

# HIGHLIGHTS

## TEAM Leafy Spurge and Theodore Roosevelt National Park:

### A PARTNERSHIP FOR THE MANAGEMENT AND CONTROL OF LEAFY SPURGE

**T**TEAM Leafy Spurge, an integrated pest management (IPM) research and demonstration project, is based on the premise that IPM provides the flexibility needed to control agricultural plant and insect pests across broad regions. To demonstrate the effectiveness of the IPM approach for controlling the noxious weed leafy spurge (*Euphorbia esula* L.) over a wide and varied expanse, TEAM Leafy Spurge chose the Little Missouri River drainage, which spans portions of North Dakota, South Dakota, Montana, and Wyoming, as its primary study area because of its complex variety of ecological conditions, all impacted by this invasive plant species (fig. 1). Fortunately, Theodore Roosevelt National Park (North Dakota) occurs within the TEAM Leafy Spurge study area.

Active extension services, land grant universities, and county weed managers; private-sector representatives include landowners and ranchers.

Over its six-year life, the project's collaborative emphasis has enabled participants to share resources and expertise, aptly demonstrating how partnerships and teamwork can be used to implement IPM strategies and achieve successful leafy spurge control over broad regions. In particular, the effort has helped demonstrate how *Aphthona* spp. flea beetles can be affordable and sustainable biocontrol agents of leafy spurge in much of the study area (fig. 2), with further containment accomplished through judicious herbicide applications and multispecies grazing.

An instrumental partner in the project was Theodore Roosevelt National Park, a park with serious leafy spurge problems. Over the past 15 years the park has released more than 18 million *Aphthona* flea beetles at 3,534 sites for leafy spurge control. In addition, the park is a strong advocate for the judicious use of herbicides, applied from sprayers attached to backpacks, all-terrain vehicles, and trucks. Helicopter spraying is also conducted in remote backcountry areas. The park has also held numerous field days involving the collection and redistribution of *Aphthona* flea beetles for local farmers and ranchers. This has resulted in a win-win situation for the National Park Service and local communities.

Leafy spurge is a formidable opponent that cannot be controlled or eliminated by any single entity or management practice. Rather, a collaborative, integrated, and regional approach is essential to solving this costly problem. Projects such as the one being conducted at Theodore Roosevelt National Park are using scientifically valid, ecologically based IPM strategies that can achieve effective, affordable, and sustainable leafy spurge control.

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Figure 1. About 120 miles (193 km) from Theodore Roosevelt National Park, this landscape in the Missouri River drainage is colored by the yellow bracts of the invasive alien, leafy spurge. The plant displaces native vegetation in prairie habitats.

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Figure 2. *Aphthona lacertosa*, flea beetles used in TEAM Leafy Spurge's integrated pest management project, gobble up leafy spurge. Over 15 years, more than 18 million of the beetles have been released within Theodore Roosevelt National Park.

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TEAM Leafy Spurge is cochaired and overseen by the USDA Agricultural Research Service in cooperation with the USDA Animal and Plant Health Inspection Service. Together these federal partners make a powerful team to address the leafy spurge problem on a multistate basis. Additional federal bureaus participating in the project are the Bureau of Land Management, USDA Forest Service, National Park Service, Bureau of Indian Affairs, Bureau of Reclamation, and U.S. Geological Survey. State partners are state departments of agriculture and other agencies, coopera-

