

# PLANTS

## Resource Concerns

# Plant Pests

Soil

Water

Air

Plants

Degraded Plant Condition

Plant Pests

Plant Productivity and Health

Structure and Composition

Wildfire Hazard

Animals

Energy

## Degraded Plant Condition - Plant Pests

Excessive pest damage to plants including that from undesired plants, diseases, animals, soil borne pathogens, and nematodes.

### What is it?

Plants provide food for many forms of life. Human beings and grazing animals depend on plants for food. It is important to note that large numbers of other much smaller creatures, such as insects and their larvae, also feed on plants. Other plants, fungi, bacteria, and viruses use plants as a host during part of their life cycle. Generally, these interactions are normal, predictable, and benign. However, we apply the term “pest” to any animal, insect, bacteria, or virus when any of these interactions become unbalanced and unacceptable plant damage results. Pests can also take the form of any organism that competes for space, nutrients, or water (e.g., weeds). Heat, drought, wind, sun, and cold create stress on plants that make them more susceptible to pests. Pests can vary from place to place, crop to crop, year to year.

### Why is it important?

For plants to produce the expected yield, preferred products, or desired environmental outcomes, they must be protected from unchecked animal, weed, insect, and disease pests.

### What can be done about it?

Management is the key to keeping damage from plant pests within tolerable limits. Integrated Pest Management is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense treatments. Set Thresholds - Before taking any pest control action, set a point at which pest populations or environmental conditions indicate that pest control action must be taken. Monitor and Identify Pests - Not all insects, weeds, and other living organisms require control. Identify pests accurately so appropriate control decisions can be made in conjunction with action thresholds. Prevention - As a first line of pest control, manage to prevent pests from becoming a threat. Rotate crops and select pest-resistant varieties. Control - If pest control is required, evaluate control methods for effectiveness and risk. Use less risky pest controls first, such as pheromones to disrupt pest mating, or mechanical control, such as trapping or weeding. If further monitoring indicates controls are not working, additional pest control methods such as targeted spraying of pesticides should be used. Use broadcast spraying of non-specific pesticides only as a last resort.

## Plant Pests at a Glance

Problems / Indicators - Animal, insect, and/or disease damage, or competition from common weeds or invasive plants substantially reduces yield or growth	
Causes	Solutions
<ul style="list-style-type: none"> <li>Plants suffer from attacks by pests or disease</li> <li>Weeds or invasive plants out compete desired crop</li> <li>Plants are weak or not thriving</li> </ul>	<ul style="list-style-type: none"> <li>Use Integrated Pest Management to employ early detection, avoidance, and treatment of pests</li> <li>Consider brush management, vegetative weed control, mulching, or prescribed grazing or burning</li> <li>Use plants adapted to climate and soils</li> </ul>