

Summary of Responses to Invasive Plant Management Needs in Montana

The following responses are summarized from a questionnaire completed at MACD Area meetings (September 29th through October 8th, 2009). There were a total of 99 responses including 18% NRCS or CD employees, and 82% agricultural producers. Questions are shown as they appeared on the questionnaire and responses summarized for eastern and western portions of the state. (*For example in "question 1", 70% of respondents in eastern Montana indicated Canada thistle was one of their top 3 rangeland weeds*).

1. What are the top 3 rangeland weed species that you manage?

Eastern Montana (Areas 1, 2, 3, 4):

- Canada thistle 70%
- Leafy spurge: 51%
- Spotted knapweed: 33%
- Houndstongue: 24%
- Cheatgrass (downy brome): 20%
- Whitetop: 10%

Western Montana (Areas 5 and 6)

- Spotted knapweed: 90%
- Leafy spurge 50%
- Houndstongue: 43%
- Canada thistle: 33%
- Dalmatian toadflax: 30%
- Sulfur cinquefoil: 20%

The following species were listed as a problem by less than 10% of respondents:

Russian knapweed	Hawkweeds	Russian olive
Field bindweed	St. Johnswort	Hoary alyssum
Burdock*	Biennial thistles*	Annual weeds in crop*
Tall buttercup	Poison hemlock*	Other annual grasses*
Common tansy	Curlycup gumweed**	Smooth brome*
Yellow flag iris	Foxtail barley*	Crested wheatgrass*
Yellow toadflax	Salt cedar	Fringed sage**

* Indicates plant is not a noxious or regulated weed in Montana.

** Indicates plant is native and not a noxious or regulated weed in Montana

2. Is cheatgrass (downy brome) a problem for you and how does it occur?

Eastern Montana (Areas 1, 2, 3, and 4)

87% indicated it was a problem, and infestations occurred as:

encroaching into perennial grasses: 46%

isolated infestations: 19%

farm land: 13%

encroaching on hay/pasture: 11%

other (less than 10% response); bare/disturbed ground, following weed control; drainages; CRP lands)

Note: 5% indicated the weed was pervasive throughout managed lands.

6% indicated they did not have cheatgrass present

7% no response

Western Montana (Areas 5 and 6)

90% indicated it was a problem, and infestations occurred as:

encroaching into perennial grasses: 37%

isolated infestations: 17%

encroaching on hay/pasture: 10%

mixed with other weeds: 10%

following weed control: 10%

other (less than 10% response); bare/disturbed ground, farming, neighbors, post-fire)

Note: 3% indicated the weed was pervasive throughout managed lands.

10% indicated they did not have cheatgrass present

3. What percent of your weed-infested acres are degraded to a level that complete restoration (i.e. reseeding) is necessary?

Eastern Montana (Areas 1, 2, 3, and 4):

None: 46%

1-5% of infested acres: 13%

6-15% of infested acres: 13%

16-30% of infested acres: 2%

31-60% of infested acres: 3%

Don't know: 8%

No response: 14%

Western Montana (Areas 5 and 6):

None: 27%

1-5% of infested acres: 30%

6-15% of infested acres: 17%

16-30% of infested acres: 7%

31-60% of infested acres: 3%

Don't know: 10%

No response: 10%

4. List the top 2 or 3 problems are you having controlling rangeland weeds? (example: too many acres to treat; high control costs; control methods ineffective; neighbors don't cooperate; inadequate control information; etc)

Eastern Montana (Areas 1, 2, 3, and 4)

Neighbors don't cooperate: 51%

High control cost: 54%

Too many acres: 21%

Lack of time: 17%

Treatments not effective: 13%

Others (less than 10%): difficult access; large number of species; application timing; spread by wildlife; infested roadsides; small acreage landholders; riparian areas; no labor; rapid spread; difficult to control weeds; no rain; poor weed board; organic farmers; fire; flood

Western Montana (Areas 5 and 6)

Neighbors don't cooperate: 57%

High control cost: 50%

Too many acres: 27%

Lack of time: 13%

Treatments not effective: 10%

Others (less than 10%): difficult access; large number of species; application timing; spread by wildlife; infested roadsides; small acreage landholders; rapid spread; need revegetation after weed control

5. What are your most successful weed management tools?

Eastern Montana (Areas 1, 2, 3, and 4):

- biological control: 24%
- herbicides: 83%
- grazing livestock: 24%
- mechanical/manual: 32%
- combination of management tools: 25%

Western Montana (Areas 5 and 6):

- biological control: 27%
- herbicides: 83%
- grazing livestock: 17%
- mechanical/manual: 27%
- combination of management tools: 50%

• If you use herbicides what factors do you consider when choosing an herbicide?

Eastern Montana (Areas 1, 2, 3, and 4):

- Effectiveness: 43%
- Cost: 35%
- Residual herbicide properties: 17%
- Weed species and application rate: 11%
- Application methods/ease of use: 10%
- Land use restrictions/riparian: 10%
- Other factors (less than 10%): non-target impacts; safety; broad-spectrum; weather; time of application

Western Montana (Areas 5 and 6):

- Effectiveness: 40%
- Cost: 53%
- Residual herbicide properties: 20%
- Weed species and application rate: 13%
- Application methods/ease of use: 13%
- Land use restrictions/riparian: 13%
- Non-target impacts: 10%
- Weather and application timing: 10%
- Other factors (less than 10%): availability; safety; broad-spectrum; weather; time of application

• What information do you need to select the best herbicide for your target weed?

Eastern Montana (Areas 1, 2, 3, and 4):

- Charts showing relative effectiveness: 29%
- Efficacy data: 13%
- Information from CES/University: 8%
- Information from County Weed Dist: 6%

Western Montana (Areas 5 and 6):

- Charts showing relative effectiveness: 29%
- Information from CES/University: 7%
- Information from County Weed Dist: 7%

Other (<6%): Most effective treatments based on cost; consultants; information from dealers/distributors and experienced applicators; test plots; summary in farm magazine

6. What is your level of understanding of aquatic weed identification and management?

Eastern Montana (Areas 1,2,3, and 4)

Low: 89% moderate: 11% high: 0%

Western Montana (Areas 5 and 6)

Low: 59% moderate: 39% high: 2%

7. Where do you receive your current weed management information?

Eastern Montana (Areas 1, 2, 3, and 4)

Chemical dealer: 59%

Cooperative Extension Service: 49%

County Weed District: 41%

Neighbors: 38%

NRCS: 35%

University: 22%

Other: internet, MDA; watershed groups; applicator training; consultant; farm magazine.

Western Montana (Areas 5 and 6)

Cooperative Extension Service: 70%

County Weed District: 57%

NRCS: 47%

Chemical dealer: 40%

Neighbors: 38%

University: 33%

Internet: 23%

Consultant: 10%

Other: MDA; applicator training; farm magazine.

8. What form do you prefer to receive your information on invasive weeds?

Eastern Montana (Areas 1, 2, 3, and 4)

Workshops: 62%

Field tours: 51%

Extension bulletins: 48%

Regular mail (brochures): 27%

Email: 27%

Internet: 25%

Other: one-on-one communication; traders dispatch; NRCS e-note

Western Montana (Areas 5 and 6)

Workshops: 53%

Email: 37%

Field tours: 33%

Extension bulletins: 33%

Internet: 13%

Regular mail (brochures): 10%

9. What weed research priorities should we have in Montana – i.e. what problems should we address to increase your success in invasive weed management?

Eastern Montana (Areas 1, 2, 3, and 4)

Prevention: 29%

Best application methods: 25%

Integrated weed management: 14%

Restoration: 13%

Non-biased herbicide information: 13%

Biological control: 10%

Education: 10%

No response: 13%

Other (less than 10%): efficacy compendium, aquatics; genetic modification; livestock grazing; riparian weed control

Western Montana (Areas 5 and 6)

Prevention: 43%

Integrated weed management: 27%

Restoration: 27%

Best application methods: 20%

Biological control: 20%

Education: 10%

No response: 20%

Other (less than 10%): fire to control weeds; non-biased herbicide information

General comments for improving weed control success: strengthen county weed districts; equipment rentals; wash stations; enforce weed law; early detection and control of species; grass-roots coordination; demonstration/workshops; non-industry workshops; increased funds for weed districts; licensing; learn to live with weeds; easy way to control cheatgrass.