

Project: Targeted Grazing For Managing Invasive Plants

Brief Description: MSU requests funding to develop and implement new management strategies for livestock and land managers by using small-ruminants to control large infestations of non-native invasive plants, while diversifying an economically versatile production system. Targeted grazing is a natural approach to vegetation management and landscape enhancement. Besides providing an ecologically sound and economically feasible tool to manage one of the west's most serious environmental threats, new management approaches will improve Montana lamb and wool producers' global competitiveness and enhance rural communities. This is a partnership with MSU and the Montana Wool Growers Association (MWGA).

Executive Summary: This project will develop grazing systems to control non-native invasive plants as well as the animal care, use, management and marketing systems necessary for a sustained sheep and goat industry. Currently, these non-native plants infest millions of acres of farm and public land in 26 northern states. This problem is not just an agricultural issue, it is a societal issue. It represents the single most serious threat to natural habitats. Noxious weed invasion reduces the ecological integrity of land and waters, alters ecosystems, impacts wildlife habitat and threatens the survival of native plants. In many cases, the cost of traditional weed control methods (e.g., herbicides) actually exceeds the land value. Previous MSU research indicates that small ruminant production can provide land managers an alternate tool in their fight against invasive plants that is more economically feasible and environmentally sensitive. Grazing prescriptions for managing large infestations of leafy spurge have been developed and are in the final stages of validation. Current efforts will focus on validating spotted knapweed prescriptions on a landscape scale and the initial development of Dalmatian toadflax prescriptions. However, to make this powerful tool sustainable, this initiative also focuses on developing practices that contribute to a profitable sheep and goat industry. This project represents a true partnership between MSU and industry stakeholders, including sheep producers, county weed districts and supervisors, federal and state land managers, and private land owners.

Congressional Action Needed: An appropriation of \$500,000 is requested.

Importance to Montana: Non-native invasive plants are the primary environmental threat to western wildlands. These plants quadrupled their area in the last 10 years. If they continue to spread at their current rate, they will dominate western rangelands in the future. Over 17 million acres of "public land" in the west are infested with noxious weeds with an additional 4,600 acres becoming infested each day. Currently Dalmatian toadflax is in an exponential growth phase in Montana, expanding at a rate of 14 percent per year. In Montana, about 8 million acres are seriously infested with noxious weeds. Previous MSU research indicates that sheep and/or goat grazing offers an additional and diversified tool in the fight against noxious weeds in an integrated weed management program.

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Targeted Grazing For Managing Invasive Plants – Talking Points

- Noxious weeds have a substantial impact on the economy and jobs. For example, spotted knapweed is estimated to cost \$42 million each year in Montana. Their secondary impact on the economy is estimated between \$200 and \$300 million annually.
- Noxious weeds are usually considered in land appraisals reducing land values. In one analysis, the presence of a noxious weed that reduced carrying capacity by 60% lowered the value of the land from \$220 to \$100 per acre.
- Currently, Dalmatian toadflax is in an exponential phase, expanding at a rate of 14 percent per year.
- Widespread adoption of this valuable tool in the fight against noxious weeds will not occur until grazing strategies are developed and tested on large-scale infestations.
- The Montana Sheep Institute has 22 active projects with 35 monitoring sites involving over 100,000 weed-infested acres. Most projects are in the third year of a five-year grazing protocol.
- Each project is a collaborative effort involving groups of both private (Montana sheep producers, land owners, local organizations) and public (BLM, MT Fish, Wildlife and Parks, weed boards) cooperators.
- Key project areas include 96 miles of the Powder River, 25 miles of the Yellowstone River, 8 miles of the Madison River and key support of the management program for the “Bucksnot After-Fire project.”
- Preliminary data indicate that 80 to 90% of the original ecological value of noxious weed-infested land can be reclaimed with controlled sheep grazing.
- From these projects, we will validate spotted knapweed grazing prescriptions on a landscape scale and develop Dalmatian toadflax prescriptions.