

# Strategies for controlling medusahead, barb goatgrass, and yellow starthistle

*Guy Kyser, Josh Davy, and Joe DiTomaso*

These are all annual weeds native to the Mediterranean region. They germinate all winter long and flower in late spring after most of the 'good' plants have dropped their seeds. They can be controlled with preemergence herbicides before or during the rainy season. Because they are still growing in late spring after most other plants have dried up, they can be controlled in late spring by mechanical or cultural methods or postemergence herbicides.

To eradicate annual weeds, you have to prevent them from producing seed until the soil seedbank is emptied out. On foothill rangeland, it takes about two years to kill off most of the seedbank for these species. After that, there may still be a few escapes.

## Medusahead

### Mechanical & cultural control

- Mow just before or just after flowering (April to May)
  - o Hard to do over large areas or in steep, rocky terrain
- Intensive grazing with sheep
  - o Graze at the time of flowering
  - o Good for small, contained areas
- Prescribed burning
  - o Burn when other grasses are dry, before medusahead drops seed
  - o Useful in California foothills, doesn't work as well in the high desert
  - o Takes away summer forage; can be risky; can be hard to get permit
- Revegetation
  - o Medusahead is not too competitive with perennial grasses
  - o Best if you control medusahead, remove thatch, and prepare a seedbed

### Chemical control

- Preemergence (fall)
  - o In the foothills, *Milestone* (7 to 14 oz per acre in October) suppresses medusahead
    - 14 oz is labeled only for spot treatments
    - 7 oz in October followed by 7 oz in January looks good
  - o In the high desert, *Plateau*, *Oust*, *Landmark*, and *Matrix* have shown good control
    - Effects may vary depending on soils and thatch
- Postemergence (spring)
  - o In early spring, low rates of *Roundup* (12 oz per acre) can control medusahead without killing perennials
  - o In late spring, use high rates of *Roundup* when medusahead is in flower

## **Barb goatgrass**

### Mechanical & cultural control

- Mow just before or just after flowering (May to June)
- Prescribed burning: May to June when other grasses are dry, before goatgrass drops seed

### Chemical control

- Preemergence (fall)
  - o Aminocyclopyrachlor (not registered) controls goatgrass at 2 to 4 ounces per acre.
- Postemergence (spring)
  - o Worth trying – in late spring, high rates of *Roundup* when goatgrass is in flower

## **Yellow starthistle**

### Mechanical & cultural control

- Mow in spiny stage before flowers open (April to May)
- Prescribed burning: May to June when grasses are dry, before starthistle drops seed

### Chemical control

- Preemergence & small plants (mid-winter to early spring). These chemicals have both foliar kill and soil residual which controls later germinating plants.
  - o *Milestone* (3 to 7 ounces, January to March)
  - o *Transline* (10 to 20 ounces, February to April)
  - o BEST treatment is a summer burn followed by *Milestone* or *Transline* in winter
- Postemergence (spring). These chemicals don't have any soil residual.
  - o *Garlon* or 2,4-D, if plants aren't too big
  - o *Roundup* for larger plants

## **More information**

### Medusahead

Low rates of *Roundup*: [ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=4526](http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=4526)

*Milestone*: [ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=7658](http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=7658)

We're working on a grant to develop a medusahead management guide.

### Barb goatgrass

ANR guide: <http://anrcatalog.ucdavis.edu/pdf/8315.pdf>

Aminocyclopyrachlor: <http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=7868>

### Yellow starthistle

Pest notes: <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7402.html>

Management guide: <http://www.cal-ipc.org/ip/management/yst.php>

*Weed Control in Natural Areas* can be ordered at <http://www.cal-ipc.org/shop/index.php>.