Creating a Weed Management Plan

Noxious weeds
- By law, management is necessary
- Noxious includes the following characteristics
  - Invasive
  - Non-native
  - Competitive
  - Unchecked

Economic or Environmental cost

Economic Impact of Invasive Species
2010
- $120 BILLION/yr USA
- $12 K on RBC right of ways
- $200,000 - RBC Pest districts
- $10 - 15 K Aerial/yr
- BLM: $25 K/yr
- DOW: $10 K/yr
- USFS: $15 K/yr?

How do I Start? Where do I start?

What do I desire to happen?

Vegetation Management Plan
How to keep what you want, where you want it and when you want it
Management plan

- Satisfaction in achieving good stewardship practices
- Improve forage, biodiversity, healthy plant communities, prevent erosion, provide competition against re-infestation
- Increase value of property
- Reduce cost of maintenance

Benefits of WMP

- 1. It improves your weed control knowledge.
- 2. It saves you time and money.
- 3. It helps you to evaluate all factors of weed control.
- 4. It helps you visualize your total weed problem.
- 5. It prioritizes control efforts.
- 6. It creates a historical record-keeping system.
- 7. It enables you to participate in state, county, or local weed projects.

Establish Realistic Site Goals

- Map of entire property, labeled with structures, roads, points, landforms.
- Location of and all weed species present, estimate area impacted.
- Herbicide label—weeds listed.
- Timing schedule.
- Rate of application, calibration.
- Special concerns: water, trees, RU.

Components of a WMP

- Establish Realistic Goals
- Site description or map

Where to get Maps

- County GIS dept.
- NRCS
- Google “aerial photos”
- Hand drawn and labeled with structures, land features, ditches, water bodies, other features

Keep it simple!!!!
Goggle Earth Map (Free)

Survey your property
- Take your map with you and draw infestations
- Take weed ID book
- Bring samples for proper identification, or take pictures to County Weed Department or CSU Extension
- Label infestations by specie on map. Ex: one acre Leafy Spurge

Weed Control Methods
- Herbicides
- Tillage
- Defoliation
  - Mowing
  - Grazing
- Good Management
  - Fertility
  - Carbohydrate Management
  - Shading/mulching

Management options
- CSU Extension, RBC Weed Department, NRCS has specific management guidelines for each noxious specie
- Remember what the objectives are and select tool most appropriate for each weed.

Canada thistle is a colony forming perennial from deep and extensive horizontal roots. Flowers are purple. Flowering occurs during June through August.

Why are noxious weeds so hard to get rid of?
- They may produce many seeds. A single Purple Loosestrife plant may produce over 2.5 million seeds per year.
- They may have deep roots, making it hard to kill them. Rush skeletonweed roots can be 8 feet deep.
How do noxious weeds spread?

- Some seeds have wings or parachutes so they can fly or float through the air.
- Some seeds (hoary cress, Dyer’s woad) can float on water.
- Houndstongue seeds have barbs.

The Plan

Specific Weed Characteristics

Weed Control Options

- **Cultural controls**
  - Desirable plant growth
  - Proper grazing management
  - Irrigation, fertilization
  - Competitive desirable plant species

- **Biological control**
  - Uses organisms to disrupt weed growth
  - Insects
  - Disease organisms
  - Sheep
  - Goats
  - Cattle
  - Or other large herbivores

- **Mechanical Control**
  - Physically disrupts weed growth
  - Tillage
  - Mowing
  - Mulching
  - Burning

IPM Lake Avery
IPM

Basic Principles of Chemical Weed Control
- Know your weeds
- Choose the right herbicide
- Calibrate your sprayer
- Spray at the proper time

Battle Plan
Chemical Weed Control Principles
- Starve the weed, feed the crop
- Spray annual weeds when they are young and actively growing
- Spray perennial weeds when they are at full leaf or fruit set

Research Herbicides
- Mustards, biennials, knapweeds, spurge, thistle, perennials
- Find best product/rate for each noxious specie
- Find mixtures/rates for mixed infestations
- Variables: life cycles, weather, water bodies, non-target species, label limits: land use restrictions, e.g. Perspective, Tordon, Aquatic 2,4-D, Roundup.
For a herbicide to work it must:

- come in contact with a plant surface (root, shoot, leaves)
- remain at site long enough to penetrate or be absorbed
- move to its site of action

Weed Control

- Limited Herbicides
- Multiple options
- Integrated Management
  - Multiple uses
  - Multiple methods

How do we control noxious weeds?

1. Data Acquisition
   - GPS data collection
   - GPS data mapping

2. Develop a Cooperative Weed Management Plan
   - Where the most effective are
   - Educate, Monitor, Map, Eradicate

3. Implement the Weed Management Plan

4. Evaluate, Report and Repeat