



USING HERBICIDE WITH LESS IMPACT

Tris Hoffman

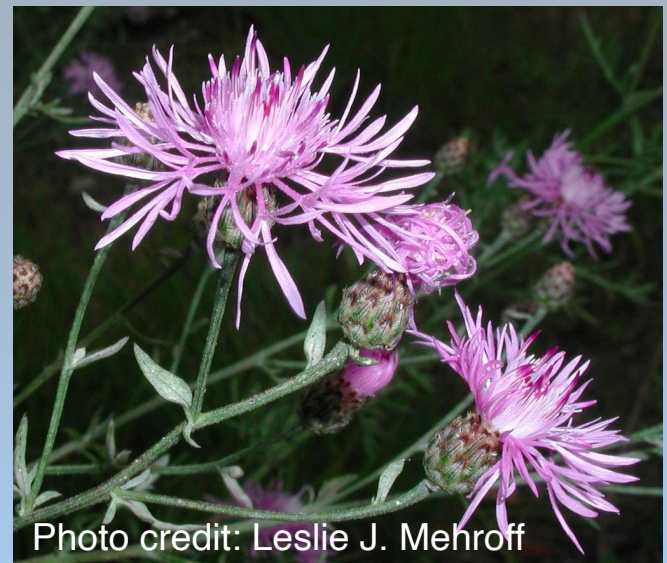


Photo credit: Leslie J. Mehroff

3 Main Points:

- **How to use less herbicide**
- **How to choose a less toxic herbicide**
- **Tips for spraying with minimal impacts to pollinators**



Photo credit: Mara Koenig USFWS

WHY USE HERBICIDE?



- **Large infestations**
- **Difficult weeds, esp. those with extensive rhizomes**
- **Herbicide is just one tool in your weed control toolbox**

SIDE NOTE

Neonicotinoid pesticides

For insects, not weeds

Very harmful to pollinators

Look for the word “systemic”

If unsure, rinse away all soil before planting



SIDE NOTE

A Word about Home Remedies

Home ingredients are not without environmental risk

- Usually affects all plants – weeds & non-weeds
- Can drastically change soil
- Low toxicity to humans does not always translate to other organisms



A photograph of a field of purple flowers, likely purple aster, growing in a clearing within a forest. The flowers are in full bloom, and the background shows a dense stand of trees, some of which appear to be dead or dormant. The scene is captured in natural daylight.

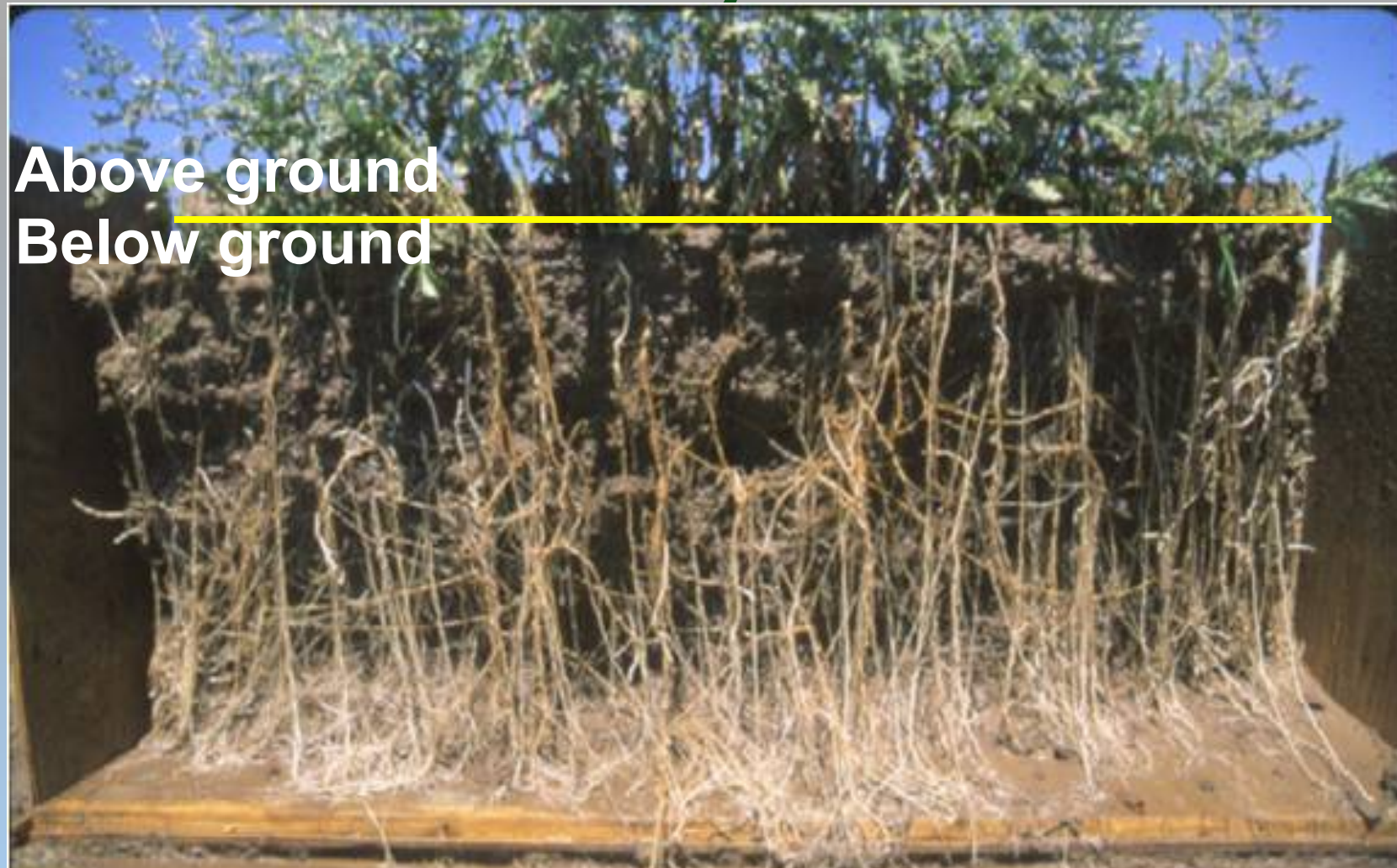
Should I leave the weeds for pollinators?

**Pollinators (and healthy ecosystems)
need DIVERSITY, not feast or famine**

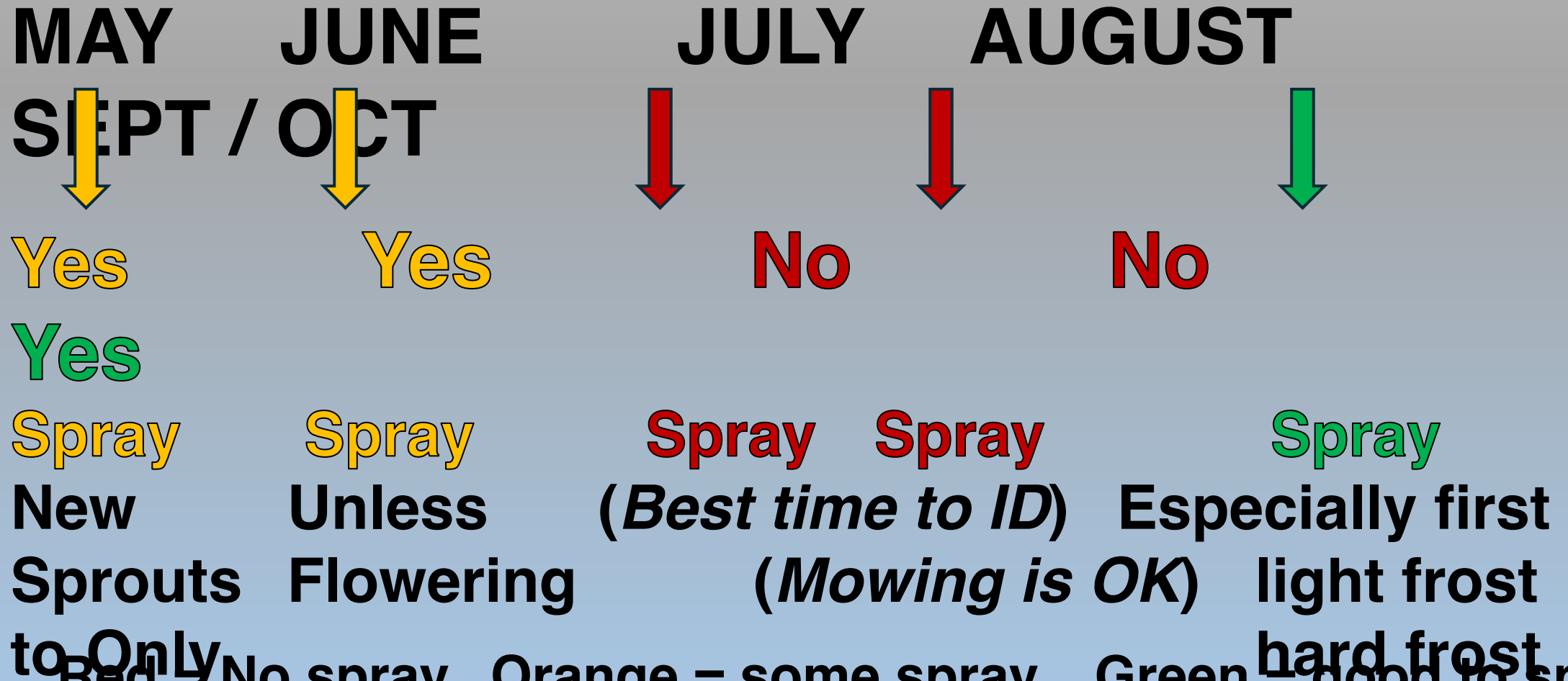
USING LESS HERBICIDE

TIMING of Spraying is Critical

Why?



Good timing improves weed control and is better for pollinators



Red = No spray. Orange = some spray. Green = good to spray.

NOTE: THIS SPRAYING CALENDAR IS FOR PERENNIALS

Fall Spray?

But...the plants will go to seed!

For *brand new* infestations, YES, spray *before* they go to seed.

Established infestations have likely been seeding already for years.



Mowing at bud or flower stage will reduce seeding.

Spray late in the fall for established plants.

Spray early in the spring for new germinants.

The challenge of **DANDELIONS** and other early bloomers

- 1) **Spray in the FALL**
- 2) **If you must spray sooner,
spray in the last hours of the day**
- 3) **Work on improving soil
conditions for competing plants**
- 4) **Set your mower blade higher to
help grass**



Learn your weeds **WITHOUT** flowers



Not sure?



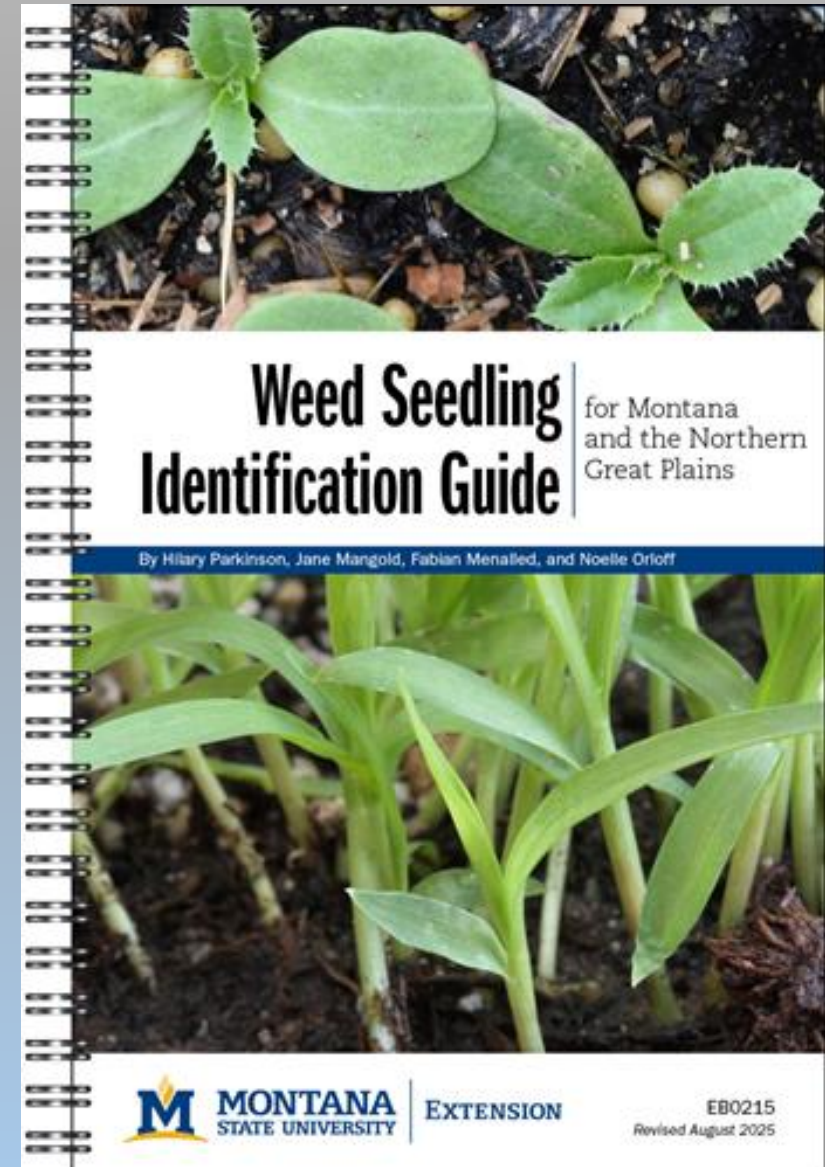
- **Mark with a pin flag and let them grow bigger**
- **Use an app such as Plantnet, Leafsnap, Picturethis, Obsidentify**
- **Be sure to touch, pluck, look at roots, etc.**

Local Resources are Ready to Help You

- Flathead County Weed Department
- Flathead County Extension Services
- MT DNRC – Dept. of Resources & Conservation
- Montana Weed Control Association

\$15.00
www.mtweed.org
store.msuextension.org 

Many other publications are free



Why is this so important?

- Weeds in flower take more herbicide to kill
- Weeds in flower are visited by pollinators
- Learning weeds often leads to species you weren't aware of
- You need to know what weeds you have to buy the correct herbicide for them



Photo credit: Mary Ellen Harte

USING LESS HERBICIDE
GET THE CORRECT HERBICIDE MATCH
Let the experts help you

- 1) Identify your weeds (write them all down)**
- 2) Identify issues on your property**
Examples: fruit trees, conifers, stream, well
- 3) Ask for herbicides labeled caution**
(not danger)
- 4) Be prepared to purchase more than one herbicide**

FILL THE VOID

You are not done when your spraying stops

- **Reduce bare ground**
- **Reduce compacted ground**
- **Reduce disturbances like overgrazing**
- **Re-plant desirable vegetation**
- **Mulch, cover, shade to prevent more weeds**



**Good land stewardship
stops the *herbicide hamster-wheel***

SELECTING A LESS TOXIC HERBICIDE



UNDERSTAND:

***ALL* herbicides (even those labeled as non-toxic) have some effect on pollinators, humans, animals, microbes, fungi, etc.**

LABELS CONTAIN CLUES

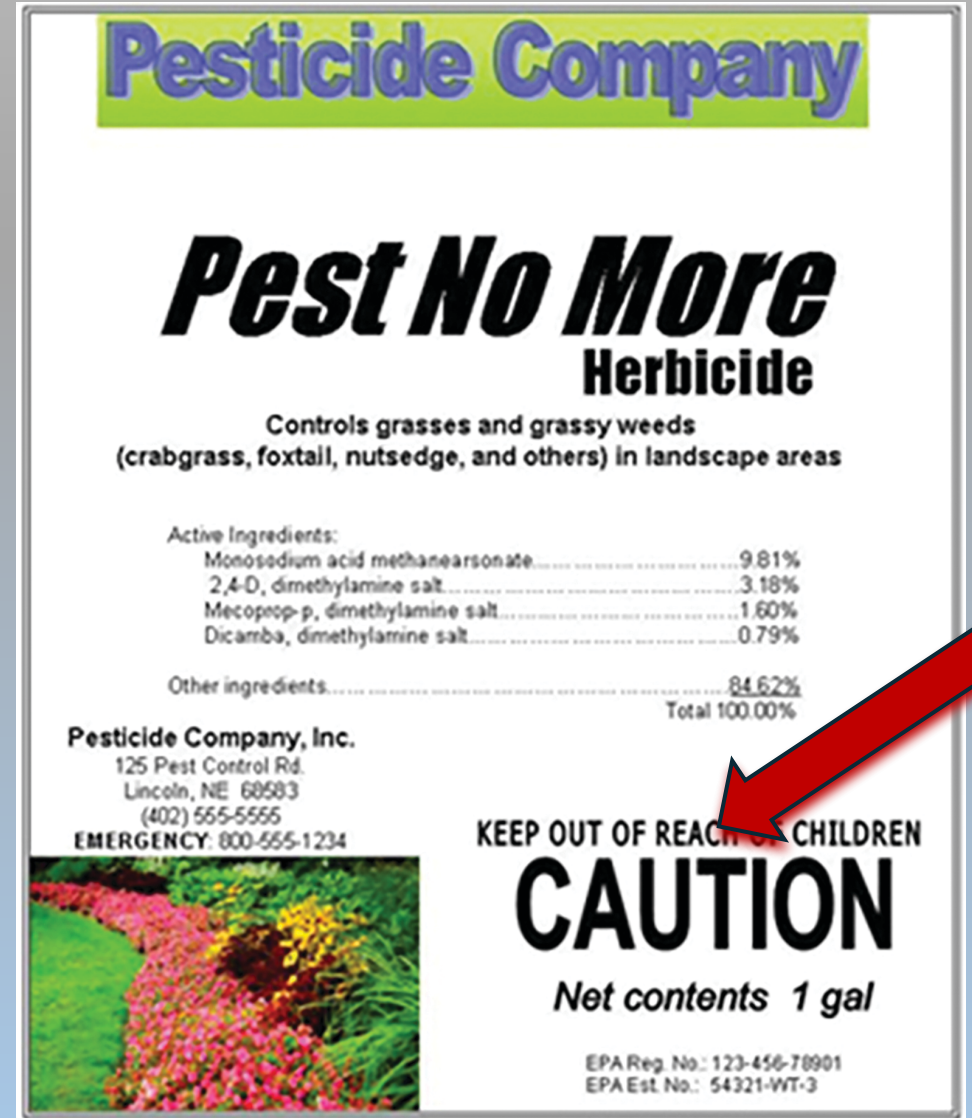
ALL labels have a signal word:

Caution

Warning

Danger (please avoid)

The signal word applies to humans, but can be assumed to apply to all animals



Pesticide Company


Pest No More
Herbicide

Controls grasses and grassy weeds
(crabgrass, foxtail, nutsedge, and others) in landscape areas

Active Ingredients:

| | |
|--------------------------------------|---------|
| Monosodium acid methanearsonate..... | 9.81% |
| 2,4-D, dimethylamine salt..... | 3.18% |
| Mecoprop-p, dimethylamine salt..... | 1.60% |
| Dicamba, dimethylamine salt..... | 0.79% |
| Other ingredients..... | 84.62% |
| Total | 100.00% |

Pesticide Company, Inc.
125 Pest Control Rd.
Lincoln, NE 68583
(402) 555-5555
EMERGENCY: 800-555-1234



KEEP OUT OF REACH OF CHILDREN
CAUTION
Net contents 1 gal

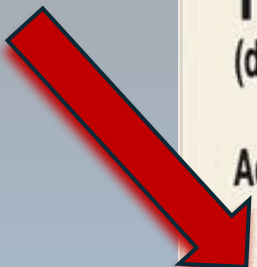
EPA Reg. No.: 123-456-78901
EPA Est. No.: 54321-WT-3

A red arrow points from the right side of the label towards the word "CAUTION".

One chemical to watch for:

2,4-D

- 2,4-Dichlorophenoxyacetic acid
- Dimethylamine salt of 2,4-dichlorophenoxyacetic acid
- Dichlorophenoxyacetic acid isooctyl ester
- *Other unprouncable names and formulations...*



I.I. Icide, Inc.
Specimen Label for Educational Purposes Only.

Weed Eliminator

Concentrate


HERBICIDE Kills Lawn Weeds
(dandelion, clover, thistle, and other listed broadleaf weeds)

Active Ingredients:

| | |
|------------------------------------|--------|
| Mecoprop, dimethylamine salt | 10.60% |
| 2, 4-D, dimethylamine salt | 3.05% |
| Dicamba, dimethylamine salt | 1.30% |

Inert Ingredients: 85.05%

TOTAL 100.00%



KEEP OUT OF REACH OF CHILDREN

2,4-D is highly toxic, but in **MANY** herbicides

WHY?



- **Cheap**
- **Gives immediate gratification (plants twist/tip right away). However, they often seed more.**
- **Companies sometimes mix a small amount of expensive/effective herbicide with a lot of cheap 2,4-D.**

TIPS FOR SPRAYING AROUND POLLINATORS

- Don't spray while flowering
- Spray in the late fall, first frost to hard frost
- Spray in the evening (if not windy)
- Spray in cooler temperatures: 45-60° F
- For small patches, consider covering with netting after spraying
- If granular herbicides will work, consider them





THANK YOU!
QUESTIONS?



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