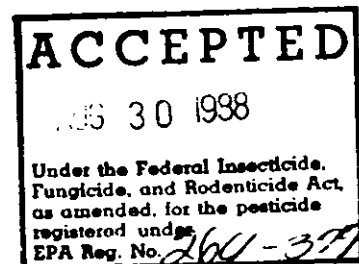


CERONE® Plant Regulator

For Reducing Lodging in Barley and Wheat

For Agricultural or Commercial Use Only
Not For Residential Use



ACTIVE INGREDIENT:
Ethephon (2-chloroethyl) phosphonic acid* 39.9%

INERT INGREDIENTS:..... 60.1%

Contains four pounds ethephon per gallon

EPA Reg. No. 264-377

EPA EST NO. 264-PA-01

**KEEP OUT OF REACH OF CHILDREN
DANGER**

Precautionary Statements: See Inside Booklet

**IN CASE OF EMERGENCY TELEPHONE (24 HOURS A DAY)
IN THE U.S.A. 1-800-521-8235**

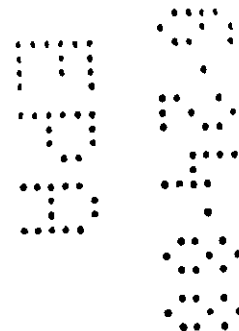
FOR GENERAL PRODUCT INFORMATION 800-334-9745

The use of this product for a variety of plant growth regulation uses is protected by various United States and foreign patents including U.S. Patents 3,879,188 and 4,240,819. No license is granted to use this product in countries other than the United States or for any use not contemplated by this label. Liability for patent infringement may result from use or sale of this product outside the United States.

RHONE-POULENC AG COMPANY
Post Office Box 12014, T. W. Alexander Drive
Research Triangle Park, North Carolina 27709

CERONE is a registered trademark of RHONE-POULENC.
Bayleton is a registered trademark of Mobay Chemical Corp.
Tilt is a registered trademark of Ciba-Geigy Corp.
Dithane is a registered trademark of Rhom and Haas Co.
Manzate is a registered trademark of E.I. du Pont de Nemours & Co.

Made in USA



PRECAUTIONARY STATEMENTS

DANGER

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage. Causes skin irritation. Do not get in eyes, on skin or on clothing. Wear full-length trousers, long-sleeved shirt, protective gloves, and goggles or face shield when handling.

Harmful or fatal if swallowed. Avoid contamination of food. Avoid inhalation of spray mist. May cause respiratory irritation. Change to clean work clothes daily. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove and wash contaminated clothing before reuse. Keep away from domestic animals.

STATEMENT OF PRACTICAL TREATMENT

GENERAL

Call a physician in cases of suspected poisoning. If poisoning is suspected in animals, call a veterinarian.

IF ON SKIN: Flush immediately with plenty of water for at least 15 minutes. Remove contaminated clothing.

IF INHALED: Stop spraying and move to uncontaminated area. Call a physician.

IF IN EYES: Flush immediately with plenty of water for at least 15 minutes and call a physician.

IF SWALLOWED: Do not induce vomiting. Promptly drink a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

NOTE TO PHYSICIAN

There is no specific antidote. Treatment should be directed at the control of symptoms and clinical conditions. This material possesses the characteristics of a strong acid, and may cause mucosal damage if swallowed. Do not induce vomiting. Gastric lavage should be undertaken with care if necessary. Appropriate conventional treatment for circulatory shock, respiratory depression and convulsions may be needed.

ENVIRONMENTAL HAZARDS

Do not contaminate water used for irrigation or domestic purposes.
Do not apply CERONE® Plant Regulator through any type of irrigation system.
Do not apply directly to water.

Avoid spray drift to nearby crops as this product will cause modifications in plant growth. Plant injury or reduced yields may result. Do not plant another crop within 30 days after treatment.

IMPORTANT

Do not use this product for purposes other than those listed on the label.

GENERAL INFORMATION

CERONE® Plant Regulator is intended to be used only for lodging reduction in barley and wheat crops that are managed for high yield and are likely to lodge. Lodging often decreases recoverable grain yields, and increases harvesting costs. Lodging also contributes to uneven maturity, higher moisture content and loss of grain quality.

Lodging reduction allows for more efficient harvesting and improved grain recovery. CERONE® Plant Regulator increases straw strength, and usually reduces plant height thus providing greater resistance to lodging. The degree of shortening varies with variety and environmental conditions. CERONE® Plant

Regulator also reduces "necking" in barley and the resultant yield decrease due to ear loss prior to harvest.

Since CERONE® Plant Regulator treatment provides greater resistance to lodging, barley and wheat grains may be managed for an optimum yield goal. Variety selection, seeding, fertility, weed, disease and insect control are important considerations. Consult your local extension service for recommendations for your area.

IMPORTANT NOTES

CERONE® Plant Regulator should be used only on vigorously growing grain crops that are likely to lodge. Management practices aimed at maximizing economic grain yields can produce conditions conducive to disease development. If rust, septoria, or mildew disease infestations are present, CERONE® treatment may enhance the severity of the disease. Growers planning to use CERONE® Plant Regulator should plant disease-resistant varieties or monitor their crop for disease and use effective fungicides.

Do not apply CERONE® Plant Regulator to crops already lodged, severely infected with rust or other diseases, or damaged by insects.

Do not apply CERONE® Plant Regulator to crops under moisture stress or on saline soils, where moisture stress may occur. Sufficient soil moisture should be available after application to prevent plant stress and possible yield loss.

IRRIGATION AREAS

Prior to treatment with CERONE®, irrigation is recommended to avoid moisture stress. Irrigation may be resumed 24 hours after treatment and should be resumed if conditions are hot and dry and continued until grain head filling is completed. Moisture and/or heat stress during anthesis and grain filling periods have been shown to cause loss of significant yield potential. With CERONE® use, avoiding plant stress during these growth periods is essential in obtaining optimum grain yield and quality.

CERONE® Plant Regulator may delay heading approximately 1-2 days and harvest maturity approximately 1-4 days. Further maturity delay may result if extreme temperature conditions such as heat (greater than 95°F), cold (less than 35°F) or wide temperature fluctuations occur within 7 days of application. Do not apply CERONE® Plant Regulator if freezing conditions are expected within 7 days of application.

Do not apply CERONE® Plant Regulator to crops seeded later than local recommendation. This is especially important in small grain production areas with short growing seasons where possible maturity delay may increase harvest difficulties.

CERONE® Plant Regulator treatment may produce undesirable secondary tillers in some spring barley varieties especially under moisture stress.

Treatment is not recommended for Azure barley, or Tyler wheat.

Mix only the amount of spray you expect to use each day. Do not allow mixed solution to stand overnight.

Do not add surfactants or wetting agents to CERONE® Plant Regulator other than those recommended on this label. Do not tank mix with herbicides or nitrogen solutions.

Spray overlap should be avoided.

Do not apply CERONE® Plant Regulator if rain is expected within 4 hours.

For CERONE® Plant Regulator to be effective, the average daytime temperature following application should reach at least 60°F. Antilodging protection begins 7 days or more after treatment.

Yield or quality decreases may occur if CERONE® is not properly used.

DO NOT GRAZE OR FORAGE TREATED CROP OR CUT FOR HAY OR SILAGE. Mature straw at normal harvest may be consumed by animals.

SPRAY PREPARATION

Add 1/2 to 3/4 of the required amount of water to the spray tank and begin agitation. Add the required amount of CERONE® Plant Regulator, followed by the remaining amount of water. Prepare only as much spray solution as can be used on the day of mixing. Do not allow spray solution to stand overnight.

Do not spill the concentrated product on spray equipment, or any airplane parts. ANY SPILLS SHOULD BE RINSED IMMEDIATELY WITH PLENTY OF WATER AS CERONE® PLANT REGULATOR IS CORROSIVE. Use of a nurse tank is highly recommended for avoiding possible spills of concentrated formulation on spray equipment or airplane parts.

EQUIPMENT CLEANING

Because of the acidic nature of this product, prolonged exposure to spray deposit will damage acrylic plastics, certain paints, and metals.

Rinse thoroughly with a detergent and water all exposed acrylic plastic-type materials (e.g., aircraft windshields), and painted surfaces within an hour after exposure to spray deposits.

At the end of each day, rinse thoroughly with a detergent and water the spray system and all the metal parts of the aircraft exposed to the spray deposits.

COMPATIBILITY

CERONE® Plant Regulator can be tank-mixed with approved cereal fungicides including: *Tilt*®, Bayleton®, and mancozeb (*Dithane*® M-45, *Manzate*® 200). *Triton CS-7* can be added to mancozeb fungicide products. Other spray adjuvants are not recommended. Adequate spray tank agitation is recommended when using fungicide tank mixtures. Do not tank mix with herbicides or nitrogen solutions.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING.

APPLICATION TIMING

Apply when the flag leaf is just visible to boot stage, but before the awns or spikes have emerged (Feekes-Large Scale 8-10, Zadok's Code 37-45). The spike or head should never be exposed to spray solution, as damage and reduced yield may result. Inspect fields carefully to determine proper stage.

GROUND APPLICATION

CERONE® Plant Regulator should be applied in a minimum of 7 gallons of water per acre when applied by conventional ground equipment. With conventional ground equipment the use of flat fan nozzles is recommended. A minimum of 5 gallons of water per acre may be applied when using controlled droplet application (CDA) or air foil type equipment. Sprayer boom height must be far enough above the crop canopy to allow a uniform spray pattern. Sprayer speed should not exceed 10 mph to insure adequate coverage.

AIR APPLICATION

CERONE® Plant Regulator should be applied in a minimum of 3 gallons of water per acre by air.

USE RATES

General use rates for barley and wheat are 0.5 to 1.0 pint (0.25 to 0.5 lb. active ingredient) CERONE® Plant Regulator per acre. Rates of 0.5 to 0.75 pints per acre will provide effective lodging control in most situations. The 1.0 pint per acre rate should be limited to unusually vigorous crops, exceptionally tall varieties or cereal types such as durum wheats, known to require the higher rate.

BARLEY

Use 0.5 to 0.75 pint per acre under most situations. Where moderate lodging is expected use 0.5 pint per acre. Where heavy lodging is expected use 0.75 pint per acre. In the western U.S. on tall varieties with vigorous growth, 1.0 pint per acre may be needed. Some varieties may be more sensitive than others. *On sensitive varieties use the lower rate of 0.5 pint per acre.* Consult your state extension specialist or Rhone-Poulenc representative for more information.

Minnesota, North Dakota, South Dakota - Use 0.5 pint per acre on dryland barley and 0.5 to 0.75 pint on irrigated barley. Do not apply to spring barley seeded later than local recommendations. Late seeded barley may be subjected to extremely hot weather during anthesis which can result in yield loss. For this reason application should generally be avoided after July 1 in Minnesota and North Dakota and June 26 in South Dakota. Do not apply to crops on saline soils. Saline soils can increase plant stress particularly under low moisture or low fertility conditions. In non-irrigated areas, CERONE® should be used only on fields with salinity levels less than 1.0 mmho (ECe, millimhos/cm @ 25°C). Do not apply to crops without good subsoil moisture at boot stage.

WHEAT

Use 0.5 to 0.75 pint per acre under most growing conditions, and on most varieties of semi-dwarf wheat. Tall varieties, durum wheats and irrigated hard wheats with vigorous growth may require 1.0 pint per acre.

Spring Wheats - Apply 0.5 pint on dryland wheat and 0.5 to 0.75 pint per acre on irrigated spring wheats.

Winter Wheats (hard red, hard white, soft red, soft white) - Use 0.5 pint where moderate lodging is expected and 0.75 pint per acre where heavy lodging is expected. Irrigated hard wheats may require 0.75 to 1.0 pint per acre.

Minnesota, North Dakota, South Dakota - On semi-dwarf winter wheat varieties, use 0.5 to 0.75 pint per acre. For tall varieties including Roughrider and Agassiz, apply 0.25 pint at growth stage 6-7, followed by 0.5 pint per acre at growth stage 9-10. For semi-dwarf durum varieties, use 0.5 to 0.75 pint per acre. For other durum varieties, use 0.75 to 1.0 pint per acre.

DO NOT APPLY MORE THAN A TOTAL OF 1.0 PINT (0.5 LB ACTIVE) OF CERONE® PLANT REGULATOR PER ACRE PER YEAR.

GRASS SEED PRODUCTION

In grasses grown for seed, lodging prior to pollination can reduce yield potential and harvest efficiency. To reduce lodging use 1 to 2 pints (0.5 to 1.0 lb. active ingredient) CERONE® Plant Regulator per acre. Apply between growth stages 8 and 10 on the Feekes-large Scale (or equivalent growth stage). Where severe lodging is expected apply 1 pint at growth stage 5-6 followed by 1 pint at growth stage 8-9.

The addition of a surfactant may enhance product effectiveness. However under some conditions (i.e. stress) certain surfactants may cause unacceptable foliage damage.

USE PRECAUTIONS

- Do not apply to exposed seed heads as damage and reduced yield may result.
- Do not graze or forage treated fields.
- CERONE® is most effective on tall fescues, perennial and annual rye grasses. CERONE® may not be effective on other grass species.

See the illustration below for growth stages and proper time for CERONE® Plant Regulator application.



| GROWTH DESCRIPTION | 1 st node detectable | 2 nd node detectable | Flag leaf just visible | Flag leaf ligule visible | Boot swollen | 1 st spikelet visible |
|----------------------|---------------------------------|---------------------------------|------------------------|--------------------------|--------------|----------------------------------|
| Feekes - Large Scale | 6 | 7 | 8 | 9 | 10 | 10.1 |
| Zadoks' Code | 31 | 32 | 37 | 39 | 45 | 50 |

TORAGE AND DISPOSAL

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

If container is broken or contents have spilled, follow all precautions indicated above and clean up immediately. Before cleaning up, put on full-length trousers, long-sleeved shirt, protective gloves and goggles or face-shield. Soak up spill with absorbent media such as sand, earth or other suitable material and dispose of waste at an approved waste disposal facility.

PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or residue 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

Do not reuse empty container. Triple rinse or equivalent. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the direction for use when it is used in accordance with such directions; and (c) that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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