

# **FALLOW SYSTEMS TO BE PLANTED TO CORN, COTTON OR SOYBEANS - PERENNIAL WEEDS**

## General Information

### Product Information

Enlist Duo herbicide is a systemic herbicide that is intended for control of emerged annual and perennial weeds. Enlist Duo is designed to be applied to corn, soybean, and cotton crops containing Enlist traits. These are patented genes that provide tolerance to Enlist Duo. Corn, soybeans, cotton or any other crop without the Enlist trait will be seriously damaged by foliar applications of Enlist Duo.

When this product is applied as directed and under the circumstances described, it controls annual and perennial weeds listed in this label.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects include twisting of leaves and curvature of stems followed by a gradual wilting and yellowing of the plant that advances to complete browning of above-ground growth and deterioration of underground plant parts. Visible effects on most annual weeds occur within 2 to 4 days depending upon weed species.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual and perennial rate tables for specific weeds. When treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions, reduced weed control may result.

**Rainfastness:** Heavy rainfall soon after application may wash off this product from the foliage.

**Spray Coverage:** For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

**Mode of Action:** 2,4-D, one of the active ingredients in this product, mimics the naturally occurring plant auxins and overloads the plant's auxin balance affecting

vital processes, such as cell division and elongation, resulting in abnormal growth and plant death. Glyphosate, the other active ingredient in this product, inhibits the EPSP synthase enzyme. This enzyme is found only in plants and microorganisms and is essential to forming specific amino acids.

**Limited Soil Activity:** Though some suppression of annual weeds emerging soon after application may occur when this product is applied at higher rates within the rate range, optimum control is achieved when the majority of weeds are emerged at the time of application. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

**Biological Degradation:** Degradation of this product is primarily a biological process carried out by soil microbes.

#### Herbicide Resistance Management

2,4-D, one of the active ingredients in this product, is a Group 4 herbicide (synthetic auxin). Glyphosate, the other active ingredient in this product, is a group 9 herbicide (inhibitor of EPSP synthase). Some naturally occurring weed biotypes that are tolerant (resistant) to 2,4-D or glyphosate may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same modes of action can lead to the selection for resistant weeds. Certain agronomic practices delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued availability of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of Enlist Duo for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Dow AgroSciences retailer, representative or call 1-855-ENLIST-1(1-855-365-4781)
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 or 9 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production. Additionally, users should follow as many of the following herbicide resistance management practices practical:
  - Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
  - Utilize sequential applications of herbicides with alternative modes of action.
  - Rotate the use of this product with non-Group 4 and non-Group 9 herbicides.
  - Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
  - Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
  - Avoid using more than two applications of Enlist Duo and any other Group 4 or Group 9 herbicide within a single growing season unless in conjunction with another mode of action herbicide with overlapping spectrum.
  - Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Dow AgroSciences representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

### Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Do not allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, desirable plants; including trees and cotton without the Enlist trait, because severe injury or destruction may result. Small

amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Before making an application, please refer to your state's sensitive crop registry (if available) to identify any commercial specialty or certified organic crops that may be located nearby.

At the time of application, the wind cannot be blowing toward adjacent commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), grapes and cotton without the Enlist trait.

### Application Equipment and Application Methods

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

Aerial Application: Do not aerially apply this product.

Apply Enlist Duo with the following application equipment: Apply spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

### Ground Broadcast Spray

Boom, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment. Use the minimum boom height based upon the nozzle manufacturer's specifications. Spray drift potential is increased as boom height increases. Spray drift can be minimized if nozzle height is not greater than maximum height recommended by nozzle manufacturer for the nozzle selected. Use the specified rates of this product as a broadcast spray unless otherwise specified. As the density of weeds increases, increases spray volume within the specified range to ensure complete coverage. Check for even distribution of spray droplets.

### Uses

Unless otherwise specified, applications may be made to control any weeds listed in the annual and perennial tables.

### Precautions:

- The use directions are based upon a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence.
- In no-till and stale seedbed systems, a preplant burndown application of this product is required to control existing weeds prior to crop emergence.

### Restrictions:

- For broadcast burndown or preplant treatments, do not harvest or feed treated

vegetation for 8 weeks following application unless otherwise specified.

- Do not irrigate treated fields for at least 24 hours after application of Enlist Duo.
- Do not make application of Enlist Duo if rain is expected in the next 24 hours.
- Do not aerially apply this product.
- Enlist Duo is approved for use in the following states: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida, Georgia, Iowa, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Mississippi, North Carolina, North Dakota, Nebraska, New Jersey, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, Wisconsin, and West Virginia. Do not use in any other state.
- Do not use Enlist Duo in the following counties: Arizona (Yuma, Pinal, Maricopa, Pima, La Paz and Santa Cruz); Florida (Brevard, Broward, Charlotte, Collier, DeSoto, Glades, Hardee, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Miami-Dade, Okeechobee, Orange, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie); Tennessee (Wilson).

#### Limitations, Restrictions, and Exceptions

#### FALLOW SYSTEMS TO BE PLANTED TO CORN OR SOYBEANS

##### Carriers and Spray Volumes

Apply in a broadcast spray volume of water ranging from 10 to 15 gallons per acre for best results. Do not substitute water with nitrogen solutions as carrier. See the Spray Drift Management section for specific information on spray nozzles, spray pressure, speed, boom heights, etc., for specific application information.

##### Postharvest

Allow weeds to regrow after any damage incurred during harvest and recover from environmental stress before applying this product. Apply prior to heading of grass weeds and, if possible, before broadleaf weeds are more than 24 inches tall. Refer to Annual and Perennial Weeds sections for specific weed height and use rate information.

##### Chemical Fallow

This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Broadcast treatments will control or suppress many perennial weeds in fallow fields. Refer to Annual and Perennial

Weeds sections for specific weed height and use rate information. Apply this product during the fallow period up until 7 to 14 days prior to planting corn without the Enlist trait, seed corn, sweet corn or popcorn, and up until 30 days prior to planting soybean.

#### Preplant Fallow Beds

Apply this product to fallow beds prior to planting or emergence of any crop listed on this label. Apply this product during the fallow period up until 7 to 14 days prior to planting corn, seed corn, sweet corn or popcorn, and up until 30 days prior to planting soybean. Refer to Annual and Perennial Weeds sections for specific weed height and use rate information.

#### Restrictions:

- Do not aerially apply this product.

#### Weed Control

Apply 3.5 to 4.75 pints of this product per acre to actively growing weeds once the majority reach 3-6 inches in height. Apply 4.75 pint rate when weeds are larger than 6 inches tall, weeds are known, or suspected to be, glyphosate-resistant, and when applications are made under challenging environmental conditions. This product may be used up to 4.75 pints per acre where heavy densities exist. Water carrier volumes of 10 to 15 gallons per acre are required for best results.

This product will not control grass weed biotypes that are glyphosate resistant broadleaf weed biotypes. Always apply 3.5 to 4.75 pints per acre.

Hard to control weeds, such as Palmer amaranth, may require a total program approach including soil applied residual herbicide(s) followed by a single or sequential post herbicide application. Glyphosate resistant Palmer amaranth may require application at smaller growth stages and may require additional herbicide application(s) with alternative modes of action.

Perennial weeds may require higher rates for best control. Below-ground portions of perennial weeds may not be completely controlled with single applications and follow-up applications may be required if regrowth occurs.

#### Perennial Weeds:

- Alfalfa: Make applications after the last hay cutting in the fall. Allow alfalfa to

regrow to a height of 6 to 8 inches or more prior to treatment. Follow applications with deep tillage at least 7 days after treatment, but before soil freeze-up.

- Bindweed, field: Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For suppression on irrigated agricultural land, apply 4.75 pints of this product in 10 to 15 gallons of water per acre for ground applications only. Apply when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.
- Dandelion: Best results achieved when most plants have reached the early bud stage of growth.
- Dock, curly: Apply when most plants have reached the early bud stage of growth.
- Dogbane, hemp: For suppression, delay applications until maximum emergence of dogbane has occurred. Best results are achieved when most plants have reached the late bud to flower stage of growth, but application must be made before corn is 48 inches tall.
- Jerusalem artichoke: For suppression, apply when most plants are in the early bud stage.
- Milkweed, common: For suppression, apply when most plants have reached the late bud to flower stage of growth.
- Pokeweed, common: Apply to actively growing plants up to 24 inches tall.
- Smartweed, swamp: For suppression, apply when most plants have reached the early bud stage of growth.
- Sowthistle, perennial: For suppression, apply when most plants are at or beyond the bud stage of growth.
- Thistle, Canada: Apply when most plants are at or beyond the bud stage of growth. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Make applications as long as leaves are still green and plants are actively growing at the time of application.

Method

[Broadcast/Foliar Ground](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

48 hours

Timings

[Post-harvest](#)

[Preplant](#)