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Watch Out for Pests!

Summer is here! Watch out for **pests on your garden and landscape plants**. Environments such as schools, homes and their surrounding landscapes include diverse physical spaces (indoors and out), which provide ideal food and living conditions for pests.

Operational and plant cultural management practices used around buildings can increase the potential for pest problems in shrubs and trees.

Practices include:

- growing non-native plants that are not adapted to our harsh climate;
- growing annual plants that carry or develop pest problems which then move onto woody plants;
- plants not receiving adequate or appropriate care and maintenance to fit the growing conditions, for example, over- or under-watering, wrong placement, inadequate shade or light, etc.;
- improper pruning (repeated shearing) or pruning plants into unnatural shapes.



An example of stressed plants. Photo Credit:
Ursula Schuch, University of Arizona

All of the above practices create stressed plants that become more susceptible to abiotic stress and more damage when they are attacked by insects. Thus, damage and stress symptoms seen on plants may not be the result of pest attack. Therefore, it is important to properly diagnose pest problems to effectively control them. Treating plants for pests that are not in reality causing problems can inflict additional stress and damage.

DIAGNOSIS OF INSECT PROBLEMS ON PLANTS

1. Examine the plant for signs of insect feeding.

- **Foliage:** holes, ragged edges, "skeletonized" leaves
- **Sap:** wilting, change in color of foliage, abnormal growth
- **Trunk** and/or limbs: holes, leaking sap, dead spot in bark
- **Roots:** stunted growth, wilting, sudden die back

2. Identify the insect.

- **Chewed foliage:** caterpillars, beetles, grasshoppers, leafcutter bees
- **Sucking sap:** aphids, true bugs, scales, thrips, whiteflies
- **Trunk and/or limbs:** borers; beetles and some moth larvae
- **Root feeding:** beetle larvae (grubs)

3. Recommend protective action, if needed.

- **Evaluate the damage to the plant.** Can it survive the insect attack? How much aesthetic damage are you willing to tolerate? For example, whiteflies will sit on many plants, and breed on quite a few, but only a handful of susceptible species such as lantana and hibiscus are potentially killed. What is the economic value of the plant?
- **Evaluate the environment.** If a tree or shrub is planted in an inappropriate location it will always show signs of stress, no matter how successfully insects are controlled. For example, plants in parking lots, planters, or narrow medians often do not have enough soil for their roots and are difficult to water sufficiently.
- **Evaluate care and maintenance practices.** How have the watering and fertilization practices been conducted? Has it been pruned correctly? Improving the growing conditions may eliminate further insect problems.
- **Consider control procedures.** Examine possible mechanical or biological control methods for usefulness. As a last resort, consider the application of an insecticide.



Tobacco hornworm on tomato. Photo Credit: Missouri Botanical Garden. <http://www.missouribotanicalgarden.org>

For more information, please view:

<http://ag.arizona.edu/pubs/garden/mg/entomology/landscape.html>

Bed Bug Battle – We Want to Hear From You

The University of Arizona and several partnering research institutions are working to battle the bed bug resurgence in the United States. Researchers hope to determine the real impact and social cost of bed bugs, the risks to individuals and society, as well as the significant causes of infestations.

We hope you will complete an online bed bug survey. This survey asks brief questions on how bed bugs affect your life, how bed bugs cause people stress, and what people do when trying to get rid of them. This voluntary survey should take about ten minutes. The survey is available in English and Spanish. There is no compensation available for your participation. Your answers are anonymous and confidential while you contribute information that will help us battle the pesky parasites.

Who should take this survey? Everyone! We would like to hear from people who currently live with bed bugs, people who have dealt with them in the past, and people who have never experienced bed bugs. We are dedicated to helping community members who need it most, and sharing your experience will be extremely helpful to develop strategies to reduce the bed bug problems.

English version of Bed Bug survey: <http://www.surveymonkey.com/s/DGLQS52>

Spanish version of Bed Bug survey: <https://es.surveymonkey.com/s/F5NZXJK>

Providing IPM Services in Schools and Child Care Settings

California requires that pest control companies providing services in schools and licensed child care centers comply with a series of laws called the Healthy Schools Act (HSA). The HSA promotes IPM and seeks to minimize pesticide exposure to children in all public K–12 schools and licensed private child care centers.

[*Providing Integrated Pest Management Services in Schools and Child Care Settings*](#) is the new free online training module available from UC IPM that explains the history of the Healthy Schools Act and details what schools, child care centers, and pest control companies are required to do to follow the law.

The free module is based on California’s Healthy Schools Act, but also provides a lot of basic and universal urban “IPM how-to” for folks managing pests in schools and child care. It also provides some business how-to for companies looking to shift towards an IPM business model.

For more information, please view:

<http://www.ipm.ucanr.edu/training/school-and-child-care-ipm.html?src=blog16780>

Indoor Air Quality (IAQ) Master Class Webinar Series Continues

As part of EPA’s ongoing effort to continue the momentum to create healthy school indoor environments in all our nation’s schools, they are pleased to announce the launching of a new [**IAQ Master Class Webinar Series**](#).

At the June 2014, the School Health and Indoor Environments Leadership Development (SHIELD) Network began work on designing ten 1-hour technical core-competency web-based trainings intended to build the capacity of school district staff across the country to start, improve, or sustain an IAQ management program.

The webinars will feature technical experts, industry leaders and model school districts from the SHIELD Network. CEU’s are pending and certificates of completion will be provided to all who complete the post-training evaluation.

Mark your calendar to join the Master Class Technical Webinar Series. Schedule below.

Webinar Topic	Webinar Date
Materials Selection	7/16/15
Source Control	8/06/15

Upcoming Webinars and Events

Attend Free Sessions of the [Green Strides Webinar Series](#). View archived webinars [here](#).

The [Green Strides Webinar Series](#) provides school communities the tools to reduce their schools' environmental impact and costs; improve health and wellness; and teach effective environmental literacy, including STEM, green careers, and civic engagement.

July 23-24, 2015, [Tribal School IPM Workshop](#), Wild Horse Pass Hotel and Casino, Chandler, Arizona

The Inter Tribal Council of Arizona (ITCA), along with University of Arizona and US EPA Region IX, is organizing a Tribal School IPM Workshop, July 23-24, 2015. The workshop will include classroom instructions and a hands-on practicum. The purpose of this workshop is to provide information for the tribal school community on: IPM philosophy and the best way to manage pests, pesticide safety, controlling vector pests, and developing a School IPM Plan specifically for each school.

Contact Africa Dorame-Avalos from Inter Tribal Council of Arizona for agenda questions and to inquire about financial support to attend this workshop: (602) 258-4822 or Africa.Dorame-Avalos@itcaonline.com.

For more information about the EPA Schools program, visit:
<http://www.epa.gov/schools/>

For more information about the Community IPM, visit:
<http://www.extension.org/pages/23359/urban-integrated-pest-management-community-page>



For more information about School IPM in Arizona, visit:
<http://cals.arizona.edu/apmc/westernschoolIPM.html>

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