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TEAM Leafy Spurge

What is TEAM Leafy Spurge?

The Ecological Area-wide Management (TEAM) Leafy Spurge is a \$4.5 million, five-year USDA-ARS research and demonstration program focusing on the Little Missouri drainage in Wyoming, Montana and the Dakotas. Its goal is to research, develop and demonstrate ecologically based Integrated Pest Management strategies that landowners and land managers can use to achieve effective, affordable and sustainable leafy spurge control.

Funded by the USDA-ARS and managed cooperatively with the USDA-APHIS, TEAM Leafy Spurge stresses partnerships, teamwork and a cooperative approach to solving the leafy spurge problem. TEAM members include state and federal agencies, state Cooperative Extension Services, land grant universities, weed managers, county and other local entities, and private landowners and ranchers.

TEAM's team

TEAM Leafy Spurge is managed by the USDA-ARS in cooperation with the USDA-Animal and Plant Health Inspection Service. Team members include the Bureau of Land Management, U.S. Forest Service, National Park Service, Bureau of Indian Affairs, Bureau of Reclamation, U.S. Geological Service, state departments of agriculture and other state agencies, Cooperative Extension Services, land grant universities, county weed managers, landowners and ranchers. Several other cooperators also participate in the program by providing technical expertise and other essential resources. [A non-partisan ad hoc committee](#) consisting of state and federal researchers, land managers, representatives from local, state and federal entities, and private landowners/ranchers provides management and direction.

How it works

TEAM Leafy Spurge gets funding from the USDA-ARS, which it invests in research and demonstration projects conducted by TEAM members. Each year, potential [program research partners](#) submit leafy spurge research and demonstration proposals to the ad hoc committee. Special consideration is given to projects that build on existing data and/or explore innovative methods of integrating control strategies. The committee discusses the proposals, offers suggestions or recommendations, then decides if funding should be allocated to proposed projects.

About 80 percent of TEAM's annual funding is distributed to research and demonstration efforts being conducted at land grant universities and by local, state and federal researchers. Program participants often supplement the funding they receive from TEAM Leafy Spurge with additional funds from their own organizations.

TEAM Leafy Spurge is built on three important concepts:

- **Regional approach:** As a USDA-ARS area-wide program, TEAM Leafy Spurge is evaluating the leafy spurge problem on a regional rather than a local, or place-by-place, basis. This area-wide approach ensures that techniques developed to manage leafy spurge will work across a wide area and not in just a single place.
- **Integrated Pest Management:** IPM combines different management tools to provide more effective leafy spurge control than could be achieved by using any single tool. Biological control is the foundation for TEAM's IPM approach: Biocontrol agents, like the host-specific leafy spurge flea beetle, are integrated with other management tools, such as herbicides, multi-species grazing programs, reseeding, tillage, burning and clipping, to achieve leafy spurge

control. IPM offers the flexibility needed by landowners and land managers to devise different management strategies for different situations.

- **Teamwork:** TEAM Leafy Spurge has assembled an experienced group of researchers and land managers into a focused, goal-oriented team. The program's collaborative effort enables participants to share resources and expertise and more effectively work toward a common goal.

Specific projects

TEAM Leafy Spurge research and demonstration projects are designed to build on existing data and explore promising areas of leafy spurge research. These projects cover a wide range of disciplines, including biological control with insects and naturally occurring plant pathogens, multi-species grazing and other range management techniques, the judicious use of herbicides, and the integration of various control tools.

Demonstration projects are geared toward showing ranchers and land managers how to use a certain management tool or combination of tools. Demonstration sites established at TEAM study areas give ranchers and land managers a hands-on opportunity to see the techniques being used and the results produced.

Research projects generally focus on gaining a better understanding of biological control agents. These studies will hopefully yield information on how biocontrol agents work, why they work in some situations but not others, how insects and pathogens can be used together, and how biocontrol agents can be best integrated with other control tools. Additional research is being conducted overseas, where entomologists are looking for new insects and pathogens to use against leafy spurge.

Results

Awareness: By distributing information and participating in numerous public events (meetings, tours, etc.), TEAM Leafy Spurge has increased public awareness of the problem, the economic and environmental consequences, and possible solutions.

Understanding: Ranchers, landowners and land managers are beginning to understand that no one tool will solve the problem and how available tools can best be integrated.

Networking: One of TEAM's most enduring achievements is the creation of a vast network of "partners." This network has provided TEAM participants with a better understanding of how different management programs (local, state and federal) work and how they can best interact with one another.

Biological Control: TEAM Leafy Spurge is proving that biological control WILL work, that it is an effective, affordable and ecologically sustainable way to manage leafy spurge. Flea beetles have reduced leafy spurge canopy cover and stem densities by as much as 95 percent at some sites; researchers are confident leafy spurge will never again be a problem at these sites.

Biological control takes time, but is clearly the preferred management tool of the new millennium. With that in mind, TEAM Leafy Spurge is working hard to distribute biocontrol agents, improve distribution systems and establish new release sites. More than 22 million leafy spurge flea beetles have been distributed to ranchers, landowners and land managers from 50 counties in seven states during the past two years, with more distributions planned for the future. These insects are being used to establish insectaries that can be harvested, redistributed and used to establish populations at new locations.



Expected outcomes

- Increased awareness and understanding.
- Increased implementation of IPM and biological control.
- Introduction of new biological control agents.
- Reduced reliance on expensive and environmentally taxing chemicals, and the subsequent development and distribution of information on alternatives to chemical control.
- Increased ranch profitability, and the subsequent protection of local and regional economies.
- The creation of relationships that will last beyond the life of TEAM Leafy Spurge and enable “partners” to more effectively combat other invasive weed and insect pests.
- A “library” of informational tools that can be used by ranchers, landowners, land managers and researchers.
- A user-friendly decision support system that can be used to determine reductions in range productivity, estimated costs and returns of various management strategies, and expected outcomes of using various management strategies.
- Database: The development of a comprehensive leafy spurge database that will allow researchers to plan strategies and quantify the reduction of leafy spurge infestations.