



Cattle Producer's Handbook

Range and Pasture Section

542

Noxious Weeds on Rangelands

*Amy Peters, Extension Agent, Coos and Curry Counties
Oregon State University*

*Roger L. Sheley, Rangeland Weed Ecologist
USDA - Agricultural Research Service*

*Michael M. Borman, Extension Rangeland Resources Specialist
Oregon State University*

Weeds, primarily from Eurasia, began making major inroads into western rangelands during the 19th century. In Eurasia they were generally not major problems because they evolved with natural controls such as insect predators, plant pathogens, fungi, other plants that provided competition, and intensive grazing. Plants that arrived here without those control agents have been able to dominate some locations with negative impacts on resource values important to livestock production as well as other uses. The encroachment of noxious weeds is reducing resource values of agricultural croplands and rangelands as well as wildlife habitat and has the potential to decrease property values for both production and recreational uses.

Weeds tend to prefer highly disturbed sites such as river and stream banks, trail heads, road sides, trails, wildlife bed-grounds, overgrazed areas, and campgrounds. Well managed land is the best defense against the spread of weeds, however, natural disturbances provide "safe sites" for weeds to become established even on well managed lands in good condition. Weeds are spread by vehicles, recreationists, distribution of weed contaminated hay, horses, livestock, wind, water, and a wide variety of wildlife including birds.

Noxious Weeds

"Noxious weed" means any weed designated by a state that is injurious to public health, agriculture, recreation, wildlife, or any public or private property. Noxious weeds have become so thoroughly established and are spreading so rapidly on state, county, and federally-owned lands, as well as on private land, that they have been declared by state laws (e.g. ORS 570.505 in Oregon) to be a menace to the public welfare.

Steps leading to eradication, where possible, are necessary. It is further recognized that the responsibility for such eradication and/or intensive control rests not only on the private landowner and operator, but also on the county, state, and federal governments. For more information contact your state's department of agriculture for a listing of noxious weeds in your state.

Integrated Weed Management

The magnitude and complexity of rangeland weeds, combined with their cost of control, necessitates using Integrated Weed Management (IWM). IWM involves the use of several control techniques in a well-planned, coordinated, and organized program to reduce the impact of weeds on rangelands.

Inventory and mapping is the first phase of any IWM program. The second phase includes prioritizing weed problems and choosing and implementing control techniques strategically for a particular weed management unit. Third phase is adopting proper range management practices as a portion of the IWM program. The IWM program must fit into an overall range management plan.

Inventory and Mapping

The goal of inventory is to determine and record the weed species present, area infested, density of the infestation, rangeland under threat of invasion, soil and range types, and other site factors pertinent to successfully managing the infested (and subject to infestation) rangeland. Inventories can be by field surveys, aerial photography, and geographic information systems.

Preventing Weed Encroachment

Preventing the introduction of rangeland weeds is the most practical and cost-effective method for their man-