reevaluate a number of chemicals in the nitroguanidine insecticide class of neonicotinoids. Data evaluated by CDPR showed high levels of imidacloprid residues in the leaves and blossoms of treated ornamental plants and that residue levels increased over time. Depending on plant type and application method CDPR found residue levels exceeding 3.0 ppm, the highest maximum tolerance established for any agricultural crop, and well above the maximum for most crops. Following soil applications, residues of imidacloprid were observed to remain low for approximately six months but then rise dramatically afterward and, in some cases, remain stable up to 500 days. The lethal concentration of imidacloprid needed to kill 50 percent of a test population (LC50) of honey bees is estimated by CDPR to be 185 ppb (or 0.185 ppm). CDPR is currently in the process of determining whether bees may be at risk from elevated residue levels in pollen and nectar. It is unknown at this time whether the reevaluation will affect the future use of these active ingredients. See the table on the next page.

Neonicotinoids in the Nitroguanidine Insecticide Class Under Reevaluation¹

Active Ingredient	Trade Names	Crop/Site Uses	Application
Imidacloprid	Admire, Condifor, Gaucho, Premier, Premise, Provado, Marathon	Field Crops, Vegetable Crops, Fruit and Nut Trees, Vines, Ornamentals, Turf	Soil, Foliar, Seed
Thiamethoxam	Actara, Cruiser, Platinum, Flagship, Meridian, Merit	Field Crops, Vegetable Crops, Fruit and Nut Trees, Vines, Ornamentals, Turf	Soil, Foliar, Seed
Clothianidin	Poncho, Celero, Arena	Corn, Rape, Dry Onion, Ornamentals, Turf	Soil, Foliar
Dinotefuran	Safari, Venom	Ornamentals, Vegetable Crops, Cotton, Fruit and Nut Trees, Grapes, Turf	Soil, Foliar

¹ For specific crop/site uses, methods, and rates of application always refer to the manufacturer's label. Labels and MSDS sheets can be found at www.cdms.net/manuf/manuf.asp

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

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