

# **RANGELAND PASTURES AND PERENNIAL GRASSLANDS - ESTABLISHED STANDS - DIFFICULT-TO-CONTROL WEEDS AND WOODY PLANTS**

## General Information

### GENERAL INFORMATION

Best results will be obtained when FIVE STAR is applied during warm weather to young weeds that are actively growing under good moisture conditions. Lowest recommended rates will generally be satisfactory on susceptible annual weed seedlings. For listed perennial or biennial weeds and under certain conditions such as drought or cool temperatures where control is difficult, the higher recommended rates may be required. In general, only weeds emerged at the time of application will be affected.

When FIVE STAR is used for weed control in actively growing crops, the growth stage of the crop must be considered. Proper timing is required to obtain maximum crop tolerance and to avoid crop injury. Weed control and crop tolerance of this product may be affected by local conditions, crop varieties, cultural practices, application methods and other factors. Users should consult Agricultural Extension Service, agricultural experiment station, university weed specialists, seed companies or other qualified crop advisors for information pertaining to local use. In general, weed control and crop tolerance will be best when plants have neither too little nor excessive moisture before or after application, and the crop is not under other stresses.

Certain states have regulations which may affect the use of this product. Contact your state pesticide authority for additional information.

Soil residue of this product may temporarily inhibit seed germination and plant growth.

### MIXING INSTRUCTIONS

FIVE STAR is an emulsifiable concentrate formulation intended for dilution in water for many applications. For certain specified applications, liquid fertilizer or oil may

replace part or all of the water as diluent.

If dry flowable (DF), wettable powder (WP) or flowable (F) tank mix products are to be used, these should generally be added to the spray tank before FIVE STAR. Refer to mixing directions on tank mix product labels.

For best results, thoroughly clean sprayer immediately after use by flushing system with water and heavy duty detergent.

**Water Spray:** To prepare a water spray mixture, fill clean spray tank about 1/2 to 2/3 full with clean water. Add required amount of FIVE STAR with agitation turned on. Continue agitation while adding balance of water and during spray operations.

**Note:** This product forms an emulsion in water and can separate upon prolonged standing. If spray mixture is allowed to stand, agitate it before use to assure uniformity.

**Liquid Fertilizer Spray:** Due to increased risk of crop foliage burn with fertilizer, use only as recommended on this label. Use fertilizer rate recommended locally. Fill clean spray tank about 1/2 to 2/3 full with liquid nitrogen fertilizer (UAN or urea) solution. Add required amount of FIVE STAR with vigorous agitation running. Continue agitation while adding balance of liquid fertilizer during spray operations. Application should be made immediately. Overnight storage of mixture is not recommended. Application during very cold (near freezing) temperatures is not advisable because of the likelihood of crop injury. FIVE STAR is formulated to be compatible with most liquid nitrogen solutions; however, due to variability in fertilizers, users may wish to perform a jar compatibility test before large scale mixing.

**Oil Spray:** Use only as recommended on this label. Fill clean spray tank about 1/2 to 2/3 full with diesel oil, fuel oil, stove oil or other suitable oil. Add required amount of FIVE STAR with agitation turned on. Continue agitation while adding balance of oil. The resulting mixture is a solution and will generally remain uniform without agitation once mixed. However, agitation is suggested if available. Do not allow any water to get into spray mixture to avoid formation of an invert emulsion (mayonnaise consistency).

**Water Spray with Oil:** Use only as recommended on this label. Where a combination of water and oil diluent is recommended, the use of emulsifiable crop oil or crop oil

concentrate is suggested since mild agitation will be sufficient. Mix in the sequence of water, FIVE STAR, and oil.

If diesel or other nonemulsified oils listed above under "Oil Spray" are desired for use with water, add no more than 1 quart of such oil per 1 gallon of water and agitate vigorously until tank is emptied. If possible, premix nonemulsified oil with FIVE STAR and add this premix to a mostly filled spray tank with agitation on. Otherwise, mix in the sequence of water, FIVE STAR, and oil with agitation on. Follow these procedures carefully to avoid formation of an invert emulsion (mayonnaise consistency).

## APPLICATION PROCEDURES

For all types of applications, use calibrated spray equipment to assure applying the recommended amount of FIVE STAR spray mixture per acre. Use sufficient spray volume within the ranges specified to obtain good coverage of weeds. FIVE STAR is absorbed sufficiently within 1 hour after application to provide adequate weed control.

**Ground Broadcast Spray:** Unless otherwise specified in the appropriate crop or noncrop directions, apply FIVE STAR in 5 or more gallons of spray solution per acre. Use enough spray volume to provide uniform coverage of weeds, taking into account the amount of vegetation present and the type of application equipment used. As crop canopy and weed density increase, a higher spray volume may be needed for equivalent coverage and weed control. Typical crop applications utilize 10 to 50 gallons of spray per acre while certain high volume noncrop applications may utilize more than 100 gallons per acre. Use coarse sprays to minimize potential spray drift. Do not apply with hollow cone nozzles or other nozzles that produce fine spray droplets. Boom sprayers with flat fan or low volume flood nozzles are generally most suitable for ground broadcast applications.

**Ground Band Spray:** Determine band equivalents to broadcast rates and volumes by the following formulas given in the label.

## CHEMIGATION

Do not apply this product through any type of irrigation system.

**Aerial Broadcast Spray:** Unless otherwise specified in the appropriate crop or

noncrop directions, apply FIVE STAR in 1 to 10 gallons of spray solution per acre. For best coverage and weed control, as well as reduced potential for spray drift, a minimum of 3 gallons per acre is suggested. Avoid using nozzles or nozzle configurations that generate fine droplets. One configuration usually found to be suitable includes straight stream nozzles (such as disk with no swirl plate) directed straight back along the windstream. Mechanical flagging systems such as Automatic Flagman are suggested to obtain more uniform application.

With fixed-wing or helicopter application, an exactly even swath deposition may not be achieved, and consequently crop injury or pesticide nonperformance may result wholly or in part. Do not apply by air during periods of thermal inversion. Avoid application if potential for drift is excessive and/or susceptible crops are growing in the vicinity.

## WEED LISTS

FIVE STAR will control or partially control the following weeds in addition to many other susceptible noxious plants. Locally resistant biotypes of listed weeds may be suppressed, but tank mixing an herbicide with a different mode and site of action is advisable for such biotypes. Certain weeds, especially deep-rooted perennials and woody varieties, may require repeat applications of FIVE STAR for control or suppression. Regrowth of perennials may occur.

## PLANTING IN TREATED AREAS

**Labeled Crops:** Within 29 days following an application of this product, plant only those crops named as use sites on this or other registered 2,4-D labels. Follow more specific limitations, if any, provided in the directions for individual crops. Labeled crops may be at risk for crop injury or loss when planted soon after application, especially in the first 14 days. Degradation factors described below should be considered in weighing this risk.

**Other Crops:** All other crops may be planted 30 or more days following an application without concern for illegal residues in the planted crop. However, under certain conditions, there may be risk of injury to susceptible crops. Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

Degradation Factors: When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid degradation of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. Consult your local Agricultural Extension Service for information about susceptible crops and typical soil conditions in your area.

## APPLICATIONS

Read all preceding general sections of label and disclaimer before use.

Unless otherwise specified, applications may be made by ground or air equipment.

Ground applications may provide more thorough coverage and better weed control.

For selective postemergent weed control in crops, do not add oil, surfactant, fertilizer or other additives unless specifically recommended on this label.

Limitations, Restrictions, and Exceptions

## RANGELAND PASTURES AND PERENNIAL GRASSLANDS

### NOT IN AGRICULTURAL PRODUCTION

General: FIVE STAR can be used to control or suppress a number of susceptible broadleaf weeds in rangeland or perennial grasslands that are set aside from agricultural use such as in the Conservation Reserve Program (CRP) or similar government programs. Consult program rules to determine whether grass and hay may be used. For best results, apply when broadleaf weeds are small. Adequate moisture is needed for best grass tolerance and weed control. Addition of a nonionic surfactant usually improves weed control.

Plant Response: Injury to legumes, bentgrass, and other warm season grasses is likely to occur. Grasses may be discolored following treatment. Do not apply when grass is in boot to milk stage, or after heading begins, if grass seed production is desired.

Established Stands: For best results, weeds must be actively growing.

For difficult-to-control weeds and woody plants: Use 51.2 fluid ounces (2.0 lbs. acid equivalent) per application.

#### RANGELAND & PASTURE RESTRICTIONS:

##### Livestock Feeding Restrictions:

- Do not graze dairy animals on treated areas within 7 days after application.
- Do not graze meat animals on treated areas within 3 days before slaughter.
- Do not cut treated grass for hay within 30 days after application.
- Do not cut forage for hay within 7 days of application.
- Do not make more than 2 applications per year.
- Minimum spray interval between applications is 30 days.
- Do not apply more than 102.4 fluid ounces per acre per year.
- If grass is to be cut for hay, Agricultural Use requirements for the Worker Protection Standard are applicable.

FIVE STAR contains 0.039 pounds a.e. of 2,4-D per fluid ounce. When tank mixing with products that contain 2,4-D, do not exceed a combined total of 4.0 pounds of a.e. per acre per year.

##### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

##### Restricted Entry Interval

12 hours

##### Timings

[When weeds are small and actively growing.](#)