

Using molasses to control grazing

This brochure describes a method of focusing grazing on a narrow strip of grass to create a firebreak. A molasses solution is sprayed onto dry grass, and then cattle are allowed to graze freely. In field trials conducted in Contra Costa County, residual dry matter reduction was two to three times greater on the molasses-treated grass than on the adjacent untreated grass.

The procedure is to:

1. Dilute molasses to a 10% - 15% solution.
2. Filter the solution to remove solidified molasses so that the spray nozzle will not clog.
3. If the spray rig has been used to apply pesticides, clean it thoroughly prior to filling with dilute molasses.
4. Spray the molasses solution on dry grass using a truck-mounted spray rig (a 100 gallon capacity tank was used in the field trials). Spray enough solution to lightly wet the vegetation.
5. Allow the cattle to graze.

What are the benefits?

The goal is to minimize disced firebreaks. There are several reasons to minimize discing:

- Grasses plowed into the soil cannot be utilized as forage.
- With the onset of winter rains, disced soil is subject to erosion and soil loss. To minimize erosion, we need to minimize disturbed soil and we need to keep the grasses' root system intact. In locations prone to soil slumps, discing can aggravate gullying.
- Weeds such as mustards and thistles thrive in disturbed soil and can spread along disced firebreaks. If we can keep the grass roots intact, grasses will compete with weeds more effectively.
- For some wildlife, grazing disrupts habitat less than discing does.

In California, the NRCS recommends at least 1000 lbs/ac residual dry matter (RDM) on slopes greater than 30%, and a minimum RDM of 800 lbs/ac on slopes less than 30%, to protect soil and water resources.

What are the limitations?

- Timing is critical. The method works best on dry grass. However, grass isn't always dry by June 1, when weed abatement requirements must be met.
- Molasses must be re-applied if rain falls before grazing is complete.
- Because of the quantities of molasses spray needed, this method is most economical in locations that are accessible by truck.

Field test results

Residual dry matter (RDM) data has been collected at test plots in the Walnut Creek Open Space District. The RDM in areas treated with molasses spray can be compared with that of adjacent untreated grass to quantify cattle's preference for molasses-treated grass.

In 2000, RDM was reduced by 56% in treated areas after two weeks of grazing. This compares to 9% in adjacent untreated areas.

In 2001, RDM was reduced by 71% in treated areas and 38% in untreated areas after three weeks of grazing.

Fire protection guidelines

Contact your local Fire Protection District to find out what requirements are applicable to your land. In some cases requirements are modified due to terrain and vegetation.

Contra Costa County Fire Protection District abatement standards for pasture land require 15-foot wide firebreaks and cross-breaks where a sufficient number of animals are present to steadily reduce grass height during the summer to 3 inches by the end of August. Where land is less intensively grazed, a 30-foot width is required.

Commercial pasture land abatement standards specify a 20-foot wide grazed, mowed, or disced firebreak adjacent to the fire trail. 15-foot wide firebreaks are required along property lines common to parcels not used for commercial pasture land. Where the Fire Protection District allows grazed fire breaks, the maximum vegetation height is 3 inches.

Costs

Wholesale agricultural supply vendors offer the lowest price for molasses, but sell in large volumes (5000 gallons). A 55-gallon barrel of molasses costs about \$90. Transportation costs must also be considered, since a 55-gallon barrel weighs about 450 lbs.

Using a truck-mounted spray rig, molasses can be applied along several miles of road in one day. It may be more economical for two or more landowners to share the cost of application.

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Molasses Spraying

A Prescribed Grazing Method

for

Fire Fuel Management

and

Rangeland Conservation