

59639-99

5/9/2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1/22

Eric Maurer
Valent U.S.A. Corporation
1333 N. California Blvd., Ste. 600
Walnut Creek, CA 94596

Dear Mr. Maurer:

Subject: Revised Labeling - Revised Product Name; Revised Burndown Language;
Additional Weed Control and Suppression Claims;
Revised Language to Avoid Phytotoxicity
Valor Herbicide
EPA Registration No. 59639-99
Your Submission Dated March 4, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provisions:

- 1) We now acknowledge the official product name for this product to be Valor Herbicide. Please use this product name in all future correspondences to the Agency concerning this product.
- 2) Revise the dermal heading in the First Aid statements to read "If on skin or clothing..."

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

DR: 305-7546: HB/PM23

CONCURRENCES

SYMBOL	7505C							
SURNAME	D. KENNY							
DATE	5/9/2002							



2/22

ACCEPTED
with COMMENTS
In EPA Letter Dated

MAY 9 2002

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
59639-99

VALOR™ Herbicide

FOR CONTROL OF CERTAIN WEEDS IN PEANUTS AND SOYBEANS

Active Ingredient	By Wt.
Flumioxazin*	51.0%
Other Ingredients	49.0%
Total	100.0%

*2-[7-fluoro-3,4-dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione

VALOR™ Herbicide is a water dispersible granule containing 51% active ingredient.

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

NET WEIGHT ___ POUNDS

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing.

FIRST AID

- | | |
|----------------------|--|
| If inhaled: | <ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice. |
| If on skin: | <ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. |
| If in eyes: | <ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. |
| If swallowed: | <ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person. |

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, shoes and 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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS:

This product is toxic to non-target plants and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

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 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, chemical resistant gloves made of waterproof material, shoes plus socks.

**DISCLAIMER, RISKS OF USING THIS PRODUCT,
LIMITED WARRANTY
AND LIMITATION OF LIABILITY**

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

LIMITED WARRANTY

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

PROMPT NOTICE OF CLAIM

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.

Read and follow the entire label of each product to be used in the tank mix with this product.

TABLE OF CONTENTS

GENERAL INFORMATION

General Restrictions and Limitations	
Environmental Conditions and Biological Performance	
Preemergence Applications	
Burndown Applications	
Soil Characteristics	
Herbicide Rate	
Residual Weed Control (Including Preemergence Applications or Applications as Part of a Spring Burndown Program)	
Carrier Volume and Spray Pressure	
Preemergence Applications	
Burndown Applications	
Additives	
Burndown Applications	
Jar Test to Determine Compatibility of Adjuvants and VALOR	
Sprayer Preparation	
Mixing Instructions	
Sprayer Cleanup	
Application Equipment	
Broadcast Application	
Band Application	
Crop Failure	
Rotational Restrictions	
Resistance Management	

DIRECTIONS FOR USE IN PREPLANT BURNDOWN PROGRAMS IN PEANUTS AND SOYBEANS (Preemergence To Crop)

General Restrictions and Limitations	
Fall Burndown Programs	
Spring Burndown Programs	
Weeds Controlled by Preplant Burndown Programs in Peanuts and Soybeans	Table 1

DIRECTIONS FOR USE IN BURNDOWN PROGRAMS IN COTTON, FIELD CORN, RICE, SORGHUM, SUGARCANE, SUNFLOWERS, TOBACCO, AND WHEAT (Preemergence To Crop)

General Restrictions and Limitations	
Fall Burndown Programs	
Spring Burndown Programs	

RECOMMENDATIONS FOR WEED CONTROL IN PEANUTS AND SOYBEANS

Broadleaf Weeds Controlled by Residual Activity of VALOR in Peanuts and Soybeans	Table 2
Weeds Suppressed by Residual Activity of VALOR in Peanuts and Soybeans	Table 3

DIRECTIONS FOR USE IN PEANUTS

General Restrictions and Limitations	
Wind Management	
Timing to Peanuts	
Timing to Weeds	
Burndown – Preemergence to Peanuts, Postemergence to Weeds	
Additional Residual Grass Control: Sequential	
Additional Residual Grass Control: Tank Mixed	

DIRECTIONS FOR USE IN SOYBEANS

General Restrictions and Limitations	
Timing to Soybeans.....	
Timing to Weeds	
Burndown – Preemergence to Soybeans, Postemergence to Weeds	
Increasing Speed of Glyphosate Burndown Activity	
Tank Mixes.....	
Tank Mix Partners for Control of Emerged Weeds in Reduced Tillage Soybeans	Table 4
Additional Residual Broadleaf Control.....	
Additional Residual Grass Control	
ROUNDUP READY® Program.....	

GENERAL INFORMATION

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

Do not apply by air

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions. Where states have more stringent regulations, they should be observed.

VALOR provides residual control of susceptible weeds in peanuts and soybeans. VALOR can also be used as part of a burndown program in peanuts and soybeans. VALOR can be used as part of early preplant burndown programs in cotton, field corn, rice, sorghum, sugarcane, sunflowers, tobacco, and wheat when applied more than 30 days prior to planting.

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply this product when weather conditions favor spray drift from treated areas.
- Do not graze treated fields or feed treated forage or hay to livestock.
- Do not incorporate into the soil after application.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

PREEMERGENCE APPLICATIONS (Conventional Tillage)

Important: Crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions. Risk of crop injury can be minimized by using on well drained soils, planting at least 1.5 inches deep, using high quality seed, and completely covering seeds with soil prior to preemergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

Moisture is necessary to activate VALOR in soil for residual weed control. Dry weather following applications of VALOR may reduce effectiveness. However, when adequate moisture is received after dry conditions, VALOR will control susceptible germinating weeds. VALOR may not control weeds that germinate after application but before an activating rainfall/irrigation or weeds that germinate through cracks resulting from dry soil.

When adequate moisture is not received after a VALOR application, weed control may be improved by irrigation with at least ¼ inch of water. If emerged weeds are controlled by cultivation, residual weed control will be reduced.

BURNDOWN APPLICATIONS

For best results, VALOR should be applied as part of a burndown program to actively growing weeds. Applying VALOR under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply VALOR when weeds are under stress due to drought, excessive water, extremes in temperature, disease, or low humidity. Weeds under stress tend to become less susceptible to herbicidal action. VALOR is most effective when applied under warm sunny conditions.

Reduced residual weed control may occur when burndown applications are made to fields where heavy crop and/or weed residue exist.

VALOR is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or efficacy may be reduced.

SOIL CHARACTERISTICS

Application of VALOR to soils with high organic matter and/or high clay content may require higher dosages than soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

HERBICIDE RATE

RESIDUAL WEED CONTROL (INCLUDING PREEMERGENCE APPLICATIONS OR APPLICATIONS AS PART OF A SPRING BURNDOWN PROGRAM)

Based upon soil characteristics (organic matter content and texture), the most difficult-to-control weed species being targeted, and the crop being grown, select the proper VALOR dosage from Table 2 when applying in peanuts or soybeans. Table 3 lists weeds that are suppressed by VALOR rates used in peanuts and soybeans.

CARRIER VOLUME AND SPRAY PRESSURE

PREEMERGENCE APPLICATIONS (Conventional Tillage)

To ensure uniform coverage, use 10 to 30 gals. spray solution per acre for conventional-tillage applications. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for preemergence herbicide application.

BURNDOWN APPLICATIONS (Prior to Crop Emergence)

To ensure thorough coverage in burndown applications, use 15 to 30 gals. spray solution per acre. Use 20 to 30 gals. per acre if dense vegetation or heavy crop residue is present. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence herbicide application.

ADDITIVES

BURNDOWN APPLICATIONS (Prior to Crop Emergence)

Postemergence control of weeds from VALOR requires the addition of an agronomically approved adjuvant to the spray mixture. Either a crop oil concentrate or methylated seed oil which contains at least 15% emulsifiers and 80% oil, may be used when applying VALOR as part of a burndown program. Some tank-mix partners, such as Roundup UltraMAX™, are formulated with sufficient adjuvants and do not require the addition of a crop oil concentrate or methylated seed oil when tank mixed with VALOR. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds such as cutleaf evening-primrose and Carolina geranium. Mixing compatibility qualities should be verified by a jar test.

A spray grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 lb./A or a 28 to 32% nitrogen solution at 1 to 2 qts./A) may be added to the spray mixture along with either a crop oil concentrate or methylated seed oil to enhance weed control. The addition of a nitrogen source does not replace the need for a crop oil concentrate or a methylated seed oil.

JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND VALOR HERBICIDE

When using VALOR and an adjuvant, such as in stale seed bed or reduced tillage situations, a jar test should be performed before mixing commercial quantities of VALOR, when using VALOR for the first time, when using new adjuvants, or when a new water source is being used.

1. Add 1 pt. of the water to a quart jar. The water should be from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 g of VALOR to the quart jar for every 3 oz. of VALOR/A being applied (1 g if 3 oz./A is the desired VALOR rate), gently mix until product goes into suspension.
3. Add 60 ml (4 tablespoons or 2 fl. oz.) of the crop oil or methylated seed oil to the quart jar, gently mix.
4. If nitrogen is being used, add 16 ml (1 tablespoon or 0.5 oz) of the 28 to 32% nitrogen source to the quart jar. If ammonium sulfate is being used, add 19 g AMS to the quart jar in place of the 28 to 32% nitrogen.
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the choice of adjuvant should be questioned:
 - a) Layer of oil or globules on the mixture's surface.
 - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
 - c) Clabbering: Thickening texture (coagulated) like gelatin.

SPRAYER PREPARATION

Before applying VALOR, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonylurea and phenoxy herbicides, (i.e. Classic® and 2,4-D respectively) are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply VALOR. If two or more products were tank-mixed prior to VALOR application, the most restrictive cleanup procedure should be followed.

MIXING INSTRUCTIONS

1. Fill clean spray tank $\frac{1}{2}$ to $\frac{3}{4}$ of desired level with clean water.
2. To ensure a uniform spray mixture, pre-slurry the required amount of VALOR with water prior to addition to the spray tank. Use a minimum of 1 gal. of water per 10 oz. of VALOR.
3. While agitating, slowly add the pre-slurried VALOR to the spray tank. Agitation should create a rippling or rolling action on the water surface.
4. If tank mixing VALOR with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates, and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing. VALOR should be applied within 6 hours of mixing.

SPRAYER CLEANUP

Spray equipment must be cleaned each day following VALOR application. After VALOR is applied, the following steps must be used to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens, and nozzles.
3. Top off tank, add 1 gal. of 3% household ammonia for every 100 gals of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens, and nozzles for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens, and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Spray equipment, including all tanks, hoses, booms, screens, and nozzles, should be thoroughly cleaned before it is used to apply postemergence pesticides. Equipment with VALOR residue remaining in the system may result in crop injury to the subsequently treated crop.

APPLICATION EQUIPMENT

Application equipment should be clean and in good repair. Nozzles should be uniformly spaced on boom and frequently checked for accuracy.

BROADCAST APPLICATION

Apply VALOR and VALOR tank mixes, with ground equipment using standard commercial sprayers equipped with flat fan or flood nozzles (preemergence applications only) designed to deliver the desired spray pressure and spray volume.

BAND APPLICATION

When banding, use proportionately less water and VALOR per acre.

CROP FAILURE

If the crop treated with VALOR is lost due to a catastrophe, such as hail or other forms of inclement weather, soybeans or peanuts can be replanted immediately, provided no more than 3 oz./A of VALOR has been used on the lost crop. Cotton, field corn, rice, sorghum, sugarcane, sunflowers, tobacco, and wheat can be planted 30 days after a VALOR application, provided no more than 2 oz./A of VALOR had been used on the lost crop and a minimum of 1 inch of rainfall/irrigation has occurred between VALOR application and replanting. Crop injury may occur if these restrictions are not followed.

ROTATIONAL RESTRICTIONS

The following rotational crops may be planted after applying VALOR at the listed rate. Planting earlier than the recommended rotational interval may result in crop injury.

VALOR RATE	CROP	ROTATION INTERVAL
2 oz./A or less	Peanut and Soybean	Immediately
	Cotton, Field Corn, Rice, Sorghum, Sunflower, Sugarcane, Tobacco, and Wheat	30 days ¹
	Barley, Dry Bean, Field Pea, Rye, and Sweet Corn	4 Months
	Alfalfa, Canola, Clover, Oats, Sugar Beet, and all other crops not listed	12 Months ²
up to 3 oz./A	Peanut and Soybean	Immediately
	Cotton, Field Corn, Rice, Sorghum, Sugarcane, Sunflower, Tobacco, and Wheat	2 Months
	Barley, Dry Bean, Field Pea, Rye, and Sweet Corn	4 Months
	Alfalfa, Canola, Clover, Oats, Sugar Beet, and all other crops not listed.	12 Months ²

¹At least one inch of rainfall/irrigation must occur between application and planting or crop injury may occur.

²Successful soil bioassay must be performed prior to planting alfalfa, canola, sugar beets and other crops not listed.

RESISTANCE MANAGEMENT

Any weed population may contain or develop plants naturally resistant to herbicides in various mode of action classes. Resistant biotypes may eventually dominate the weed population if the same class of chemistry/mode of action herbicides are used repeatedly in the same field or in successive years. These resistant biotypes may not be adequately controlled by herbicides in a mode of action class for which resistance has developed. A gradual or total loss of weed control may occur over time. Other resistance mechanisms that are not linked to site of action, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

TO DELAY HERBICIDE RESISTANCE

- Avoid the use of herbicides that have a similar target site mode of action in consecutive years.
- Herbicide use should be based on an IPM program that includes scouting, record keeping, and consideration of cultivation practices, water management, weed free crop seed, crop rotation, and other chemical or cultural control practices.
- Monitor treated weed population for resistance development and report suspected resistance.
- Contact your local extension or crop expert (advisor) for any additional pesticide resistance management and/or IPM recommendations for specific crops and weed biotypes.
- For further information contact Valent U.S.A. Corporation at the following toll free number 1-800-682-5368.

DIRECTIONS FOR USE IN PREPLANT BURNDOWN PROGRAMS IN PEANUTS AND SOYBEANS (Preemergence to Crop)

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.

FALL BURNDOWN PROGRAMS

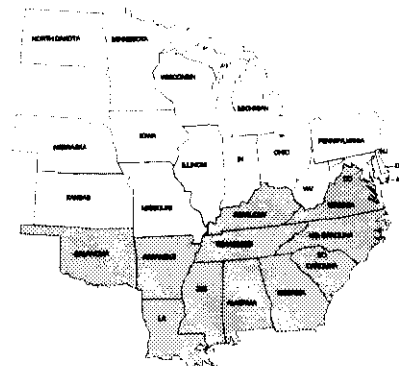
VALOR can be used in combination with labeled preplant burndown herbicides plus crop oil concentrate to control emerged weeds and provide residual weed control in fields that will be planted the following spring. Application must be made no earlier than October 15 in Region 2 or November 15 in Region 1 or when soil temperature falls below 50°F. at a two inch depth to maintain residual weed control into the spring (April 1 in Region 1 and May 1 in Region 2) or up until planting, whichever comes first.

Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

Fall Application Regions:

Region 1: Alabama, Arkansas, Georgia, Louisiana, Kentucky, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Virginia

Region 2: Delaware, Kansas, Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Pennsylvania, West Virginia, and Wisconsin



Weeds controlled by postemergence or residual activity, are listed in Table 1. Preplant burndown treatment tank-mixes and rates are:

Herbicide	Rate
Program 1	
VALOR Plus	2 to 3 oz./A
Glyphosate Plus	0.5 to 1.0 lb. ai./A (equivalent to 1 to 2 pt./A of Roundup Original™)
2,4-D (2,4-D for use on preplant soybeans only) Plus	0.5 to 1.0 lb. ai./A (equivalent to 1 to 2 pt./A of 2,4-D 4 LVE)
COC	1 to 2 pt./A
or	
Program 2	
VALOR Plus	2 to 3 oz./A
Glyphosate Plus	0.5 to 1.0 lb. ai./A (equivalent to 1 to 2 pt./A of Roundup Original)
COC	1 to 2 pt./A
or	
Program 3 (Region 2 Only)	
VALOR Plus	2 to 3 oz./A
2,4-D (2,4-D for use on preplant soybeans only) Plus	0.5 to 1.0 lb. ai./A (equivalent to 1 to 2 pt./A of 2,4-D 4 LVE)
COC	1 to 2 pt./A

Table 1. Weeds Controlled by Preplant Burndown Programs in Peanuts and Soybeans

WEEDS CONTROLLED ¹		Postemergence			Residual
COMMON NAME	SCIENTIFIC NAME	Program 1	Program 2	Program 3	
		Weeds 3 inches or less			
Chickweed					
Common	<i>Stellaria media</i>	Yes	Yes	Yes	Yes
Mouseear	<i>Cerastium vulgatum</i>	Yes	Yes	Yes	Yes
Dandelion	<i>Taraxacum officinale</i>	Yes	No	Yes	Yes
Henbit	<i>Lamium amplexicaule</i>	Yes	Yes	Yes	Yes
Marestail, Horeseweed	<i>Conyza Canadensis</i>	Yes	Yes	Yes	Yes
Groundsel, Cressleaf	<i>Senecio glabellus</i>	Yes	Yes	-	Yes
Purple Deadnettle	<i>Lamium purpureum</i>	Yes	Yes	Yes	Yes
		Weeds 12 inches or less			
Carolina Geranium	<i>Geranium carolinianum</i>	Yes	Yes	Yes	-
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>	Yes	Yes	Yes	Yes
Mustard, Wild	<i>Brassica Kaber</i>	Yes	Yes	Yes	Yes
Shepard's-purse	<i>Capsella bursa-pastoris</i>	Yes	Yes	Yes	Yes

¹Refer to glyphosate and/or 2,4-D labels for additional weeds controlled and rotational restrictions.

SPRING BURNDOWN PROGRAMS

VALOR can be used in combination with labeled preplant burndown herbicides plus crop oil concentrate to control emerged weeds and provide residual weed control prior to soybean emergence. Weeds controlled by residual activity, are listed in Table 2, Section A.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row. Apply VALOR after planting when these types of planters are used (within 3 days of planting and before the crop emerges).

VALOR can be used at 1 to 3 oz./A with labeled preplant burndown herbicides to enhance the speed of burndown and increase weed spectrum.

VALOR can be used at 1 to 3 oz./A in soybean and peanut burndown programs. See "DIRECTIONS FOR USE IN SOYBEANS", "DIRECTIONS FOR USE IN PEANUTS" for more information.

DIRECTIONS FOR USE IN BURNDOWN PROGRAMS IN COTTON, FIELD CORN, RICE, SORGHUM, SUGARCANE, SUNFLOWERS, TOBACCO, AND WHEAT (Preemergence to Crop)

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply to frozen or snow covered soil.
- Do not perform any tillage operation after application or residual weed control will be reduced.
- VALOR can be used at 1 to 2 oz./A with labeled burndown herbicides to enhance the speed of burndown and increase weed spectrum. A minimum of 30 days must pass, and 1 inch of rainfall/irrigation must occur, between VALOR application and planting of cotton, field corn, rice, sorghum, sugarcane, sunflowers, tobacco, or wheat. Refer to most restrictive label for minimum interval between application and planting.

FALL BURNDOWN PROGRAMS

VALOR can be used in combination with labeled burndown herbicides plus crop oil concentrate to control emerged weeds and provide residual weed control in fields that will be planted the following spring. Application must be made no earlier than October 15 in Region 2 or November 15 in region 1 or when soil temperature falls below 50°F. at a two inch depth to maintain residual weed control into the spring (April 1 in Region 1 and May 1 in Region 2) or up until planting, whichever comes first.

Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

SPRING BURNDOWN PROGRAMS

VALOR can be used in combination with labeled burndown herbicides plus crop oil concentrate to control emerged weeds and provide residual weed control prior to crop emerges. Weeds controlled by residual activity are listed in Table 2, Section A. Crops that will be planted following application must be in compliance with the rotational interval listed in the "Rotational Restriction" table above.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row.

RECOMMENDATIONS FOR WEED CONTROL IN PEANUTS AND SOYBEANS

Table 2 lists broadleaf weeds controlled by residual activity of VALOR in peanuts and soybeans.
Table 3 list weeds suppressed by residual activity of VALOR in peanuts and soybeans.

Table 2. Broadleaf Weeds Controlled by Residual Activity of VALOR in Peanuts and Soybeans

BROADLEAF WEED SPECIES				
SECTION A				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	VALOR RATE
Carpetweed	<i>Mollugo verticillata</i>	Up to 5%	All Soil Types	2.0 oz./A
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium valgatum</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>			
Florida Pusley	<i>Richardia scabra</i>			
Henbit	<i>Lamium amplexicaule</i>			
Kochia	<i>Kochia scoparia</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			
Nightshades				
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane, Common	<i>Portulaca oleracea</i>			
Redmaids	<i>Calandrinia ciliata</i> var <i>menziessi</i> .			
Shepherd's-purse	<i>Capsella bursa-pastoris</i>			
Smallflower				
Morningglory	<i>Jacquemontia tamnifolia</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Venice Mallow	<i>Hibiscus trionum</i>			

SECTION B

All weeds listed in Section A plus:

COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	VALOR RATE
Coffee Senna	<i>Cassia occidentalis</i>	Up to 3%	All Soil Types	3.0 oz./A Peanuts ² 2.5 oz./A Soybeans
Common Ragweed ¹	<i>Ambrosia artemisiifoli</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>	3 to 5%	Coarse and Medium Soils: (sandy loam, loamy sand, loamy, silt-loam, silt, sandy clay, sandy clay loam)	3.0 oz./A Peanuts ² 2.5 oz./A Soybeans
Hemp Sesbania	<i>Sesbania exaltata</i>			
Jimsonweed	<i>Datura stramonium</i>			
Morningglories ³				
Entireleaf	<i>Ipomoea hederacea</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Tall	<i>Ipomoea purpurea</i>			
Mustard, Wild	<i>Brassica kaber</i>		Fine Soils; (silty clay, silty clay loam, clay, clay loam)	3.0 oz./A Peanuts and Soybeans
Palmer Amaranth	<i>Amaranthus palmeri</i>			
Spurred Anoda	<i>Anoda cristata</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Waterhemp ¹				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			

¹ A postemergence herbicide, such as Cobra®, Phoenix™, or glyphosate (Roundup Ready soybeans only) may be needed following a preemergence application of VALOR to adequately control common ragweed or waterhemp in soybean fields with heavy pressure.

² Due to differences in crop canopy timing between peanuts and soybeans, 3.0 oz./A of VALOR should be used in peanuts, regardless of soil type and organic matter content, except in the states of Virginia, North Carolina, and Oklahoma where a maximum of 2 oz./A can be applied in peanuts.

³ Morningglory species are not adequately controlled on fine soils or soils with greater than 3% organic matter.

18/22

Table 3. Weeds Suppressed by Residual Activity of VALOR in Peanuts and Soybeans

BROADLEAF WEED SPECIES		ORGANIC MATTER	OUNCES PER ACRE
COMMON NAME	SCIENTIFIC NAME		
Bristly Starbur	<i>Acanthospermum hispidum</i>	Up to 5%	2.5 to 3.0
Copperleaf, Hophornbean	<i>Acalypha ostryifolia</i>		
Ragweed, Giant	<i>Ambrosia trifida</i>		
Russian Thistle	<i>Salsola iberica</i>		
Smartweeds			
Ladysthumb	<i>Polygonum persicaria</i>		
Pennsylvania	<i>Polygonum pennsylvanicum</i>		
Velvetleaf	<i>Abutilon theophrasti</i>		
GRASS WEED SPECIES			
Barnyardgrass	<i>Echinochloa crus-galli</i>		
Crabgrass, Large	<i>Digitaria sanguinalis</i>		
Foxtail, Giant	<i>Setaria faberi</i>		
Goosegrass	<i>Eleusine indica</i>		
Lovegrass, California	<i>Eragrostis diffusa</i>		
Panicums			
Fall	<i>Panicum dichotomiflorum</i>		
Texas	<i>Panicum texanum</i>		
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>		

DIRECTIONS FOR USE IN PEANUTS

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz. of VALOR per acre during a single growing season.
- Do not apply more than 2 oz./A in the states of Virginia, North Carolina, or Oklahoma, where climatic conditions may result in unacceptable injury to peanuts.
- Do not use on peanuts grown for seed.
- Do not irrigate when peanuts are cracking.
- Do not tank-mix with Strongarm®
- Do not use on the following peanut varieties: Perry or NC 10C.

WIND MANAGEMENT

In areas where shallow cultivation is used between rows to reduce wind born sand damage to peanuts, weed control from VALOR may be reduced.

TIMING TO PEANUTS

VALOR may be applied to peanuts prior to planting or preemergence (after planting). Preemergence applications of VALOR must be made within 2 days after planting and prior to peanut emergence. Application after the peanuts have begun to crack, or are emerged, will result in severe crop injury. Application should not be made when peanuts have begun to crack. Select VALOR rate from Table 2 according to anticipated weed spectrum.

TIMING TO WEEDS

BURNDOWN - PREEMERGENCE TO PEANUTS, POSTEMERGENCE TO WEEDS

VALOR, applied as part of a burndown program, may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where peanuts will be planted directly into a stale seedbed, cover crop, or in previous crop residues. Apply VALOR before planting, during planting, or after planting, but before the crop emerges. For control of emerged weeds, tank mix VALOR with glyphosate. Refer to glyphosate label for recommended rate and application pressure. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. VALOR tank mixes applied to assist in the control of emerged weeds must be applied with an adjuvant, such as crop oil concentrate or methylated seed oil at 1 to 2 pt./A. A spray grade nitrogen source (either ammonium sulfate at 2.0 to 2.5 lbs./A or 28 to 32% nitrogen solution at 1 to 2 qts./A) may be added to increase herbicidal activity.

Preemergence (conventional tillage) applications of VALOR must be applied prior to weed emergence.

ADDITIONAL RESIDUAL GRASS CONTROL: SEQUENTIAL

VALOR may be applied sequentially following a preplant incorporated application of trifluralin (states of Texas, Oklahoma and New Mexico only) SONALAN®, DUAL® (metolachlor), pendimethalin or FRONTIER®.

ADDITIONAL RESIDUAL GRASS CONTROL: TANK MIXED

VALOR can be tank mixed with alachlor, metolachlor, or FRONTIER for additional grass and broadleaf weed control. VALOR can also be tank mixed with pendimethalin or SONALAN in states where they are labeled, provided overhead irrigation guidelines on the pendimethalin and/or SONALAN labels are followed.

Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. The most restrictive labeling of any tank mix product must be followed. VALOR, when applied according to label use directions, will control the weeds listed in Table 2. This label makes no claims concerning control of other weed species.

DIRECTIONS FOR USE IN SOYBEANS

GENERAL RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz. of VALOR per acre during a single growing season.
- Do not use VALOR in soybeans in the same field flufenacet (AXIOM®, DOMAIN®), alachlor (MICRO-TECH®), metolachlor (DUAL products or BOUNDARY®) or dimethenamid (FRONTIER or OUTLOOK®) will be used or soybean injury may occur.
- Do not irrigate when soybeans are cracking.

TIMING TO SOYBEANS

VALOR may be applied to soybeans prior to planting or preemergence (after planting). Preemergence application of VALOR must be made within 3 days after planting and prior to soybean emergence. Application after the soybeans have begun to crack, or are emerged, will result in severe crop injury. Application should not be made when soybeans have begun to crack. Select VALOR rate from Table 2 according to anticipated weed spectrum.

TIMING TO WEEDS

BURNDOWN - PREEMERGENCE TO SOYBEANS, POSTEMERGENCE TO WEEDS

VALOR, applied as part of a burndown program, may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where soybeans will be planted directly into a stale seedbed, cover crop, or in previous crop residues. For control of emerged weeds, choose the most appropriate tank mix partner from Table 4. Apply VALOR with ground equipment before planting, during planting, or within 3 days after planting, **but before the crop emerges**. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. Refer to tank mix partner's label for recommended application pressure. All VALOR tank mixes applied to assist in the control of emerged weeds must be applied with crop oil concentrate or methylated seed oil at 1 to 2 pt./A.

INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY

VALOR, at rates as low as 1.0 oz./A, may be tank-mixed with glyphosate (ROUNDUP) to increase the speed of burndown activity compared to glyphosate applied alone. Residual weed control will not be provided at rates lower than 2 oz./A; however, suppression of the weeds in Table 2, Section A may occur at VALOR rates as low as 1 oz./A.

TANK MIXES

VALOR may be tank mixed with the herbicides listed in Table 4 for increased burndown activity, additional residual broadleaf, and/or additional grass control. Refer to tank mix partner's label for adjuvant recommendations.

Table 4. Tank Mix Partners for Control of Emerged Weeds in Reduced Tillage Soybeans

TANK MIX PARTNER	TARGET WEEDS ¹
GRAMOXONE EXTRA®	<ul style="list-style-type: none"> • Annual Grasses • Henbit
Glyphosate	<ul style="list-style-type: none"> • General Burndown
SELECT®	<ul style="list-style-type: none"> • Annual Grasses
SCEPTER® 70 DG	<ul style="list-style-type: none"> • Cocklebur • Common Sunflower
2,4-D LVE	<ul style="list-style-type: none"> • Maretail • Giant Ragweed • Dandelion

¹ Refer to tank mix product labels for specific recommendations for control of emerged weeds present.

ADDITIONAL RESIDUAL BROADLEAF CONTROL

VALOR can be tank mixed with metribuzin, FIRSTRATE®, LOROX®, PURSUIT PLUS®, PYTHON, SQUADRON, SCEPTER, or STEEL for additional broadleaf control.

ADDITIONAL RESIDUAL GRASS CONTROL

VALOR can be tank mixed with pendimethalin or COMMAND® for additional grass control. Tank mixes with fluthiamide (AXIOM or DOMAIN), metolachlor (DUAL products or BOUNDARY), dimethenamid (FRONTIER or OUTLOOK) or alachlor (MICRO-TECH), may result in severe injury to soybeans when application is followed by prolonged periods of cool wet weather and should not be used with VALOR.

ROUNDUP READY PROGRAM

VALOR may be applied as part of a burndown program or preemergence in conventional tillage programs, at 2 to 3 oz./A to reduce early season weed competition from waterhemp, velvetleaf, nightshade, and morningglories as well as other weeds listed in Tables 2 and 3 in Roundup Ready programs. A sequential post emergence application of glyphosate will be required to control weeds not controlled by VALOR.

Read tank mix product label for rates and weeds controlled. Always read and follow label directions for all tank mix products before using. The most restrictive labeling of any tank mix product must be followed. VALOR, when applied according to label use directions, will control the weeds listed in Table 2. This label makes no claims concerning control of other weed species.

STORAGE AND DISPOSAL

PROHIBITIONS

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

STORAGE

Keep pesticide in original container.

Store in a cool, dry, secure place.

Do not put formulation or dilute spray solution into food or drink containers.

Do not contaminate food or foodstuffs.

Do not store or transport near feed or food.

Not for use or storage in or around the home.

For help with any spill, leak, fire or exposure involving this material, call day or night (800) 892-0099.

PESTICIDE DISPOSAL

Wastes 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). Do not reuse container. 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.

Copyright© 2002 by Valent U.S.A. Corporation

AXIOM® - Reg. TM of Bayer Corporation

BOUNDARY® - Reg. TM of Syngenta

CLASSIC® - Reg. TM of E. I. duPont de Nemours & Co., Inc. for chlorimuron herbicide

COBRA® - Reg. TM of Valent U.S.A. Corporation for lactofen herbicide

COMMAND® - Reg. TM of FMC Corporation for clomazone herbicide.

DOMAIN® - Reg. TM of Bayer Corporation

DUAL® - Reg. TM of Syngenta for metolachlor herbicide

EXPRESS® - Reg. TM of E.I. duPont de Nemours & Co., Inc. for tribenuron herbicide

FIRSTRATE® - Reg. TM of Dow AgroSciences LLC for cloransulam methyl herbicide

FRONTIER® - Reg. TM of BASF Corporation for dimethenamid herbicide

GRAMOXONE EXTRA® - Reg. TM of Zeneca Ag Products for paraquat herbicide

LASO® - Reg. TM of Monsanto Co. for alachlor herbicide

LOROX® - Reg. TM of E. I. DuPont de Nemours & Co., Inc. for linuron

MICRO-TECH® - Reg. TM of Monsanto Co. for alachlor herbicide

OUTLOOK® - Reg. TM of BASF Corporation for dimethanamid herbicide

PHOENIX™ - Reg. TM of Valent U.S.A. Corporation for lactofen herbicide

PURSUIT PLUS® - Reg. TM of BASF Corporation

PYTHON® - Reg. TM of Dow AgroSciences LLC for flumetsulam herbicide

ROUNDUP READY® - Reg. TM of Monsanto Co.

ROUNDUP UltraMAX™, ROUNDUP Original™ - Reg. TM of Monsanto Co. for glyphosate herbicide

SCEPTER® - Reg. TM of BASF Corporation for imazaquin herbicide

SELECT® - Reg. TM of Valent U.S.A. Corporation for clethodim herbicide

SONALAN® - Reg. TM of Dow AgroSciences LLC for ethalfluralin herbicide

SQUADRON® - Reg. TM of BASF Corporation

STEEL® - Reg. TM of BASF Corporation

STRONGARM® - Reg. TM of Dow AgroSciences LLC for diclosulam herbicide

VALOR™ - Reg. TM of Valent U.S.A. Corporation for flumioxazin herbicide

Manufactured for:

Valent U.S.A. Corporation

P.O. Box 8025

Walnut Creek, CA 94596-8025

www.valent.com

Made in U.S.A.

EPA Reg. No. 59639-99

EPA Est.