

# **CEREALS, PASTURE, RANGELAND AND FALLOW - SPECIFIC WEED PROBLEM (MUSK THISTLE)**

## General Information

### GENERAL INFORMATION

Clean Pasture DF is recommended for use on land primarily dedicated to the production of wheat, barley, fallow, pasture, and rangeland. It is also recommended for use on irrigated or dry land grain sorghum in Colorado, Kansas, Nebraska, Oklahoma, and Texas (north of Interstate 20).

Clean Pasture DF can be used in most states. Check with your state before use. Clean Pasture DF is not registered for use in Alamosa, Conejos, Costilla, RioGrande, and Saquache counties of Colorado.

Clean Pasture DF controls weeds in grain sorghum, wheat (including durum), barley, pasture, rangeland grasses, and fallow. Clean Pasture DF is mixed in water or can be preslurried in water and added to liquid nitrogen carrier solutions and applied as a broadcast spray. A surfactant should be used in the spray mix unless otherwise specified on the label.

Clean Pasture DF is noncorrosive, nonflammable, nonvolatile, and does not freeze.

Clean Pasture DF controls weeds by postemergence activity. For best results, apply Clean Pasture DF to young, actively growing weeds. The use rate depends upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- Type and number of weeds.
- Weed size.
- Environmental conditions during and after treatment.

### Environmental Conditions and Biological Activity

Clean Pasture DF is absorbed through the foliage of broadleaf weeds, rapidly inhibiting growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks

after application and the growing point subsequently dies.

Clean Pasture DF works best in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

Clean Pasture DF may cause injury to crops that are stressed from environmental conditions such as extreme temperatures or moisture, abnormal soil conditions, or cultural practices. In addition, some crop varieties may be sensitive to treatment with Clean Pasture DF under otherwise normal conditions. Treatment of such varieties may injure crops.

In warm, moist conditions, herbicidal activity is accelerated in weeds; in cold, dry condition, herbicidal activity is delayed. In addition, weeds hardened-off by drought stress are less susceptible to Clean Pasture DF.

Weed control may be reduced if rainfall or snowfall occurs soon after application.

#### Ground Application

For optimum spray coverage, use flat-fan or low volume flood nozzles.

For flood nozzles on 30" spacing, use at least 10 gallons spray solution per acre (GPA), nozzles no larger than TK10 (or equivalent), and at least 30 pounds per square inch (psi). For 40" nozzle spacing, use at least 13 GPA; for 60" spacing, use at least 20 GPA. Overlap nozzles 100% for all spacings.

With Raindrop<sup>1</sup> RA nozzles use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

For flat-fan nozzles, use at least 3 GPA for applications to wheat or barley. Use at least 10 GPA for applications to pasture or rangeland. For grain sorghum, use 10-30 GPA and apply uniformly at 20-40 PSI with a properly calibrated low pressure boom sprayer using flat-fan nozzles. If applying to irrigated sorghum, delay first post-treatment irrigation for a minimum of 3 days after treatment. For the first post-treatment irrigation, do not exceed 1". Cultivate prior to treatment to cover exposed brace roots of grain sorghum. This will minimize injury from 2,4-D amine.

Use 50-mesh screens or larger.

#### Aerial application

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Wheat, Barley and Fallow – use 1 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.

Grain Sorghum – apply at the rate of 2-5 GPA. If applying to irrigated sorghum, delay first post-treatment irrigation for a minimum of 3 days after treatment. For the first post-treatment irrigation, do not exceed 1". Cultivate prior to treatment to cover exposed brace roots of grain sorghum. This will minimize injury from 2,4-D amine.

Pasture and Rangeland – use 2 to 5 GPA When applying Clean Pasture DF by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields.

See the Spray Drift Management section of the label.

#### Product Measurement

Measure precisely using scales calibrated in ounces.

#### SPECIFIC WEED PROBLEMS

Note: Thorough spray coverage is very important.

Blue Mustard, Flixweed, and Tansymustard: For best results, apply Clean Pasture DF in tank mixtures with 2,4-D or MCPA postemergence to mustards before bloom.

Canada Thistle and Sowthistle: Apply Clean Pasture DF with a surfactant, 2,4-D or MCPA in the spring after the majority of thistles have emerged while still small (rosette stage to 6" elongating stems) and actively growing to reduce the ability of emerged thistles to compete with the crop.

For spot applications to Canada Thistle in pasture and rangeland, apply as foliar spray once plant is fully leafed. Apply to runoff and include a surfactant in the spray

mix at 1 to 2 qts. Per 100 gal. of spray solution. Complete coverage of all foliage and stems is required for control.

On tall, dense stands, it may be necessary to spray from both sides to obtain adequate coverage.

Corn Gromwell and Prostrate Knotweed: Apply Clean Pasture DF with a surfactant when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing with 2,4-D or MCPA can improve results.

Kochia, Russian thistle, Prickly lettuce: Resistant biotypes of these weeds are known to occur. For best results, use in a tank mix with Banvel/Banvel SGF and 2,4-D, or bromoxynil and 2,4-D (such as 3/4-1 pt. Buctril + 1/4 - 3/8 lb. active 2,4-D ester). Apply in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing. Refer to the Tank Mixtures section of the label for additional details.

Sunflower (common/volunteer): Apply with a surfactant, 2,4-D or MCPA after the majority of sunflowers have emerged, are 2" to 4" tall and are actively growing. Use spray volumes of at least 3 gal./ac by air or 5 gal./ac by ground (10 gal./ac by ground in pastures).

Wild Buckwheat: For best results, apply in a tank mix with MCPA when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

Musk Thistle: Apply at 2/10 to 3/10 oz. per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Fall applications should be made before the soil freezes.

Multiflora Rose: For best control, apply as a broadcast application when multiflora rose is less than 3" tall. Application should be made in the spring, soon after multiflora rose is fully leafed. For spot applications in pasture and rangeland, apply as a foliar spray once plant is fully leafed. Apply to runoff. Include a surfactant in the spray mix at 1 to 2 qts. per 100 gal. of spray solution. Complete coverage of all foliage and stems is required for control. On tall, dense stands, it may be necessary to spray from both sides to obtain adequate coverage.

Blackberry and Dewberry: For spot applications in pasture and rangeland, apply as

a foliar spray once plant is fully leafed. Apply to runoff and include a surfactant in the spray mix at 1 to 2 qts. per 100 gal. of spray solution. Complete coverage of all foliage and stems is required for control. On tall, dense stands, it may be necessary to spray from both sides to obtain adequate coverage.

Pensacola bahiagrass control in established Bermudagrass pasture: Apply at 3/10 oz. per acre plus surfactant after green-up in the spring but before bahiagrass seedhead formation. Apply when moisture is sufficient to enhance grass growth.

Clean Pasture DF effectively removes bahiagrass from bermudagrass pastures. In highly infested pastures, Clean Pasture DF clears the areas of useful forage until the bermudagrass has time to cover the area. Therefore, do not apply to an entire farm or ranch in one year.

Treatments should be made to different areas of a farm over a period of years. Pastures may be re-established more quickly by fertilization (particularly with nitrogen and potassium) and/or replanting.

Under heavy bahiagrass pressure, grazing pressure, or adverse weather conditions (heat and drought), some regrowth of weeds may occur.

Note: Clean Pasture DF should not be used for the control of common or Argentine bahiagrass. Clean Pasture DF should not be applied in liquid fertilizer solutions for Pensacola bahiagrass control, as poor control and/or regrowth may occur.

Serecia lespediza: Apply at 4/10 oz. per acre with a surfactant at 1 to 2 qts per 100 gal. of total spray solution. For best results, make applications to serecia lespedeza beginning at flower bud initiation through the full bloom stage of growth.

Note: Do not use if drought conditions exist at intended time of applications.

Wild Garlic: Apply 1/10 to 2/10 oz. per acre in early spring when wild garlic is less than 12" tall with 2" to 4" of new growth.

Woolly Croton: Apply 1/10 to 2/10 oz. per acre in late spring or early summer at preemergence through 2 true leaf stage.

Limitations, Restrictions, and Exceptions

## SPECIFIC WEED PROBLEMS

Musk Thistle: Apply at 2/10 to 3/10 oz. per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Fall applications should be made before the soil freezes.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

4 hours

Timings

[In the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth.](#)