

A photograph of a field densely populated with yellow starthistle plants. The plants have thin, upright stems and numerous small, bright yellow flowers. A wooden utility post is visible on the right side of the frame. The background shows a dirt path or road.

Yellow starthistle
Control
Utilizing Herbicides

UGA1459659



WANTED



**DEAD OR ALIVE
\$1000 REWARD**



Early Identification is the Key to Success!



A photograph of a field of yellow wildflowers, possibly a meadow or a roadside area. The flowers are small and numerous, scattered across a field of dry, light-colored grass. On the right side of the image, a portion of a tree trunk is visible, extending from the top to the bottom. The overall scene is bright and natural.

**These products are not
registered for use in crop areas**

Chemicals Available for Yellow Starthistle Treatment

Selective Chemicals: Only work on certain plants

Ø Clopyralid – Transline, Yellow starthistle killer

Ø Asteraceae (Sunflower) Family

Ø Legume (Pea) Family

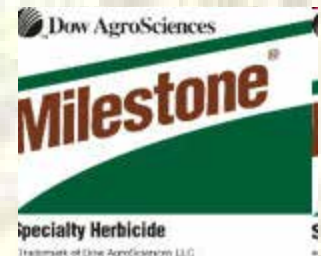
Ø Aminopyralid – Milestone

Ø Asteraceae (Sunflower) Family

Ø Legume (Pea) Family

Ø Some annual grasses

Ø Expanded plant list – on the label



Clopyralid

Trade Names: **Transline** and **Yellow Starthistle Killer**

- Ø Residual in the soil for 3 to 4 months
- Ø Works on Yellow starthistle, Bull thistle, Milk thistle, Vetch, etc...
- Ø Will hurt Alfalfa and Clover crops
- Ø No known toxicity to animals
- Ø Livestock which graze on treated material excrete active compound
- Ø Recommended buffer around water bodies of at least 25 feet.
- Ø Will move in sandy soils.
- Ø Do not use in potential grape planting sites
- Ø Do not dispose of treated material clippings into compost

Aminopyralid

Ø Trade Names: **Milestone**

Ø Residual in the soil is 4 to 5 months

Ø Expanded species list

Ø Yellow starthistle, all other thistles, fiddleneck, ragweeds, etc...

Check the label for a complete list.

Ø Use less chemical – 3 to 7 ounces per acre/year

Ø No known toxicity to animals

Ø Excreted from grazing livestock as an active chemical

Ø Can be used up to the waters edge

Do not apply directly to water

Ø Do not use in potential grape planting sites

Treatment Timing

- Ø Early treatment
 - Ø Rosette to bolting stage
 - Ø Aminopyralid works best at rosette stage
- Ø Mechanism: causes the plant to grow itself to death
- Ø Can be up to 2 weeks to visual signs of death of plant
- Ø Goal = no seeds produced

- Ø Treatment window
 - Ø **February to April**



Non-Selective Chemicals:

Will kill or damage all plants that it touches

- ØGlyphosate – Round Up
- ØNo residual in the soil
- ØNot selective so can hurt surrounding vegetation
- ØLow toxicity
- ØAquatic formulations available

Treatment Timing:

Rosette stage

Health and Safety

Personal Protection

- Ø Personal protective equipment
 - Ø Safety Glasses, Long sleeved shirt, chemical resistant gloves
- Ø Wash Hands thoroughly with soap and water
- Ø Read your entire label – follow all instructions

Environmental Protection

- Ø Avoid sensitive sites
 - Ø Water bodies, endangered species, crops, ground water and roadways
- Ø Avoid drift to non-target areas
 - Ø People, animals, neighboring properties

Health and Safety

- Ø Use coarse spray = Large droplets
- Ø Spray to wet. Not running off the plant
- Ø Watch wind speed. Optimal 3 – 10 miles/hr
- Ø Backflow prevention
- Ø Survey application site
- Ø Protect your wellhead
- Ø Watch the weather
- Ø Protect people and animals

Requirements

Agricultural Labeled Products

- Ø Transline, Milestone, and some formulations of Glyphosate
- Ø Need a permit from the El Dorado County Dept. of Agriculture
- Ø Permit allows purchase, use, and storage
- Ø Pesticide use reports required
- Ø Permit must be renewed every year

Products Labeled for Home Use

- Ø Yellow Starthistle Killer and some formulations of Glyphosate
- Ø No permit required
- Ø Purchased at retail stores
- Ø Not for use on agricultural sites.

Results

Ø Aminopyralid and Clopyralid

Ø 90% control in the first year

Ø Treatments should continue for at least 3 years

Ø Glyphosate

Ø Results depend on diligence



**Crop
Land**

Switching Gears

**Crop
Land**



Vineyard / Orchard Floor Management



Vineyard / Orchard Floor Management



Management Strategies that affect Yellow Starthistle

- Early Mowing - *reduces competition, opens canopy for YST*



Management Strategies that affect Yellow Starthistle

- Cultivation – *shift towards no-till, which allows weeds to flourish in the middles*



Management Strategies that affect Yellow Starthistle

- Herbicides – *shift towards using fewer chemicals, which allows weeds to flourish in the middles*



Biological Control

- California has released 7 bio-control agents



Biological Control – Peacock Fly



Hairy Weevil

Plan and Follow Up!

- Control takes at least 3-5 years of work!
- Identify the rosettes early

Yellow Starthistle Control Strategies in Vineyards / Orchards

- Mechanical
 - Mowing
 - Cultivation
 - Hand pulling / Hoeing
- Cultural
 - Flaming
 - Revegetation
- Chemical



Yellow Starthistle Control Strategies in Vineyards / Orchards

- Mechanical
 - Hand pulling / Hoeing; *wait till plants begin to bolt. Very selective and highly effective, but costly*



Yellow Starthistle Control Strategies in Vineyards / Orchards

- Cultural
 - Flaming; *wait till last spring rains*



Yellow Starthistle Control Strategies in Vineyards / Orchards

- Cultural
 - Revegetation; *establishment of a cover crop to outcompete yellow starthistle*



Yellow Starthistle Control

- Mowing/Weedeating
 - 2% flower
 - light infestation – no low branching
- Hand-pulling
- Grazing – at bolting
 - 6-8 weeks duration
 - intense grazing
- Plant/vegetate bare areas

Use Integrated Pest Management – a variety of control techniques

Herbicides Registered for use in Trees and Vines

Preemergent

Surflan
Chateau
Princep
Goal
Solicam
Kerb
Visor

Casoron
Karmex
Devrinol
Gallery
Prowl
Matrix

Postemergent

Glyphosate
Gramoxone
Rely
Shark
Fusilade
2,4-D
Poast
Venue
Prism

Organic

Matratec
GreenMatch
Scythe

University of California

Agriculture and Natural Resources

•* UCIPM Pest management guidelines-always check the label before using any herbicide



Yellow Starthistle Control Strategies in Vineyards / Orchards

- Selective chemical control
 - What about Milestone and Transline?
 - *NOT REGISTERED FOR USE IN VINEYARDS / ORCHARDS*
 - Use broadleaf herbicides or those that show some tolerance to grasses
 - Preemergent; GoalTender, Gallery
 - Postemergent; Shark, 2,-D
 - Use non-selective herbicides but only apply as spot treatments
 - Roundup, Rely, Matratec, GreenMatch, Scythe



**El Dorado County Department of
Agriculture**

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**Please call for an appointment to obtain a
permit**

Questions?