

DU PONT

Pinnacle®

herbicide

P1125

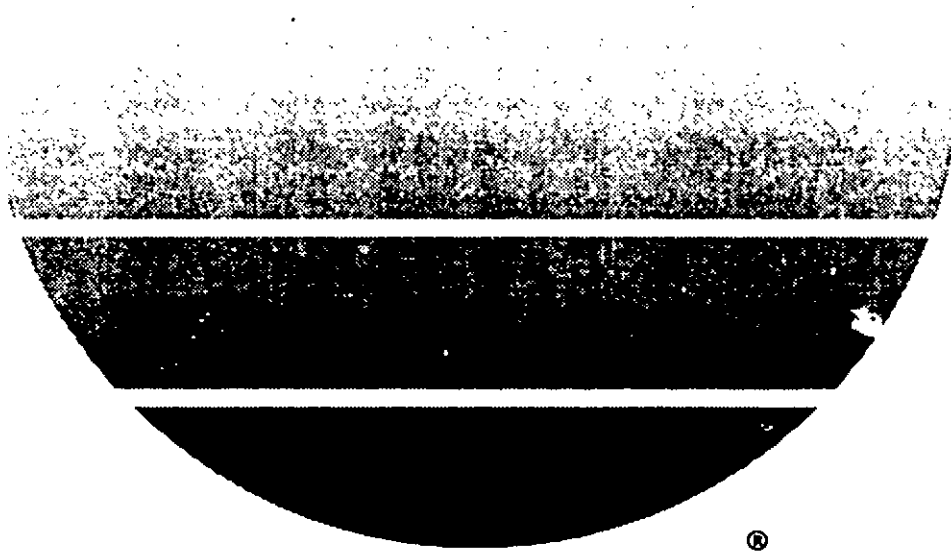
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ACCEPTED

NOV 1988

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 352-500



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..... A Growing Partnership With Nature

"PINNACLE" HIGHLIGHTS

- For selective postemergence broadleaf weed control in soybeans.
 - Apply at the rate of 1/4 ounce per acre.
 - Include a spray additive recommended in this label. See Spray Additives.
 - Include a nitrogen fertilizer (example: 4-8 pints of 28-0-0). See Spray Additives.
 - May be applied by ground (broadcast or band) or by air.
 - For ground application, add 0.25 gallon of water at 25-60 psi. Using flat fan nozzles will optimize Pinnacle performance.
 - Apply to actively growing weeds at the recommended size. See Rate.
 - Tank mix only with pesticides specified by this or other supplemental labeling. See Tank Mix Applications.
 - Certain environmental conditions, such as cool and dry, or hot and humid weather, affect the performance of "Pinnacle". See Environmental Conditions.
- Consult label text for complete instructions.
Always read and follow label directions for use.

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PINNACLE® HERBICIDE

Dry flowable

For Use on Soybeans Only

For selective postemergence weed control in soybeans.

This product is a water-dispersible granule containing 25% active ingredient by weight.

For use in the states of Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Texas (West of Highway 83 only), Wisconsin and Virginia.

<i>Active Ingredient</i>	<i>By Weight</i>
Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate	25.0%
<i>Inert Ingredients</i>	75.0%
<i>Total</i>	100.0%

EPA Reg. No. 352-525

U.S. Patents 4,547,215, 4,481,029 and 4,394,506

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

If in eyes: Flush eyes with plenty of water.

Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water.

For medical emergencies involving this product, call toll-free 1-800-441-3637.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution! Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

Long-sleeve shirt and long pants.

Waterproof gloves.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

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 washwater. Do not apply where/when conditions favor runoff.

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DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

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

AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Waterproof gloves.
- Shoes plus socks.

For Use on Soybeans Only

APPLICATION INFORMATION

Du Pont "Pinnacle" Herbicide is a convenient dispersible granule formulation which readily dissolves in water.

Rate

Apply "Pinnacle" at a rate of 1/4 ounce per acre for selective postemergence broadleaf weed control.

When to Apply

"Pinnacle" performs best when applied to small weeds a few weeks after planting.

Timing to Crop Stage

- "Pinnacle" may be applied to soybeans any time after the first trifoliolate has expanded fully.
- Apply no later than 60 days before harvest.

Timing to Weeds

- Apply "Pinnacle" when weeds are young and actively growing (after the first true leaves have expanded, but before the weeds exceed the size indicated in the table below).
- Applications made to weeds that are in the cotyledon stage, larger than the size indicated, or to weeds under stress may result in unsatisfactory control.

When applied as directed, "Pinnacle" will control the following weeds:

	Height (Inches) at Application													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Weeds Controlled														
Annual Smartweeds 2 - 6"														
Lambsquarters 2 - 4"														
Pigweed														
Rough (redroot) 2 - 12"														
Waterhemp species 2 - 8"														
Other species 2 - 8"														
Velvetleaf 2 - 6"														
Wild Mustard up to 4" in dia.														
Weeds Suppressed*														
Cocklebur 2 - 6"														
Jimsonweed 2 - 4"														
Wild Sunflower 2 - 6"														

*Weed suppression is a visual reduction in weed competition (reduced population size, and/or vigor) as compared to an untreated area. Degree of control can be increased by treating weeds when actively growing and not under stress.

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Spray Additives

Applications of "Pinnacle" must include a nonionic surfactant or crop oil concentrate, and an ammonium nitrogen fertilizer. For additional information refer to the DuPont bulletin "Approved Adjuvants for use with DuPont Row Crop and Cereal Herbicides" for a list of approved adjuvants and suggested use rates.

Nonionic Surfactant

- Apply at the rate of 1 to 2 pts per 100 gal of spray solution (0.125%-0.25% v/v concentration of formulated product). Surfactants must contain at least 50% of the formulated product as actual nonionic surfactant. Avoid products that do not accurately define their ingredients on the product label.
- Using the higher rate of nonionic surfactant, particularly under hot, humid conditions, may result in temporary crop injury.
- Use adjuvants that contain only EPA-exempt ingredients (CFR 40 180.1001).
- Products that combine ammonium fertilizers with surfactants or crop oils must meet the minimum surfactant/crop oil concentrate requirements AND the equivalent ammonium based nitrogen fertilizer requirements.
- Do Not Use Dash!

Crop Oil Concentrate

Under dry conditions or during cool weather, a crop oil concentrate at 4 pt/100 gal of spray solution (0.5% v/v) may be used in place of a nonionic surfactant to enhance weed control.

- Use a petroleum-based crop oil concentrate with at least 14% emulsifiers/surfactant and 80% oil.
- The use of crop oil concentrate may result in temporary crop injury.

Ammonium Nitrogen Fertilizer

An ammonium nitrogen fertilizer is required in addition to a surfactant or a crop oil concentrate.

- Use a high-quality liquid nitrogen fertilizer such as 28-0-0 at a rate of 4-8 pints per acre, or 10-34-0 at a rate of 2-4 pints per acre.
- Alternatively, a high-quality, sprayable grade of ammonium sulfate (21-0-0) may be used at a rate of 2-4 pounds per acre.
- Use the lower rate for spray volumes less than 15 gallons per acre.

Mixing Instructions

1. Measure out the proper amount of "Pinnacle" to apply 1/4 ounce per acre.
2. Fill the tank 1/4 to 1/3 full of water.
3. While agitating, add the required number of ounces of "Pinnacle".
4. The "Pinnacle" should dissolve completely within few minutes. Continue adequate agitation.
5. "Pinnacle" should be thoroughly mixed with water in the spray tank before adding any other material (in order, companion herbicide, surfactant, crop oil concentrate, and nitrogen fertilizer). As the tank is filling and after the "Pinnacle" has dissolved, add the needed tank mix

products such as Du Pont's Assure® II Herbicide and the required spray adjuvants.

6. Apply "Pinnacle" spray preparation within 24 hours of mixing to avoid product degradation.
7. If the mixture has settled, thoroughly reagitiate before using.

Tank Mix Applications

Do not tank mix "Pinnacle" with any other pesticide or spray adjuvant except as specified on this or other supplemental labeling.

"Pinnacle" plus Postemergence Grass Herbicides

"Pinnacle" may be tank mixed with postemergence grass herbicides such as "Assure" II herbicide. Do not tank mix with Poast Plus!

Under certain conditions, "Pinnacle" may reduce the activity of the postemergent grass herbicide. The broadleaf activity of "Pinnacle" will not be affected. Refer to the postemergent grass herbicide label for specific use information and precautions.

The amount of "Assure" II to be used in a tank mix with "Pinnacle" will be determined by the grasses present. When applied as directed, a tank mix of "Pinnacle" and "Assure" II will control the following grasses:

"Pinnacle" + 5 oz of "Assure" II per acre

Grass	Size (Height) inches
volunteer corn	6 - 18
shattercane	6 - 12
seedling johnsongrass	2 - 8

"Pinnacle" + 7 oz of "Assure" II per acre

Grass	Size (Height) inches
giant foxtail	2 - 8
wild proso millet	2 - 6

"Pinnacle" + 9 oz of "Assure" II per acre

Grass	Size (Height) inches
fall panicum	2 - 6
green foxtail	2 - 4
bristly foxtail	2 - 4
field sandbur	2 - 6
volunteer cereals	2 - 6

"Pinnacle" + 10 oz of "Assure" II per acre

Grass	Size (Height) inches
rhizome johnsongrass	10 - 24

Tankmix Adjuvants

Include a nonionic surfactant with the tank mix of "Pinnacle" and post grass herbicides such as "Assure" II.

- Surfactant rate (concentration) should be 1-2 pints per 100 gallons of spray solution (0.125%-0.25% v/v concentration).
- Use of a higher rate of nonionic surfactant, particularly under hot, humid conditions, may result in temporary crop injury.
- Do not use "Dash" or crop oil concentrate when tank mixing "Pinnacle" with postemergence grass herbicides.

"Pinnacle" plus Basagran'

"Pinnacle" may be tank mixed with "Basagran" Herbicide at the rate of 1/4 oz "Pinnacle" plus 1 pint "Basagran" per acre for control of these weeds in addition to those listed as controlled by "Pinnacle" alone:

<i>Species</i>	<i>Height (inches)</i>
cocklebur	2-4
jimsonweed	2-6
venice mallow	2
wild sunflower	2-4

Applications of "Pinnacle" plus "Basagran" must include a nonionic surfactant or crop oil concentrate and an ammonium nitrogen fertilizer. See "Spray Additives" section.

"Pinnacle" and Organophosphate Insecticides

Do not tank mix "Pinnacle" with organophosphate insecticides, or apply "Pinnacle" within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.

"Pinnacle" Sequential Treatments

Pinnacle may be used as a sequential treatment to control newly emerged weeds following a soil application (preemerge, preplant, or preplant incorporated) of Pursuit² or imazethapyr-containing products.

Sequential applications of "Pinnacle" following postemerge "Pursuit" treatments are not recommended because:

- Crop injury from sequential postemergence applications of "Pinnacle" following "Pursuit" is greater than from the use of either product applied alone. The first application interferes with the soybean plant's ability to metabolize the second herbicide treatment. Sequential applications may result in severe crop injury.
- Any weeds not controlled by the "Pursuit" application will be stressed at the time of the sequential treatment. This will result in unsatisfactory weed control, particularly for stress sensitive weeds such as lambsquarters.
- Weeds that have recovered from a "Pursuit" application will typically be larger than labeled size by the time soybeans may be safely treated with a "Pinnacle" application. This will result in unsatisfactory weed control.

Even though not recommended for sequential application, a minimum interval of at least 14 days between applications of "Pinnacle" following "Pursuit" is advised to reduce the potential for crop injury and unsatisfactory weed control. The soybeans should be free from stress (herbicide or environmental) and actively growing. Weeds should be free from stress and not exceed the labeled size (height) at the time of "Pinnacle" application.

APPLICATION EQUIPMENT

Many crops are highly sensitive to "Pinnacle". All direct or indirect contact (such as spray drift) with crops other than soybeans should be avoided.

Ground Application (See also Spray Drift)**Broadcast Application**

- Use 10-25 gallons of water per acre.
- Use flat fan nozzles at 25-60 psi.
- Do not use flood, hollow cone, rain drop, whirl chamber, or controlled droplet applicator (CDA) type nozzles. Unacceptable crop injury, excessive spray drift, or poor weed control may result.
- For proper spray coverage, adjust the boom and nozzle height according to the specifications listed by the nozzle manufacturer.

Band Application

- For band application, use proportionately less spray mixture.
- To avoid crop injury, carefully calibrate the band applicator not to exceed the labeled rate.
- Carefully follow the manufacturer's instructions for nozzle types (flat fan nozzles preferred), nozzle orientation, distance of the nozzles from the crop and weeds, spray volumes, calibration, and spray pressure.
- For additional information on row banders, see Du Pont's bulletin, "Application Accuracy Row Banders."

Aerial Application (See also Spray Drift)

- Use nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 5 to 10 GPA.
- Do not apply during a temperature inversion condition, when winds are gusty, or when other conditions will favor poor coverage and/or off target spray movement.
- Use a minimum of 5 gallons of water per acre.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

"Pinnacle" provides best postemergence results when applied to young, actively growing weeds. Degree of control and duration of effect depend on: application rate, weed spectrum, weed size, growing conditions at and following time of treatment, soil moisture, precipitation, previous herbicide injury and spray adjuvants. Some weeds, such as lambsquarters, are more affected by stress than others. Delay application until stress passes and weeds start to grow again. Treating weeds under stress or large weeds may result in only partial control. Conditions that are conducive to healthy, actively growing plants optimize the performance of "Pinnacle".

- If rain is expected within 1 hour, do not apply "Pinnacle", or weed control may be decreased.
- Applications made during or immediately following periods of abnormally cold weather for soybeans may result in less than satisfactory weed control.
- Poor weed control or crop injury may result from applications made to plants under stress from:
 - abnormal hot or cold weather,
 - growing conditions such as drought or water-saturated soil,
 - soil nutrient deficiencies such as iron chlorosis,
 - disease,
 - injury from cultivation,
 - nematode, insect, or prior herbicide injury.

Delay application until stress passes and weeds and soybeans resume growth. Severe stress from conditions immediately following application may also result in crop injury or poor weed control.

- Applications during periods of hot and humid weather increase the risk of crop injury.

Wilting, temporary leaf yellowing, reddened veins, and/or growth retardation of soybeans may follow application of "Pinnacle". The growth retardation is generally in the form of shortened internode spacing. These effects will generally be most evident 5-7 days after application. The soybeans will recover quickly under favorable growing conditions.

"Pinnacle" rapidly inhibits the growth of susceptible weeds, reducing weed competition hours after application. Leaves turn yellow 5-7 days after postemergence application, followed by death of the weed's growing point in 7-21 days. Suppressed weeds may remain green but stunted and noncompetitive.

CULTIVATION

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at the time of application, or weeds that emerge after an application of "Pinnacle".

- Do not cultivate before, during, or within 7 days after the application.
- Cultivation may decrease weed control by pruning roots and placing the weed under stress.
- The best time to cultivate is approximately 14 days after application.

CROP ROTATION

Any crop may be planted 45 days after the application of "Pinnacle".

SPRAYER PREPARATION AND CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using "Pinnacle", and then properly cleaned out following application. Clean all application equipment before applying "Pinnacle". Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of "Pinnacle", thoroughly clean all mixing and spray equipment to avoid applications to crops other than soybeans.

Notes

- When cleaning spray equipment before applying "Pinnacle", read and follow label directions for proper rinsate disposal of the product previously sprayed.
- A steam cleaning of aerial spray tanks is recommended to dislodge any visible pesticide deposits.
- When spraying or mixing equipment will be used over an extended period to apply multiple loads of "Pinnacle", partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight.

Cleanup Procedure

1. Drain the tank and thoroughly hose down the interior surfaces. Flush the tank, hoses, and boom with clean water for a minimum of 5 minutes.
2. Partially fill the tank with clean water and add one gallon of household ammonia* (containing 3% active) for every 100 gallons of water. Finish filling the tank with water, then flush the cleaning solution through the hoses, boom, and nozzles. Add more water to completely fill the tank and allow to agitate/recirculate for at least 15 minutes. Again, flush the hoses, boom, and nozzles with the cleaning solution, then drain the tank.
3. Repeat Step 2.
4. Remove the nozzles and screens and clean separately in a bucket containing the cleaning agent and water.
5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing the water through the hoses and boom.

* Equivalent amounts of an alternate strength ammonia solution may be used, or a tank cleaner recommended in the DuPont bulletin "Sulfonylurea Herbicides. A Guide to Equipment Cleanout."

SPRAY DRIFT

Do not allow spray from either ground or aerial equipment to drift onto adjacent crops or land, as injury to other plants may occur. The minimization of pesticide drift is the responsibility of the applicator. When spraying adjacent to crops other than soybeans, minimize the spray drift potential by following these practices:

- Stop spraying if wind speed becomes excessive. Spray drift can occur at wind speeds less than 10 MPH. Do not spray if sensitive crops are downwind. Do not spray if winds are gusty.
- High temperatures, drought, and low relative humidity increase the possibility of spray drift. Regardless of wind speed, extreme caution must be used when these conditions are present and sensitive crops or plants are nearby.
- Do not apply when a temperature inversion exists. An inversion is characterized by low air movement and an increase in air temperature with an increase in altitude. In humid regions, a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. Smoke-producing devices on aircraft are recommended. If not sure whether inversion conditions are present, consult with local weather services before making an application.

To further reduce drift from aerial or ground equipment:

1. Use large-droplet size sprays to minimize drift.
Do not use hollow-cone nozzles on ground equipment. Do not use nozzles that produce very small droplets, such as airblast-type nozzles. For ground applications, nozzles should be oriented at an angle between straight down and straight back. For aerial applications, orient nozzles straight back along the windstream. If using flood-type nozzles on aircraft, orient the nozzles so spray is produced in direction of the airstream.
2. Increase volume of spray mix per acre (for example, 10 GPA by air, 25 GPA by ground) by using higher-flow-rate nozzles.
3. Reduce pressure (PSI). Do not exceed 60 psi when applying "Pinnacle" (Vehicle speed must also be reduced to maintain the proper application rate per acre.). Consult manufacturers' catalogs for details on correct calibration.
4. Apply as close to target plants as possible while still maintaining a good spray pattern.

IMPORTANT PRECAUTIONS

- "Pinnacle" Herbicide should be used only in accordance with recommendations on this label or in separately published Du Pont recommendations.
- Injury to or loss of desirable trees or vegetation may result from failure to observe the following:
 - Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where "Pinnacle" may be washed or moved into contact with their roots.
 - Do not use on lawns, walks, driveways, tennis courts or similar areas.
 - Prevent drift of spray to desirable plants.
- Do not contaminate any body of water.
- Thoroughly clean application equipment immediately after use. (Refer to Sprayer Preparation and Cleanup section of this label.)
- Do not graze or feed forage, hay or straw from treated areas to livestock.
- Do not apply this product through any type of irrigation system.
- Du Pont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by Du Pont.

STORAGE AND DISPOSAL

Storage: Store product only in original container, away from other pesticides, fertilizer, food or feed.

Product Disposal: Do not contaminate water, food or feed by storage or disposal. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: 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.

Notice to Buyer: Purchase of this material does not confer any rights under patents of countries outside of the United States.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. 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 weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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