

PH 25-10182-372

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US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460	EPA REGISTRATION NO. 10182-372	DATE OF ISSUANCE SEP 13 1993
	TERM OF ISSUANCE	
	NAME OF PESTICIDE PRODUCT Cyclone Concentrate Herbicide	

NOTICE OF PESTICIDE: ☒ REGISTRATION
☐ REREGISTRATION
 (Under the Federal Insecticide, Fungicide,
 and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Mr. Wayne R. Billebrecht
 Zeneca Inc.
 Zeneca Ag Products
 P. O. Box 751
 Wilmington, DE 19897

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) and sec. 4 when the Agency requires all registrants of similar products to submit such data.
2. Add the phrase, "EPA Registration No. 10182-372" to your label before you release the product for shipment.
3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

☐ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL	DATE
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This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR part 156, subpart k, sec. 156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

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RESTRICTED USE PESTICIDE
Due to Acute Toxicity

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

CYCLONE® Concentrate

A Weed, Grass, and Harvest Aid Herbicide

COMPLETE DIRECTIONS FOR USE

ACCEPTED
with COMMENTS
In EPA Letter Dated:

Inside of Front Cover

SEP 13 1993
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
10152-372

DIRECTIONS FOR USE AND
CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

CONDITIONS OF SALE AND LIMITED WARRANTY:

The Directions for Use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended or other influencing factors in the use of the product, all of which are beyond the control of the seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Seller harmless for any claims relating to such factors.

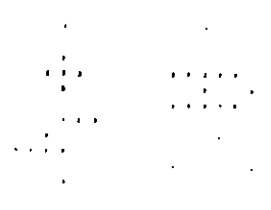
Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label, subject to the inherent risks referred to above, when used in accordance with directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller and Buyer and User assume the risk of any such use. SELLER DISCLAIMS ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY.

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When Buyer or User claims losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability or other legal theories), Buyer or User must promptly notify in writing Seller of any claims to be eligible to receive either of the remedies set forth below. The EXCLUSIVE REMEDY OF BUYER OR USER and the LIMIT OF LIABILITY of Seller will be, at the election of Seller, refund of the purchase price paid for product bought, or replacement of amount of product used. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE.

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KEEP OUT OF REACH OF CHILDREN

O
DANGER POISON
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ONE SWALLOW CAN KILL!

**SYMPTOMS ARE PROLONGED AND PAINFUL. ONSET OF SYMPTOMS MAY BE
DELAYED FOR UP TO 3 DAYS AFTER SWALLOWING.**

PELIGRO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la
etiqueta le haya sido explicada ampliamente.

- **DO NOT USE OR STORE IN OR AROUND THE HOME.**
- **DO NOT REMOVE CONTENTS EXCEPT FOR IMMEDIATE USE.**
- **NEVER PUT INTO FOOD, DRINK OR OTHER CONTAINERS.**

ACTIVE INGREDIENT:

Paraquat dichloride (1,1'-dimethyl-4,4'-bipyridinium dichloride)	43.05%
INERT INGREDIENTS	<u>56.95%</u>
Total	100.00%

Contains 3.0 lbs paraquat cation per gallon.
Contains emetic.

EPA Reg. No. 10182-

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STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: IMMEDIATELY induce vomiting by touching back of throat with finger. Administer fluids and induce further vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. **GET TO A HOSPITAL OR PHYSICIAN FAST. PROMPT TREATMENT IS ESSENTIAL AND MUST BE INITIATED BEFORE SIGNS AND SYMPTOMS APPEAR.**

NOTE TO PHYSICIANS: CALL ZENECA MEDICAL EMERGENCY INFORMATION NETWORK 1-800-327-8633 (Dial 1-800-F-A-S-T-M-E-D) at any hour to obtain toxicology and medical management consultation, a supply of bentonite clay, and paraquat analysis. Symptoms following ingestion may be delayed up to 3 days. To be effective, treatment for paraquat poisoning must begin **IMMEDIATELY**. Treatment consists of binding paraquat in the gut with suspensions of bentonite clay or charcoal and removal of paraquat from the blood by prolonged charcoal hemoperfusion or continuous hemodialysis.

IF ON SKIN: IMMEDIATELY wash with soap and water. Remove and wash all contaminated clothing separate from other laundry with soap and hot water before reusing. Prolonged contact will cause severe irritation. Contact with irritated skin or a cut or repeated contact with intact skin may result in poisoning. **GET MEDICAL ATTENTION.**

IF IN EYES: IMMEDIATELY wash eyes with water for at least 15 minutes and get medical attention. Contact may cause eye injury. **CALL A PHYSICIAN.**

IF INHALED: IMMEDIATELY remove victim to fresh air or get away from spray mist. Exposure may cause irritation, nose bleeds, and may lead to poisoning. Stop and check spray procedure.

Read and follow **PRECAUTIONARY STATEMENTS.**

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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DANGER POISON
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FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRREVERSIBLE EYE DAMAGE. CAUSES SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.

DO NOT get in eyes, on skin, or on clothing. **DO NOT** breathe spray mist. **WASH SPLASHES** from skin and eyes immediately. **WASH** thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

- When pouring, loading, mixing concentrate or when exposure to concentrate is possible wear:

A NIOSH/MSHA-approved pesticide respirator.

Protective clothing (disposable suit/coveralls or long-sleeved shirt and pants).

Full face shield.

Mid-forearm waterproof gloves.

Waterproof apron and footwear.

- When spraying end-use dilution outside of an enclosed cab or aircraft or when contacting vegetation wet with spray wear:

Protective clothing (disposable suit/coveralls or long-sleeved shirt and pants).

Wide-brimmed hat.

Waterproof footwear.

- **REMOVE** contaminated clothing and wash separate from other laundry before reuse.

ENVIRONMENTAL HAZARDS

WILDLIFE: This product is toxic to wildlife. Birds and other wildlife in treated areas may be killed. For terrestrial uses, 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.

DRIFT: CYCLONE® concentrate is a contact herbicide that kills all green plant tissue. Do not apply under conditions involving possible drift to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use, or consumption. Do not apply when weather conditions favor drift from areas treated. For aerial applicators use, do not apply during periods of thermal inversion to avoid drift. Refer to the local state laws, regulations, and guidelines for proper application to avoid off-target movement.

CHEMICAL HAZARD: This product reacts with aluminum to produce hydrogen gas which may form a highly combustible gas mixture. Such gas could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette, or other ignition source. Do not mix or store in containers, spray tanks, nurse tanks, or such systems made of aluminum or having aluminum fittings. After dilution with water to spray concentrations, spray systems made of, or containing aluminum parts, may be used but should not be used for extended (overnight) storage.

EQUIPMENT/CONTAINER: Flush all spray equipment with water after use each day. CYCLONE Concentrate is corrosive to aluminum. Aluminum spray equipment and aluminum aircraft structures that are exposed to spray solution or spray drift should be flushed thoroughly with water immediately after use.

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DIRECTIONS FOR USE

It is a violation of Federal law and may endanger the applicator or third parties to use this product without complying with all label directions and warnings.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH DANGER STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS. READ STATEMENT OF PRACTICAL TREATMENT AND PRECAUTIONARY STATEMENTS ON PAGES ____.

NOTE: DO NOT USE AROUND HOME GARDENS, SCHOOLS, RECREATIONAL PARKS, GOLF COURSES, OR PLAYGROUNDS.

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

REENTRY STATEMENTS

DO NOT enter treated areas without protective clothing until sprays have dried.

AVOID working in spray mist. If there is risk of exposure, wear goggles and approved face mask capable of filtering spray droplets.

KEEP ALL UNPROTECTED PERSONS OUT OF OPERATING AREAS OR VICINITY WHERE THERE MAY BE DANGER OF DRIFT.

Certain states may require more restrictive reentry intervals; consult your State Department of Agriculture for further information.

Written or oral warnings regarding use of protective clothing and accidental exposure must be given to workers who are expected to be in treated areas or in areas about to be treated.

IMPORTANT: The effect of swallowing CYCLONE Concentrate is far more severe than that which usually results from skin contact or inhalation of spray mist. This product should not cause injury if used according to label instructions. Follow the label as if your life depends on it.

GENERAL INFORMATION

CYCLONE Concentrate is a contact herbicide used to control or suppress a broad spectrum of emerged weeds. CYCLONE Concentrate controls most small annual weeds -- both broadleaves and grasses, and suppresses perennial weeds by destroying green foliage. CYCLONE Concentrate can also be used as a crop desiccant at harvest.

CYCLONE Concentrate is formulated as a liquid which contains 2-1/2 lbs of active ingredient per gallon. The formulation contains an emetic (an agent which will induce vomiting if the product is swallowed).

CYCLONE Concentrate is rapidly absorbed by green plant tissue and interacts with the photosynthetic process to produce superoxides which destroy the plant cells. CYCLONE Concentrate requires actively growing green plant tissue to function. Thorough coverage of all green foliage is essential for effective weed control. CYCLONE Concentrate is not as effective on drought-stressed weeds, weeds with little green foliage (i.e., mowed or cut weeds), or mature woody bark of trees and vines.

Clay and organic matter rapidly tie up CYCLONE Concentrate. As a result, CYCLONE Concentrate has no residual soil activity to affect later-planted crops or later germinating weeds.

RAINFASTNESS

Because CYCLONE Concentrate is rapidly absorbed by the weed foliage, rain occurring 30 minutes or more after application will have no effect on the activity of CYCLONE Concentrate.

APPLICATION

Since CYCLONE Concentrate is a contact-type herbicide, it is essential to obtain complete coverage of target weeds to get good control. Improper application technique and/or application to large, stressed, or mown weeds will usually result in unacceptable weed control. Good coverage is also essential for proper performance in harvest-aid applications. See details below for specific application instructions.

USE OF A NONIONIC SURFACTANT OR CROP OIL CONCENTRATE

ALWAYS ADD ONE OF THE FOLLOWING:

Failure to add one of the following will result in reduced performance of CYCLONE Concentrate.

Nonionic Surfactant: Add nonionic surfactant containing 75% or more surface-active agent at 0.125% v/v (1 pint per 100 gallons), OR add a nonionic surfactant containing 50-74% surface-active agent at 0.25% v/v (2 pints per 100 gallons), of the finished spray volume for ground applications. For aerial applications, add a nonionic surfactant at 0.25% v/v (2 pints per 100 gallons) of the finished spray volume.

Crop Oil Concentrate: Add a nonphytotoxic crop oil concentrate containing 15-20% approved emulsifier, at 1.0% v/v (1 gallon per 100 gallons) of the finished spray volume for ground applications. For aerial applications, add 1 pint of crop oil concentrate per acre. Do not use crop oil concentrate when using CYCLONE Concentrate for cotton harvest aid.

NOZZLE SELECTION

The use of flat-fan nozzles will result in the most effective application of CYCLONE Concentrate. Flood nozzles are generally not as good as flat fans since they produce large uneven droplets. The use of flood nozzles may result in reduced weed control due to inadequate coverage.

WHEN SPRAYING LESS THAN 20 GALLONS OF SPRAY CARRIER PER ACRE, USE ONLY FLAT FAN NOZZLES AS RECOMMENDED IN THE CHART BELOW.

RECOMMENDED NOZZLES, PRESSURES AND SETUP		
	Nozzle Type	
	Flat Fan	Flood
Maximum Size	8	15
Spray Pressure (at nozzle)	30-50 P.S.I.	30-50 P.S.I.
Maximum Nozzle Spacing	30"	40"
Direction of Spray Pattern	Down	Down
Maximum Speed	10 mph	10 mph
Spray Overlap (at each edge)	30%	50%

Using nozzles, pressures, or setups different from the above chart will result in reduced control.

SPRAY CARRIER

Always use clean water (free of mud or clay), clear liquid nitrogen, or complete clear liquid fertilizers as the carrier when spraying CYCLONE Concentrate. Muddy water, or suspension-type fertilizers containing clay, can inactivate CYCLONE Concentrate. Never use suspension-type fertilizers containing clay as the spray carrier. If using a complete clear liquid fertilizer containing high phosphate levels as the spray carrier, always use the higher rate of CYCLONE Concentrate and surfactant.

NOTE: When using liquid fertilizers such as 28% N, as a carrier, it is important that nonionic surfactant still be used with CYCLONE Concentrate. Liquid fertilizer carriers cannot substitute for surfactant.

RATES OF CYCLONE CONCENTRATE

Follow recommended rates listed with each use of CYCLONE Concentrate. Use the higher label rates when weeds are dense or large. Also, use higher label rates for harvest aid when crop vegetation is dense.

SPRAY VOLUME

Follow recommended minimum spray volumes listed with each use of CYCLONE Concentrate. These are minimum volumes only, and spray volumes should be increased as necessary to obtain complete coverage of the target weed or plant without runoff from the foliage.

WHEN SPRAYING LESS THAN 20 GALLONS OF SPRAY CARRIER PER ACRE, TARGET WEEDS SHOULD NOT EXCEED 6 INCHES IN HEIGHT.

DRIFT MINIMIZATION

DO NOT spray if conditions of thermal inversion exist, or if wind direction and speed may cause spray drift onto adjacent areas. With both aerial and ground applications, the use of a drift control or spray deposition additive (in accordance with label directions) may reduce the potential for drift to occur. **Drift minimization is the responsibility of the applicator.** Refer to the local state laws, regulations, and guidelines for proper application to avoid off-target movement.

When CYCLONE Concentrate is applied at less than 10 gallons per acre finished spray volume, a drift control or spray deposition additive **SHOULD** be used. Refer to the additive label for use directions.

APPLICATION TIMING

CYCLONE Concentrate should be applied to emerged weeds when they are small. Weeds 1" to 6" in height are the easiest to control. Larger weeds may be more difficult to control. When weeds have been grazed or mowed, thus removing much of the green foliage, allow the weeds to regrow to a height of 2 to 4 inches before spraying if possible. Similarly, when forage or grain crops have been harvested prior to spraying, weeds present in the field will also have been cut. To allow for adequate green foliage to remain on weeds in this situation, raise cutter bars as high as possible from the ground to cut stubble and weeds at a greater height.

BURNDOWN OF GRASS COVER CROPS OR VOLUNTEER CEREALS

When using CYCLONE Concentrate for control of grass cover crops or volunteer cereals, best results are obtained when CYCLONE Concentrate is applied **prior to tillering or after boot stage.** This is especially important with a wheat cover crop or volunteer wheat. Treatments made between tillering and boot stage will generally not provide complete control. Do not expect complete control of perennial cover crops.

ENVIRONMENTAL CONDITIONS

CYCLONE Concentrate is active over a wide range of environmental conditions. Cool weather (below 55°) will slow the activity of CYCLONE Concentrate, as will cloudy, overcast weather, but will not affect performance.

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In dry areas, dust stirred up by high winds or equipment tires can coat weed leaves and reduce CYCLONE Concentrate activity. Avoid applying CYCLONE Concentrate in extremely dusty conditions.

SPOT SPRAYING

When only small areas are to be sprayed with labeled applications, it is advantageous to mix small quantities of CYCLONE Concentrate. To aid in mixing small quantities, the following table should be consulted. When spraying with wand-type applicators as in spot spraying, always follow precautionary statements regarding use, protective clothing and footwear.

If The Broadcast Rate Per Acre for CYCLONE Concentrate is:	Add The Following Amount of CYCLONE Concentrate To 1 Gallon of Water
1-1/2 pts	1/3 fl oz
2.0 pts	3/8 fl oz
2.5 pts	1/2 fl oz
3 pts	2/3 fl oz

Always add 1/3 to 1/2 fl oz of a nonionic surfactant for each gallon of spray. When spot spraying in this manner, spray to thoroughly wet the foliage, but not to the point of runoff.

TANK MIXING FOR IMPROVED BURNDOWN OF DIFFICULT WEEDS, AND RESIDUAL WEED CONTROL

Photosynthetic Inhibitor Herbicides

Difficult weeds can often be controlled by tank mixing CYCLONE Concentrate with other herbicides. The addition of herbicides which are also photosynthetic inhibitors (PSI) will slow the activity of CYCLONE Concentrate, allowing CYCLONE Concentrate to thoroughly distribute itself within the treated leaf. The resulting level of control is usually greater than if CYCLONE Concentrate was applied alone.

CYCLONE Concentrate may be applied in tank mixture with the following PSI herbicides:

Aatrex® herbicide
Atrazine herbicide
Bicep® herbicide
Bladex® herbicide
Canopy® herbicide*
Extrazine® herbicide*
Gemini® herbicide*
Griffex® herbicide*
Lariat® herbicide
Lexone® herbicide
Linex®* herbicide
Lorox® herbicides*
Lorox Plus™™ herbicide
Preview® herbicide*
Princep® herbicide
Sencor® herbicides

*Not for use in California.

Refer to respective product label(s) for rates of application, directions for use, limitations, cautions and for a list of weeds controlled.

Improved Weed Control With PSIs

Control of difficult weeds listed below and annual grass control will be enhanced by the addition of a PSI herbicide. For best results a second application is needed.

Marestail	Prickly lettuce
Pennsylvania Smartweed	Lambsquarters
Velvetleaf	Morningglory
Malva (Cheeseweed)	Cheatgrass
Fall Panicum	Knotweed
Giant Ragweed	Volunteer wheat
Kochia	Perennial Weeds (suppression only)
Cocklebur	Barnyardgrass
Tansymustard	Broadleaf signalgrass
	Sedges

Improved Control of Perennial and Annual Broadleaf Weeds

When perennial broadleaf weeds such as Canada thistle, bindweed, dandelion, etc. or difficult to control annual broadleaf weeds such as giant ragweed or morningglory are present, tankmixes with 2,4-D ester (cv), 2,4-DB or Banvel® herbicide, where labeled, will help improve control. Tank mixing the amine formulation of 2,4-D with CYCLONE Concentrate may result in reduced grass control.

Order of Tank Mixing

In general, CYCLONE Concentrate tankmixes with other products should be mixed as follows:

1. Fill spray tank 1/2 full with clean water or other approved carriers such as clear liquid fertilizer.
2. Begin tank agitation and continue throughout mixing and spraying.
3. Add dry formulations (WP, DF, etc.) to tank.
4. Add liquid formulations (SC, EC, L, etc.) to tank.
5. Add CYCLONE Concentrate to tank.
6. Add nonionic surfactant to tank.
7. Fill remainder of spray tank.

Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here.

Since many of the herbicides listed on this label are available in several types of formulations, it is advisable to perform a jar test to check physical compatibility.

LIMITATIONS, PRECAUTIONS AND WARNINGS

- **DO NOT** use around home gardens, schools, recreational parks, or playgrounds.
- In preplant and preemergence (to the crop) uses, do not apply to soils lacking clay minerals, i.e., peat, muck, pure sand, artificial planting media.
- Seedbeds and plantbeds should be formed as far ahead of planting and treatment as possible to permit maximum weed and grass emergence prior to treatment.
- Seeding or transplanting should be done with a minimum amount of soil disturbance.
- Weeds and grasses emerging after application of CYCLONE Concentrate will not be controlled or suppressed.
- Unless otherwise indicated, crop plants emerged at time of application may be severely injured or killed if contacted by spray of CYCLONE Concentrate.
- **PRODUCT PERFORMANCE CONCERNS:** Concerns with the performance of CYCLONE Concentrate must be reported to the retail dealer or to an ICI representative within 14 days of application. Weeds emerging after application or regrowth of perennial weeds do not constitute a legitimate product performance complaint.

SPECIFIC USE RECOMMENDATIONS

The following tables indicate use patterns, rates, minimum spray volumes, preharvest intervals and other precautions, restrictions and comments specific to each crop. Read and follow directions carefully.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions
<u>ALFALFA</u> New seedlings (California only)	Broadcast	0.3 - 1.3 pints See Table on page ____	Ground: 10 gal Air: 5 gal	70	<ul style="list-style-type: none"> • Apply during late winter or early spring • Do not cut or harvest within 70 days • Do not apply more than once during season • Caution: Seedling alfalfa stands will require irrigation to be necessary. • Not recommended for seedling alfalfa • Alfalfa foliage present at time of application
Preplant or Preemergence (No-till or conventional planting)	Broadcast or Banded Over- Row	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Apply prior to emergence of the crop • Crop plants emerged at time of application • Seeding should be done with a minimum

Page 1
CYCLONE Concentrate Booklet
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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<p>Dormant season on established plantings</p> <p>Region A - See map at end of Alfalfa section.</p>	Broadcast	1.3 - 2.0 pints	Ground: 10 gal Air: 5 gal	42	<ul style="list-style-type: none"> For control of weeds, including bluegrass, chickweed, henbit, downy brome, ryegrass, cheatgrass, dogfennel, tansymustard, london rocket, sowthistle, rescue brome, wild oats, and other winter annuals; and suppression of perennial weeds. Do not apply if <u>fall regrowth</u> following last fall cutting is greater than 6", or if <u>spring regrowth</u> is more than 2". Apply to well-established stands (at least one year old) after the crop is dormant. Alfalfa foliage present at the time of application will be burned which may reduce the yield of the first cutting. Do not cut or harvest within 42 days of application. Do not apply more than once per season. Tank mix with metribuzin (Lexone or Sencor) for improved burndown of weed vegetation and residual weed control. Consult the metribuzin product label for a list of weeds controlled, rates of application, and precautions.
<p>Dormant season Tankmix with Velpar® L herbicide</p> <p>Region A - See map at end of Alfalfa section.</p>	Broadcast	0.7 - 1.3 pints	Ground: 10 gal Air: 10 gal	42	<ul style="list-style-type: none"> For control of weeds such as chickweed, downy brome and tanseymustard. Use the 0.7 pt rate of CYCLONE Concentrate when weeds and grasses are less than 4" tall. Mix with 1 to 2 qts. of Velpar L per acre. Use the lower rate of Velpar L on loamy sands or sandy loams. Refer to Velpar L label for directions, limitations, cautions and for a list of weeds controlled. Apply once to established alfalfa stands during the dormant season. Do not apply if <u>fall regrowth</u> following last fall cutting is greater than 6", or if <u>spring regrowth</u> is more than 2". Do not apply to alfalfa during the first season after seeding. Temporary chlorosis may occur on alfalfa regrowth. Stress which may be caused in part by low fertility, disease, insects, winterkill, over cutting, drought or frost may increase the chances of crop injury. DO NOT USE on gravelly or rocky soils, exposed subsoils, hardpan, sand or poorly drained alkaline soils as crop injury, including mortality, may result. Do not cut or harvest within 42 days of application.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<p>Dormant Season</p> <p>On established plantings: Region B- See map at end of Alfalfa section.</p> <p>On fall-seeded, newly established stands less than 1-year-old: Region A- See map at end of Alfalfa section.</p> <p>On fall-seeded, newly established stands less than 1-year-old: Region B- See map at end of Alfalfa section.</p>	<p>Broadcast</p> <p>Broadcast</p> <p>Broadcast</p>	<p>0.7 - 1.3 pints</p> <p>0.7 - 1.3 pints</p> <p>0.3 - 0.8 pints</p>	<p>Ground: 10 gal Air: 5 gal</p> <p>Ground: 10 gal Air: 5 gal</p> <p>Ground: 10 gal Air: 5 gal</p>	<p>60</p>	<ul style="list-style-type: none"> • For desiccation of weeds, including London rocket, sowthistle, rescue brome, wild oats, chickweed, ryegrass, bluegrass, cheatgrass, dogfennel, tansymustard, henbit, downy brome, and other winter annuals; and suppression of perennial weeds. • Apply during late fall or winter months after the last fall cutting and before first spring cutting. • Do not apply if <u>regrowth</u> after grazing or cutting is more than 2 inches. • Do not harvest within 60 days of application. • CAUTION: Applications to alfalfa that is not dormant, or has broken dormancy, may result in stand and/or yield reductions. Replanting may be necessary. Green alfalfa foliage present at the time of application will be burned. • Total hay yield of first cutting may be reduced in alfalfa fields with severe weed infestation. This reduction will usually be directly proportionate to the loss of weed weight. • Do not apply more than once per season. • Tank mix with metribuzin (Lexone or Sencor) for improved burndown of weed vegetation and residual weed control in <u>dormant established</u> (at least 1-year old) alfalfa. Consult the metribuzin product label for a list of weeds controlled, rates of application, and precautions. • Do not apply tankmix with metribuzin on newly established (less than 1-year old) alfalfa. <p>California</p> <ul style="list-style-type: none"> • For desiccation of weeds including bluegrass, ryegrass, shepherdspurse, chickweed, tansymustard, foxtail, sowthistle and groundsel. • Use high rate if ryegrass, shepherdspurse, sowthistle or groundsel is present.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<p>Between-cuttings treatment in established plantings. (Includes first year alfalfa) (All states East of the Rocky Mountains)</p> <p>(INSERT MAP BETWEEN THE ALFALFA AND ASPARAGUS TABLES)</p>	Broadcast	0.7 pints	Ground: 10 gal	30	<ul style="list-style-type: none"> • Weeds much beyond the seedling stage and the stubble of weeds cut off during harvest will be less affected by this treatment. • Apply immediately after alfalfa has been removed for hay or silage. • Do not treat more than 5 days after cutting. • CAUTION: First year alfalfa stands and yields may be reduced if alfalfa is allowed to regrow more than two (2) inches. • Alfalfa foliage present at time of application will be burned. • In arid areas where moisture is limited, weed control may be reduced. • Do not cut or harvest within 30 days of application. • Make 1 to 3 applications, as needed, during the growing season. These sprays may be applied in addition to a dormant application. • For first year alfalfa, do not apply more than twice during the first growing season.

9/10/55

Counties of:

Del Norte

Siskiyou

Madoc

Shasta

Lassen

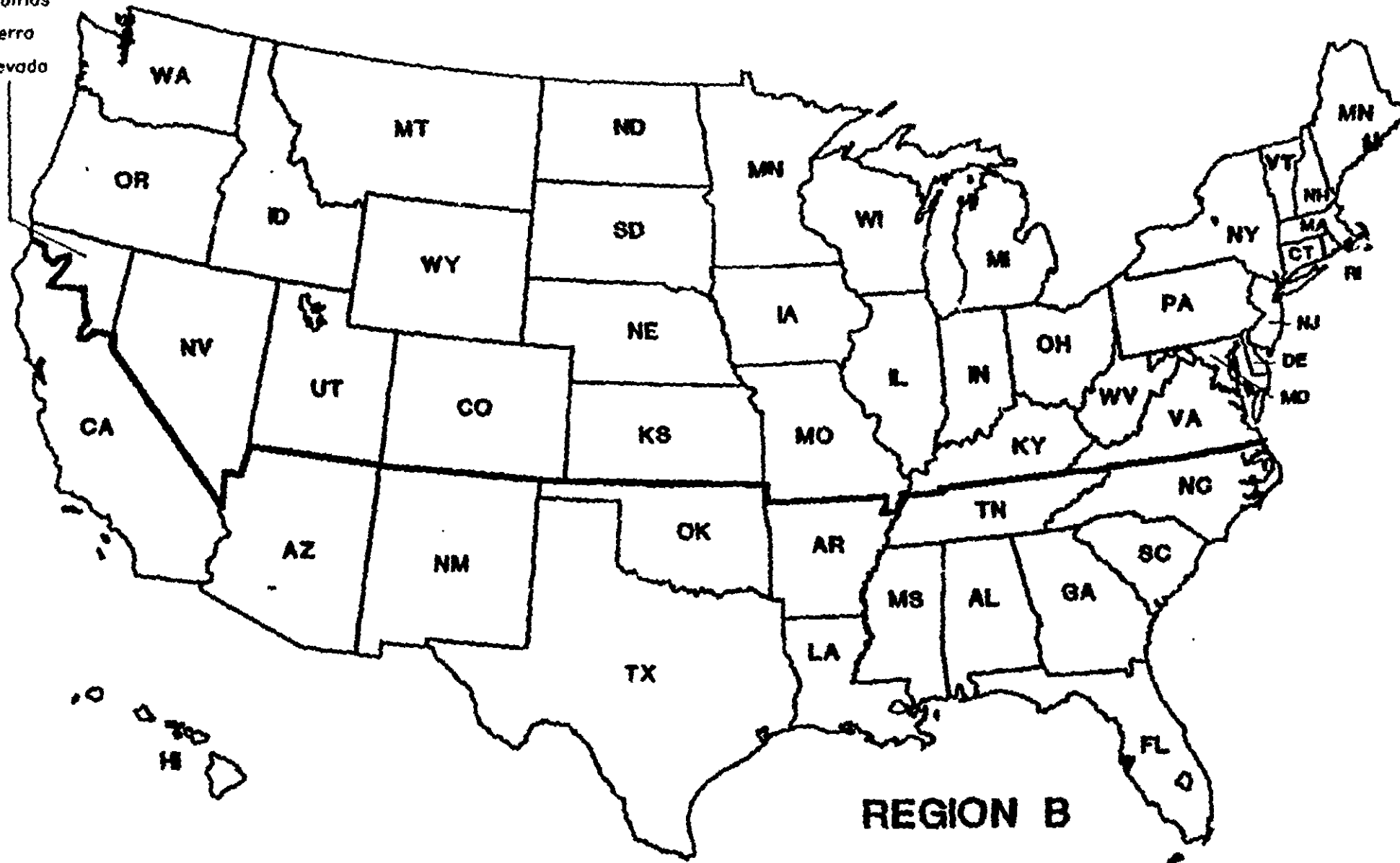
Plumas

Sierra

Nevada



REGION A



REGION B

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<u>ASPARAGUS</u>					
Preplant or Preemergence	Broadcast or Band Over-Row	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Apply to emergence of the crop. • Crop plants emerged at time of application will be killed.
Preemergence to established plantings at least 2 years old	Broadcast or Band Over-Row	1.3 - 2.7 pints	Ground: 10 gal	6	<ul style="list-style-type: none"> • Apply prior to emergence of crop or after last harvest. • Crop plants emerged at time of planting will be killed. • May be tank-mixed with Princep herbicide for residual control. Refer to Princep label for specific directions, limitations, cautions and for a list of weeds controlled.
<u>BEANS, DRY</u> (Form) <u>Cicer arietum</u> Chick peas Garbonzo beans <u>Lupinus</u> spp (including) Sweet lupine White sweet lupino White lupine Grain lupine <u>Phaseolus</u> spp (including) Black beans Kidney beans Lima beans Mung beans Navy beans Pinto beans Snap beans Wax beans <u>Vigna</u> spp (including) Asparagus beans Blackeyed peas Cowpeas	Harvest-Aid	0.8 - 1.3 pints	Ground: 20 gal Air: 5 gal	7	<ul style="list-style-type: none"> • Add spreader (nonionic) at 1 quart per 100 gallons of spray mix. • For vining type beans or bush type with lush growth, use a single application of the higher rate. • May also be applied as a split application. DO NOT make more than 2 applications or exceed a total of 1.3 pints per acre. The split application may improve vine coverage. • Apply when the crop is mature and at least 80% of the pods are yellowing and mostly ripe with no more than 40% (<u>bush type beans</u>) or 30% (<u>vine type beans</u>) of the leaves still green in color. • DO NOT apply when weather conditions favor spray drift. A drift control agent may be included to reduce spray drift. • DO NOT use on Faba beans. • NOT REGISTERED FOR USE ON DRY BEANS IN CALIFORNIA

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
CASSAVAS, TANIERS & YAMS (Puerto Rico only) Shielded Post directed spray)	Directed Spray	1.3 pints	Ground: 50 gal	90	<ul style="list-style-type: none"> • Apply when weeds are succulent and growth is 1-6 inches. • On cassavas and taniers, do not make more than 3 applications per crop season. • On yams do not make more than 2 applications per crop season. • Do not allow spray to contact cassavas, tanier or yam plants as injury may result. • Do not spray under windy conditions. • Do not graze treated areas or feed treated forage to livestock.
<u>CLOVER AND OTHER LEGUMES¹</u> Dormant Season On established plantings: Region A- See map at end of Alfalfa section. On established plantings: Region B- See map at end of Alfalfa section. On fall-seeded, newly established stands less than 1-year-old: Region A- See map at end of Alfalfa section. On fall-seeded, newly established stands less than 1-year-old: Region B- See map at end of Alfalfa section.	Broadcast Broadcast Broadcast Broadcast	1.3 - 2.1 pints 0.7 - 1.3 pints 0.7 - 1.3 pints 0.3 - 0.8 pints	Ground: 10 gal Air: 5 gal Ground: 10 gal Air: 5 gal Ground: 10 gal Air: 5 gal Ground: 10 gal Air: 5 gal	60 60 60 60	<ul style="list-style-type: none"> • For desiccation of weeds, including London rocket, sowthistle, rescue brome, wild oats, chickweed, ryegrass, bluegrass, cheatgrass, dogfennel, tansymustard, henbit, downy brome, and other winter annuals, and suppression of perennial weeds. • Apply during late fall or winter months after the last fall cutting and before first spring cutting. • Do not apply if <u>regrowth</u> after grazing or cutting is more than 2 inches. • Do not harvest within 60 days of application. • CAUTION: Applications to clover or other legumes that is not dormant, or has broken dormancy, may result in stand and/or yield reductions. Replanting may be necessary. Green clover or other legumes foliage present at the time of application will be burned. • Clover or other legumes foliage present at the time of application will be discolored and temporarily stunted. • Total hay yield of first cutting may be reduced in clover or other legumes fields with severe weed infestation. This reduction will usually be directly proportionate to the loss of weed weight. • Do not apply more than once per season. <p>California</p> <ul style="list-style-type: none"> • For desiccation of weeds including bluegrass, ryegrass, shepherdspurse, chickweed, tansymustard, foxtail, sowthistle and groundsel. • Use high rate if ryegrass, shepherdspurse, sowthistle or groundsel is present. <p>¹Other legumes include velvetbean, lespedeza, lupine, sainfoin, trefoil, vetch, crown vetch, and milk vetch.</p>

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<u>CONSERVATION RESERVE, FEDERAL SET-ASIDE, CONSERVATION COMPLIANCE PROGRAMS</u> (For use in compliance with the Federal Conservation Reserve Program or Federal set-aside programs).	Broadcast	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> For improved emerged weed control or extended weed control, CYCLONE Concentrate may be tank mixed with other herbicides registered for this use. Refer to tank mix herbicide labels for specific directions, limitations, cautions and for a list of weeds controlled.
<u>CORN</u> Preplant or Preemergence Used Alone	Broadcast or Banded Over Row	Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal		<ul style="list-style-type: none"> Includes field, fresh, sweet, forage, fodder and popcorn. Seedbeds should be formed as far ahead of planting and treatment as possible to permit maximum weed and grass emergence. Seeding should be done with a minimum amount of soil disturbance. Weeds and grasses emerging after application will not be controlled. Crop plants emerged at time of application will be killed.

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Tank Mixture Treatments for No- till/Reduced Till Corn	Broadcast or Banded	Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal**	-	<ul style="list-style-type: none">• Apply as a broadcast spray before, during or after planting, but before crop emergence.• For improved burndown or residual control, CYCLONE Concentrate may be tank mixed with the following herbicides:<table><tr><td>2,4-D Ester</td><td>Bladex</td><td>Linex*</td></tr><tr><td>AAtrex/Atrazine</td><td>Dual® herbicide</td><td>Lorox</td></tr><tr><td>Barvel</td><td>Extrazine*</td><td>Modown® herbicide</td></tr><tr><td>Bicep</td><td>Gnifex*</td><td>Princep</td></tr><tr><td>Prowl® herbicide</td><td>Lasso® herbicide</td><td>Simazine</td></tr></table>• CYCLONE Concentrate may also be tank mixed with AMBUSH® Insecticide.• Refer to respective product label(s) for rates of application, directions for use, limitations, cautions, and for a list of weeds or insects controlled. <p>*Not for use in California. **Refer to respective product labels to determine if these products can be applied by air.</p>	2,4-D Ester	Bladex	Linex*	AAtrex/Atrazine	Dual® herbicide	Lorox	Barvel	Extrazine*	Modown® herbicide	Bicep	Gnifex*	Princep	Prowl® herbicide	Lasso® herbicide	Simazine
2,4-D Ester	Bladex	Linex*																		
AAtrex/Atrazine	Dual® herbicide	Lorox																		
Barvel	Extrazine*	Modown® herbicide																		
Bicep	Gnifex*	Princep																		
Prowl® herbicide	Lasso® herbicide	Simazine																		
<u>FIELD CORN</u> <u>POPCORN</u> <u>SWEET CORN</u> <u>SEED CORN</u>	Postemergence Directed Spray Used Alone	0.7 pints - 1.3 pints	Ground: 10 gal	-	<ul style="list-style-type: none">• Apply when corn is at least 10 inches tall with nozzles arranged to spray no higher than the lower 3 inches of corn stalks.• Corn plants shorter than 10 inches may be injured and not recover (corn height measured from soil surface to top of whorl).• For corn greater than 20 inches tall, arrange the nozzles to spray no higher than the lower 1/3 of the corn stalks.• To avoid excessive crop phytotoxicity, use a shielded sprayer with skids or wheels on the spray boom to maintain spray height.• Corn foliage sprayed will be injured, but the crop will recover and develop normally.															

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<u>FIELD CORN ONLY</u> (grain, fodder, forage, popcorn)	Postemergence directed spray USDA witchweed eradication program	1.3 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Initiate sprays in early July and repeat in early August if regrowth of grassy weeds occurs. • Follow application instructions in postemergence directed spray section above. • For corn greater than 20 inches tall, arrange the nozzles to spray no higher than the lower 1/3 of the corn stalks. • To avoid excessive crop phytotoxicity, use a shielded sprayer with skids or wheels on the spray boom to maintain spray height. • Corn foliage sprayed will be injured, but the crop will recover and develop normally.
<u>CO TON</u> Preplant or Preemergence (Used alone)	Broadcast	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Apply prior to, during or after planting, but before crop emergence. • For fallow bed treatment, beds should be preformed to permit maximum weed and grass emergence prior to treatment. • Seeding should be done with a minimum of soil disturbance.
Preplant (California only) (Used alone)	Broadcast	5.4 - 10.7 fl oz	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • For control of volunteer barley in preformed seedbeds.
Preplant or Fallow Bed (Tankmix with Goak® herbicide)	Broadcast	0.7 - 2.7 pints	Ground or Air: 10 gal	-	<ul style="list-style-type: none"> • Refer to Goal label for specific use directions and restrictions, and weeds controlled.
Preplant (Tankmix with Bladex)	Broadcast	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Refer to Bladex label for specific use directions and restrictions and weeds controlled.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Preplant/ Preemergence (Other Tankmixes)				-	<ul style="list-style-type: none"> • Apply as a broadcast spray before, during or after planting, but before crop emergence. <p>Other Tankmixes</p> <ul style="list-style-type: none"> • For improved burndown or residual control, CYCLONE Concentrate may be tank mixed with the following herbicides: <ul style="list-style-type: none"> - Cotoran® herbicide (DF only) - Meturon® herbicide (DF only)* - Cotton-Pro® herbicide - Caparol® herbicide - MSMA* - Zoriat® herbicide - Karmex®* - Direx®* herbicides* - Dual* - Prowl* • When tank mixing with Cotoran DF or Meturon DF*, follow mixing instructions in the "Order of Tank Mixing" section carefully and maintain constant agitation. • When tank mixing with any of the herbicides listed above, refer to that product's label for specific directions and restrictions and for a list of weeds controlled. <p>*Not for use in California.</p>
	Harvest Aid			-	<p>Harvest Aid Use Precautions</p> <ul style="list-style-type: none"> • Do not pasture lactating dairy animals. • Do not pasture livestock in treated fields, feed treated foliage or gin trash. • Remove livestock from treated area 30 days before slaughter. • Do not apply to cotton within 3 days before harvest. • Repeat application if necessary. Do not make more than 2 applications or exceed a total of 1.3 pts • When combined with phosphate defoliants, observe livestock cautions listed on the phosphate label. • Do not harvest within 7 days of application when used with phosphate or chlorate defoliants.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Harvest aid for boll opening and defoliation (Tank mix with phosphate and chlorate defoliants)	Broadcast	5.4 fl oz plus 1 pt phosphate or 1 gal chlorate	Ground: 10 gal Air: 5 gal	7	<ul style="list-style-type: none"> • Development of immature bolls will be inhibited. • Apply when 80% or more of the bolls are open and the remaining bolls to be harvested are mature. • Follow Harvest Aid Use Precautions listed above.
Other Tankmixes for boll opening and defoliation of southern cotton	Broadcast	2.1 - 3.3 oz	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • To aid in defoliation and opening of mature bolls, CYCLONE Concentrate may be tank mixed with the following products: DEF® defoliant HARVADE® harvest growth regulant FOLEX® defoliant PREP™ PGR DROPP® defoliant ACCELERATE® defoliant • Apply when 60% or more of the bolls are open and the remaining bolls to be harvested are mature. • Development of immature bolls will be inhibited. • Refer to tank mix product label for rate, directions, limitations and cautions.
Post Defoliation-To aid in opening of mature bolls and to desiccate green weeds (except AZ & CA).	Broadcast	0.7 - 1.3 pints	Ground: 10 gal Air: 5 gal	3	<ul style="list-style-type: none"> • Use higher rate if weed infestation is heavy or dense. • Apply when 75% or more of the bolls are open and remaining bolls to be harvested are mature. • Development of immature bolls will be inhibited. • Follow Harvest Aid Use Precautions listed above.
Harvest aid for boll opening and defoliation of Western cotton (AZ & CA).	Broadcast Split Application	First application 3.7-5.4 fl oz plus 1-3 pts phosphate or 1-2 gal chlorate	Ground: 10 gal Air: 5 gal	7	<ul style="list-style-type: none"> • Use higher rate of CYCLONE Concentrate on rank cotton. • Do not use more than 5.4 fl oz of CYCLONE Concentrate at first application as excessive desiccation may occur. • Apply when 60% or more of the bolls are open and the remaining bolls to be harvested are mature. • Development of immature bolls will be inhibited. • Do not use more than 4.1 lbs of actual sodium chlorate or 2.28 lbs of actual phosphate type defoliants per acre. • Follow Harvest Aid Use Precautions listed above.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
(Tankmix with phosphate or chlorate defoliants)		Second application 5.4 - 10.7 fl oz alone or tank mixed with 1-1/2-2 gal chlorate, <u>or</u> 1-1/2-2 pts phosphate		3 (Alone) or 7 (Tankmix)	<ul style="list-style-type: none"> • In desert cotton areas or on rank vigorous cotton, use the 10.7 fl oz rate of CYCLONE Concentrate. • Apply when 75% or more of the bolls are open and remaining bolls to be harvested are mature. • Development of immature bolls will be inhibited. • Follow Harvest Aid Use Precautions listed above.
Harvest aid for defoliation and boll opening of stripper or spindle harvested cotton	Broadcast	2.1 - 7.5 fl oz	Ground: 10 gal Air: 5 gal	3	<ul style="list-style-type: none"> • IT IS ADVISABLE, BECAUSE OF EXTREMES IN ENVIRONMENTAL AND PLANT CONDITIONS, TO APPLY THE RANGE OF RATES ON A SMALL BLOCK OF COTTON TO DETERMINE THE RATE THAT BEST FITS YOUR NEEDS. • Apply when 75% of the bolls are open and the remaining bolls to be harvested are mature. • DEVELOPMENT OF IMMATURE BOLLS WILL BE INHIBITED. SLICE BOLLS AND INSPECT THE SEED FOR MATURITY. • CYCLONE Concentrate may be applied alone or tank mixed with the following cotton harvest aids: DEF® defoliant HARVADE® harvest growth regulant FOLEX® defoliant PREP™ PGR DROPP® defoliant ACCELERATE® defoliant • May be applied as a split application. Do not make more than 2 applications or exceed a total of 1.3 pts/Acre. • To avoid leaf sticking, apply CYCLONE Concentrate as a desiccant approximately 3-7 days after defoliation or a conditioning application and 7-14 days before harvest. • Cooler temperatures may cause a longer waiting period between application of CYCLONE Concentrate as a desiccant and defoliation/condition. • Lower rates in the range may be necessary south of I-10 in Texas where temperatures are typically higher during defoliation. • Follow Harvest Aid Use Precautions listed above.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Harvest aid desiccation of stripper cotton or spindle harvested cotton late season	Broadcast	0.7 - 1.3 pints	Ground: 10 gal Air: 5 gal	3	<ul style="list-style-type: none"> • IT IS ADVISABLE, BECAUSE OF EXTREMES IN ENVIRONMENTAL AND PLANT CONDITIONS, TO APPLY THE RANGE OF RATES ON A SMALL BLOCK TO DETERMINE THE RATE THAT BEST FITS YOUR NEEDS. • Use to desiccate regrowth occurring after defoliation or desiccation. • May be applied as a split application. Do not make more than 2 applications or exceed a total of 1.3 pts/Acre. • Apply when 85% of the bolls are open and the remaining bolls to be harvested are mature. • Development of immature bolls will be inhibited. Slice bolls and inspect the seed for maturity. • To avoid leaf sticking, apply CYCLONE Concentrate as a desiccant approximately 3-7 days after defoliation or a conditioning application and 7-14 days before harvest. • Lower rates in the range may be necessary south of I-10 in Texas where temperatures are typically higher during defoliation. • Follow Harvest Aid Use Precautions listed above.
Desiccation of Regrowth	Broadcast	0.3 - 1.3 pints	Ground: 10 gal Air: 5 gal	3	<ul style="list-style-type: none"> • Use to desiccate regrowth occurring after defoliation or desiccation. • Regrowth is difficult to control, therefore, thorough coverage with the full recommended rate is necessary. • Control is dependent upon growing conditions and desiccation of small new growth may not always be complete. • Use higher rate if regrowth is excessive. • Follow Harvest Aid Use Precautions listed above.
<u>EASTER LILIES</u> (Field grown)	Preemergence	1.3 - 2.7 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Do not apply more than twice per season.
<u>GRASSES</u> (For Seed) (For Use in Seedbed Preparation)	Preplant, At Planting, or Preemergence	1.3 - 2.7 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Prepare the seedbeds and allow weeds to germinate. • Apply CYCLONE Concentrate when weeds are at the 3 to 5 leaf stage. • Repeat applications as necessary prior to grass emergence. • Do not graze treated areas or use the seed or straw from treated areas for animal feed or bedding.

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GUAR (Preharvest desiccation)	Preharvest	1.3 pints	Ground: 10 gal	4	<ul style="list-style-type: none"> • Apply after the pods are fully mature. • Do not graze treated areas or use the treated forage for animal feed.
MINT (Peppermint, Spearmint)	Dormant Season	1.0 - 2.0 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • For suppression of weeds such as Italian ryegrass, prickly lettuce, groundsel, chickweed, downy brome and bluegrass. • Apply when crop is dormant before spring growth begins and when weeds are less than 6 inches tall. • Do not apply more than 2.0 pts per acre per dormant season. • May be tank mixed with Sinbar® herbicide* (terbacil) weed killer for improved contact activity and residual control of Italian ryegrass, prickly lettuce and groundsel. Apply this tank mixture no more than once per season. Refer to the Sinbar® label for rates, directions, and cautions and for a list of weeds controlled. <p>*Not for use in California.</p>
NONCROP USES	Broadcast or Spot Treatment	1.3 - 2.7 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • For use in noncrop areas such as public airports, electric transformer stations, pipeline pumping stations, around commercial buildings, storage yards and other installations, fence lines or similar noncrop areas. • Avoid contact with the foliage of ornamentals or desired plants. • Repeat as necessary.
ONIONS (seeded) AND GARLIC	Preplant/ Preemergence	1.3 - 2.7 pints	Ground: 10 gal	60 200 (CA only)	<ul style="list-style-type: none"> • Use the higher rate for heavy weed infestations or wild oat control. Apply only one application per season at the 2.7 pt per acre dosage. • Allow maximum weed and grass emergence prior to treatment but apply prior to crop emergence. • Apply a maximum of 2.7 pt per acre per season.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
PASTURE RESEEDING For suppression of existing sod and undesirable emerged broadleaf weeds and grasses prior to or at time of planting grasses or forage legumes	Broadcast	0.7 - 1.3 pints	Ground: 10 gal Air: 5 gal	See specific geographic recommendation	<u>West of Cascade and Sierra Nevada Mountains:</u> <ul style="list-style-type: none"> • Apply in October through December after first fall rains and after weeds have emerged and sod has started new growth. • For best seeding results, apply on moderately to heavily grazed areas. • Do not use in areas with heavy sod and weed growth. <u>East of Rocky Mountains</u> <ul style="list-style-type: none"> • Use the 1.3 pint rate on vigorous or coarse sod species such as bromegrass. • Apply prior to, or at time of seeding grasses or forage legumes. • Apply only to grazed or mowed pastures not more than 3 inches in height at time of treatment.
		0.7 pints			<u>Bermudagrass or Bahiagrass Sod:</u> <ul style="list-style-type: none"> • Apply in late summer or early fall to sod not exceeding 3 inches in height. • For control of emerged Little Barley, apply in February or March before the midboot stage of Little Barley.
		0.7 pints			<u>Bermudagrass Pastures - Dormant Season Suppression of Emerged Weeds</u> <ul style="list-style-type: none"> • Apply during March • For control of little barley, apply before the mid-boot stage. • Do not mow for hay until 40 days after treatment.
For Control of Endophyte-Fungus-Infected Fescue Forage Legume/Grass Mixture and Other Grass Pastures	Broadcast (Split Application)	0.7 - 1.3 pints followed by 0.7 - 1.3 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Use split applications of 10 to 21 days apart if necessary. • Do not exceed 2.6 pints per acre total in preparation for reseeding. • For spring plantings, the initial application of 0.7 to 1.3 pts may be made the previous fall. • Apply when fescue is actively growing and no more than 4 inches high. • To reduce the infestation of endophyte-infested grass, do not allow fescue to go to seed starting with the preceding year's crop.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<u>PEANUTS</u>	Broadcast At Ground Crack Postemergence	5.4 oz Second application 5.4 oz	Ground: 10 gal	-	<ul style="list-style-type: none"> • To control or suppress small (1-6") emerged annual grass and broadleaf weeds in peanuts at ground crack. A second application of 5.4 fl oz/acre may be made up to 28 days after ground crack. • For at ground crack use, CYCLONE Concentrate can be tank mixed with Pursuit® herbicide* or Dual for residual weed control. Consult the Pursuit® or Dual label for a list of weeds controlled, rates of application, and precautions. • Make no more than two applications per acre and do not apply a total of more than 10.8 fl oz of product per acre per season. • Crop foliage sprayed will be injured in the form of bronzing and crinkling but the crop will recover and develop normally. • Do not apply by air. <p>Not for use in California.</p>
(Tankmix with Basagran® herbicide)	Broadcast At Ground Crack Postemergence	5.4 oz Second application 5.4 oz	Ground: 10 gal	-	<ul style="list-style-type: none"> • For improved control of weeds such as cocklebur, bristly starbur, smartweed and prickly sida, tank mix CYCLONE Concentrate with Basagran at 1 pint/acre. • This tankmix can be applied at the ground crack stage of peanuts. A second application may be made up to 28 days after application. • Make no more than two applications per season and do not apply a total of more than 10.8 fl oz of product per acre per season. • Crop foliage sprayed will be injured in the form of bronzing and crinkling but the crop will recover and develop normally. • Refer to the Basagran label for specific use directions, limitations, cautions and for a list of weeds controlled. • Do not apply this tankmix if peanuts show injury (leaf phytotoxicity and/or plant stunting) produced by any other herbicide treatment as injury may be enhanced and/or prolonged. • Do not apply this tankmix during prolonged periods of drought or unseasonably cold weather as unsatisfactory weed control may result. • Do not apply by air.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
(Tankmix with Butyrac® herbicide or Butoxone™ herbicide 200)	Broadcast Postemergence	5.4 oz Second Application 5.4 oz	Ground: 10 gal	-	<ul style="list-style-type: none"> For improved control of weeds such as cocklebur, sicklepod and morningglory tank mix CYCLONE Concentrate with 8-16 oz (0.125-0.25 lbs) per acre of Butyrac or Butoxone 200. Make no more than two applications per crop and do not apply a total of more than 10.8 fl oz of product per crop. Crop foliage sprayed will be injured in the form of bronzing and crinkling but the crop will recover and develop normally. Refer to the complete Butyrac or Butoxone 200 label for specific use directions, limitations, cautions and for a list of weeds controlled. Do not apply by air.
PIGEON PEAS (Puerto Rico only)	Directed Spray	1.3 pints	Ground: 10 gal	60	<ul style="list-style-type: none"> Avoid contact with pigeon pea foliage. Do not make more than 1 application per season. Do not graze treated areas or feed treated forage to livestock. Cannery waste can be fed to livestock.
PINEAPPLE	Directed Spray	1.3 - 2.7 pints	Ground: 10 gal	20	<ul style="list-style-type: none"> Retreatment may be necessary on more mature weeds. Do not exceed 3 applications per season.
POTATO Preplant or Preemergence	Broadcast	0.7 - 1.3 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> Apply up to ground cracking, before potatoes have emerged.
Preplant (California, Washington, Oregon, Idaho only) (Used alone)	Broadcast	5.4 - 10.7 fl oz	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> For control of volunteer barley in preformed seedbeds.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Preharvest vine killing and desiccation (Except Northern Alabama; Counties of Marshal, DeKalb, Jackson and Cherokee)	Broadcast	0.7 - 1.3 pints	Ground: 20 gal	3	<ul style="list-style-type: none"> • Begin application when leaves begin to turn yellow. • Immature or drought-stressed potato foliage are tolerant to CYCLONE Concentrate. Desiccation will not be complete under these conditions. • Use 1.3 pts/acre rate where quick vine kill is desired. • Use two applications of 0.7 pts/acre when vine growth is dense. Split applications must be applied a minimum of five days apart. • Do not pasture livestock in treated potato fields. • Do not use on muck or peat soils to avoid injury to subsequent crops. • DO NOT use to desiccate potato vines when potatoes are to be stored or used for seed as this use may result in tuber decomposition or failure of seed pieces to germinate and grow normally. • Do not exceed 2.6 pts/acre per season.
RESIN SOAKING (Pines)	See Page ____				
SAFFLOWER Preplant or Preemergence	Broadcast or Banded Over Row	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Apply before, during, or after planting but before crop emergence.
Preplant (California only)	Broadcast	5.4 - 10.7 fl oz	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • For control of volunteer barley in preformed seedbeds.
SMALL FRUITS Blackberries Boysenberries Raspberries Blueberries	Postemergence Directed Spray	1.3 - 2.7 pints	Ground: 50 gal	-	<ul style="list-style-type: none"> • Apply before emergence of new canes or shoots as injury to those canes or shoots can occur. • Apply as a course spray to avoid crop injury from fine spray mist
Strawberries	Postemergence Directed Spray	1.6 pints	Ground: 20 gal	21	<ul style="list-style-type: none"> • Apply by directing spray between the rows and using shields to prevent spray contact with crop plants. • Do not allow spray to contact strawberry plants as injury or excessive residues may result. • Do not apply more than 3 times per season. • Do not graze livestock in treated areas.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
SMALL GRAINS (Barley, wheat) Preplant or Preemergence	Broadcast or Banded Over Row	Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal	-	
CHEMICAL FALLOW General Information					<ul style="list-style-type: none"> • Use higher spray volumes for better coverage as density of stubble, crop residue or weeds increase. • To control volunteer wheat or downy brome, fall-applied treatments generally work best with CYCLONE Concentrate. If possible, tank mix with Atrazine or Bladex for maximum burndown and residual control. • Apply from immediately after harvest up to emergence of the newly seeded crop as a broadcast or band treatment. • Cut wheat as high as possible to avoid cutting weeds too short, and allow the weeds to grow at least 2-3 inches after harvest before applying CYCLONE Concentrate. • The addition of Banvel or 2,4-D may aid in the suppression of emerged perennial broadleaf weeds and large annual broadleaf weeds. • Refer to 2,4-D, Banvel or residual herbicide label(s) for directions, limitations, cautions and for a listing of weeds controlled. • For extended weed control during the fallow period, tankmixes with registered residual herbicide combinations other than those listed on this label are permissible. • Weeds taller than 6 inches may not be controlled. • Weeds and grasses emerging after application will not be controlled. • Crop plants emerged at the time of application will be killed. • By ground application, apply 10-60 gallons of spray mix per acre at 30-50 psi. By air, use 5-10 gallons of spray mix per acre. As density of stubble, crop residue or weeds increases, spray gallonage should be increased within the recommended range for complete coverage.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Continuous Wheat 2-3 Month Recropping Interval	Broadcast	Weeds 1-2": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Make application at least 45 days prior to seeding. • Use at least 1.3 pints of CYCLONE Concentrate per acre with a PSI (see page __) for volunteer wheat or downy brome control in the spring. • Tank mix with Bladex for enhanced burndown, however, low rates (less than 2 lbs active) of Bladex may not provide complete control of volunteer wheat and downy brome. • Refer to the Bladex label for specific use rates for your soil type, use directions, cautions and a list of weeds controlled. • Refer to the Chemical Fallow General Information section.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<p>Wheat-Fallow- Wheat Rotations Fall applied after harvest (seeded 12-14 months later)</p> <p>Spring applied (seeded 3-5 months later)</p>	Broadcast	<p>Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts</p>	<p>Ground: 20 gal Air: 5 gal</p>	-	<ul style="list-style-type: none"> • Spray before weeds produce seed. • Volunteer wheat and downy brome control are better with late August or early September applications • Tank mix with Atrazine and/or Bladex, Marksman® herbicide*, or Command® herbicide* for enhanced burndown and residual weed control. • Tank mix with Sencor 75DF for burndown and residual control of grass and broadleaf weeds. • Refer to the product labels for specific use rates for your soil type, use directions, cautions, and a list of weeds controlled. • Refer to the Chemical Fallow General Information section. <ul style="list-style-type: none"> • Application should be made March 1 to April 15, prior to spring rains to conserve moisture. • Volunteer wheat is easier to control after the boot stage, but soil moisture loss will be greater. • Use at least 1.3 pints of CYCLONE Concentrate per acre with a PSI (see page __) for volunteer wheat or downy brome control in the spring. • Tank mix with Bladex for enhanced burndown, however, low rates (less than 2 lbs active) of Bladex may not provide complete control of volunteer wheat and downy brome. • Refer to the Bladex label for specific use rates for your soil type, use directions, cautions and a list of weeds controlled. • Refer to the Chemical Fallow General Information section. • Tank mix with Sencor 75DF for burndown and residual control of grass and broadleaf weeds. • Refer to the Sencor 75DF label for use rates for your soil type, use directions, cautions, and weeds controlled. <p>*Not for use in California.</p>

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
<p>Wheat-Annual Crop*-Wheat Rotations (Fall applied in wheat stubble)</p> <p>(Spring applied prior to planting an annual crop*)</p> <p>* Approved Annual Crops are grain sorghum, corn, wheat, or proso millet.</p>	Broadcast	<p>Weeds 1-3": 0.7-1.0 pts</p> <p>Weeds 3-6": 1.0-1.3 pts</p> <p>Weeds 6": 1.3-2.7 pts</p>	<p>Ground: 20 gal</p> <p>Air: 5 gal</p>	-	<ul style="list-style-type: none"> Tank mix with Atrazine and/or Bladex or Marksman* for enhanced burndown and residual weed control. Refer to the labels for specific use rates for your soil type, use directions, cautions, and a list of weeds controlled. Spray after wheat harvest and before weeds produce seed. If grasses such as foxtails or barnyardgrass recover, respray before they develop seed. Volunteer wheat and downy brome are easier to control with late August to November applications. Refer to the Chemical Fallow General Information section. Tank mix with Atrazine and/or Bladex for enhanced burndown and residual weed control. Refer to the labels for specific use rates for your soil type, use directions, cautions, and a list of weeds controlled. Use at least 1.3 pints of CYCLONE Concentrate per acre with a PSI (see page __) for volunteer wheat or downy brome control in the spring. Tank mix with Bladex for enhanced burndown, however, low rates (less than 2 lbs active) of Bladex may not provide complete control of volunteer wheat and downy brome. Follow the Atrazine recommendations pertaining to soil pH and recropping intervals. Refer to the Chemical Fallow General Information section. <p>*Not for use in California.</p>
<u>SORGHUM</u> (Grain)	Preplan/ Preemergence Broadcast or Band Application	<p>Weeds 1-3": 0.7-1.0 pts</p> <p>Weeds 3-6": 1.0-1.3 pts</p> <p>Weeds 6": 1.3-2.7 pts</p>	<p>Ground: 10 gal</p> <p>Air: 5 gal</p>	-	<ul style="list-style-type: none"> Seedbeds should be formed as far ahead of planting as possible to allow maximum weed and grass emergence. Seeding should be done with a minimum amount of soil disturbance.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
(Tankmixes with Atrazine & 2-4D)	Preplant or Preemergence			-	<ul style="list-style-type: none"> • CYCLONE Concentrate may be tank mixed with Atrazine for improved preemergence or residual weed control. The addition of 2,4-D (ester) may aid in the suppression of perennial and annual broadleaf weeds emerged at the time of application. Refer to the specific tankmix herbicide label(s) for rates, directions, limitations, and cautions and a list of weeds controlled.
	Postemergence Directed Applications	0.7 - 1.3 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Apply when sorghum is at least 12 inches tall when naturally standing. • Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift. • Use precision directed-spray application equipment adjusted so that no more than the lower 3 inches of the sorghum stalk is contacted by the application spray. • Some crop injury will occur. The degree of injury is related to the precision of application and spraying conditions. • Do not harvest forage, fodder, silage or hay before the soft dough stage of the grain. • Do not exceed 2 postemergence-directed applications or exceed a total of 5.3 pints CYCLONE Concentrate per season.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments																					
<u>SOYBEANS</u>	Preplant/ Preemergence	Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none">• Apply as a broadcast spray before, during or after planting, but before crop emergence.• For improved burndown or residual control, CYCLONE Concentrate may be tank mixed with the following herbicides:<table><tr><td>2,4-DB</td><td>Lin^{ax}*</td><td>Scepter® herbicide*</td></tr><tr><td>Canopy*</td><td>Lorox</td><td>Sencor</td></tr><tr><td>Dual</td><td>Lorox Plus</td><td>Surflan® herbicide*</td></tr><tr><td>Gemini*</td><td>Modown</td><td>Turbo® herbicide*</td></tr><tr><td>Goal</td><td>Preview*</td><td></td></tr><tr><td>Lasso</td><td>Prowl*</td><td></td></tr><tr><td>Lexone</td><td>Pursuit herbicide*</td><td></td></tr></table>• The rate of CYCLONE Concentrate to be used in these tank mixtures is dependent on weed height and growing conditions. Use the highest recommended rate of CYCLONE Concentrate under dry conditions or where the weed canopy is dense. Refer to the specific tank-mix herbicide label(s) for rates, directions, limitations, and cautions and for a list of weeds controlled.• The lower rate may be used when weeds are less than 4" tall and a selective post-emergence spray or cultivation will be made within 3 weeks after planting.• Seeding should be done with a minimum amount of soil disturbance. <p>*Not for use in California.</p>	2,4-DB	Lin ^{ax} *	Scepter® herbicide*	Canopy*	Lorox	Sencor	Dual	Lorox Plus	Surflan® herbicide*	Gemini*	Modown	Turbo® herbicide*	Goal	Preview*		Lasso	Prowl*		Lexone	Pursuit herbicide*	
2,4-DB	Lin ^{ax} *	Scepter® herbicide*																								
Canopy*	Lorox	Sencor																								
Dual	Lorox Plus	Surflan® herbicide*																								
Gemini*	Modown	Turbo® herbicide*																								
Goal	Preview*																									
Lasso	Prowl*																									
Lexone	Pursuit herbicide*																									

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Tankmix w/2,4-D ester	Preplant/Preemergence	Weeds 1-3": 0.7-1.0 pts Weeds 3-6": 1.0-1.3 pts Weeds 6": 1.3-2.7 pts	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> • Apply 2,4-D ester at 0.35-0.475 lbs ai/A at least 7 days prior to planting. • Apply 2,4-D ester at 0.475-0.95 lbs ai/A at least 30 days prior to planting. • Do not apply 2,4-D ester prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield. • Do not use the amine formulation as CYCLONE Concentrate activity may be reduced. • May be tank mixed with residual herbicides listed above. • Refer to the 2,4-D ester label for a list of rates, directions, limitations and cautions and for a list of weeds controlled.
Directed Spray	Postemergence	2.7 - 5.3 fl oz	Ground: 10 gal	-	<ul style="list-style-type: none"> • For control of seedling johnsongrass, crabgrass, goosegrass, brachiaria, Texas millet and pigweed less than 2 inches tall, use the lower rate of CYCLONE Concentrate. • For control of 2-4 inch red rice, <i>Brachiaria</i>, barnyard grass, crabgrass, goosegrass, seedling johnsongrass, giant foxtail, and fall panicum, use 5.3 fl oz of CYCLONE Concentrate. • For control of 2-3 inch sicklepod, purslane, pigweed, cutleaf ground cherry, and common ragweed, use 5.3 fl oz of CYCLONE Concentrate. • For control of common cocklebur, morningglory, red rice, 2-4 inch grass, and 2-3 inch pigweed, apply CYCLONE Concentrate at 5.3 fl oz per acre plus 0.2 lb active ingredient per acre of a 2,4-DB formulation. • Refer to the 2,4-DB label for directions, limitations, and cautions. • Do not treat if soybeans are less than 8 inches tall. • Use precision directed spray application equipment adjusted so that no more than the lower 3 inches of the soybean plant is contacted by the application spray. • Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift. • Some crop injury will occur. The degree of injury is related to the precision of application and spraying conditions. • Do not graze treated areas or feed treated forage to livestock. • If needed make a second and final application 7-14 days later.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
	Harvest Aid	5.4 - 10.7 fl oz	Ground: 20 gal Air: 5 gal	-	<ul style="list-style-type: none"> Indeterminant varieties: Apply when at least 65% of the seed pods have reached a mature brown color or when seed moisture is 30% or less. Determinant varieties: Apply when plants are mature, i.e, beans are fully developed, 1/2 of leaves have dropped, and remaining leaves are yellowing. Immature soybeans will be injured. Mature cocklebur, especially drought-stressed plants, are tolerant to CYCLONE Concentrate and desiccation will not be complete. Always use the higher rate for cocklebur. Do not pasture livestock in treated areas within 15 days after treatment. Remove livestock from treated areas at least 30 days prior to slaughter.
<u>SUGARCANE</u>	Postemergence Directed Spray				General Comments <ul style="list-style-type: none"> Apply as a shielded or directed spray to avoid contact with cane foliage to prevent leaf burn and yield reduction. Make a second and final application, if necessary, when new weed growth is 2-6 inches high. Do not graze treated areas or feed treated forage to livestock.
-- Florida --		1.3 pints	Ground: 50 gal	-	<ul style="list-style-type: none"> For optimum results, apply in early spring (March-April) when weeds are small. Do not apply after June 1 as cane growth may be stunted and yields reduced.
-- Hawaii --		1.3 pints	Ground: 20 gal	-	<ul style="list-style-type: none"> Do not apply after cane rows have closed in.
-- Louisiana --		0.7 - 2.0 pints	Ground: 20 gal	30	<ul style="list-style-type: none"> For tiller control, apply when tillers are less than 18 inches high. Use the higher rate for heavier weed infestations or tiller growth.
-- Florida & Texas --	Harvest Aid	5.4 - 10.7 fl oz	Air: 5 gal	-	<ul style="list-style-type: none"> Use higher rate under cool, cloudy weather conditions. Apply 3-14 days before burning and harvest.
<u>SUNFLOWER</u> Preplant or Preemergence	Broadcast or Banded Over Row	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal	-	<ul style="list-style-type: none"> Apply before, during, or after planting but before crop emergence.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Preharvest Desiccation (Oil seed sunflower varieties only)	Broadcast	0.7 - 1.3 pts	Ground: 10 gal Air: 5 gal	7	<ul style="list-style-type: none"> • Apply when sunflower seeds reach physiological maturity (when seed moisture is 35% or lower). For many varieties, this corresponds to the time when the back of the heads are yellow and the bracts are turning brown. • Do not graze treated areas or feed treated forage to livestock. • Use the higher rate when crop stands or weed infestations are heavy.
<u>TARO, DRYLAND</u> (Hawaii Only)	Postemergence Directed Spray	1.3 - 2.1 pts	Ground: 10 gal	180	<ul style="list-style-type: none"> • Do not allow spray to contact the taro plants as injury may result. • Make the first application when weed growth is 1 to 4 inches high. • Weeds emerging after the application will not be controlled. • A single re-treatment may be made; however, do not harvest dryland taro within 6 months of the last application.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
TREES AND VINES Orchards, Vineyards, Windbreak, Shade & Ornamental Trees Acerola Almonds Apples Apricots Avocados Bananas Cherries Citrus Coffee Figs Filberts Grapes Kiwi Fruit Macadamia Nuts Nectarines Olives Papayas Peaches Pears Pecans Pistachios Plums Prunes Walnuts Other shade and ornamental trees such as arborvitae, ash, elm, fir, oak, pine, etc.	Directed Spray	1.3 - 2.7 pints	Ground: 10 gal	Kiwi Fruit 14 Pistachios 7 Plums 28 Olives 13 Figs 13	<ul style="list-style-type: none"> • Do not allow spray to contact green stems (except suckers), fruit or foliage. • Use a shield or wrap plant when spraying around young trees or vines. • Do not graze treated areas. • Do not feed cover crops grown in treated areas to livestock. • Do not apply when figs, nuts or olives to be harvested are on the ground. • For grapes - treat when sucker growth is no more than 8" long. • For kiwi fruit - Do not treat more than 3 times per year. • For pistachios - Do not exceed two applications after shells split. • For mature woody weeds, perennial weeds, late germinating weeds and green suckers, retreatment or spot treatment may be necessary. • For plums - Do not harvest within 28 days after application and do not exceed 3 postdirected applications per season. • For olives - Do not harvest within 13 days after application and do not exceed 4 postemergence-directed applications per season. • For figs - Do not harvest within 13 days after application and do not exceed 5 postemergence-directed applications per season.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
Hops (ID, OR, & WA only)	Directed Spray and/or Suckering and Stripping	1.3 pints	Ground: 10 gal	14	<ul style="list-style-type: none"> • Retreatment or spot treatment may be necessary. • Do not apply more than 3 times per season. • Do not allow spray to contact green stems, foliage, flowers, or cones as injury may result. • Do not allow animals to graze in treated hopyards. • Hop vine refuse and silage may be fed to livestock. • For suckering and stripping, spray only the basal 2 ft. of the vines. Repeat as necessary. • Experience with varieties other than CASCADE, YAKIMA CLUSTER, and BULLION is limited. If using CYCLONE Concentrate on other varieties than these, test the use pattern on a small number of vines of each variety to determine sensitivity to injury. Do not use on unlisted varieties if unacceptable crop injury occurs. • Chemical Pruning: To burn back existing vines and obtain even emergence of subsequent vines, spray when vines are less than 3 ft tall. • APPLICATION TO HOP VINES LESS THAN 6 FT TALL MAY CAUSE UNACCEPTABLE INJURY.
Passion Fruit	Directed Spray	2.7 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Use a shield or wrap vine if bark is still green at application time. • If application is to be made during harvest season, pick all fruit off the ground prior to application. • Do not allow animals to graze on treated areas. • Retreatment or spot treatment may be necessary.
TYFON (New Hampshire only)	Preplant Preemergence	1.3 - 2.7 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> • Seeding should be done with a minimum of soil disturbance. • Weeds and grasses emerging after treatment will not be controlled. • Crop plants emerged at time of application will be injured.

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Crop	Use Pattern	CYCLONE Concentrate Rate Per Acre	Minimum Total Spray Per Acre	Grazing or Preharvest Interval (Days)	Precautions, Restrictions and Comments
VEGETABLES (Seeded or Transplanted) Beans (Lima, Snap) Broccoli Cabbage Cantaloupe Carrots Cauliflower Chinese Cabbage Collards Cucumber Eggplant Lettuce Musk Melons Peas Peppers Pumpkin Squash Sugar Beets Sweet Corn Turnips Tomatoes Watermelons	Preplant Preemergence	1.3 - 2.7 pints	Ground: 10 gal Air: 5 gal		<ul style="list-style-type: none"> Seedbeds or plantbeds should be formed as far ahead of treatment as possible to permit maximum weed emergence. Applications can be made as a banded or broadcast treatment before, during or after planting but prior to the crop emergence. Use the higher rate for heavier weed infestations. Seeding or transplanting should be done with a minimum amount of soil disturbance. Crop plants emerged at time of application will be killed. Can be used in fallow bed/stale seedbed for weed control alone or tank mixed with Goal. Consult the Goal label for a list of weeds controlled, rates of application and precautions. Do not harvest tomatoes within 30 days after application.
VEGETABLES Tomatoes Peppers (Middle Atlantic, Southeast, South Central Regions, and Southwest to the western border of Texas)	Directed Spray	1.3 pints	Ground: 10 gal	-	<ul style="list-style-type: none"> For control or suppression of emerged weeds between rows after crop establishment. Use precision directed spray application equipment adjusted to prevent spray contact with crop plants. Do not exceed 30 psi nozzle pressure or spray under conditions which may cause excessive drift. Apply when weeds are succulent and weed growth is less than 6 inches. Do not apply more than 3 applications per season. Do not allow animals to graze in treated areas. Do not harvest tomatoes within 30 days after application.

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For Control of:	For Suppression	For Control
Spikeweed (4 in. tall or less)	5.4 fl oz	10.7 to 16.0 fl oz
Volunteer Small Grain. (8 in. tall or less)	5.4 to 10.7 fl oz	21.3 fl oz
Fiddleneck (6 in. tall or less)	5.4 to 10.7 fl oz	21.3 fl oz
Shepherdspurse	10.7 to 21.3 fl oz	-
Annual Bluegrass	-	10.7 to 21.3 fl oz
Chickweed	-	10.7 to 21.3 fl oz
Red Maids (6 in. tall or less)	-	10.7 to 21.3 fl oz

Do not use the 5.4 fl oz rate unless the alfalfa has at least 3 trifoliate leaves; the 10.7 fl oz rate unless the alfalfa has 6 trifoliate leaves; or rates over 10.7 oz unless there are 9 trifoliate leaves.

RESIN SOAKING

Pines (Loblolly, Shortleaf, Longleaf, Slash, Virginia, Pond, Pitch, and Spruce Pines).

Tree Selection - Select trees to be treated from stands on sites not subject to periods of extreme drought stress as the desiccating effect of CYCLONE Concentrate to pines is accentuated during such periods, causing a reduction in the amount of oleoresin deposited in the xylem. Select trees to be treated from vigorous, non-stagnated stands, either natural or planted. In stagnated stands or commercial timber stands, plan treating with GRAMOXONE EXTRA herbicide not sooner than three years after a commercial thinning.

Application Directions - Apply CYCLONE Concentrate diluted in water (0.2% to 5% cation, wt./wt. basis, depending on the type of treatment method) to a suitable wound in the tree trunk to bring the treatment into contact with the xylem (sapwood). One of the following methods may be used:

Bark Streaks or Cuts: This type of wound is made using a standard or rotary bark hack or a chainsaw chipping tool employed in naval stores work to remove a single one-inch wide streak of bark about 1 to 2 feet from ground level. The total length should not exceed 1/3 of the tree circumference. Multiple streaks or cuts can result in serious girdling of the trunk and premature death of the tree. A coarse spray (about 1.7 to 5.0 ml.) CYCLONE Concentrate solution (1% to 5% cation, wt./wt. basis) should be applied to runoff to the exposed xylem, using a plastic acid bottle or a low-pressure sprayer. Wear rubber gloves when using the acid bottle. The amount of spray required per cut depends on tree circumference and the length of

cut or streak (1/3 of circumference). For a 9-inch diameter tree, 3 ml. of spray will cover the 1-inch wide streak. Using 3 ml. of a 2% or 4% CYCLONE Concentrate solution will result in application of 60 or 120 mg. CYCLONE Concentrate per streak.

Tree Injection: Pressure injections of 1% to 4% CYCLONE Concentrate solution (cation, wt./wt. basis) should be applied beneath the bark and just beneath the cambium layer. Injections should be made 1 to 2 inches apart around 1/3 of the tree circumference or no closer than 3 inches apart all around the tree. From 0.2 ml to 0.4 ml of CYCLONE Concentrate solution is applied per injection. Using 2% to 4% CYCLONE Concentrate solution, this results in 36 to 144 mg CYCLONE Concentrate applied per 9-inch diameter tree, for holes spaced 1 inch apart around 1/3 of the tree or 3 inches apart all around the tree.

Bore Holes: 3/8 to 5/8 inch diameter holes 2 to 6 inches deep, depending on tree diameter are bored sloping slightly downward and tangentially inward rather than directly towards the center of the tree. Solutions of 0.3% to 5% CYCLONE Concentrate can be used. Lower concentrations (0.3%) are usually applied at higher volumes of 15 to 35 ml per tree, resulting in application of 45 to approximately 100 mg CYCLONE Concentrate per tree. Using 2% to 4% solutions and applying 5 ml per single hole per tree results in application of 100 or 200 mg CYCLONE Concentrate per tree. Bore hole applications in the range of 45 to 100 mg CYCLONE Concentrate per tree have resulted in effective oleoresin induction.

Time of Treatment: Resin soaking can occur from treatments made any time of the year; however, cool season treatments under nondrought conditions usually result in less severe pine beetle infestations and longer tree life.

Interval Between Treatment and Tree Harvest: The interval between application of CYCLONE Concentrate and tree harvest should be a minimum of 6 months and preferably from 12 to 24 months. Intervals of over 6 months may not be possible under conditions of drought or serious pine beetle attacks, which may make early harvest necessary. The CYCLONE Concentrate treatment may encourage beetle attack, or may cause premature death of the tree. Desiccation of the xylem tissue, rather than the desired resin soaking, may occur, and is more likely at higher dosage rates.

Effect on Stem Growth:

CYCLONE Concentrate treatment can result in reduced stem growth during the interval between treatment and tree harvest.

Dilution Table for CYCLONE Concentrate (3.0 lbs cation per gallon):	
Concentration of Cation Desired (Wt./Wt. Basis)	To 2/3 Gallon of CYCLONE Concentrate add the following No. Gals. of Water:
0.2%	118.8
0.5%	46.8
1.0%	22.9
2.0%	10.9
3.0%	6.9
4.0%	4.9
5.0%	3.7

Conversion Table CYCLONE Concentrate to Be Applied	
Fl oz or Pints/Ac.	Lb. ai/Ac.
5.4 oz	0.13
10.7 oz	0.25
0.7 pt	0.25
1.0 pt	0.375
1.3 pt	0.5
2.0 pt	0.75
2.7 pt	1.0

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited.

STORAGE: Store at temperatures above 32°F. Do not contaminate feed, foodstuffs or drinking water. Do not store next to feed or food, or transport in or on vehicles containing foodstuffs or feeds. For help with any spill, leak, fire or exposure involving this material, call CHEMTREC 1-800-424-9300.

PESTICIDE DISPOSAL: This product is acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or dispose of by other procedures allowed by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER!

FOR BULK/MINI-BULK AND E-Z HANDLER® CONTAINERS:

CONTAINER DISPOSAL: Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

CONTAINER PRECAUTIONS: Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.

REFILL ONLY WITH CYCLONE CONCENTRATE. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than CYCLONE Concentrate will result in contamination and may weaken container.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER!

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Please consult each appropriate label for specific recommendations.