



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 20, 2017

Solito Sumulong
Manager of Registrations
Loveland Products Inc.
P.O. Box 1286
Greeley, CO 80632-1286

Subject: Notification per PRN 98-10 – Making minor changes
Product Name: Double Header
EPA Registration Number: 34704-1099
Application Date: February 27, 2017
Decision Number: 528559

Dear Solito Sumulong:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records. Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact Shanta Adeeb at 703-347-0502 or via email at adeeb.shanta@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Shanta Adeeb" with a small flourish underneath.

Reuben Baris, Product Manager 25
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

NOTIFICATION

34704-1099

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

04/20/2017

GROUP **15 27** HERBICIDES



Double Header

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A herbicide for control of annual grasses and broadleaf weeds in field corn, field seed corn, field silage corn, sweet corn, and yellow popcorn.

ACTIVE INGREDIENTS:

	By Wt.
Acetochlor*, 2-Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide.....	35.00%
Mesotrione**, 2-(4-Mesyl-2-nitrobenzoyl)-1,3-cyclohexanedione.....	4.10%
OTHER INGREDIENTS:	60.90%
TOTAL	100.00%

* Contains 3.2 pounds acetochlor per gallon

** Contains 0.38 pounds mesotrione per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label find someone to explain it to you in detail.)

For Additional Precautionary Statements, Directions for Use, Storage and Disposal and Other Use Information, See Inside This Label Booklet.

FIRST AID

If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor for treatment advice. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378. FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.	

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Wear protective eyewear (goggles, face shield). Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Keep out of reach of children and domestic animals.

Personal Protective Equipment (PPE):

Mixers, loaders, applicators, and other handlers must wear

- long-sleeved shirts,
- long pants,
- shoes plus socks, and
- chemical resistant gloves made of any waterproof material (such as nitrile rubber, neoprene rubber, barrier laminate, polyvinyl chloride (PVC), or viton).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Acetochlor demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow, may result in groundwater contamination.

PHYSICAL-CHEMICAL HAZARDS

Do not mix or allow to come into contact with an oxidizing agent. A Hazardous Chemical reaction may occur.

SURFACE WATER ADVISORY

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This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This product has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

DIRECTIONS FOR USE

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**It is a violation of Federal law to use this product in any manner inconsistent with its labeling.
Read entire label before using this product.**

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, waterproof gloves and shoes plus socks.

PRODUCT INFORMATION

For use only on field corn, field seed corn, field silage corn, sweet corn, and yellow popcorn, which collectively will be referred to as "corn" in this label.

Double Header herbicide may be used preplant, preemergence (after planting but prior to crop emergence), or postemergence (after crop emergence) in field corn, field seed corn, and field silage corn fields, and sweet corn. For yellow popcorn, Double Header must be applied prior to crop emergence (i.e., preplant or preemergence) or severe crop injury may occur.

Double Header is a combination of the herbicides acetochlor (group 15), mesotrione (group 27) and the antidote or safener dichlormid. While this combination of ~~two~~2 herbicide modes of action controls many grass and

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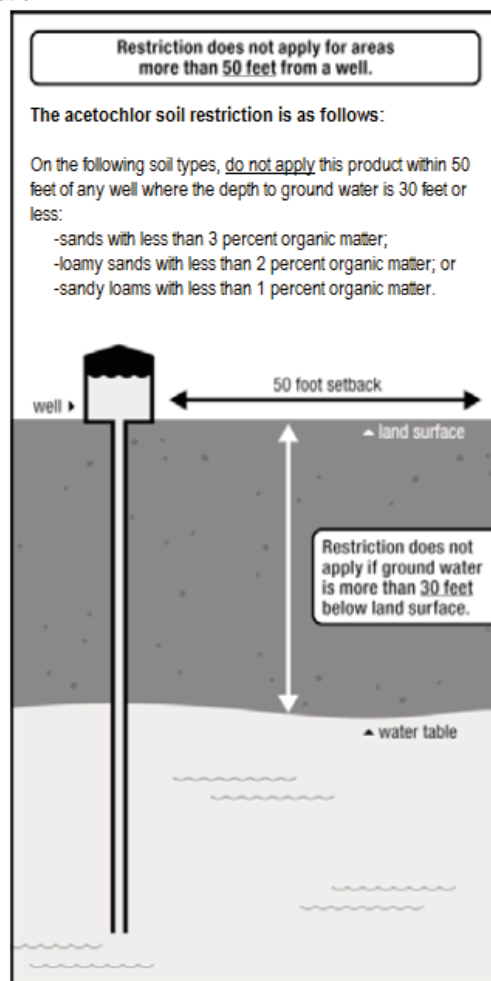
broadleaf weeds by interfering with normal germination, growth, and seedling development, the dichlormid safens corn against herbicide injury. When applied after weed emergence, Double Header will provide control of many broadleaf weed species but will not provide consistent control of emerged grass weeds. Double Header may be used in tank mix combinations with other herbicides registered for use on the above crops to enhance or broaden the spectrum of control of weeds listed in the "Weeds Controlled" section of this label (Tables 6 and 7).

Use Restrictions

- Not for Sale, Sale Into, Distribution and/or Use in Nassau and Suffolk Counties of New York State.
- All containers of Double Header must be kept tightly closed when not in use.
- Observe all restrictions, precautions, and limitations on the label of each product used in tank mixtures.
- Double Header must be used in a manner that will prevent back siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.
- Do not store Double Header near seeds, fertilizers, or foodstuffs.
- Do not allow Double Header to contaminate feed or food.
- Do not use Double Header on any crop other than field corn (for grain, seed, or silage), sweet corn, or yellow popcorn.
- Do not use Double Header in the production of white popcorn or ornamental (Indian) corn or crop injury may occur.
- Do not apply Double Header to yellow popcorn after the crop has emerged or severe crop injury may occur.
- Do not make postemergence applications of Double Header to field corn, field seed corn, or field silage corn using liquid fertilizer as the carrier or severe crop injury may occur.
- Do not make postemergence (emerged corn) applications of Double Header in a tank mix with any organophosphate or carbamate insecticide or severe crop injury may occur.
- Do not apply Double Header to field corn, field seed corn, and field silage corn over 11 inches tall.
- Do not contaminate irrigation water used for crops other than corn or water used for domestic purposes.
- On the following soil types, do not apply this product:
 - within 50 feet of any well where the depth to groundwater is 30 feet or less,
 - sands with less than 3% organic matter,
 - loamy sands with less than 2% organic matter, or
 - sandy loams with less than 1% organic matter.
- This product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinks holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum ~~110%~~ percent of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of ~~100%~~ percent of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. Additional State imposed

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requirements regarding well-head setbacks and operational area containment must be observed. See the figure for additional clarification.



- Do not apply this product through any type of irrigation system.
- Use a sprinkler irrigation system only to incorporate Double Header after application. After Double Header has been applied, a sprinkler irrigation system set to deliver 0.5- to 1.0 inch of water may be used to incorporate the product; using more than one inch of water could result in reduced performance. On sandy soils low in organic matter, apply no more than 0.5 inch of water.
- Do not use flood or furrow irrigation to incorporate this product.
- Do not apply under conditions that favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:
 - Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

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- Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.
- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 0.5 inch of rainfall has occurred between application and the first irrigation.
- **Aerial Application:** Do not apply Double Header using aerial application equipment unless otherwise directed by approved supplemental labeling in possession of the user at the time of application.
- Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:
 - Use low-pressure application equipment capable of producing a large droplet spray.
 - Do not use nozzles that produce a fine droplet spray.
 - Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
 - Keep ground-driven spray boom as low as possible above the target surface at the minimum specified height required for uniform spray coverage with the spray nozzle used.
 - Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph.
 - Do not apply when wind gusts approach 15 mph.
 - Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Do not spray during conditions of low humidity and/or high temperatures. Do not apply during inversion conditions.
- Thoroughly clean sprayer or other application equipment before and after use. Do not use a sprayer or applicator contaminated with other materials or crop damage or sprayer clogging of the application equipment may occur.
- **Maximum Acetochlor Application Rates Per Calendar Year:** When tank mixing or sequentially applying products containing acetochlor with Double Header to corn, do not exceed an application rate of 3.00 pounds active ingredient of acetochlor per acre per year. **Note:** For purposes of calculating total acetochlor active ingredient applied, Double Header contains 3.20 pounds active ingredient acetochlor per gallon (0.80 pound active ingredient acetochlor per quart).
- **Maximum Mesotrione Application Rates Per Calendar Year:** When tank mixing or sequentially applying products containing mesotrione with Double Header to corn, do not exceed an application rate of 0.24 pound active ingredient of mesotrione per acre per year. **Note:** For purposes of calculating total mesotrione active ingredient applied, Double Header contains 0.38 pound active ingredient mesotrione per gallon (0.095 pound active ingredient mesotrione per quart).
- Do not apply more than 2.40 quarts of Double Header per acre per year.
- Do not make more than ~~two~~ 2 applications of Double Header per year.
- **Preharvest Interval:** Do not apply Double Header within 45 days of harvest for ears and forage or within 60 days of harvest for stover.

Use Precautions

- Acetochlor demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination.
- Avoid spray overlap, as crop injury may result.
- Avoid spray drift onto adjacent crop or non-crop areas.
- Double Header will not provide consistent control of emerged grass weeds present at application; utilize tank mixtures or sequential applications of herbicides registered for postemergence control of grass weeds in corn.
- Applying Double Header postemergence (emerged corn) to corn that has received an at-plant application of phorate or terbufos insecticide may result in severe corn injury. Temporary corn injury may occur if Double

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Header is applied to emerged corn where organophosphate insecticides other than phorate or terbufos were applied at planting.

- Postemergence (emerged corn) applications of any organophosphate or carbamate insecticide within 7 days before or 7 days after a Double Header application may result in severe corn injury.
- Dry weather following preplant or preemergence applications of Double Header or a Double Header tank mixture may reduce effectiveness. If weeds develop, they may be controlled with cultivation or use of registered corn herbicides.
- Where reference is made to weeds partially controlled, partial control can mean erratic or inconsistent control or efficacy at a level below that generally considered acceptable for commercial weed control.
- Applied according to directions and under normal growing conditions, Double Header will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil-applied systemic insecticides, or improperly placed fertilizers or soil insecticides may weaken crop seedlings and stress crop growth. Double Header used under these conditions could result in crop injury.

Rotational Crop Restrictions:

When Double Header is applied as directed on this label, follow the crop rotation intervals in Table 1. If Double Header is tank mixed or used sequentially with other products, follow the most restrictive product's crop rotation interval.

Table 1: Time Interval between Double Header Application and Replanting or Planting of Rotational Crop

Rotational crop	Rotational Interval
Corn (all types)	Anytime (1)
Wheat	4 months
Alfalfa (2) Barley Millet (pearl and proso) Oats Rice Rye Sorghum (3) Soybean (4, 5, 6) Sunflower (4)	10.5 months (7, 8)
All other rotational crops	18 months

1. Do not make a second application of Double Header if the original corn crop is lost.

2. Table 1A: Time Intervals between Double Header Application and Replanting or Planting of Alfalfa

State	Rotational Interval
California, Idaho, Nevada, Oregon, Utah, and Washington	12 months for areas receiving greater than 18 inches of annual rainfall, excluding irrigation
	18 months for areas receiving less than 18 inches of annual rainfall, excluding irrigation
All other states	10.5 months

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3. **California, Idaho, Nevada, Oregon, Utah, and Washington:** 12 months. **All other states:** 10.5 months.
4. **Table 1B: Time Intervals between Double Header Application and Replanting or Planting of Soybean and Sunflower**

State	Rotational Interval
Florida	18 months
California, Idaho, Nevada, Oregon, Utah, and Washington	12 months for areas receiving greater than 18 inches of annual rainfall, excluding irrigation
	18 months, areas receiving less than 18 inches of annual rainfall, excluding irrigation
All other states	10.5 months for soils greater than 2% organic matter AND rainfall more than 15 inches during 12 months following applications
	18 months for soils less than 2% organic matter AND rainfall less than 15 inches during 12 months following applications

5. Injury may occur to soybeans planted the year following application on soils having a calcareous subsurface layer, if products containing atrazine were used at rates above 0.75 pounds active ingredient atrazine per acre in tank mixtures and/or sequentially with Double Header.
6. In eastern parts of the Dakotas, Kansas, western Minnesota and Nebraska, do not rotate to soybeans for 18 months following application if products containing atrazine were used in tank mixtures and/or sequentially with Double Header and the total atrazine rate applied was more than 2.0 pounds active ingredient per acre, or equivalent band application rate, or soybean injury may occur.
7. If Double Header is applied after June 1, rotating to crops other than corn or grain sorghum the next spring may result in crop injury.
8. In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use Double Header only when corn or sorghum is to follow field corn, or a crop of untreated corn or sorghum is to precede other rotational crops.

Rotation to Non-food Winter Cover Crops

Following harvest of corn treated with Double Header, only non-food or non-feed winter cover crops (with the exception of winter wheat) may be planted. Do not graze or harvest rotational cover crops for food or animal feed for 18 months following the last application of Double Header.

This prohibition does not apply to winter wheat, which may be planted 4 months following the last application of Double Header, or to nongrass animal feeds, which may be planted 9 months after the last application of Double Header.

Weed Resistance Management Guidelines

Acetochlor, and mesotrione, the active ingredients in Double Header, are Group 15, and Group 27 herbicides, respectively, based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain biotypes naturally tolerant or resistant to Group 15 or 27 herbicides. Such resistant weed plants may not be effectively managed using Group 15 or 27 herbicides but may be effectively managed utilizing another herbicide from a different Group and/or by using cultural or mechanical practices. However, any herbicide mode of action classification by itself may not adequately control specific weed biotypes that are resistant to specific herbicides. Consult your state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate actions for treating specific resistant weeds. Double Header

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contains 2 herbicide active ingredients and 2 modes of action that provide overlapping control for many key weeds and thus can be a very effective component of a weed resistance management strategy.

Best Management Practices

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to ~~one~~1 or more herbicides is recommended. A diversified weed management program may include the use of multiple herbicides and applications with different modes of action and overlapping weed spectrums with or without tillage operations and/or other cultural practices. Research has demonstrated the importance of using full labeled rates and following use recommendations to minimize selection for resistance. Scouting fields after an herbicide application is important because it can facilitate the early detection and identification of weed shifts and/or weed resistance and thus provide direction on future weed management practices. One of the best ways to contain resistant populations is to adjust management practices to prevent weeds from reproducing by seed or vegetative propagules. Cleaning equipment between sites and avoiding movement of plant material between sites may minimize the spread of resistant weed seed.

General principles of herbicide resistance management:

1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
2. Use the full specified herbicide rate and proper application timing for the hardest to control weed species present in the field.
3. Scout fields after herbicide application to ensure control has been achieved. Eliminate weed escapes to avoid allowing weeds to reproduce by seed or vegetative propagules.
4. Monitor sites and clean equipment between sites.

For annual cropping situations also consider the following:

- Start with a clean field and control weeds early by using a burndown herbicide treatment or tillage in combination with a soil-applied residual herbicide, as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Utilize good agronomic principles that enhance crop competitiveness.
- Use new commercial seed that is as free of weed seed as possible.

Report any incidence of repeated non-performance of this product on a particular weed to your Local Loveland Products representative, retailer, or Extension specialist.

APPLICATION DIRECTIONS

CARRIERS

Liquids:

- **Preemergence Applications:** Either clean water or liquid fertilizers, excluding suspension fertilizers, may be used as liquid carriers for preplant or preemergence applications of Double Header. If fluid fertilizers are used, a physical compatibility test must be done **before combining** in the spray tank. See “Dry Bulk Fertilizer Impregnation” section for details of the compatibility testing procedure. Even if Double Header is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.

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- **Postemergence Applications:** Use only clean water as the carrier when applying Double Header after field corn emergence; do not make postemergence applications using liquid fertilizer as the carrier or severe crop injury may occur. Do not apply Double Header to emerged yellow popcorn or severe crop injury may occur.

Dry Bulk Fertilizer Impregnation: Double Header may be impregnated on dry bulk fertilizer and applied as the fertilizer is spread. Impregnation of bulk fertilizer is restricted to commercial facilities. On-farm fertilizer impregnation is prohibited. No more than 500 tons of bulk fertilizer can be impregnated per day. No single facility may impregnate fertilizer with this product for more than 30 days per calendar year. The commercial facility impregnating the dry bulk fertilizer must inform, in writing, the user (applicator) of the dry bulk fertilizer that:

- Applicator must wear long-sleeved shirt, long pants, shoes, and socks
- **The restricted entry interval is 12 hours.**

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the Double Header. Dry bulk fertilizers (Table 2) may be impregnated with this product or the tank mixtures of this product on corn. This product and these tank mixtures must be applied with 200 to 450 pounds of dry bulk fertilizer per acre and shallowly incorporated within 14 days prior to planting. On medium- and fine-textured soils in areas where incorporation is not planned (i.e., reduced tillage situations or in some conventional tillage situations), applications can be made up to 30 days before planting to allow moisture to move the herbicide-fertilizer mixture into the soil. On coarse-textured soils, applications can be made up to 14 days prior to planting. When applying Double Header alone or in tank mixes with dry bulk fertilizers, follow all directions for use and precautions on the respective tank mix product labels regarding rates, soil type, application methods and rotational restrictions. Refer to the table for broadcast rate per acre to determine the application rate per acre for the herbicide treatment to be applied.

Table 2: Approved Dry Fertilizer Ingredients for Use with Double Header

Fertilizer	N	P	K
Ammonium Phosphate-Sulfate	16	20	0
Ammonium Sulfate	21	0	0
Diammonium Sulfate	18	46	0
Monoammonium Phosphate	11	56	0
Potassium Chloride	0	0	60
Potassium Sulfate	0	0	52
Urea *	45	0	0

* Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

For impregnating the pesticides on dry fertilizers, use an appropriate mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside the mixer to provide uniform spray coverage of the tumbling fertilizer. The Double Header should be sprayed uniformly onto the fertilizer using a fine spray pattern.

Tank mix components may be applied as separate ingredients with powders and dry flowables added first or they may be mixed in a slurry in the proper ratio and added jointly. Double Header may also be impregnated on the go and applied with pneumatic applicators.

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The following table provides a reference to determine the amount of Double Header to be mixed per ton of dry bulk fertilizer for a range of herbicide and fertilizer rates per acre.

Table 3: Double Header Fertilizer Impregnation Rate Conversions

Fertilizer Rate (lbs/A)	Acres Covered (per ton)	Quarts of Double Header per Ton of Fertilizer to Deliver:	
		2.25 qts/acre	2.40 qts/acre
200	10.0	22.5	25.0
250	8.0	18.0	19.2
300	6.7	15.1	16.1
350	5.7	12.8	13.7
400	5.0	11.3	12.0
450	4.5	10.1	10.8

To determine the amount of Double Header needed for other fertilizer rates, use the following formula:

$$\frac{\text{Double Header rate (quarts/A)} \times 2000}{\text{Pounds of fertilizer/A}} = \text{Quarts of Double Header per ton of fertilizer}$$

If the herbicide/fertilizer mixture is too wet, use of a drying agent is required to provide a dry, free-flowing mixture. For mixtures to be used in spinning-disc applicators, Micro-Cel E calcium silicate powder (Manville, Filtration & Minerals) is recommended for use as a drying agent. Mixtures to be used in pneumatic applicators should use Micro-Cel E or Agsorb 16/30 RVM-MS granular clay (GII-Dri Corporation). The drying agents should be added separately and uniformly to the prepared pesticide/fertilizer mixture, in a quantity that is sufficient to provide a suitable free-flowing mixture. Generally, less than 2% percent Micro-Cel E or 5% percent Agsorb 16/30 RVM-MS by weight is required.

Precaution: To avoid potential for explosion, do not impregnate Double Header on ammonium sorbate nitrate, potassium nitrate, or sodium nitrate fertilizer or fertilizer blends. Do not impregnate on single (0-20-0) or triple (0-46-0) super phosphate. Do not impregnate on agricultural limestone because Double Header will not be absorbed.

ADDING DOUBLE HEADER TO THE SPRAY TANK

The spray tank must be clean, thoroughly rinsed and decontaminated before adding either Double Header alone or with tank mix combinations. If water is used as the carrier, use clean water.

Double Header Applied Alone: When Double Header is used alone, add the specified amount of Double Header to the spray tank when the tank is half filled with carrier and then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform mixture.

Double Header Applied in Tank Mixtures: Refer to the sections of this label for recommended tank mixes. Always refer to labels of the tank mix partners for mixing directions and precautions. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture. Do not exceed label dosage rates or combined maximum seasonal doses for acetochlor or mesotrione. Double Header cannot be

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mixed with any product bearing a label prohibition against such mixing. If a tank mixture is used, a compatibility test must be done. See "Tank Mix Compatibility Test" section below for details on the procedure for such a test. If the tank mix partner is compatible, fill the tank half full of carrier. Start and continue agitation throughout mixing and spraying operation. All return lines to the spray tank must discharge below the liquid level to prevent foaming. Prepare the tank mix components and add them in the following order by formulation type:

1. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
2. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when the flowable is diluted with water before adding to the tank.
3. Add Double Header.
4. Add any other tank mix products next, with emulsifiable concentrates added last.
5. Add adjuvants last, if needed.
6. Complete filling the sprayer tank and continue agitation. Apply as soon as possible after spray mixture is prepared. Do not leave mixture in spray tank overnight without agitation or unattended.

Note: For all tank mixtures, maintain agitation during mixing and throughout application to ensure the spray mixture remains uniformly suspended. If the spray mixture is allowed to settle at any time, thorough agitation is required to re-suspend the mixture before spraying is resumed.

Tank Mix Compatibility Test

Complete a compatibility test before tank mixing to ensure compatibility of Double Header with other pesticides. The following test assumes a spray volume of 25.0 gallons per acre. For other spray volumes, make appropriate changes in the ingredients.

Note: Nitrogen solutions or complete liquid fertilizers, excluding suspension fertilizers, may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before use.** Incompatibility of tank mixtures is more common with mixtures of fertilizer and pesticides.

Test Procedure:

1. Add 1.0 pint of carrier (fertilizer or water) to each of ~~two one-2~~ 1-quart jars with tight lids. **Note:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
2. To one of the jars, add 1/4 teaspoon or 1.2 milliliters of a compatibility agent approved for this use, such as E-Z Mix (1/4 teaspoon is equivalent to 2.0 pints per 100 gallons of spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on specified label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
4. After adding all ingredients, put lids on and tighten and invert each jar ten times to mix. Let the mixtures stand 15 to 30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of

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improving compatibility: (a) slurry the dry pesticide(s) in water before addition, or (b) add 1/2 the compatibility agent to the fertilizer or water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section of this label.

Procedure for Testing the Compatibility of Double Header and Tank Mixes with Fluid Fertilizers

Since fluid fertilizers vary, the following procedure is suggested for determining whether Double Header may be combined with a specific fluid fertilizer for spray tank application.

Materials Needed:

- Double Header and any tank mix products.
- Fluid fertilizer to be used.
- Adjuvant for fertilizer tank mix: Use any adjuvant cleared for use on growing crops under 40 CFR 180.1001 to improve the compatibility of Double Header with fluid fertilizers. The adjuvant that provides the best emulsification depends on the specific fertilizer under consideration.
- Two 1 quart, wide mouth glass jars with lid or stopper.
- Measuring spoons (a 25-ml pipette or graduated cylinder provides more accurate measurement).
- Measuring cup, 8 ounces (257 ml).

Procedure:

1. Pour a pint (about 473 ml) of the fluid fertilizer into each of the quart jars.
2. Add Double Header and any tank mix combination to the jars. The order of addition is wettable powders first with mixing, followed by flowables with mixing and the EC's last. The rate of wettable powders and dry flowables is 1.5 teaspoon per pound of product per acre to be applied. EC's should be added at the rate of 1.5 teaspoon for each pint per acre to be applied. Premixing the wettable powders in 1.0 ounce of water before adding to the pint of fluid fertilizer will improve the compatibility of the final mixture.
3. Add 0.5 teaspoon (2 ml) adjuvant to one of the jars, label it as "with", and mix. The rate of 0.5 teaspoon per pint is equal to 3.0 pints of adjuvant per 100 gallons of fluid fertilizer.
4. Close both jars with lids or stoppers and mix the contents by turning the jars upside down ten times.
5. Inspect the surface and body of the mixtures:
 - a. Immediately after completing the jar inversions
 - b. After allowing the jars to stand quietly for 30 minutes
 - c. And then again after turning the jars upside down 10 times after the 30 minute inspection

Evaluation: If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with 10 jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory but the mixture without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant first at a rate of 3.0 pints per 100 gallons of fluid fertilizer. Foaming may be minimized by using only moderate agitation. **If non-dispersible oil, sludge, or clumps of solids form in the mixtures, the combination should not be used.**

ADJUVANTS

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When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

Use of adjuvants with Double Header applied prior to weed emergence is not necessary or recommended.

Where Double Header is applied after field corn has emerged, a non-ionic surfactant (NIS), such as LI 700® or Liberate® at 0.25% v/v (1 quart/100 gallons) may be used. A crop oil concentrate (COC), such as Herbimax® may also be used at a rate not to exceed 1.0% (1.0 gallon/100 gallons) or not more than the equivalent of 1.0 quart per acre. The use of crop oil concentrate (COC) may result in temporary crop injury. Do not apply Double Header to yellow popcorn after the crop has emerged or severe crop injury may occur.

Do not use nitrogen based adjuvants (AMS or UAN) or methylated seed oil (MSO) with Double Header when applied alone to emerged field corn or when Double Header is applied as a postemergence tank mixture with other products (except for the inclusion of AMS in tank mixtures containing glyphosate or glufosinate, as directed on those product labels), unless directed for a specific tank mix on this label or as part of a supplemental Double Header label.

Any of the above adjuvants may be used at a preplant or preemergence application timing (i.e., where the corn crop has not yet emerged) to enhance burndown activity on existing weeds. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

SPRAY EQUIPMENT

Ground Application: Spray nozzles should be uniformly spaced, be of the same size and type, and provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to avoid spray drift yet provide good coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Use a pump that can maintain an operating pressure of at least 35 to 40 psi at the nozzles and provide proper agitation within the spray tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles as long as adequate spray coverage is maintained. Always make sure that agitation is maintained until spraying is completed, even if stopped for only brief periods of time. If agitation is stopped for more than five minutes, re-suspend the spray solution by running at full agitation prior to spraying.

Preplant or Preemergence Application: Apply in a spray volume of 10.0 to 80.0 gallons per acre.

Postemergence Application: Good spray coverage of weeds is essential for optimum weed control. Boom height for broadcast over-the-top applications should be based on the height of the crop but set only high enough to provide uniform coverage with the spray nozzle used. Apply in a spray volume of 10.0 to 30.0 gallons per acre. When weed foliage is dense or corn approaches 11 inches in height, use a minimum spray volume of 15.0 gallons per acre. Use 80° or 110° flat fan nozzles for optimum postemergence coverage. Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Do not use floodjet nozzles or controlled droplet application equipment for postemergence applications.

Dry Bulk Fertilizer: When applying Double Header impregnated on dry bulk fertilizer, use a minimum of 200 pounds of dry bulk fertilizer per acre. See "**Application Directions**" section for directions and restrictions.

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USE DIRECTIONS

Double Header may be used for early preplant (EPP), preplant surface, preplant incorporated (PPI), or preemergence (PRE) application for control of many annual grasses and broadleaf weeds in field corn, field seed corn, field silage corn, sweet corn and yellow popcorn. Double Header may also be applied postemergence for the control of broadleaf weeds in field corn, field seed corn, and field silage corn. This product will not consistently control grasses that are emerged at the time of application; utilize tank mixtures or sequential applications of herbicides registered for postemergence control of grass weeds in corn. Do not apply Double Header to emerged yellow popcorn or severe crop injury may occur.

See Tables 6 and 7 for a list of weeds controlled by Double Header.

Tillage Systems

Double Header may be used in conventional, reduced, and no-tillage corn systems. Weed control will be greatest when applications are made as close to planting as possible. Thoroughly till soil or make an application of a burndown herbicide to control germinating and emerged weeds. It is recommended that a burndown herbicide, such as paraquat, glyphosate, glufosinate, and/or 2,4-D be tank mixed with Double Header in reduced, minimum, and no-tillage systems if weeds are present at application and corn has not yet emerged. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Soil Texture and Organic Matter

The texture and organic matter of the soil on which the application of Double Header is to be made must be known or determined prior to application. The use rate of Double Header is determined by the soil texture grouping (coarse, medium, or fine; see Table 4) and percent organic matter content.

Table 4: Soil Texture Groupings for Double Header Use Rate Selection

Coarse	Medium	Fine
Sand	Loam	Silty Clay Loam
Loamy Sand	Silt Loam	Clay Loam
Sandy Loam	Silt	Sandy Clay
	Sandy Clay Loam	Silty Clay
		Clay

Double Header Use Rates

Double Header use rates based on soil texture and organic matter content are outlined in Table 5. Do not apply Double Header more than 28 days prior to planting or to field corn taller than 11 inches in height. Double Header is not recommended for use on soils with greater than 10% organic matter or poor weed control may result.

Table 5: Double Header Use Rates by Soil Texture and Organic Matter Content

Soil Texture	Rate Per Acre (Quarts)*	
	Soil Organic Matter Content	
	Less than 3%	3% or Greater
Coarse	1.4	1.7

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Medium	1.7	2.0
Fine	2.0	2.4

* An additional 0.15 quart per acre may be used in areas of heavy weed infestation. Do not apply more than 2.40 quarts per acre of Double Header per season.

DOUBLE HEADER APPLIED ALONE

Early Preplant (EPP) or Preplant Surface: Double Header may be applied up to 28 days prior to planting.

Preplant Incorporated (PPI): For PPI application, uniformly incorporate Double Header into the upper 2 inches of the soil using a field cultivator, disc, or spring tooth harrow any time within 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tilth may result in erratic, streaked, or otherwise unsatisfactory weed control. Do not mix Double Header deeper than 2 inches into the soil and avoid moving or shaping soil after incorporation.

Preemergence (PRE) Surface: Double Header may be applied to the soil surface as a broadcast application after planting but prior to corn emergence. Precipitation or sprinkler irrigation of at least 0.25 inch is required to bring Double Header into contact with germinating weed seeds. If rainfall or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar equipment to incorporate the herbicide. Incorporation equipment should be operated at a shallow depth to avoid disturbance of germinating corn seed. Erratic weed control resulting from exposure of untreated soil may occur if surface soil is moved or reshaped after incorporation.

Postemergence: Double Header may be applied after emergence to field corn, field seed corn, and field silage corn fields. See the “**Adjuvants**” section of this label for adjuvant recommendations. Do not apply postemergence to field corn with liquid fertilizer as the carrier or severe crop injury may occur. Apply this treatment when broadleaf weeds are less than 3 inches tall. Occasional field corn leaf burn may result but this will not affect later corn growth or yield. Postemergence applications to field corn must occur before the crop reaches 11 inches in height. Do not apply Double Header to emerged yellow popcorn or severe crop injury may occur. Double Header will not provide consistent control of emerged grass weeds. For control of emerged grass weeds, a grass herbicide tank mixture may be required (see tank mix section of this label). Tank mixtures with atrazine can improve control of emerged annual grass and broadleaf weeds. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Split Application: Double Header may be applied as a split application in field corn, field seed corn, or field silage corn. For a split application program, apply approximately half (50%) of the labeled rate of Double Header (for the soil type, from Table 5) prior to crop emergence, followed by a second Double Header application at approximately half (50%) of the labeled rate, but a minimum of 1.0 quarts per acre, as a post application after corn emergence. The total amount of Double Header applied in the split application program cannot exceed the labeled rates by soil type listed in Table 5 or 2.40 quarts per acre per season. Refer to the “**Postemergence**” section above for instructions on postemergence applications.

DOUBLE HEADER TANK MIX COMBINATIONS

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Use of Spray Adjuvants with Tank Mixtures: When Double Header is used as a preemergence herbicide, and before weeds have emerged, spray adjuvants have little or no effect on performance and are not recommended. In burndown situations, where weeds have emerged and the corn has not, an adjuvant(s) may be used with Double Header applied alone or when applied in tank mixtures with a burndown herbicide, as allowed on the individual product labels. Use only those adjuvants approved for agricultural crop use. See the “Adjuvants” section of this label for further instructions.

Burndown Combinations Applied Before Corn Emergence in Reduced Tillage Systems: In reduced or no-till corn prior to crop emergence, Double Header tank mixtures with glyphosate, glufosinate, or paraquat can be used to burn down susceptible emerged weeds. For best results, such tank mixtures should be applied to emerged weeds that are less than 6 inches tall. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Preplant and Preemergence Tank Mixtures Applied Before Corn Emergence: In conventional, reduced, or no-till corn prior to crop emergence, the following tank mix partners may be applied by the same methods and at the same timings as Double Header unless otherwise specified by the tank mix product label:

- Glyphosate, glufosinate, or paraquat, per product labels, to control susceptible emerged weeds.
- Atrazine, to improve broadleaf and grass weed control.

Follow all tank mix product label directions and restrictions and perform a compatibility test prior to spraying the mixture. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture.

NOTE 2, 4-D products can vary widely in their compatibility properties, therefore extreme care must be taken to ensure tank mix compatibility. Follow the compatibility testing instructions listed above.

Postemergence Tank Mixtures Applied After Field Corn Emergence: In conventional, reduced, or no-till field corn after crop emergence, the following tank mix partners may be applied by the same methods and at the same timings as Double Header unless otherwise specified in the tank mix product label:

- Atrazine, to improve broadleaf and grass weed control.
- For emerged grass control, follow all tank mix product (such as Accent Q®, Basis® brands, and Steadfast® Q) label directions and restrictions and perform a compatibility test prior to spraying the mixture.

Consult the “Adjuvants” section of this label for recommendations when applying Double Header alone or in tank mixtures to emerged field corn. It is the pesticide user’s responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another). Do not apply Double Header tank mixtures to emerged yellow popcorn.

DOUBLE HEADER PROGRAMS FOR GLYPHOSATE TOLERANT CORN

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Double Header Preemergence Followed by Glyphosate Postemergence: Double Header may be applied preemergence at a rate as low as 1.12 quarts per acre as part of a two-pass weed control system when followed by a postemergence application of a glyphosate product, such as Makaze®, that is registered for use in glyphosate tolerant field corn. Use higher Double Header rates, up to the maximum amounts listed by soil type in Table 5, if there is a history of glyphosate-resistant weeds in the field. Atrazine may also be tank mixed with Double Header to improve broadleaf and grass weed control. When used in this way, Double Header will provide reduced competition from the weeds listed in Tables 6 and 7 for a period of 30 or more days, improving the timing flexibility and effectiveness of the follow-up glyphosate application. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Double Header + Glyphosate Tank Mixture Applied Postemergence: Double Header may be applied postemergence at a rate as low as 1.0 quarts per acre in a tank mixture with a solo glyphosate product, such as Makaze®, that is registered for use in glyphosate tolerant field corn. To minimize weed competition effects on the crop, apply this mixture to 1 to 2 inch tall weeds and before the corn reaches 11 inches in height. If the glyphosate product includes an adjuvant system (does not call for additional adjuvants), only spray-grade ammonium sulfate (AMS) at 8.5 pounds per 100 gallons should be added to this tank mixture. If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25% v/v and AMS to the mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to the mixture or crop injury may occur. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

DOUBLE HEADER PROGRAMS FOR GLUFOSINATE TOLERANT CORN

Double Header Preemergence Followed by Glufosinate Postemergence: Double Header may be applied preemergence at rate as low as 1.12 quarts per acre as part of a two-pass weed control system when followed by a postemergence application of a glufosinate product that is registered for use in glufosinate tolerant field corn. Use higher Double Header rates, up to the maximum amounts listed by soil type in Table 5, if there is a history of glufosinate-resistant weeds in the field. Atrazine may also be tank mixed with Double Header to improve broadleaf and grass weed control. When used in this way, Double Header will provide reduced competition from the weeds listed in Tables 6 and 7 for a period of 30 or more days, improving the timing flexibility and effectiveness of the follow-up glufosinate application. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Double Header + Glufosinate Tank Mixture Applied Postemergence: Double Header may be applied postemergence at a rate as low as 1.0 quart per acre in tank mixture with a solo glufosinate product that is registered for use in glufosinate tolerant field corn. To minimize weed competition effects on the crop, apply this mixture to 1 to 2 inch weeds and before the corn reaches 11 inches in height. Ammonium sulfate (AMS) may be added at 8.5 pounds per 100 gallons as a spray adjuvant as directed on the glufosinate product label but AMS should be the only adjuvant added to this tank mixture. Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to the mixture or crop injury may occur. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use.

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Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

CULTIVATION

If weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If Double Header was incorporated, cultivate at less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to a shallow depth and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

WEEDS CONTROLLED

Double Header applied as directed in this label will control or suppress the weeds listed in Tables 6 and 7. Additional weeds may be controlled with tank mixtures. See the "Double Header Tank Mix Combinations" section of this label for recommended tank mix combinations. Always consult the tank mix product labels for specific use rates and directions. Always follow the most restrictive label when tank mixing Double Header with another product. Double Header may be tank mixed with any other registered corn product as long as compatibility is verified and tank mixing is not prohibited by the tank mix product label.

Table 6: Weeds Controlled or Partially Controlled by Preplant or Preemergence Applications of Double Header

Grasses and Sedges	C= Control PC= Partial Control	Broadleaves	C= Control PC= Partial Control
Barnyardgrass	C	Amaranth, Palmer	C*
Crabgrass species	C	Amaranth, Powell	C
Crowfootgrass	C	Amaranth, spiny	C
Cupgrass, prairie	C	Beggarweed, Florida	C
Cupgrass, Southwestern	C	Buffalobur	C
Cupgrass, woolly	PC	Carpetweed	C
Foxtail, bristly	C	Chickweed, common	C
Foxtail, giant	C	Cocklebur, common	C*
Foxtail, green	C	Deadnettle, purple	C
Foxtail, robust (purple, white)	C	Galinsoga	C
Foxtail, yellow	C	Groundcherry, cutleaf	PC*
Goosegrass	C	Henbit	C
Johnsongrass, seedling	PC	Horseweed (marestail)	C
Millet, foxtail	C	Jimsonweed	C
Millet, wild proso	PC	Kochia	C*
Nutsedge, yellow	C	Lambsquarters, common	C
Oat, wild	PC*	Mallow, Venice	C
Panicum, browntop	C	Morningglory, entireleaf	C*
Panicum, fall	C	Morningglory, ivyleaf	C*
Panicum, Texas	PC	Morningglory, pitted	C*
Rice, red	C	Mustard, wild	C

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Sandbur, field	PC	Nightshade, black	C
Shattercane	PC	Nightshade, eastern black	C
Signalgrass, broadleaf	C*	Nightshade, hairy	C
Signalgrass, narrowleaf	C	Pigweed, redroot	C
Sprangletop, red	C	Pigweed, smooth	C
Starbur, bristly	C	Pigweed, tumble	C
Wheat, volunteer	PC*	Puncturevine	C*
Witchgrass	C	Purslane, common	C
		Pusley, Florida	C
		Ragweed, common	C
		Ragweed, giant	C*
		Sesbania, hemp	C
		Shepherd's-purse	C
		Sida, prickly	PC*
		Smartweed, ladysthumb	C
		Smartweed, Pennsylvania	C
		Sunflower, common	C*
		Velvetleaf	C
		Waterhemp, common	C*
		Waterhemp, tall	C*

* The addition of atrazine at specified label rates may improve control.

Thoroughly till soil or make an application of a burndown herbicide to control germinating and emerged weeds. Plant crop immediately after tillage. If a significant rainfall does not occur within 7 days after application, weed control may be reduced. If irrigation is available, apply 0.25-0.75 inch of water. If irrigation is not available, a uniform shallow cultivation is recommended as soon as weeds emerge.

Table 7: Weeds Controlled or Partially Controlled by Postemergence Applications of Double Header

Grasses and Sedges	C = Control PC = Partial Control	Broadleaves	C = Control PC = Partial Control
Crabgrass, large (1)	C*	Amaranth, Palmer	C*
Nutsedge, yellow	PC*	Amaranth, Powell	C
Signalgrass, broadleaf (1)	C*	Amaranth, spiny	C
		Atriplex	C
		Beggarweed, Florida	C
		Buckwheat, wild	C*
		Buffalobur	C
		Burcucumber	PC*
		Carpetweed	C
		Carrot, wild	PC*
		Chickweed, common	C
		Cocklebur, common	C
		Dandelion, common	PC*
		Deadnettle, purple	C

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	Dock, curly	PC*
	Galinsoga	C
	Groundcherry, cutleaf	C
	Hemp	C
	Henbit	C
	Horsenettle	C*
	Horseweed (maretail)	C*
	Jimsonweed	C
	Knotweed, prostrate	PC
	Kochia	C*
	Lambsquarters, common	C
	Mallow, Venice	C*
	Morningglory, entireleaf	C*
	Morningglory, ivyleaf	C*
	Morningglory, pitted	C*
	Mustard, wild	C
	Nightshade, black	C
	Nightshade, eastern black	C
	Nightshade, hairy	C
	Pigweed, redroot	C
	Pigweed, smooth	C
	Pigweed, tumble	C
	Pokeweed	C*
	Potatoes, volunteer	C
	Purslane, common	C
	Pusley, Florida	C
	Ragweed, common	C*
	Ragweed, giant	C*
	Sesbania, hemp	C
	Shepherd's-purse	C
	Sida, prickly	C*
	Smartweed, ladythumb	C*
	Smartweed, Pennsylvania	C*
	Sunflower, common	C*
	Thistle, Canada	C*
	Velvetleaf	C
	Waterhemp, common	C*
	Waterhemp, tall	C*

* The addition of atrazine at specified label rates may improve control.

(1) Apply before the weed exceeds 2 inches in height.

Double Header will not provide consistent control of emerged grass weeds. For control of emerged grass weeds, a grass herbicide tank mixture may be required (see "Double Header Tank Mix Combinations" section of this label).

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Tank mixtures with atrazine can improve control of emerged annual grass and broadleaf weeds. Refer to atrazine product labels for use directions, restrictions, and weeds controlled.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Do not store in or around the home. Store unused product in a cool, ventilated, dry, locked area. Do not allow prolonged storage in areas where temperatures frequently exceed 115 °F (46 °C).

NEVER TRANSFER THIS PRODUCT TO ANOTHER CONTAINER FOR STORAGE.

PESTICIDE DISPOSAL: Contamination with this product will render water, food or feed unfit for human or animal consumption. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE. IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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