



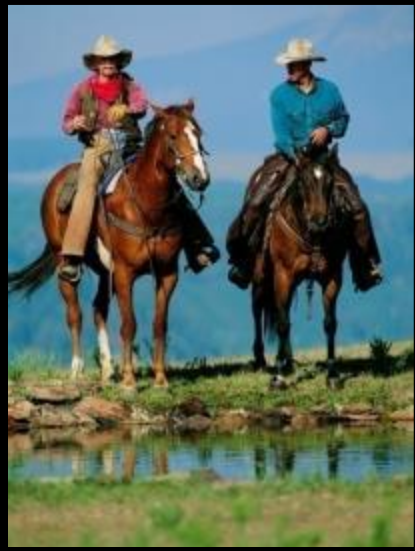
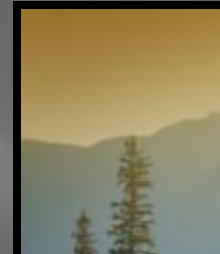
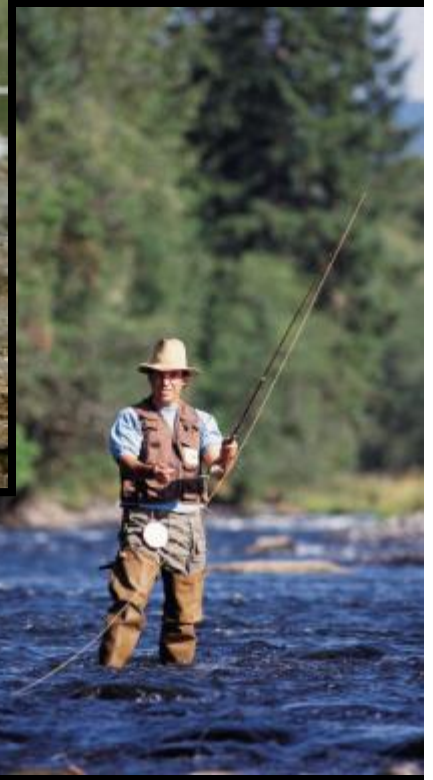
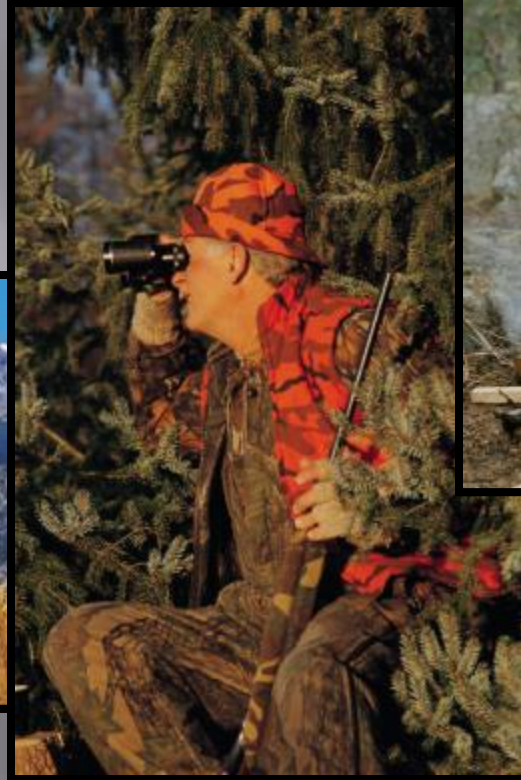
Toxic Plants to Livestock in SE Colorado

Purgatoire Watershed Weed Management Collaborative

Fred Raish



**It's not just an
"Ag" issue**



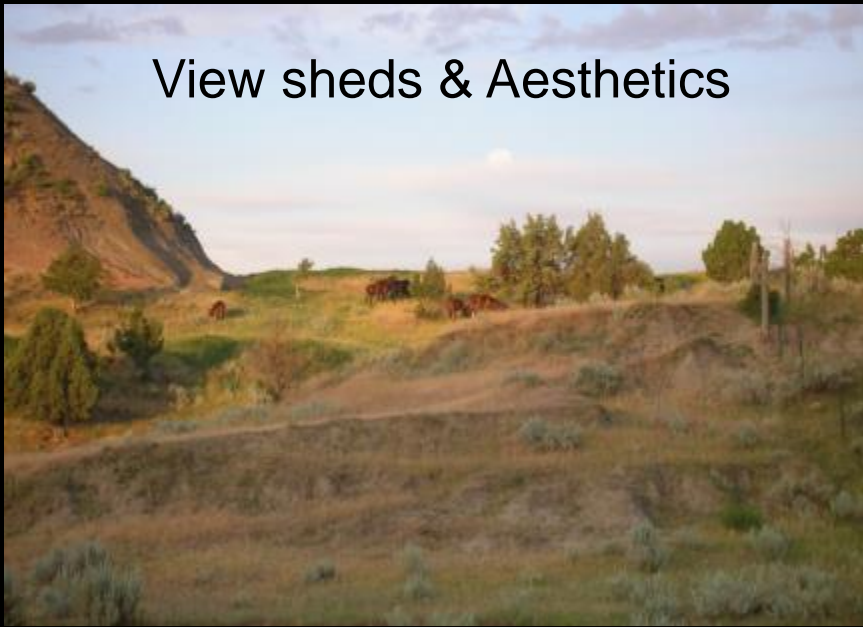
**Do you
partake in
one of
these
activities?**

Fisheries &
Food



Water &
Wildlife forage

View sheds & Aesthetics





And yes, your beer. . .



Canada Thistle

- ▣ Clopyralid (Clopyralid 3 or Transline)
 - 0.67 to 1.33 pints per acre
 - Spring after all shoots have emerged, rosette to early bud growth stages; or fall.

- ▣ Picloram (Picloram 22K or Tordon 22K)
 - 1 quarts per acre
 - Anytime when weeds are rapidly growing.

Canada Thistle

- ▣ Aminopyralid (Milestone)
 - 5 to 7 ounces per acre
 - Spring at pre-flower through bud growth stage; or fall.

- ▣ Chlorsulfuron (Chlorsulfuron 75 or Telar)
 - 1 ounce per acre
 - Fall application

Milkweed

- ▣ Labriform Milkweed
- ▣ Western Whorled Milkweed
- ▣ Mexican Whorled Milkweed

Labriform Milkweed



Western Whorled Milkweed



Mexican Whorled Milkweed



Milkweed Control

- ▣ Hand Pulling or mowing
- ▣ Dicamba (Cruise Control or Banvel) at 4 pints per acre.
- ▣ Picloram (Picloram 22K or Tordon 22K) at 1 quart per acre
- ▣ Glyphosate (Glyphosate 4 Plus or Round Up) at 2 quarts per acre



Purple loco



White loco



Woolly loco



Spotted loco

Locoweed / Milkvetch

- ▣ Clopyralid (Clopyralid 3 or Transline)
 - 6 oz. per acre
 - Apply from the rosette to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

- ▣ Clopyralid + 2,4-D (Cody or Curtail)
 - 1.5 quarts per acre
 - Apply from the rosette to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

Locoweed / Milkvetch

- ▣ Dicamba (Cruise Control or Banvel) + 2,4-D
 - 1 pint + 1 quart per acre
 - Apply from the rosette to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

- ▣ Metsulfuron (MSM 60 DF or Escort)
 - 0.5 ounces per acre
 - Apply from the rosette to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

Locoweed / Milkvetch

- ▣ Picloram (Picolram 22K or Tordon 22K)
 - 1 pint per acre
 - Apply from early bud to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

- ▣ Picloram + 2,4-D (Picolram + D or Grazon P+D)
 - 3 to 4 pints per acre
 - Apply from the rosette to the bloom stage. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

Locoweed / Milkvetch

- ▣ Clopyralid + Triclopyr (Prescott or Redeem R+P)
 - 1 - 2 quarts per acre
 - Apply to actively growing weeds. To prevent livestock poisoning, avoid grazing until the plants are completely dead.

Arrowgrass



Arrowgrass

- ▣ Metsulfuron (MSM 60 DF or Escort)
 - 0.5 ounces per acre
 - Apply when arrowgrass is fully emerged in the spring up to late summer when seeds are developing. Do not graze treated forage until the arrowgrass is dead.

Death Camas



Death Camas

- ▣ 2,4-D
 - 2 to 3 quarts per acre
 - Early spring no later than the 3 – 5 leaf stage.

Larkspur



Tall Larkspur

- ▣ Picloram (Picloram 22K or Tordon 22K)
 - 4 pints per acre
 - For best results apply from 6 inches tall to late bloom stage.

- ▣ Metsulfuron (MSM 60 DF or Escort)
 - 1.5 ounces per acre
 - Apply in the spring when larkspur plants are in the rosette

Russian Knapweed

56,721



Russian Knapweed



Russian Knapweed

- ▣ Picloram (Picloram 22K or Tordon 22K)
 - 2 to 4 pints per acre
 - Spring at bud to mid-flowering growth stages; or late fall.

- ▣ Aminopyralid (Milestone)
 - 5 to 7 ounces per acre
 - Spring and summer at bud to flowering growth stages; or in late fall.

Russian Knapweed

- ▣ Clopyralid (Clopyralid 3 or Transline)
 - 1 to 1.33 pints per acre
 - Spring after all shoots have emerged, bud to mid-flowering growth stages; late fall.

- ▣ Clopyralid + 2,4-D (Cody or Curtail)
 - 3 to 4 quarts per acre
 - Spring after all shoots have emerged, bud to mid-flowering growth stage; late fall.

Russian Knapweed

- ▣ Chlorsulfuron (Chlorsulfuron 75 or Telar)
 - 1 to 1.5 ounce per acre
 - Spring bud to flowering growth stage; late fall.

- ▣ Imazapic (Panoramic or Plateau)
 - 10 to 12 ounces per acre
 - Apply after the plants become completely brown in fall or early winter.

Russian Knapweed

- ▣ Clopyralid + Triclopyr (Prescott or Redeem R + P)
 - 3 to 4 pints per acre
 - Apply when plants are in the early flowering stage to fall.

Yellow Starthistle



Yellow Starthistle

- ▣ Mechanical Control – Pulling, cutting, disking
- ▣ Cultural Control – Grazing, burning
- ▣ Biological Control – 6 insects in western US

Yellow Starthistle

- ▣ 2,4-D
 - 1 to 4 pints per acre
 - Postemergence from rosette to beginning of bolting, but before flowering.

- ▣ Aminopyralid (Milestone)
 - 3 to 5 ounces per acre
 - Postemergence and preemergence. Postemergence applications are most effective when applied to plants from seedling to the mid-rosette stage.

Yellow Starthistle

- ▣ Clopyralid (Clopyralid 3 or Transline)
 - 0.25 to 0.67 pints per acre
 - Postemergence and preemergence. For postemergence application, apply to plants from seedling to mid-bolting stage.

- ▣ Clopyralid + 2,4-D (Cody or Curtail)
 - 2 to 4 quarts per acre
 - Postemergence and preemergence. For postemergence application, apply to plants from seedlings to mid-bolting stage.

Yellow Starthistle

- ▣ Clopyralid (Clopyralid 3 or Transline)
 - 0.25 to 0.67 pints per acre
 - Postemergence and preemergence. For postemergence application, apply to plants from seedling to mid-bolting stage.

- ▣ Clopyralid + 2,4-D (Cody or Curtail)
 - 2 to 4 quarts per acre
 - Postemergence and preemergence. For postemergence application, apply to plants from seedlings to mid-bolting stage.

Disclaimer

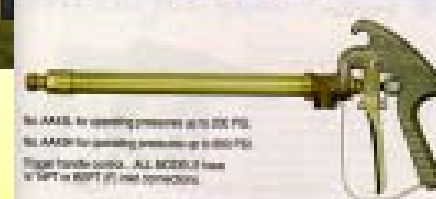
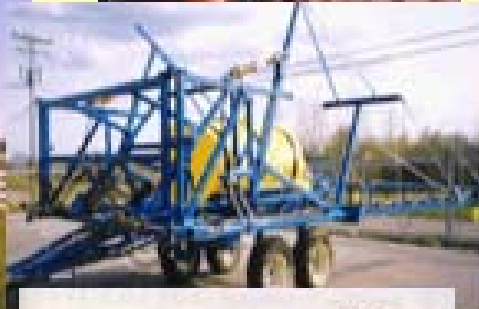
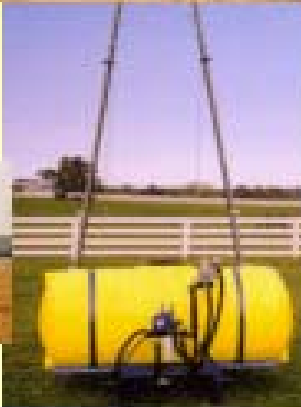
- ▣ Surfactant – Always use a non-ionic surfactant
 - MSO – If the label states

- ▣ Grazing Poisonous Plants
 - An application of a herbicide may increase the palatability of certain poisonous plants. Do not graze treated areas until poisonous plants are dry and no longer palatable to livestock.

- **ALWAYS READ AND FOLLOW LABEL DIRECTIONS**



Sprayer Calibration



For AASE, in operating pressures up to 200 PSI.
For AASD, in operating pressures up to 100 PSI.
Trigger handle only... ALL MODELS have
1/2" SPT or 3/8" SPT at hose connections.



Sprayer Calibration

- ▣ Determine the volume or weight that application equipment will apply to a known area under a given set of conditions.

Volume of Pesticide Solution Applied Depends Upon

- ▣ Nozzles
- ▣ Pressure
- ▣ Speed
- ▣ Spacing of Nozzles
- ▣ Viscosity of Liquid

- ▣ Why Calibrate??

1984 Colorado Spray Check Program

	Commercial Applicators	Private Applicators
average initial error	17.5%	25.8%
average corrected error	6.6%	5.5%
under-application	50%	40%
over-application	17%	37%
with 10% range	33%	23%



Pesticide Run-Off (insecticide/fish kill)







Krovar (10 lb/A) + Oust (3 oz/A)







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