



**FOR CONTROL AND/OR SUPPRESSION OF CERTAIN WEEDS IN COTTON, DRY BEANS, FIELD CORN, FIELD PEAS, FLAX, LENTILS, PEANUT, SOYBEAN, SUGARCANE, SUNFLOWER AND SAFFLOWER, SWEET POTATO, WHEAT, FALLOW LAND AND TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS.**

Active Ingredient	By Wt
Flumioxazin*.....	51%
Other Ingredients.....	49%
Total	100%

\*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® SX Herbicide is a water dispersible granule containing 51% active ingredient.

EPA Reg. No. 59639-99  
EPA Est. 11773-IA-01®, 39578-TX-01®, 5905-IA-01®  
Superscript is first letter of lot number.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

**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.

<b>FIRST AID</b>	
<b>If inhaled:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>If on skin or clothing:</b>	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.

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<b>First Aid (continued)</b>	
<b>If in eyes:</b>	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. Call a poison control center or doctor for treatment advice.
<b>If swallowed:</b>	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 by the poison control center or doctor. Do not give anything to an unconscious person.
<b>HOT LINE NUMBER</b>	
	Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact <b>800-892-0099</b> 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.

**For aerial application to sugarcane, mixer/loaders must also wear:** coveralls, chemical-resistant apron and chemical-resistant boots.

**For aerial application to field peas, flax, lentils, safflower, sunflower and wheat, mixer/loaders must also wear:** filtering face piece respirator (N95, R95 or P95).

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

**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

PANTONE 360  
BLACK

DATE: 7.11.16  
DIMENSIONS: 8-1/2" x 11"

FORM: 2016-VSX-0001  
NAME: Valor SX Herbicide  
KIND: Specimen Label

drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off and is recommended.

### **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.

#### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forest, nurseries or greenhouses.

Keep all unprotected persons out of operating areas, or vicinity where there may be drift.

Do not enter or allow others to enter treated areas until sprays have dried.

#### **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 TO THE FULLEST EXTENT ALLOWED BY LAW, AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

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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. To the extent consistent with applicable law AND 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**

**To the fullest extent allowed by law, Valent or Seller is not 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. TO THE FULLEST EXTENT ALLOWED BY LAW, 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**

To the extent consistent with applicable law allowing such requirements 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 later, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

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#### **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, to the extent allowed by applicable law.**

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

#### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

*Valor* SX Herbicide is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to *Valor* SX Herbicide and other Group 14 herbicides. Weed species with acquired resistance to Group 14 herbicides may eventually dominate the weed population if Group 14 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by *Valor* SX Herbicide or other Group 14 herbicides.

To delay herbicide resistance consider:

- Avoiding the consecutive use of *Valor* SX Herbicide or other target site of action Group 14 herbicides that might have a similar target site of action, on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

For further information or to report suspected resistance, you may contact Valent U.S.A. Corporation at the following toll-free number: 800-682-5368.

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## USE INFORMATION

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*Valor* SX Herbicide uses:

- *Valor* SX Herbicide provides residual control of susceptible weeds.
- *Valor* SX Herbicide provides additional burndown activity when used as part of a burndown program.
- *Valor* SX Herbicide can be applied as part of a fall burndown program for control of susceptible winter annuals.
- *Valor* SX Herbicide can be applied with a hooded or shielded sprayer, as well as part of a layby application in selected crops, for postemergence weed control as well as residual control of susceptible weeds.
- *Valor* SX Herbicide can be used on farms for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed free.
- **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* SX Herbicide, when applied according to label use directions, will control the weeds claimed in crop specific use directions. This label makes no claims concerning control of other weed species.**

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

The interaction of many equipment and weather related factors determines 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.

### RESTRICTIONS AND LIMITATIONS

- Do not apply this product when weather conditions favor spray drift from treated areas.
- Do not apply during low-level inversion conditions, including fog.
- When applying by air, observe drift management restrictions and precautions listed under “**AERIAL APPLICATION**”.
- Do not apply to frozen or snow covered soil.
- Mechanical incorporation into the soil will reduce residual weed control.
- Post directed and layby applications of *Valor* SX Herbicide should be applied only to healthy growing crops.
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply within 300 yards of non-dormant pears.
- Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.

**Spray equipment used to apply *Valor* SX Herbicide should not be used to apply other materials to any**

crop foliage, unless the proper cleanout procedures are followed. See "SPRAYER CLEANUP" for more information.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

### Preemergence Application (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* SX Herbicide in soil for residual weed control. Dry weather following applications of *Valor* SX Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *Valor* SX Herbicide will control susceptible germinating weeds. *Valor* SX Herbicide 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* SX Herbicide application, weed control may be improved by irrigation with at least 1/4 inch of water. If emerged weeds are controlled by cultivation, residual weed control will be reduced.

### Burndown Application

For best results, *Valor* SX Herbicide should be applied as part of a burndown program to actively growing weeds. Applying *Valor* SX Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply *Valor* SX Herbicide 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* SX Herbicide 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.

### Postemergence Application

*Valor* SX Herbicide should only be applied to healthy crops labeled for postemergence use. Do not apply *Valor* SX Herbicide to crops that have been weakened by disease, drought, flooding, excessive fertilization, soil salts, previously applied pesticides, nematodes, insects or winter injury.

### Rainfastness

*Valor* SX Herbicide is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or postemergence efficacy may be reduced.

## Soil Characteristics

Application of *Valor* SX Herbicide 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 Fall or Spring Burndown and Fallow Seedbed 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* SX Herbicide dosage from the rate range tables contained in this label.

**CARRIER VOLUME AND SPRAY PRESSURE** (Ground Equipment only. See Information for Aerial Equipment under "AERIAL APPLICATION".)

### Preemergence Application (Conventional Tillage)

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

### Burndown Application (Prior to Crop Emergence)

To ensure thorough coverage in burndown applications, use 15 to 60 gals spray solution per acre. Use 20 to 60 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. Do not use flood jet nozzles.

### Postemergence Application (Emerged Crop)

Check use directions for specific crops in which *Valor* SX Herbicide can be applied postemergence. To ensure thorough coverage in burndown applications, use a minimum of 15 gallons spray solution per acre. Use a minimum of 20 gallons 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 Application (Prior to Crop Emergence)

Postemergence control of weeds from *Valor* SX Herbicide tank mixes will require the addition of an agronomically approved adjuvant to the spray mixture. When an adjuvant is to be used with *Valor* SX Herbicide, Valent recommends the use of a Chemical Producers and Distributors Association certified adjuvant. Either a crop oil concentrate or methylated seed oil which contains at least 15% emulsifiers and 80% oil or a non-ionic surfactant at 0.25% v/v, may be used when applying *Valor* SX Herbicide as part of a burndown program. Some tank mix partners, such as Roundup Power Max<sup>®</sup>, are formulated with sufficient adjuvants and do not require the addition of a crop oil concentrate, methylated seed

oil or non-ionic surfactant when tank mixed with *Valor SX* Herbicide. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds such as cut-leaf eveningprimrose and Carolina geranium. Mixing compatibility qualities should be verified by a jar test.

A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/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, methylated seed oil or non-ionic surfactant to enhance weed control. The addition of a nitrogen source does not replace the need for a crop oil concentrate, a methylated seed oil or a non-ionic surfactant.

#### **JAR TEST TO DETERMINE COMPATIBILITY OF ADJUVANTS AND *VALOR SX* HERBICIDE**

When using *Valor SX* Herbicide and an adjuvant, such as in stale seed bed, layby, hooded/shielded or reduced tillage situations, a jar test should be performed before mixing commercial quantities of *Valor SX* Herbicide, when using *Valor SX* Herbicide 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 SX* Herbicide to the quart jar for every 3 oz of *Valor SX* Herbicide per acre being applied (4 g if 12 oz/A is the desired *Valor SX* Herbicide rate), gently mix until product goes into suspension.
3. Add 60 ml (4 Tbsps or 2 fl oz) of the crop oil or methylated seed oil to the quart jar or 1 ml of non-ionic surfactant if it is being used in place of oil, gently mix.
4. If nitrogen is being used, add 16 ml (1 Tbsp 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 SX* Herbicide, 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<sup>®</sup> 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 SX* Herbicide. If two or more products were tank mixed prior to *Valor SX* Herbicide application, the most restrictive cleanup procedure should be followed.

#### **MIXING INSTRUCTIONS**

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. If a drift retardant is to be used, add 10 lbs of spray grade ammonium sulfate per 100 gals of spray solution.
3. To ensure a uniform spray mixture, pre-slurry the required amount of *Valor SX* Herbicide with water prior to addition to the spray tank. Use a minimum of 1 gal of water per 10 oz of *Valor SX* Herbicide.
4. While agitating, slowly add the pre-slurried *Valor SX* Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
5. If tank mixing *Valor SX* Herbicide 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.
6. Add any required adjuvants.
7. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**
8. Mix only the amount of spray solution that can be applied the day of mixing. *Valor SX* Herbicide should be applied within 6 hours of mixing.

#### **SPRAYER CLEANUP**

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following *Valor SX* Herbicide application. After *Valor SX* Herbicide 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 (or equivalent) 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. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of *Valor SX* Herbicide from the spray system, add a tank cleaner such as "Valent Tank Cleaner" from Valent U.S.A. Corporation, in place of ammonia and allow the cleaning solution to remain in the pressurized



spray system (spray tank, hoses and boom) overnight before flushing the system 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 SX* Herbicide 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 SX* Herbicide, and *Valor SX* Herbicide 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.

#### **AERIAL APPLICATION**

Spray drift away from the site of application may cause damage to non-target vegetation. To minimize drift, apply the largest droplet size consistent with uniform coverage and satisfactory weed control. To obtain satisfactory application and avoid drift, the following directions must be observed:

- Do not apply during low-level inversion conditions (including fog), when winds are gusty or under other conditions that favor drift. Do not spray when wind velocity is less than 2 mph or more than 10 mph.
- Do not apply this product by air within 40 ft of non-target plants including non-target crops.
- Do not apply this product by air within 100 ft of emerged cotton crops.
- Do not apply this product by air within 40 ft of streams, wetlands, marshes, ponds, lakes and reservoirs.
- **Carrier Volume and Spray Pressure:** When used as part of a burndown weed control program, apply *Valor SX* Herbicide in 7 to 10 gals of water per acre. Application at less than 7 gals per acre may provide inadequate control. When used for preemergence weed control, apply *Valor SX* Herbicide in 5 to 10 gals of water per acre. The higher gallonage applications generally afford more consistent weed control. Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Nozzle Selection and Orientation:** Formation of very small drops may be minimized by appropriate nozzle selection, by orienting nozzles away from the air

stream as much as possible and by avoiding excessive spray pressure. Use nozzles that produce flat or hollow cone spray patterns. Use non-drip type nozzles, such as diaphragm type nozzles, to avoid unwanted discharge of spray solution. The nozzles must be directed toward the rear of the aircraft, at an angle between 0 and 15° downward. Do not place nozzles on the outer 25% of the wings or rotors.

- **Adjuvants and Drift Control Additives:** Refer to tank mix partner's label for adjuvant recommendation. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

#### **CHEMIGATION**

Follow all label recommendations for crops regarding rates, timing of application, special instructions and precautions.

Apply this product only through center pivot systems. End guns must be turned off due to uneven application. Do not apply this product through any other type of irrigation system.

Crop injury, lack of efficacy or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

The system must be properly calibrated (with water only) to ensure that the amount of *Valor SX* Herbicide applied corresponds to the recommended rate.

Apply *Valor SX* Herbicide in 1/2 to 3/4 inches of water during the first sprinkler set. Allow time for all lines to flush the herbicide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining herbicide, a dye indicator may be injected into the lines to mark the end of the application period. Once chemigation has begun, the run must be completed to ensure no product is left in the system.

If you have any questions about calibration, you should contact your State Extension Service Specialist, equipment manufacturers or other experts.

#### **Special Precautions for Chemigation**

1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
2. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
3. The system must be free of leaks and clogged nozzles.
4. The pesticide must be supplied continuously for the duration of the aqueous application. An uneven application may cause injury to the crop or poor weed control.
5. Agitation must be maintained in the nurse tank.
6. The sprinkler chemigation system must contain a functional check valve, vacuum relief valve and



low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in the case where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with the pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **Chemigation Systems Connected to Public Water Systems**

1. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to the public water system must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to the public water system must also follow restrictions listed in the preceding section titled **“Special Precautions for Chemigation.”**

#### **APPLICATION WITH DRY BULK FERTILIZERS**

Dry bulk fertilizer may be impregnated or coated with *Valor SX* Herbicide. Application of dry bulk fertilizer with *Valor SX* Herbicide provides weed control equal to, or slightly below, the same rate of *Valor SX* Herbicide applied in liquid carriers, due to better coverage with application via spray equipment. Follow label recommendations for *Valor SX* Herbicide regarding rates, special instructions, cautions and special precautions. Apply 400 to 700 lbs of the fertilizer/herbicide mixture per acre to obtain adequate soil coverage. Apply the mixture to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury and to obtain uniform weed control.

Ammonium nitrate and/or limestone should not be used as the sole source of fertilizer, as the *Valor SX* Herbicide may not adhere to these materials.

Compliance with all Federal and State regulations relating to blending pesticide mixtures with dry bulk fertilizer, registrations, labeling and application are the responsibility of the individual and/or company offering the fertilizer and *Valor SX* Herbicide mixture for sale.

*Valor SX* Herbicide must be premixed with water to form a slurry prior to impregnation on dry bulk fertilizer. For best results, use a minimum of 1 pt of water for each 2 oz of *Valor SX* Herbicide. A minimum of 6 pts of the *Valor SX* Herbicide slurry should be used to impregnate 2000 lbs of the fertilizer for uniform coverage of the fertilizer. Closed drum, belt, ribbon or other commonly used dry bulk blenders may be used.

The amount of *Valor SX* Herbicide required can be calculated with the following formula:

$\frac{\text{ounces of Valor SX Herbicide per ton of fertilizer}}{\text{ounces of Valor SX Herbicide per acre}} \times 2000 \div \text{pounds of fertilizer per acre}$
--

Thoroughly clean dry fertilizer blending equipment after *Valor SX* Herbicide has been placed in the system to avoid injury to sensitive crops that may be treated with fertilizers blended after the equipment has been used for *Valor SX* Herbicide. Rinse the sides of the blender and the herbicide tank with water. Then impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gal of rinsate per ton of fertilizer. Follow with 1 to 2 loads of unimpregnated fertilizer in the blender before switching herbicides.

#### **ROTATIONAL RESTRICTIONS**

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

- **Do not plant any crop, except corn (field), cotton, peanut, soybean, sugarcane and sweet potato earlier than 30 days after applying *Valor SX* Herbicide.**

<b>VALOR SX HERBICIDE RATES</b>	<b>CROPS</b>	<b>ROTATION INTERVALS</b>
1 oz/A	Cotton (no-till or strip-till only)	14 days <sup>1</sup>
1.5 to 2 oz/A	Cotton (no-till or strip-till only)	21 days <sup>1</sup>
2 oz/A or less	Peanut, Soybean, Sugarcane and Sweet Potato	immediately
	Field Corn (minimum and no-till)	7 days
	Cotton and Field Corn (conventional tillage), Rice, Sorghum, Sunflower, Tobacco and Wheat	30 days <sup>1</sup>
	Barley, Dry and Snap Beans, Flax, Peas, Rye, Safflower and Sweet Corn	3 months
	Alfalfa, Canola, Clover, Oats, Potato, Sugar Beet and all other crops not listed <sup>2</sup>	4 months if soil is tilled prior to planting 8 months if no tillage is performed
	Lentil	6 months
Up to 3 oz/A	Peanut, Soybean, Sugarcane and Sweet Potato	immediately
	Field Corn (minimum and no-till)	14 days
	Field Corn (conventional tillage) and Sorghum	30 days <sup>1</sup>
	Cotton, Rice, Sunflower, Tobacco and Wheat	2 months <sup>1</sup>
	Barley, Dry and Snap Beans, Flax, Pea, Rye, Safflower and Sweet Corn	4 months
	Alfalfa, Clover, Oats, Potato, Sugar Beet	5 months if soil is tilled prior to planting 10 months if no tillage is performed
	Canola and all other crops not listed <sup>2</sup>	6 months if soil is tilled prior to planting 12 months if no tillage is performed
	Lentil	7 months
Up to 4 oz/A	Sugarcane	immediately
	Alfalfa, Canola, Potato, Sugar Beet and all other crops not listed <sup>2</sup>	6 months if soil is tilled prior to planting 12 months if no tillage is performed
	Cotton, Field Corn, Peanut, Rice, Sorghum, Soybean, Sunflower, Tobacco and Wheat	4 months
6 to 12 oz/A	Cotton, Field Corn, Peanut, Rice, Sorghum, Soybean, Sunflower, Tobacco and Wheat	9 months
	Alfalfa, Canola, Sugar Beet and all other crops not listed <sup>2</sup> Trees can be transplanted 2 months after an application of <i>Valor SX</i> Herbicide <sup>3</sup>	12 months if soil is tilled prior to planting 18 months if no tillage is performed

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

<sup>2</sup> Successful soil bioassay must be performed prior to planting these crops.

<sup>3</sup> Transplanted apple, apricot, avocado, bushberries (including blueberry), cherry, fig, grape, grapefruit, lemon, nectarine, nut trees (including pistachio), olive, orange, peach, pear, plum (including dried plum), and tangerine can be planted 2 months after a *Valor SX* Herbicide application of 2 to 12 oz/A.

**Table 1. Broadleaf Weeds Controlled by Residual Activity of Valor SX Herbicide**

<b>BROADLEAF WEED SPECIES</b>				
<b>SECTION A</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE</b>
Carpetweed	<i>Mollugo verticillata</i>	Up to 5%	All Soil Types	2 oz/A
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrate</i>			
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Florida Pusley	<i>Richardia scabra</i>			
Henbit	<i>Lamium amplexicaule</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			
Mayweed/False Chamomile	<i>Matricaria maritime</i>			
Nightshades				
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce	<i>Lactuca serriola</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane, Common	<i>Portulaca oleracea</i>			
Radish, Wild	<i>Raphanus raphanistrum</i>			
Redmaids	<i>Calandrinia ciliata</i> var. <i>menziessii</i>			
Shepherd's-purse	<i>Capsella bursa-pastoris</i>			
Smallflower Morningglory	<i>Jacquemontia tamnifolia</i>			
Sowthistle, Prickly	<i>Sonchus asper</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Venice Mallow	<i>Hibiscus trionum</i>			
<b>SECTION B</b>				
All weeds listed in Section A plus:				
Coffee Senna	<i>Cassia occidentalis</i>	Up to 3%	All Soil Types	2 oz/A Cotton and Dry Bean 2.5 oz/A Field Corn and Soybean 3 oz/A Peanut and all other labeled crops
Common Ragweed <sup>1</sup>	<i>Ambrosia artemisiifolia</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Hairy Indigo	<i>Indigofera hirsute</i>			

(continued)



**Table 1. Broadleaf Weeds Controlled by Residual Activity of Valor SX Herbicide (continued)**

<b>BROADLEAF WEED SPECIES</b>				
<b>SECTION B</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE<sup>2</sup></b>
Hemp Sesbania Jimsonweed Kochia London Rocket Morningglories <sup>3</sup> Entireleaf  Ivyleaf Red/Scarlet Tall Mustard, Wild Palmer Amaranth Spurred Anoda	<i>Sesbania exaltata</i> <i>Datura stramonium</i> <i>Kochia scoparia</i> <i>Sisymbrium irio</i>  <i>Ipomoea hederacea</i> var. <i>integriscula</i> <i>Ipomoea hederacea</i> <i>Ipomoea coccinea</i> <i>Ipomoea purpurea</i> <i>Brassica kaber</i> <i>Amaranthus palmeri</i> <i>Anoda cristata</i>	3 to 5%	Coarse and Medium Soils: (sandy loam, loamy sand, loamy, silt-loam, silt, sandy clay, sandy clay loam)	2 oz/A Cotton and Dry Bean 2.5 oz/A Field Corn and Soybean 3 oz/A Peanut and all other labeled crops
Tropic Croton Waterhemp <sup>1</sup> Common Tall Wild Poinsettia Yellow Rocket	<i>Croton glandulosus</i>  <i>Amaranthus rudis</i> <i>Amaranthus tuberculatus</i> <i>Euphorbia heterophylla</i> <i>Barbarea vulgaris</i>	3 to 5%	Fine Soils: (silty clay, silty clay loam, clay, clay loam)	2 oz/A Cotton and Dry Bean 3 oz/A Field Corn Peanut, Soybean and all other labeled crops

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

<sup>2</sup> Valor SX Herbicide will provide residual control of these weeds at 2 oz/A when applied under a cotton canopy.

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

**Table 2. Weeds Suppressed by Residual Activity of Valor SX Herbicide**

<b>BROADLEAF WEED SPECIES</b>		<b>ORGANIC MATTER</b>	<b>OUNCES PER ACRE</b>
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>		
Bristly Starbur Copperleaf, Hophornbeam Ragweed, Giant Russian Thistle Smartweeds Ladysthumb Pennsylvania Smellmelon Velvetleaf Wild Buckwheat Wormwood, Biennial	<i>Acanthospermum hispidum</i> <i>Acalypha ostryifolia</i> <i>Ambrosia trifida</i> <i>Salsola iberica</i>  <i>Polygonum persicaria</i> <i>Polygonum pensylvanicum</i> <i>Cucumis melo</i> <i>Abutilon theophrasti</i> <i>Polygonum convolvulus</i> <i>Artemisia biennis</i>	Up to 5%	2 to 3
<b>GRASS WEED SPECIES</b>			
Barnyardgrass Bluegrass, Annual Crabgrass, Large	<i>Echinochloa crus-galli</i> <i>Poa annua</i> <i>Digitaria sanguinalis</i>		

(continued)

**Table 2. Weeds Suppressed by Residual Activity of Valor SX Herbicide (continued)**

GRASS WEED SPECIES		ORGANIC MATTER	OUNCES PER ACRE
COMMON NAME	SCIENTIFIC NAME		
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>		
Ryegrass, Italian	<i>Lolium multiflorum</i>		
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>		
Cheat	<i>Bromus secalinus</i>	Up to 5%	1.5 to 3
Downy Brome	<i>Bromus tectorum</i>		

**DIRECTIONS FOR USE IN FALL AND SPRING PREPLANT BURNDOWN AND FALLOW SEEDBED PROGRAMS IN FIELD CORN, PEANUT AND SOYBEAN (Preemergence to Crop)**

**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.
- Observe all rotational intervals prior to planting as listed in the "ROTATIONAL RESTRICTIONS" table.

**FALL BURNDOWN AND FALLOW SEEDBED PROGRAMS**

Valor SX Herbicide, at 2 to 4 oz/A can be used in the fall to provide residual weed control in fields that will be planted the following spring with field corn, peanut or soybean (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). Weeds controlled by residual activity are listed in Table 1 (sections A and B), Broadleaf Weeds Controlled by Residual Activity of Valor SX Herbicide; Table 3, Weeds Controlled by Fall and Spring Preplant Burndown Programs; and Table 7, Weeds Controlled by Residual Activity of Valor SX Herbicide. If weeds have emerged at the time of application, use Valor SX Herbicide in combination with a labeled burndown herbicide. Valor SX Herbicide can be used in a fall burndown or fallow seedbed program, however the length of residual control may be variable.

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

Weeds controlled by postemergence or residual activity are listed in Table 3. Preplant burndown treatment tank mixes and rates are:

Herbicide	Rate
<b>Program 1<sup>1</sup></b>	
Valor SX Herbicide 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 <sup>®</sup> )
2,4-D LVE (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)
NIS + AMS	0.5% v/v + 17 lbs/100 gals of water

or

<b>Program 2<sup>1</sup></b>	
Valor SX Herbicide 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 <sup>2</sup> or NIS + AMS	1 pt/A or 0.5% v/v + 17 lbs/100 gals of water

or

<b>Program 3<sup>1</sup></b>	
Valor SX Herbicide Plus	2 to 3 oz/A
2,4-D LVE (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 pt/A

<sup>1</sup> Dicamba (Banvel<sup>®</sup>), at 0.188 lb ai/A (6 fl oz/A of Banvel 4) can be added to Programs 1, 2 & 3 to assist in the control of emerged broadleaves. Refer to dicamba label for rotational restrictions.

<sup>2</sup> Crop oil concentrate has been found to increase glyphosate burndown of emerged cutleaf eveningprimrose and Carolina geranium.

**Table 3. Weeds Controlled by Fall and Spring Preplant Burndown Programs**

WEEDS CONTROLLED <sup>1</sup>		POSTEMERGENCE			RESIDUAL
COMMON NAME	SCIENTIFIC NAME	Program 1	Program 2	Program 3	
		Weeds 3 inches or less			
Chamomile, False	<i>Matricaria maritima</i>	Yes	Yes	No	Yes
Cheatgrass	<i>Bromus tectorum</i>	Yes	Yes	No	Yes
Chickweed, Common	<i>Stellaria media</i>	Yes	Yes	No	Yes
Chickweed, Mouseear	<i>Cerastium vulgatum</i>	Yes	Yes	No	Yes
Cockle, White	<i>Silene latifolia</i>	No	Yes	Yes	Yes
Dandelion	<i>Taraxacum officinale</i>	Yes	No	Yes <sup>2</sup>	Yes
Deadnettle, Purple	<i>Lamium purpureum</i>	Yes	Yes	Yes	Yes
Groundsel, Cressleaf	<i>Senecio glabellus</i>	Yes	Yes	-	Yes
Henbit	<i>Lamium amplexicaule</i>	Yes	Yes	Yes	Yes
Kochia	<i>Kochia scoparia</i>	Yes	Yes	Yes	Yes
Marestail/Horseweed	<i>Conyza canadensis</i>	Yes	Yes <sup>3</sup>	Yes	Yes
Mallow, Common	<i>Malva Neglecta</i>	Yes	Yes	No	Yes
Prickly Lettuce	<i>Lactuca serriola</i>	Yes	Yes	Yes	Yes
Wormwood, Biennial	<i>Artemisia biennis</i>	Yes	Yes	Yes	Yes
Canola, Volunteer	<i>Brassica napus</i>	Yes	Yes	Yes	Yes
Carolina Geranium	<i>Geranium carolinianum</i>	Yes	Yes	Yes	-
Eveningprimrose, Cutleaf <sup>4</sup>	<i>Oenothera laciniata</i>	Yes	Yes	Yes	Yes
Flixweed	<i>Descurainia sophia</i>	Yes	Yes	Yes	Yes
		Weeds 4 inches or less			
Mustard, Tansy	<i>Descurainia pinnata</i>	Yes	Yes	Yes	Yes
Mustard, Wild	<i>Brassica kaber</i>	Yes	Yes	Yes	Yes
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	Yes	Yes	Yes	Yes

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

<sup>2</sup> 1 lb ai/A of 2,4-D LVE (equivalent to 2 pt/A of 2,4-D 4 LVE) should be used for control of emerged dandelion.

<sup>3</sup> Program 2 will not control emerged glyphosate resistant marestail/horseweed.

<sup>4</sup> Program 1 should be used to control cutleaf eveningprimrose that are nearing 12 inches in height or are past the rosette stage. Programs 2 or 3 should be used to control cutleaf eveningprimrose that are 12 inches or less and in the rosette stage.

### SPRING BURNDOWN PROGRAMS

*Valor* SX Herbicide can be used in combination with labeled preplant burndown herbicides to assist in the postemergence burndown of emerged weeds and provide residual weed control prior to crop emergence. Weeds controlled by residual activity are listed in Table 1.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row. Apply *Valor* SX Herbicide after planting peanuts and soybeans when these types of planters are used (within 3 days after planting soybeans, within 2 days after planting peanuts and before the crop emerges). *Valor* SX Herbicide cannot be applied after planting field corn.

*Valor* SX Herbicide 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* SX Herbicide can be used at 1 to 3 oz/A in field corn, peanut and soybean burndown programs. See "DIRECTIONS FOR USE IN FIELD CORN", "DIRECTIONS FOR USE IN PEANUT", "DIRECTIONS FOR USE IN SOYBEAN" for more information.

### DIRECTIONS FOR USE IN FALL AND SPRING BURNDOWN PROGRAMS IN COTTON AND SUGARCANE

#### 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 SX* Herbicide 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 SX* Herbicide application and planting of conventionally tilled cotton.
- A minimum of 14 days must pass, and 1 inch of rainfall/irrigation must occur, between *Valor SX* Herbicide application and planting of no-till or strip-till cotton when a *Valor SX* Herbicide rate of 1 oz/A is used and 21 days when a *Valor SX* Herbicide rate of 1.5 to 2 oz/A is used. The field must contain the stubble from the previous crop.
- *Valor SX* Herbicide can be applied as part of a burndown application to sugarcane until cane emergence.
- Observe all rotational intervals prior to planting as listed in the "ROTATIONAL RESTRICTIONS" table.
- Refer to most restrictive label for minimum interval between application and planting.

#### **FALL BURNDOWN PROGRAMS**

*Valor SX* Herbicide, at 2 to 4 oz/A, can be used in the fall to provide residual weed control in fields that will be planted the following spring with cotton or sugarcane (refer to Rotational Restrictions table for rates and rotational intervals prior to planting). Weeds controlled by residual activity are listed in Table 1 and Table 7. If weeds have emerged at the time of application, use *Valor SX* Herbicide in combination with a labeled burndown herbicide.

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

#### **SPRING BURNDOWN PROGRAMS**

*Valor SX* Herbicide, at 1 to 2 oz/A, can be used in combination with labeled preplant burndown herbicides to assist in the postemergence burndown of emerged weeds and provide residual weed control prior to crop emergence in fields that will be planted with cotton or sugarcane. Weeds controlled by residual activity are listed in Table 1.

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

#### **DIRECTIONS FOR USE IN FALL AND SPRING BURNDOWN PROGRAMS IN RICE, SORGHUM, SUNFLOWERS, TOBACCO AND WHEAT (Preplant to Crop)**

##### **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 SX* Herbicide 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 SX* Herbicide application and planting of rice, sorghum, sugarcane, sunflowers, tobacco or wheat. Refer to most restrictive label for minimum interval between application and planting.

- Observe all rotational intervals prior to planting as listed in the "ROTATIONAL RESTRICTIONS" table.

#### **FALL BURNDOWN PROGRAMS**

*Valor SX* Herbicide can be used in combination with labeled burndown programs to control emerged weeds and provide residual weed control in fields that will be planted the following spring. (refer to Rotational Restrictions table for rates and rotational intervals prior to planting).

Abnormally warm winters may reduce the length of weed control observed in the spring.

#### **SPRING BURNDOWN PROGRAMS**

*Valor SX* Herbicide can be used in combination with labeled burndown programs to control emerged weeds and provide residual weed control prior to crop emergence. Weeds controlled by residual activity are listed in Table 1 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.

#### **DIRECTIONS FOR USE IN FALL BURNDOWN PROGRAMS IN FIELDS TO BE PLANTED TO BARLEY, FIELD PEA, FLAX, LENTIL, SAFFLOWER, SUNFLOWER AND SPRING WHEAT (Preplant to Crop)**

##### **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 SX* Herbicide can be mixed with 2,4-D and/or glyphosate formulations labeled for burndown programs (preplant to crop) in accordance with the most restrictive label limitations and precautions. Labeled application rates can not be exceeded. Do not mix *Valor SX* Herbicide with any product containing a label prohibition against such mixing.
- Observe all rotational intervals prior to planting as listed in the "ROTATIONAL RESTRICTIONS" table.

#### **FALL BURNDOWN PROGRAMS**

*Valor SX* Herbicide can be used at 2 to 4 oz/A with labeled burndown herbicides to enhance the speed of burndown, increase weed spectrum and provide residual weed control of the weeds listed in Table 3 until the following spring. Rotational intervals must be followed for crop to be planted in the spring following the fall *Valor SX* Herbicide application. Refer to most restrictive label for minimum interval between application and planting.

#### **DIRECTIONS FOR USE IN FALLOW LAND**

*Valor SX* Herbicide may be used as a preemergence fallow treatment. Weeds controlled by residual activity are listed in Table 1.

*Valor SX* Herbicide, at 2 to 4 oz/A, can be used in the fall to provide residual weed control in fallow fields (refer to "ROTATIONAL RESTRICTIONS" table for rates and rotational intervals prior to planting). If weeds

have emerged at the time of application, use *Valor SX* Herbicide in combination with a labeled fallow herbicide. Abnormally warm or wet winters will reduce the length of weed control observed in the spring.

*Valor SX* Herbicide, at 1 to 4 oz/A, can be used in spring in combination with labeled burndown herbicides to control emerged weeds and provide residual weed control.

#### DIRECTIONS FOR USE IN COTTON

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 2 oz of *Valor SX* Herbicide per acre during a single application.
- Do not apply more than 4 oz of *Valor SX* Herbicide per acre during a single growing season.
- Do not make a sequential *Valor SX* Herbicide application within 30 days of the first *Valor SX* Herbicide application.
- Do not apply within 60 days of harvest.

#### ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

##### Hooded, Shielded and Layby Application

For best results, *Valor SX* Herbicide should be applied to actively growing weeds within the growth stages indicated in this label. Applying *Valor SX* Herbicide under conditions that do not promote active

weed growth will reduce herbicide effectiveness. Do not apply *Valor SX* Herbicide when the crop or 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 SX* Herbicide is most effective when applied under sunny conditions at temperatures above 65°F.

*Valor SX* Herbicide is rainfast one hour after application. Applications should not be made if rain is expected within one hour of application or postemergence efficacy may be reduced. Rainfall within one hour of application will not adversely affect residual activity.

#### HERBICIDE RATE

##### Hooded, Shielded and Layby Application

For postemergence weed control, *Valor SX* Herbicide should be applied through a hooded or shielded sprayer or at layby, at 2 oz/A, in combinations with MSMA or at 1 to 2 oz/A in combination with glyphosate, to assist in the control of weeds listed in Table 4. Residual weed control can also be obtained through hooded, shielded and layby application of *Valor SX* Herbicide. Weeds that are controlled through residual activity of *Valor SX* Herbicide are listed in Table 1. Weeds that are suppressed by residual activity of *Valor SX* Herbicide are listed in Table 2.

**Table 4. Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of *Valor SX* Herbicide Tank Mixes With Glyphosate or MSMA in Cotton**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches) 2 oz/A
COMMON NAME	SCIENTIFIC NAME	
Bindweed, Field <sup>1</sup>	<i>Convolvulus arvensis</i>	4
Carpetweed	<i>Mollugo verticillata</i>	4
Chickweed, Common	<i>Stellaria media</i>	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6
Jimsonweed	<i>Datura stramonium</i>	4
Lambsquarters, Common	<i>Chenopodium album</i>	4
Morningglories		
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriscula</i>	4
Ivyleaf	<i>Ipomoea hederacea</i>	4
Pitted	<i>Ipomoea lacunose</i>	4
Red	<i>Ipomoea coccinea</i>	4
Tall	<i>Ipomoea purpurea</i>	2
Mustard, Wild	<i>Brassica kaber</i>	6
Nightshades		
Black	<i>Solanum nigrum</i>	4
Eastern Black	<i>Solanum ptycanthum</i>	4
Hairy	<i>Solanum sarrachoides</i>	4

**Table 4. Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of Valor SX Herbicide Tank Mixes With Glyphosate or MSMA in Cotton (continued)**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches) 2 oz/A
COMMON NAME	SCIENTIFIC NAME	
Pigweeds		
Palmer Amaranth	<i>Amaranthus palmeri</i>	4
Redroot	<i>Amaranthus retroflexus</i>	4
Smooth	<i>Amaranthus hybridus</i>	4
Plaintain, Broadleaf	<i>Plantago major</i>	6
Prickly Sida (Teaweed)	<i>Sida spinosa</i>	4
Purslane, Common	<i>Portulaca oleracea</i>	2
Ragweeds		
Common	<i>Ambrosia artemisiifolia</i>	2
Giant	<i>Ambrosia trifida</i>	4
Rice Flatsedge	<i>Cyperus iria</i>	2
Sicklepod	<i>Senna obtusifolia</i>	4
Smartweeds		
Ladysthumb	<i>Polygonum persicaria</i>	4
Pale	<i>Polygonum lapathifolium</i>	4
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4
Spotted Spurge	<i>Euphorbia maculata</i>	4
Velvetleaf	<i>Abutilon theophrasti</i>	4
Venice Mallow	<i>Hibiscus trionum</i>	2
Waterhemp		
Common	<i>Amaranthus rudis</i>	2
Tall	<i>Amaranthus tuberculatus</i>	2

<sup>1</sup> Valor SX Herbicide tank mixes will control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

**CARRIER VOLUME AND SPRAY PRESSURE  
Hooded, Shielded and Layby Application**

To ensure thorough coverage in hooded, shielded and layby applications, use 15 to 30 gals spray solution per treated acre. Use 20 to 30 gals per treated acre under heavy weed pressure. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for application method being used. Do not use "Flood Jet" nozzles, as they tend to increase the chance of crop injury.

**ADDITIVES  
Hooded, Shielded and Layby Application**

Weed control from hooded, shielded or layby application of Valor SX Herbicide in cotton requires the addition of an agronomically approved non-ionic surfactant to the spray mixture. Non-ionic surfactant must contain at least 80% active ingredient. Mixing compatibility qualities should be verified by a jar test.

**The use of crop oil concentrates, methylated seed oils, organo-silicant surfactants or products containing these ingredients, may result in severe crop injury and should not be used.**

**APPLICATION EQUIPMENT**

Apply Valor SX Herbicide tank mixes, with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Application equipment should be clean and in good repair. Nozzles should meet manufacturer's recommendations for spray pattern and placement on spray boom and should be checked frequently for accuracy.

**TIMING TO COTTON  
Hooded and Shielded Application**

Valor SX Herbicide tank mixes may be applied with a hooded or shielded sprayer after cotton has reached



a minimum of 6 inches in height. All nozzles must be under the hood or behind the shield to ensure no spray solution comes in contact with the cotton. **Care must be taken to ensure the spray solution or drift does not come in contact with the cotton or severe crop injury can occur.**

#### Layby Application

Layby application of *Valor* SX Herbicide tank mixes may be made once cotton has reached a minimum of 16 inches in height. Cotton that is smaller than 16 inches in height may be injured by *Valor* SX Herbicide applications. *Valor* SX Herbicide application must be directed to the lower 2 inches of the cotton stem to avoid crop injury.

#### TIMING TO WEEDS

*Valor* SX Herbicide tank mix applications must be made to weeds within the height range given in Table 4.

#### TANK MIXES

*Valor* SX Herbicide must be tank mixed with one of the herbicides listed in Table 5 for postemergence control of the weeds listed in Table 4.

**Table 5. Tank Mixes with *Valor* SX Herbicide for Hooded, Shielded and/or Layby Use in Cotton**

TANK MIX PARTNER	TARGET WEEDS	HOODED AND SHIELDED	LAYBY
glyphosate	Perennial Grasses and Broadleaves	X	X <sup>1</sup>
MSMA	Annual Grasses Yellow Nutsedge	X	X

<sup>1</sup> For use only in cotton with the Roundup Ready gene.

#### DIRECTIONS FOR USE IN DRY BEANS

##### HARVEST AID

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single application.
- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from *Valor* SX Herbicide requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 2% v/v should be used. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/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 desiccation. The addition of a nitrogen source does not replace the need for a crop oil concentrate or a methylated seed oil. Tank mixing *Valor* SX Herbicide with glyphosate or paraquat will increase control of emerged weeds and aid in harvest. Add a burndown tank mix partner for the control of emerged weeds

labeled for dry bean in accordance with the most restrictive labeled limitations and precautions.

#### TIMING TO DRY BEANS

Apply when crop is mature and at least 80% of the pods are yellowing and mostly ripe with no more than 40% (bush type beans) or 30% (vine type beans) of the leaves still green in color. Dry beans can be harvested 5 days after application. To ensure thorough coverage use 15 to 30 gallons spray solution per acre. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence application.

#### DIRECTIONS FOR USE IN FIELD CORN

#### RESTRICTIONS AND LIMITATIONS

- Use only on no-till or minimum tillage fields where last years crop residue has not been incorporated into the soil.
- Corn must be planted between 14 and 30 days after application unless the application is made as part of a Fall burndown program.
- Corn can be planted 7 days after an application of 2 oz/A if a minimum of 25% of the soil surface is covered with the residue of the preceding crop and a minimum of 1/4 inch of rainfall has occurred between application and planting.
- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single growing season.
- Do not irrigate between emergence and 2-leaf corn.
- Do not use on popcorn, sweet corn or corn grown for seed.

#### TIMING TO FIELD CORN

- Apply *Valor* SX Herbicide, at 2 to 3 oz/A, between 7 and 30 days prior to planting field corn for the pre-emergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of *Valor* SX Herbicide.
- Apply *Valor* SX Herbicide at 2 oz/A between 7 and 30 days prior to planting field corn if a minimum of 25% of the soil surface is covered with the residue of the preceding crop and a minimum of 1/4 inch of rainfall has occurred between application and planting.
- Apply *Valor* SX Herbicide at 3 oz/A between 14 and 30 days prior to planting field corn.

#### Burndown Use Directions –

##### For Preplant Applications in Field Corn

*Valor* SX Herbicide, applied as part of a burndown program, may be used for residual weed control, as well as to assist in postemergence burndown of many weeds where field corn will be planted directly into the residue of the previous year. See Directions For Use in Fall and Spring Preplant Burndown and Fallow Seedbed Programs in Field Corn, Peanut and Soybean for rates and timing of applications. For control of emerged weeds, *Valor* SX Herbicide must be applied with an appropriate burndown tank mix partner listed in Table 6. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre. Refer to tank mix partner's label for recommended application pressure and recommended adjuvant systems.

### INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY

*Valor* SX Herbicide, at 1 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 may occur at *Valor* SX Herbicide rates as low as 1 oz/A. Applications of *Valor* SX Herbicide at 1 oz/A must be made a minimum of 14 days prior to planting field corn.

### TANK MIXES

*Valor* SX Herbicide may be tank mixed with the herbicides listed in Table 6 for pre-plant burndown applications. Refer to tank mix partner's label for adjuvant recommendations.

**Table 6. Tank Mix Partners for Burndown and/or Residual Control of Weeds in Field Corn**

TANK MIX PARTNERS <sup>1</sup>	
2,4-D LVE	metribuzin
atrazine	paraquat
Basis®	Python®
dicamba	Resolve®
Express®	simazine
glyphosate	Weedmaster®
Hornet®	

<sup>1</sup>Refer to tank mix product labels for specific recommendations.

### TANK MIX RESTRICTIONS

Tank mixes with flufenacet (Axiom or Domain), metolachlor or s-metolachlor (Dual Magnum or Dual II Magnum), dimethenamid or dimethenamid-p (Frontier or Outlook), alachlor (Lasso), or acetochlor (Surpass or Harness) may result in injury to field corn when application is followed by prolonged periods of cool wet weather and should not be used with *Valor* SX Herbicide, unless supplemental labeling, provided by Valent U.S.A. Corporation, is followed.

### DIRECTIONS FOR USE IN FIELD PEAS

#### WEED CONTROL

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 2 oz of *Valor* SX Herbicide per acre during a single application.
- Do not apply more than 2 oz of *Valor* SX Herbicide per acre during a single growing season.
- For use in Idaho, Montana, Oregon and Washington only.

**Many weather related factors, including high wind, splashing or heavy rains or cool conditions at or near crop emergence, may result in pea injury in fields treated with *Valor* SX Herbicide. On occasion this has resulted in a delay in maturity. User should assume these risks before using *Valor* SX Herbicide.**

### TIMING TO FIELD PEAS

*Valor* SX Herbicide may be applied to field peas within 2 days after planting for the preemergence control of the weeds listed in Table 1, Broadleaf Weeds Controlled by Residual Activity of *Valor* SX Herbicide. Tank mix *Valor* SX Herbicide with other labeled herbicides for broad spectrum weed control.

### TIMING TO WEEDS

*Valor* SX Herbicide may be applied to field peas prior to planting or preemergence (after planting). Pre-emergence application of *Valor* SX Herbicide must be made within 2 days after planting and prior to field pea emergence. To avoid severe crop injury, do not apply to field peas after peas begin to crack or have emerged.

Preplant incorporation (PPI) applications may result in reduced weed control.

### ADDITIONAL RESIDUAL GRASS CONTROL

*Valor* SX Herbicide can be tank mixed with pendimethalin for additional grass control.

### HARVEST AID

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single application.
- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from *Valor* SX Herbicide requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt/A should be used. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing *Valor* SX Herbicide with glyphosate will increase control of emerged weeds and aid in harvest.

### TIMING TO FIELD PEAS

Apply *Valor* SX Herbicide, at 1.5 to 2 oz/A, when crop is physiologically mature and a minimum of 80% of the pods are yellow to tan in color and 20% are yellow in color. If field peas are treated too early, a reduction in seed quality may occur. Do not spray *Valor* SX Herbicide on any area of the field with a significant amount of plants with green color. Peas can be harvested 5 days after application.

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre and select nozzle type using manufacturer's gallonage and pressure recommendations for postemergence application.

## DIRECTIONS FOR USE IN FLAX

### HARVEST AID

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz of *Valor SX* Herbicide per acre during a single application.
- Do not apply more than 3 oz of *Valor SX* Herbicide per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from *Valor SX* Herbicide requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt/A should be used. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil.

#### TIMING TO FLAX

Apply *Valor SX* Herbicide, at 1.5 to 2 oz/A, when crop is physiologically mature and at least 75% of the bolls are brown in color. Flax can be harvested 5 days after application.

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre and select nozzle type using manufacturer's gallonage and pressure recommendations for postemergence application.

## DIRECTIONS FOR USE IN LENTILS

### HARVEST AID

#### RESTRICTIONS AND LIMITATIONS

- Do not apply more than 3 oz of *Valor SX* Herbicide per acre during a single application.
- Do not apply more than 3 oz of *Valor SX* Herbicide per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from *Valor SX* Herbicide requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt/A should be used. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing *Valor SX* Herbicide with glyphosate or paraquat will increase control of emerged weeds and aid in harvest.

#### TIMING TO LENTILS

Apply *Valor SX* Herbicide, at 1.5 to 2 oz/A, when crop is physiologically mature and a minimum of 80% of the pods are yellow to tan in color and 20% are yellow in color. If lentils are treated too early, a reduction in seed quality may occur. Do not spray *Valor SX* Herbicide on any area of the field with a significant amount of plants with green color. Lentils can be harvested 5 days after application.

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre and select nozzle type using manufacturer's gallonage and pressure recommendations for postemergence application.

**Table 7. Weeds Controlled by Residual Activity of *Valor SX* Herbicide**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	VALOR SX HERBICIDE RATE
Bristly Starbur	<i>Acanthospermum hispidum</i>	Up to 5%	All Soil Types	4 oz/A
Carpetweed	<i>Mollugo verticillata</i>			
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Coffee Senna	<i>Cassia occidentalis</i>			
Copperleaf, Hophornbeam	<i>Acalypha ostryifolia</i>			
Dandelion	<i>Taraxacum officinale</i>			
Dodder (suppression only) <sup>1</sup>	<i>Cuscuta</i> spp.			
Eclipta	<i>Eclipta prostrata</i>			
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			

(continued)

<sup>1</sup> Valor Herbicide at 4 oz/A will provide postemergence dodder suppression when applied in combination with Pursuit Herbicide or Raptor Herbicide at labeled rates. The use of Pursuit Herbicide and Raptor Herbicide require the use of a NIS, which will result in burn and stunting of alfalfa. Growers should expect and accept this prior to using this tank mix.



**Table 7. Weeds Controlled by Residual Activity of Valor SX Herbicide (continued)**

<b>BROADLEAF WEED SPECIES</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE</b>
Fiddleneck, Coast	<i>Amsinckia menziesii</i>	Up to 5%	All Soil Types	4 oz/A
Field Pennycress	<i>Thlaspi arvense</i>			
Fleabane, Hairy	<i>Conyza bonariensis</i>			
Flixweed	<i>Descurainia spophia</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Florida Pusley	<i>Richardia scabra</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Groundsel, Common	<i>Senecio vulgaris</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>			
Henbit	<i>Lamium amplexicaule</i>			
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Little Mallow	<i>Malva parviflora</i>			
London Rocket	<i>Sisymbrium irio</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			
Mayweed/False Chamomile	<i>Matricaria maritima</i>			
Morningglories				
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>			
Ivyleaf	<i>Ipomoea hederacea</i>			
Red/Scarlet	<i>Ipomoea coccinea</i>			
Smallflower	<i>Jacquemontia tamnifolia</i>			
Tall	<i>Ipomoea purpurea</i>			
Mustard				
Tansy	<i>Descurainia pinnata</i>			
Tumble	<i>Sisymbrium altissimum</i>			
Wild	<i>Brassica kaber</i>			
Nettle, Burning	<i>Urtica urens</i>			
Nightshades				
Black	<i>Solanum nigrum</i>			
Eastern Black	<i>Solanum ptycanthum</i>			
Hairy	<i>Solanum sarrachoides</i>			
Pigweeds				
Palmer Amaranth	<i>Amaranthus palmeri</i>			
Redroot	<i>Amaranthus retroflexus</i>			
Smooth	<i>Amaranthus hybridus</i>			
Spiny Amaranth	<i>Amaranthus spinosus</i>			
Tumble	<i>Amaranthus albus</i>			
Prickly Lettuce (China Lettuce)	<i>Lactuca serriola</i>			
Prickly Sida (Teaweed)	<i>Sida spinosa</i>			
Puncturevine	<i>Tribulus terrestris</i>			
Purslane				
Common	<i>Portulaca oleracea</i>			
Horse	<i>Trianthema portulacastrum</i>			
Radish, Wild	<i>Raphanus raphanistrum</i>			
Ragweed, Common	<i>Ambrosia artemisiifolia</i>			

(continued)

**Table 7. Weeds Controlled by Residual Activity of Valor SX Herbicide (continued)**

<b>BROADLEAF WEED SPECIES</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE</b>
Redmaids	<i>Calandrinia ciliata</i> var. <i>menziesii</i>	Up to 5%	All Soil Types	4 oz/A
Russian Thistle	<i>Salsola iberica</i>			
Shepherd's-purse	<i>Capsella bursa-pastoris</i>			
Smartweeds				
Ladysthumb	<i>Polygonum persicaria</i>			
Pennsylvania	<i>Polygonum pennsylvanicum</i>			
Smellmelon	<i>Cucumis melo</i>			
Sowthistle, Prickly	<i>Sonchus asper</i>			
Spotted Spurge	<i>Euphorbia maculata</i>			
Spurred Anoda	<i>Anoda cristata</i>			
Tropic Croton	<i>Croton glandulosus</i>			
Velvetleaf	<i>Abutilon theophrasti</i>			
Venice Mallow	<i>Hibiscus trionum</i>			
Waterhemp				
Common	<i>Amaranthus rudis</i>			
Tall	<i>Amaranthus tuberculatus</i>			
White Cockle	<i>Silene latifolia</i>			
Wild Poinsettia	<i>Euphorbia heterophylla</i>			
Wormwood, Biennial	<i>Artemisia biennis</i>			
Yellow Rocket	<i>Barbarea vulgaris</i>			
<b>GRASS WEED SPECIES</b>				
Barnyardgrass	<i>Echinochloa crus-galli</i>	Up to 5%	All Soil Types	4 oz/A
Bluegrass, Annual	<i>Poa annua</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>			
Ryegrass, Italian	<i>Lolium multiflorum</i>			
Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>			

**DIRECTIONS FOR USE IN PEANUT**

**RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz of Valor SX Herbicide per acre during a single growing season.
- Do not irrigate when peanuts are cracking.
- Do not graze treated fields or feed treated hay to livestock.

Many weather related factors, including high wind, splashing or heavy rains or cool conditions at or near peanut emergence, may result in peanut injury in fields treated with Valor SX Herbicide. On occasion this has resulted in a delay in maturity or even a slight decrease in yield.

**WIND MANAGEMENT**

In areas where shallow cultivation is used between rows to reduce wind-borne sand damage to peanuts,

weed control from Valor SX Herbicide may be reduced.

**TIMING TO PEANUTS**

Valor SX Herbicide may be applied to peanuts prior to planting or preemergence (after planting). Pre-emergence applications of Valor SX Herbicide 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 SX Herbicide rate from Table 1 according to anticipated weed spectrum.

**TIMING TO WEEDS**

**Burndown – Preemergence to Peanuts, Postemergence to Weeds**

Valor SX Herbicide, 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 SX* Herbicide before planting, during planting or after planting, but before the crop emerges. For control of emerged weeds, tank mix *Valor SX* Herbicide 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 SX* Herbicide tank mixes applied to assist in the control of emerged weeds must be applied with an adjuvant, such as a non-ionic surfactant at 0.25% v/v or a crop oil concentrate or a methylated seed oil at 1 to 2 pt/A. A spray grade nitrogen source (either ammonium sulfate at 2 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 SX* Herbicide must be applied prior to weed emergence.

**ADDITIONAL RESIDUAL GRASS CONTROL: SEQUENTIAL**

*Valor SX* Herbicide may be applied sequentially following a preplant incorporated application of trifluralin (states of New Mexico, Oklahoma and Texas only), Sonalan<sup>®</sup>, Dual<sup>®</sup> (metolachlor), pendimethalin or Frontier<sup>®</sup>.

**ADDITIONAL RESIDUAL GRASS CONTROL: TANK MIXED**

*Valor SX* Herbicide can be tank mixed with alachlor, metolachlor or Frontier for additional grass and broadleaf weed control. *Valor SX* Herbicide 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.

**DIRECTIONS FOR USE IN SOYBEAN**

**RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz of *Valor SX* Herbicide per acre during a single growing season.
- Do not graze treated fields or feed treated hay to livestock.

**PRECAUTIONS**

- Do not tank mix *Valor SX* Herbicide with flufenacet (Axiom<sup>®</sup>, Domain<sup>®</sup>), metolachlor (Dual<sup>®</sup> Magnum, Dual<sup>®</sup> II Magnum, Boundary<sup>®</sup>) or dimethenamid (Frontier<sup>®</sup> or Outlook<sup>®</sup>) within 14 days of planting soybeans, unless soybeans are planted under no-till or minimum tillage conditions on wheat stubble or no-till field corn stubble.
- Do not irrigate when soybeans are cracking.

**TIMING TO SOYBEANS**

*Valor SX* Herbicide may be applied to soybeans prior to planting or preemergence (after planting). Preemergence application of *Valor SX* Herbicide 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 SX* Herbicide rate from Table 1 according to anticipated weed spectrum.

**TIMING TO WEEDS**

**Burndown – Preemergence to Soybeans, Postemergence to Weeds**

*Valor SX* Herbicide, 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 8. Apply *Valor SX* Herbicide 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 SX* Herbicide 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 or a non-ionic surfactant at 0.25% v/v.

**INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY**

*Valor SX* Herbicide, at rates as low as 1 oz/A, may be tank mixed with glyphosate (Roundup<sup>®</sup>) 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, may occur at *Valor SX* Herbicide rates as low as 1 oz/A.

**TANK MIXES**

*Valor SX* Herbicide may be tank mixed with the herbicides listed in Table 8 for increased burndown activity, additional residual broadleaf and/or additional grass control. Refer to tank mix partner's label for adjuvant recommendations.

**Table 8. Tank Mix Partners for Control of Emerged Weeds in Reduced Tillage Soybeans**

TANK MIX PARTNER	TARGET WEEDS <sup>1</sup>
2,4-D LVE	Marestail Giant Ragweed Dandelion
paraquat	Annual Grasses Henbit
glyphosate	General Burndown
Select Max <sup>®</sup>	Annual Grasses
Scepter <sup>®</sup> 70 DG	Cocklebur Common Sunflower
Weedmaster <sup>®</sup>	Marestail Giant Ragweed Dandelion

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

**ADDITIONAL RESIDUAL BROADLEAF CONTROL**

Valor SX Herbicide can be tank mixed with metribuzin, Firstrate®, Lorox®, Pursuit Plus®, Python®, Squadron®, Scepter or Steel® for additional broadleaf control.

**ADDITIONAL RESIDUAL GRASS CONTROL**

Valor SX Herbicide can be tank mixed with pendimethalin or Command® for additional grass control. In the states of Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia, Valor SX Herbicide can be tank mixed with microencapsulated acetochlor (WARRANT) at 2 ounces per acre. Tank mixes with flufenacet (Axiom or Domain), metolachlor (Dual products or Boundary) or dimethenamid (Frontier or Outlook) 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 SX Herbicide, unless supplemental labeling, provided by Valent U.S.A. Corporation, is followed.

**ROUNDUP READY PROGRAM**

Valor SX Herbicide may be applied as part of a burn-down 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 SX Herbicide.

**Table 9. Weeds Controlled by Preemergence Application of Valor SX Herbicide**

BROADLEAF WEED SPECIES				
COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	SOIL TYPE	VALOR SX HERBICIDE RATE
Bristly Starbur	<i>Acanthospermum hispidum</i>	Up to 10% <sup>1</sup>	All Soil Types	Sugarcane 6 to 8 oz/A
Carpetweed	<i>Mollugo verticillata</i>			To Maintain Bare Ground on Non- Crop Areas of Farms 6 to 12 oz/A
Chickweeds				
Common	<i>Stellaria media</i>			
Mouseear	<i>Cerastium vulgatum</i>			
Coffee Senna	<i>Cassia occidentalis</i>			
Dandelion	<i>Taraxacum officinale</i>			
Eclipta	<i>Eclipta prostrata</i>			
Eveningprimrose, Cutleaf	<i>Oenothera laciniata</i>			
False Chamomile	<i>Tripleurospermum maritima</i>			
Fiddleneck, Coast	<i>Amsinckia menziesii</i>			
Field Pennycress	<i>Thlaspi arvense</i>			
Filaree				
Redstem	<i>Erodium cicutarium</i>			
Whitstem	<i>Erodium moschatum</i>			
Fleabane, Hairy	<i>Conyza bonariensis</i>			
Florida Beggarweed	<i>Desmodium tortuosum</i>			
Florida Pusley	<i>Richardia scabra</i>			
Golden Crownbeard	<i>Verbesina encelioides</i>			
Groundsel, Common	<i>Senecio vulgaris</i>			
Hairy Indigo	<i>Indigofera hirsuta</i>			
Hemp Sesbania	<i>Sesbania exaltata</i>			
Henbit	<i>Lamium amplexicaule</i>			
Jimsonweed	<i>Datura stramonium</i>			
Kochia	<i>Kochia scoparia</i>			
Lambsquarters, Common	<i>Chenopodium album</i>			
Mallow				
Common (Cheeseweed)	<i>Malva neglecta</i>			
Little	<i>Malva parviflora</i>			
Marestail/Horseweed	<i>Conyza canadensis</i>			
Mayweed/False Chamomile	<i>Matricaria maritima</i>			

(continued)



**Table 9. Weeds Controlled by Preemergence Application of Valor SX Herbicide** (continued)

<b>BROADLEAF WEED SPECIES</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE</b>
Morningglories Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	Up to 10% <sup>1</sup>	All Soil Types	Sugarcane 6 to 8 oz/A
Ivyleaf Red/Scarlet Smallflower Tall	<i>Ipomoea coccinea</i> <i>Jacquemontia tamnifolia</i> <i>Ipomoea purpurea</i>			To Maintain Bare Ground on Non- Crop Areas of Farms 6 to 12 oz/A
London Rocket Mustards Tansey Tumble Wild Nettle, Burning Nightshades Black Eastern Black Hairy Pigweeds Palmer Amaranth Redroot Smooth Spiny Amaranth Tumble Prickly Lettuce (China Lettuce) Prickly Sida (Teaweed) Puncturevine Purslane Common Horse Radish, Wild Ragweed, Common Redmaids Redweed Shepherd's-purse Smellmelon Sowthistle, Annual <sup>2</sup> Spotted Spurge Spurred Anoda Thistle, Russian Tropic Croton Venice Mallow	<i>Sisymbrium irio</i>  <i>Desurainia pinnata</i> <i>Sisymbrium altissimum</i> <i>Brassica kaber</i> <i>Urtica urens</i>  <i>Solanum nigrum</i> <i>Solanum ptycanthum</i> <i>Solanum sarrachoides</i>  <i>Amaranthus palmeri</i> <i>Amaranthus retroflexus</i> <i>Amaranthus hybridus</i> <i>Amaranthus spinosus</i> <i>Amaranthus albus</i>  <i>Lactuca serriola</i>  <i>Sida spinosa</i> <i>Tribulus terrestris</i>  <i>Portulaca oleracea</i> <i>Trianthema portulacastrum</i> <i>Raphanus raphanistrum</i> <i>Ambrosia artemisiifolia</i> <i>Calandrinia ciliata</i> var. <i>menziessi</i> . <i>Melochia corchorifolia</i> <i>Capsella bursa-pastoris</i> <i>Cucumis melo</i> <i>Sonchus oleraceus</i> <i>Euphorbia maculata</i> <i>Anoda cristata</i> <i>Salsola iberica</i> <i>Croton glandulosus</i> <i>Hibiscus trionum</i>			

(continued)

**Table 9. Weeds Controlled by Preemergence Application of Valor SX Herbicide** (continued)

<b>BROADLEAF WEED SPECIES</b>				
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>ORGANIC MATTER</b>	<b>SOIL TYPE</b>	<b>VALOR SX HERBICIDE RATE</b>
Waterhemp Common Tall Wild Poinsettia White Cockle Wormwood, Biennial Yellow Rocket	<i>Amaranthus rudis</i> <i>Amaranthus tuberculatus</i> <i>Euphorbia heterophylla</i> <i>Silene latifolia</i> <i>Artemisia biennis</i> <i>Barbarea vulgaris</i>	Up to 10% <sup>1</sup>	All Soil Types	Sugarcane 6 to 8 oz/A
<b>GRASS WEED SPECIES</b>				To Maintain Bare Ground on Non-Crop Areas of Farms 6 to 12 oz/A
Barnyardgrass Bluegrass, Annual Crabgrass Large Smooth Foxtails Bristly Giant Green Yellow Goosegrass Guineagrass Johnsongrass, Seedling Lovegrass, California Panicum Fall Texas Ryegrass, Italian Signalgrass, Broadleaf	<i>Echinochloa crus-galli</i> <i>Poa annua</i>  <i>Digitaria sanguinalis</i> <i>Digitaria ischaemum</i>  <i>Setaria verticillata</i> <i>Setaria faberi</i> <i>Setaria viridis</i> <i>Setaria glauca</i> <i>Eleusine indica</i> <i>Panicum maximum</i> <i>Sorghum halepense</i> <i>Eragrostis diffusa</i>  <i>Panicum dichotomiflorum</i> <i>Panicum texaum</i> <i>Lolium multiflorum</i> <i>Brachiaria platyphylla</i>			

<sup>1</sup> Valor SX Herbicide can be used on soils with greater than 10% organic matter; however, length of residual control may be shorter than on soils with lower organic matter content.

<sup>2</sup> Except CA

**DIRECTIONS FOR USE IN SUGARCANE**

**RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 8 oz of Valor SX Herbicide per acre per application.
- Do not make a sequential application within 14 days of the first application.
- Do not apply more than 12 oz of Valor SX Herbicide per acre during a single growing season.
- Do not apply within 90 days of harvest.

**TIMING TO SUGARCANE**

Valor SX Herbicide may be applied from 2 weeks prior to planting to before the sugarcane emerges, post directed or at layby. Select the proper Valor SX Herbicide rate from Table 9 according to anticipated weed spectrum and soil organic matter content for preemergence applications. Select Valor SX Herbicide rate from Table 10 according to emerged weed spectrum and weed heights for post-directed and layby applications.

**TIMING TO WEEDS**

**Burndown – Preemergence to Sugarcane, Postemergence to Weeds**

Valor SX Herbicide may be used for preemergence control, and to assist in postemergence burndown, of many annual broadleaf weeds in sugarcane. For control of emerged weeds, choose the most appropriate tank mix partner from Table 11. Apply Valor SX Herbicide **before the crop emerges**. To ensure thorough coverage, use a minimum of 15 gals of spray solution per acre. All Valor SX Herbicide tank mixes applied to assist in the control of emerged weeds must be applied with crop oil concentrate or methylated seed oil at 1 qt/A or a non-ionic surfactant at 0.25% v/v. Some tank mix products, such as Roundup Original Max (glyphosate), may be formulated with a suitable adjuvant and do not require additional adjuvant.

**Preemergence – Preemergence to Sugarcane, Preemergence to Weeds**

Valor SX Herbicide may be used for preemergence control of many annual broadleaf and grassy weeds in sugarcane. Select rate based on anticipated weed spectrum and soil organic matter content from Table 9. Apply Valor SX Herbicide **before the crop emerges.**

**Post-Directed – Postemergence to Sugarcane, Postemergence to Weeds**

Post-directed applications should only be made to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height and has begun to joint. Post-directed applications should not be made to "PINEAPPLE" varieties. Post-directed applications to "PINEAPPLE" varieties or to upright varieties that have not exceeded 24 inches in height and have not begun to joint, may result in unacceptable crop injury. To ensure thorough coverage, use a minimum of 15 gals of spray solution per acre. Post-directed

applications of Valor SX Herbicide must include a crop oil concentrate or methylated seed oil at 1 qt/A or a non-ionic surfactant at 0.25% v/v. Select the proper Valor SX Herbicide rate based on weed spectrum and weed height from Table 10.

**Layby – Postemergence to Sugarcane, Postemergence to Weeds**

Layby applications can be made to upright and "PINEAPPLE" varieties after the sugarcane has exceeded 30 inches in height and the spray solution will not contact foliage above 6 inches from the base of the sugarcane. To ensure thorough coverage, use a minimum of 15 gals of spray solution per acre. Layby applications of Valor SX Herbicide must be applied with crop oil concentrate or methylated seed oil at 1 qt/A or a non-ionic surfactant at 0.25% v/v. Select the proper Valor SX Herbicide rate based on weed spectrum and weed height from Table 10.

**Table 10. Broadleaf Weeds Controlled by Post-Directed or Layby Application of Valor SX Herbicide in Sugarcane**

BROADLEAF WEED SPECIES		WEED HEIGHT (inches)	
COMMON NAME	SCIENTIFIC NAME	3 oz/A	4 oz/A
Bindweed, Field <sup>1</sup>	<i>Convolvulus arvensis</i>	4	8
Carpetweed	<i>Mollugo verticillata</i>	4	4
Cocklebur, Common	<i>Xanthium strumarium</i>	4	4
Florida Beggarweed	<i>Desmodium tortuosum</i>	2	2
Hemp Sesbania	<i>Sesbania exaltata</i>	6	8
Jimsonweed	<i>Datura stramonium</i>	4	4
Lambsquarters, Common	<i>Chenopodium album</i>	4	4
Morningglories			
Entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	-	4
Ivyleaf	<i>Ipomoea hederacea</i>	4	4
Pitted	<i>Ipomoea lacunosa</i>	4	6
Red	<i>Ipomoea coccinea</i>	-	4
Tall	<i>Ipomoea purpurea</i>	2	4
Mustard, Wild	<i>Brassica kaber</i>	6	6
Pigweeds			
Palmer Amaranth	<i>Amaranthus palmeri</i>	4	6
Redroot	<i>Amaranthus retroflexus</i>	4	6
Smooth	<i>Amaranthus hybridus</i>	4	6
Plantain, Broadleaf	<i>Plantago major</i>	6	6
Prickly Sida	<i>Sida spinosa</i>	4	6
Purslanes			
Common	<i>Portulaca oleracea</i>	2	4
Rock	<i>Calandrinia</i> spp.	-	2

(continued)

**Table 10. Broadleaf Weeds Controlled by Post-Directed or Layby Application of Valor SX Herbicide in Sugarcane** (continued)

BROADLEAF WEED SPECIES		WEED HEIGHT (inches)	
COMMON NAME	SCIENTIFIC NAME	3 oz/A	4 oz/A
Ragweeds			
Common	<i>Ambrosia artemisiifolia</i>	2	2
Giant	<i>Ambrosia trifida</i>	4	4
Rice Flatsedge	<i>Cyperus iria</i>	2	4
Sicklepod	<i>Senna obtusifolia</i>	4	4
Smartweeds			
Ladysthumb	<i>Polygonum persicaria</i>	4	4
Pale	<i>Polygonum lapathifolium</i>	4	4
Pennsylvania	<i>Polygonum pennsylvanicum</i>	4	4
Spotted Spurge	<i>Euphorbia maculata</i>	4	4
Velvetleaf	<i>Abutilon theophrasti</i>	4	6
Venice Mallow	<i>Hibiscus trionum</i>	2	2
Waterhemp			
Common	<i>Amaranthus rudis</i>	2	2
Tall	<i>Amaranthus tuberculatus</i>	2	2

<sup>1</sup> Valor SX Herbicide, tank mixes will only control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

#### TANK MIXES

Valor SX Herbicide may be tank mixed with the herbicides listed in Table 11 for additional weed control in burn-down, preemergence, post-directed and layby applications. Refer to tank mix partner's label for adjuvant recommendations.

**Table 11. Tank Mixes with Valor SX Herbicide for Post-Directed or Layby Use in Sugarcane**

TANK MIX PARTNER <sup>1</sup>	TARGET WEEDS	BURN-DOWN	POST-DIRECTED <sup>2</sup>	LAYBY
2,4-D amine	Annual and Perennial Broadleaf Weeds	X		
atrazine	Pigweeds Cocklebur	X	X	X
Asulox <sup>®3</sup>	Annual Grasses		X	X
Evik <sup>®4</sup>	Annual Grasses		X	X
glyphosate <sup>5</sup>	Annual and Perennial Weeds	X		X
metribuzin <sup>6</sup>	Broadleaf Panicum Goosegrass		X	X
Sempre <sup>®</sup>	Purple Nutsedge Yellow Nutsedge	X	X	X
Weedmaster <sup>®</sup>	Annual and Perennial Broadleaf Weeds	X		

<sup>1</sup> Refer to tank mix product labels for specific recommendations for control of emerged weeds present not listed in Table 10.

<sup>2</sup> Post-directed applications should only be made to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height. Post-directed applications should not be made to "PINEAPPLE" varieties. Post-directed applications to "PINEAPPLE" varieties or to upright varieties that have not exceeded 24 inches in height may result in unacceptable crop injury.

<sup>3</sup> Apply to sugarcane at least 24 inches tall.



<sup>4</sup> Apply before weeds are greater than 6 inches tall.

<sup>5</sup> **Glyphosate applications must be made with a hooded sprayer. Sugarcane must be at least 3 ft tall. Contact with the sugarcane foliage by either the spray mixture or the treated weed foliage will result in sugarcane injury.**

<sup>6</sup> Refer to metribuzin label for restrictions based on soil type.

#### **ADDITIONAL PREEMERGENCE BROADLEAF CONTROL**

*Valor* SX Herbicide can be tank mixed with atrazine or diuron for additional preemergence broadleaf control.

#### **ADDITIONAL PREEMERGENCE GRASS CONTROL**

*Valor* SX Herbicide can be tank mixed with Prowl (or other pendimethalin products) for additional pre-emergence grass control provided sugarcane has not emerged.

#### **DIRECTIONS FOR USE IN SUNFLOWER AND SAFFLOWER**

##### **HARVEST AID**

##### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single application.
- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single growing season.
- Do not harvest within 5 days of application.

Desiccation from *Valor* SX Herbicide requires the addition of an agronomically approved adjuvant to the spray mixture. A methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt/A should be used. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing *Valor* SX Herbicide with glyphosate or paraquat will increase control of emerged weeds and aid in harvest for sunflowers. Tank mixing *Valor* SX Herbicide with glyphosate will increase control of emerged weeds and aid in harvest for safflower.

##### **TIMING TO SUNFLOWER AND SAFFLOWER**

Apply *Valor* SX Herbicide, at 1.5 to 2 oz/A, when crop is mature (when seed is 35% moisture or less). For many varieties, this is when the backs of the heads are turning yellow and the bracts are turning brown. Sunflower and safflower can be harvested 5 days after application.

To ensure thorough coverage, use 15 to 30 gallons of spray solution per acre and select nozzle type using manufacturer's gallonage and pressure recommendations for postemergence application.

#### **DIRECTIONS FOR USE IN SWEET POTATO**

##### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 3 oz of *Valor* SX Herbicide per acre during a single growing season.
- Do not apply postemergence to sweet potatoes.

- Do not use greenhouse grown transplants.
- Do not use transplants harvested more than 2 days prior to transplanting.
- Do not use on any sweet potato variety other than "BEAUREGARD", unless user has tested *Valor* SX Herbicide on other variety and has found crop tolerance to be acceptable.
- Do not apply as a part of any tank mix, except with labeled rates of Command, if tank mix is applied prior to transplanting.

##### **TIMING TO SWEET POTATOES**

*Valor* SX Herbicide must be applied prior to transplanting sweet potatoes.

##### **TIMING TO WEEDS**

##### **Preemergence To Weeds**

Apply *Valor* SX Herbicide to soil prior to transplanting sweet potato slips for the preemergence control of the weeds listed in Table 1.

#### **DIRECTIONS FOR USE IN WHEAT**

For use in the states of DE, ID, KY, MD, MN, MT, NC, ND, NJ, OR, PA, SC, SD, TN, VA, WA and WI Only.

##### **RESTRICTIONS AND LIMITATIONS**

- Do not apply more than 2 oz of *Valor* SX Herbicide per acre during a single application.
- Do not apply more than 2 oz of *Valor* SX Herbicide per acre during a single growing season.

##### **PREPLANT APPLICATIONS, PREEMERGENCE WEED CONTROL**

##### **RESTRICTIONS AND LIMITATIONS**

- For pre-plant weed control, use only on no-till or minimum tillage fields where the previous year's crop residue has not been incorporated into the soil.
- Plant wheat no sooner than 7 days after *Valor* SX Herbicide application in the states of DE, KY, MD, NC, NJ, SC, TN, VA or PA.
- Plant wheat no sooner than 14 days after *Valor* SX Herbicide application in the states of ID, MN, MT, ND, OR, SD, WA or WI.
- Do not use on Durum wheat.
- Do not irrigate between emergence and spike.
- Wheat must be planted a minimum of 1" deep.
- Do not graze until wheat has reached 5 inches in height.

##### **Burndown Use Directions**

*Valor* SX Herbicide, applied as part of a burndown program, at 2 oz/A, may be used for residual weed control, as well as to assist in postemergence burndown of many weeds where wheat will be planted directly into the residue of the previous crop. See Directions for Use in Fall Burndown Programs in Fields to be Planted to Barley, Field Pea, Flax, Lentil, Safflower, Sunflower and Wheat for rates and timing of applications. For control of emerged weeds, *Valor* SX Herbicide must be applied with an appropriate burndown tank mix partner. To ensure thorough coverage, use a minimum of 15 gallons of spray solution per acre. Refer to tank mix partner's label for recommended application pressure and recom-

mended adjuvant systems.

## **HARVEST AID**

### **RESTRICTIONS AND LIMITATIONS**

- Do not harvest within 10 days of application.

### **Use Directions**

*Valor SX* Herbicide, applied at 2 oz/A for desiccation requires the addition of an agronomically approved adjuvant to the spray mixture. Use a methylated seed oil which contains at least 15% emulsifiers and 80% oil at 1 qt/A. A spray grade nitrogen source (either ammonium sulfate at 2 to 2.5 lbs/A or a 28 to 32% nitrogen solution at 1 to 2 qts/A) may be added to the spray mixture along with methylated seed oil to enhance desiccation. The addition of a nitrogen source does not replace the need for methylated seed oil. Tank mixing *Valor SX* Herbicide with glyphosate will increase control of emerged weeds and aid in harvest.

To ensure thorough coverage, use a minimum of 10 gallons spray solution per acre by ground application and a minimum of 5 gallons per acre by aerial application. Nozzle selection should meet manufacturer's gallonage and pressure recommendations for postemergence application.

### **TIMING TO WHEAT**

Apply *Valor SX* Herbicide, at 1.5 to 2 oz/A, after wheat reaches the hard dough stage and grain has no more than 30% moisture. Wheat can be harvested 10 days after application. Valent recommends tank mixing with glyphosate.

### **DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS**

#### **RESTRICTIONS AND LIMITATIONS**

- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply to ditch banks.

*Valor SX* Herbicide, when used as directed, can be used on farms for non-selective vegetation control to maintain bare ground on non-crop areas that must be kept weed free. Follow all applicable directions as outlined above under "USE INFORMATION".

*Valor SX* Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. *Valor SX* Herbicide can be tank mixed with the herbicides listed in Table 12 for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. *Valor SX* Herbicide rates of 6 to 12 oz/A are required to provide residual control of the weeds listed in Table 9.

### **PREEMERGENCE APPLICATION**

Apply 6 to 12 oz (0.188 to 0.38 lb ai/A) of *Valor SX* Herbicide per broadcast acre as a preemergence appli-

cation. Preemergence (to weed emergence) applications of *Valor SX* Herbicide should be made to a weed-free soil surface. Preemergence applications of *Valor SX* Herbicide must be completed prior to weed emergence. Moisture is necessary to activate *Valor SX* Herbicide on soil for residual weed control. Dry weather following application of *Valor SX* Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, *Valor SX* Herbicide will control susceptible germinating weeds.

### **POSTEMERGENCE APPLICATION**

Apply 6 to 12 oz (0.188 to 0.38 lb ai/A) of *Valor SX* Herbicide per broadcast acre plus an adjuvant (0.25% v/v non-ionic surfactant or 1 qt/A crop oil concentrate). The addition of an adjuvant enhances *Valor SX* Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of *Valor SX* Herbicide. Emerged weeds are controlled postemergence with *Valor SX* Herbicide, however, translocation of *Valor SX* Herbicide within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with *Valor SX* Herbicide occurs when applied in combination with a surfactant to weeds less than 2 inches in height. A tank mix partner should be used in combination with *Valor SX* Herbicide for the postemergence control of weeds larger than 2 inches. Recommended tank mix partners are listed in Table 12.

**IMPORTANT:** Completely read and follow the label of any potential tank mix partner with *Valor SX* Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label.

**Table 12. Tank Mix Combinations to Maintain Bare Ground on Non-Crop Areas**

glyphosate	2,4-D	Rely	paraquat
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## STORAGE AND DISPOSAL

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

### PESTICIDE 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 HANDLING

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill.

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Made in U.S.A.

Form 1501-I

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