



# PLANTS

## Plant Pest Pressure

### Plants

Plant Pest Pressure

Productivity and  
Health

Structure and  
Composition

Wildfire Hazard  
from Biomass  
Accumulation

### Plant Pest Pressure

Excessive damage to plant communities from pests such as undesired plants, insects, diseases, animals, soil borne pathogens, and nematodes. This concern addresses invasive plant, animal and insect species.

#### What is it?

Plants provide food for many forms of life. Human beings and grazing animals depend on plants for food. Large numbers of other much smaller creatures, such as insects and their larvae, also feed on plants. Other plants, insects, fungi, bacteria, and viruses use plants as a host during part of their life cycle. Generally, these interactions are symbiotic, 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 occurs. 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 a desired yield, preferred products, or favored environmental outcomes, plant communities must be protected from undesirable pests such as weeds, insects, fungi, bacteria, viruses and animals.

#### What can be done about it?

Management, monitoring, and record-keeping can help stifle 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 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. For grazing lands, weeds or invasive plants outcompete the desired crop or desired plant community when plants are weak and not thriving, or they are overused. Identify pests accurately so appropriate control decisions can be made in conjunction with action thresholds. Prevention: The first line of pest control is to manage and prevent pests from becoming a threat. Rotate crops and select pest-resistant varieties. Rotate forms and mode of action in pesticides to prevent and alleviate pesticide resistance. On grazing lands, maintain native plant communities or desired plants with adequate cover to protect sites from plant pest establishment. Control: If pest control is required, evaluate control methods for effectiveness and risk. Use low-risk 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/herbicides should be used. Use the application of non-selective pesticides as a final method when thresholds and conditions warrant their use.

#### Plant Pest Pressure at a Glance

(continued)

# Plant Pest Pressure (continued)

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## Plant Pest Pressure at a Glance

Problems / Indicators— Animal, insect, and/or disease damage, or competition from common weeds or invasive plants substantially reduces yield, growth, or desired plant community composition or structure	
Typical Causes	Examples of Typical Solutions
<ul style="list-style-type: none"><li>• Plants suffer from attacks by pests or disease</li><li>• Weeds or invasive plants outcompete desired crop or desired plant community</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><li>• Use of local, source-identified seed of native species when available</li></ul>