

**SHEEP AND
NOXIOUS WEED
CONTROL**



One of the greatest threats to public and agricultural lands in the United States is the spread of noxious weeds. Invasive plants such as leafy spurge and spotted knapweed kill off surrounding vegetation, trigger soil erosion, decrease available



water, and cost agriculture millions of dollars each year. The weeds not only make the land unfit for crops and cattle, they threaten native plant species and drive off wildlife. For example, a U.S. Forest Service study concludes that forage loss due to knapweed invasion in western Montana's Lolo National Forest could result in the loss of 220 elk annually by 1998.

Noxious plants typically are imports that have few, if any, natural enemies in North America. Managing these weeds with herbicides is costly, while manual clearing is largely ineffective. Sheep are unique in that they readily consume plants that other animals avoid or find toxic. As a result, land managers are turning to sheep grazing as an environmentally sound and cost-effective way to control noxious weeds.

- Leafy spurge (*Euphorbia esula*) is an invasive, indestructible weed that infests an estimated 3 million acres of farm and public lands in 26 northern states. The invasion is particularly severe in the Dakotas, Montana, and Wyoming. While leafy spurge is toxic to most animals, sheep thrive on the weed.
- In Montana, the Bureau of Land Management (BLM) found that proper sheep grazing resulted in up to 90% control of leafy spurge over four growing seasons, greatly reducing the need for costly herbicides. Near Glasgow, Mont., the BLM had been spending \$40-\$50 per acre to control spurge with chemicals. Three years after 1,200 sheep were brought onto the land, herbicide treatments were reduced to "spot" applications.

- In North and South Dakota, the U.S. Fish & Wildlife Service is using sheep in place of herbicides to control leafy spurge on eight National Wildlife Refuges.
- Wyoming studies found that sheep grazing effectively controls leafy spurge far less expensively than other control measures. Over a 10-year period, sheep cost \$18.80 per acre for spurge control, compared to \$185-\$310 per acre for herbicides, \$350 per acre for cutting and mowing.
- The BLM, U.S. Forest Service, and Bureau of Reclamation have allowed sheep to graze free of charge on spurge-infested public recreational lands and cattle allotments. Landowners in some parts of Montana partially reimburse sheep producers for leafy spurge control.
- In Oregon's Baker County, the first-ever spurge outbreak has been controlled for four seasons by sheep. An estimated 1,000 sheep trucked in from California graze the county's 80 spurge-infested acres.
- In eastern Colorado, Colorado State University researchers are combining sheep grazing with other methods — such as flea beetles, whose larvae dehydrate leafy spurge — to control the weed.
- In the West, sheep effectively control spotted knapweed (*Centaurea maculosa*), another aggressive rangeland invader that is displacing native plant species in relatively pristine sites. In Montana alone, spotted knapweed has infested 810,000 acres, including parts of Glacier National Park.
- Montana State University researchers report that sheep successfully graze a variety of other noxious weeds. These include: fringed sagewort (*Artemisia frigida*), a western rangeland pest; kudzu (*Pueraria lobata*), a perennial vine that infests southeastern states; oxeye daisy (*Chrysanthemum leucanthemum*), a rangeland perennial herb; and tall larkspur (*Delphinium spp.*), a native herbaceous forb that is the leading cause of cattle deaths on mountain range. Sheep now control larkspur in Colorado's Routt National Forest and Montana's Beaverhead National Forest.
- West of the Cascade Mountains in Washington, Oregon and Northern California, sheep — in combination with the Cinnabar moth — control tansy ragwort (*Senecio jacobaea*), a plant toxic to horses and cattle.

SHEEP AND THE ENVIRONMENT

Sheep and Noxious Weed Control is a publication of the American Sheep Industry Association (ASI), which represents more than 100,000 U.S. sheep and angora goat producers. Sheep are a natural, low-cost means of managing rangelands, forests, and agricultural lands, even as they produce important resources, such as wool, meat, and lanolin. ASI is committed to proper grazing that benefits the environment, wildlife, the taxpaying public and consumers. For additional copies of this and other ASI pamphlets on sheep and the environment, contact the American Sheep Industry Association, 6911 S. Yosemite St., Centennial, CO 80112, (303) 771-3500.

