This information is for promotional purposes only. Space considerations may require information to be omitted. Always refer to the actual package for complete label verbiage. This product may not yet be available or approved for sale or use in your area.

FLUMIOXAZIN	GROUP	14	HERBICIDE

ZALTUS™ SX

Contains flumioxazin, the active ingredient used in Valor® SX and Clipper®

For control and/or suppression of certain weeds in alfalfa, artichoke, asparagus, bushberries, cactus (prickly pear)*, caneberries, celery, citrus, clover*, cotton, dry beans, field corn, field peas*, flax*, garlic, grape, hops*, lentils*, mint, nut trees, onion (dry bulb)*, olive, peanut*, pome fruit, pomegranate, potato, soybean*, stone fruit, strawberry, sugarcane*, sunflower* and safflower*, sweet potato, wheat*, non-bearing fruit trees, fallow land and to maintain bare ground on non-crop areas of farms, orchards and vineyards.

***NOT FOR USE IN CALIFORNIA**

ACTIVE INGREDIENT:	**(% by weight)**
Flumioxazin**	51.0%
OTHER INGREDIENTS:	49.0%
TOTAL:	100.0%

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

Zaltus SX is a water dispersible granule containing 51% active ingredient.

EPA Reg. No.: 91234-180

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you DO NOT understand the label, find someone to explain it to you in detail.)
See below for additional Precautionary Statements.

FIRST AID	
If inhaled:	▪ 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.
If on skin or clothing:	▪ Take off contaminated clothing. ▪ Rinse skin immediately with plenty of water for 15 - 20 minutes. ▪ Call a poison control center or doctor for treatment advice.
If in eyes:	▪ 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.
If swallowed:	▪ Call a poison control center or doctor immediately for treatment advice. ▪ Have person sip a glass of water if able to swallow. ▪ **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. ▪ **DO NOT** give anything to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at **1-844-685-9173** for emergency medical treatment information.	

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Zaltus™ SX is not manufactured, or distributed by Valent U.S.A. Corporation, seller of Valor® SX and Clipper®.

Manufactured for:
Atticus, LLC
940 NW Cary Parkway, Suite 200
Cary, NC 27513

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND 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. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material including 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. Not for use in California.

For aerial application to artichoke; field peas; flax; lentils; safflower; sunflower and wheat, mixer/loaders must also wear: Wear a minimum of a NIOSH approved filtering face piece respirator with any N filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection, including a half face of full face respirator with any filter or a powered air purifying respirator with an HE filter. For more information about these options, see www.epa.gov/pesticide-respirators. **DO NOT** apply by aerial application to field peas, flax, safflower, sunflower and wheat in California.

For ground boom application to cactus (prickly pear); olive and pomegranate, mixer/loaders must also wear: Wear a minimum of a NIOSH approved filtering face piece respirator with any N filter (TC-84A). You can also use other NIOSH approved particulate respirators that offer more protection, including a half face of full face respirator with any filter or a powered air purifying respirator with an HE filter. For more information about these options, see www.epa.gov/pesticide-respirators. Not for use on cactus (prickly pear) in California.

User Safety Requirements

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

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

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

This pesticide is toxic to plants and must 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, including 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.

PHYSICAL OR CHEMICAL HAZARDS

DO NOT mix or allow coming in contact with oxidizing and reducing agents. A hazardous chemical reaction may occur.

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 LABEL 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, including 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 Standard 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.

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.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESISTANCE MANAGEMENT

For resistance management, **Zaltus SX** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **Zaltus SX** and other Group 14 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of **Zaltus SX** or other Group 14 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures from a different group if such use is permitted; where information on resistance in target weeds species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method including hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Atticus, LLC at www.AtticusLLC.com

USE INFORMATION

Zaltus SX uses:

- **Zaltus SX** provides residual control of susceptible weeds.
- **Zaltus SX** provides additional burndown activity when used as part of a burndown program.
- **Zaltus SX** can be applied as part of a fall burndown program for control of susceptible winter annuals.
- **Zaltus SX** 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.
- **Zaltus SX** can be used on farms, orchards and vineyards for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed free.
- **It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Zaltus SX, 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.**

ZALTUS SX RATE SUMMARY	
OZ. OF ZALTUS SX	POUNDS OF FLUMIOXAZIN
2	0.064
4	0.128
6	0.191
8	0.255
12	0.383
24	0.765

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o Mandatory Spray Drift

Aerial Applications

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

o Spray Drift Advisories

- **THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.**
- **BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.**
- **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

- **BOOM HEIGHT - Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

- **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

- **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

- **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

- **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

- **WIND**

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

- **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

- **Handheld Technology Applications:**

Take precautions to minimize spray drift.

DO NOT use spray equipment used to apply Zaltus SX to apply other materials to any crop foliage, unless the proper clean-out procedures are followed. See SPRAYER CLEANUP for more information.

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ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

Pre-emergence 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 pre-emergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

Moisture is necessary to activate **Zaltus SX** in soil for residual weed control. Dry weather following applications of **Zaltus SX** may reduce effectiveness. However, when adequate moisture is received after dry conditions, **Zaltus SX** will control susceptible germinating weeds. **Zaltus SX** 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 **Zaltus SX** 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, apply **Zaltus SX** as part of a burndown program to actively growing weeds. Applying **Zaltus SX** under conditions that **DO NOT** promote active weed growth will reduce herbicide effectiveness. **DO NOT** apply **Zaltus SX** 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. **Zaltus SX** 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

Zaltus SX may only be applied to healthy crops labeled for postemergence use. **DO NOT** apply **Zaltus SX** to crops that have been weakened by disease, drought, flooding, excessive fertilization, soil salts, previously applied pesticides, nematodes, insects or winter injury.

Rainfastness

Zaltus SX is rainfast one hour after application. Applications must not be made if rain is expected within one hour of application or postemergence efficacy may be reduced.

Soil Characteristics

Application of **Zaltus SX** 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 Pre-emergence 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 **Zaltus SX** 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**).

Pre-emergence Application (Conventional Tillage)

To ensure uniform coverage, use 10 to 30 gals. of spray solution per acre for conventional tillage applications. Nozzle selection must meet manufacturer's gallonage and pressure specifications for pre-emergence 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 must meet manufacturer's gallonage and pressure specifications for postemergence herbicide application. **DO NOT** use flood jet nozzles.

Postemergence Application (Emerged Crop)

Check use directions for specific crops in which **Zaltus SX** 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 must meet manufacturer's gallonage and pressure specifications for postemergence herbicide application.

ADDITIVES

Burndown Application (Prior to Crop Emergence)

Postemergence control of weeds from **Zaltus SX** tank mixes will require the addition of an agronomically approved adjuvant to the spray mixture. When an adjuvant is to be used with **Zaltus SX**, Atticus, LLC directs 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 **Zaltus SX** as part of a burndown program. Some tank mix partners 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 **Zaltus SX**. The addition of a crop oil concentrate or methylated seed oil may increase the burndown activity on certain weeds including cutleaf evening primrose and Carolina geranium. Verify mixing compatibility qualities 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 ZALTUS SX

When using **Zaltus SX** and an adjuvant, including in stale seed bed, layby, hooded/shielded or reduced tillage situations, perform a jar test before mixing commercial quantities of **Zaltus SX**, when using **Zaltus SX** 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. Use water from the same source and temperature as which will be used in the spray tank mixing operation.
2. Add 1 g of **Zaltus SX** to the quart jar for every 3 oz. of **Zaltus SX** per acre being applied (4 g if 12 oz./A is the desired **Zaltus SX** 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 must 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 **Zaltus SX**, 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., chlorimuron 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 **Zaltus SX**. If two or more products were tank mixed prior to **Zaltus SX** application, follow the most restrictive cleanup procedure.

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 **Zaltus SX** with water prior to addition to the spray tank. Use a minimum of 1 gal. of water per 10 oz. of **Zaltus SX**.
4. While agitating, slowly add the pre-slurried **Zaltus SX** to the spray tank. Ensure sufficient agitation to create a rippling or rolling action on the water surface.
5. If tank mixing **Zaltus SX** 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. **Continue agitation until all spray solution has been applied.**
8. Mix only the amount of spray solution that can be applied the day of mixing. Apply **Zaltus SX** within 6 hours of mixing.

SPRAYER CLEANUP

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following **Zaltus SX** application. After **Zaltus SX** 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 gallon of 3% household ammonia (or equivalent) for every 100 gallons 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 the 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 **Zaltus SX** from the spray system, add a tank cleaner 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.

Thoroughly clean all spray equipment, including all tanks, hoses, booms, screens and nozzles, before it is used to apply postemergence pesticides. Equipment with **Zaltus SX** residue remaining in the system may result in crop injury to the subsequently-treated crop.

APPLICATION EQUIPMENT

Use only application equipment that is clean and in good repair. Uniformly space nozzles on boom and frequently check for accuracy.

BROADCAST APPLICATION

Apply **Zaltus SX**, and **Zaltus SX** tank mixes, with ground equipment using standard commercial sprayers equipped with flat fan or flood nozzles (pre-emergence applications only) designed to deliver the desired spray pressure and spray volume.

BAND APPLICATION

When banding, use proportionately less water and **Zaltus SX** per acre. The rate of **Zaltus SX** required per acre, when applied as a banded application, can be calculated with the following formula:

$$\text{Amount Needed per Acre for Banded Application} = \frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Rate per Broadcast Acre}$$

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CHEMIGATION

Follow all label directions for crops regarding rates, timing of application, special instructions and precautions. Refer to the **ONION (DRY BULB)** and **POTATOES** sections of this label for chemigation instructions for these crops.

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 **Zaltus SX** applied corresponds to the specified rate.

Apply **Zaltus SX** 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 system.

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

Chemigation Restrictions

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 if 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, for example 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, discharge the water from the public water system 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 **Chemigation Restrictions**.

APPLICATION WITH DRY BULK FERTILIZERS

Dry bulk fertilizer may be impregnated or coated with **Zaltus SX**. Application of dry bulk fertilizer with **Zaltus SX** provides weed control equal to, or slightly below, the same rate of **Zaltus SX** applied in liquid carriers, due to better coverage with application via spray equipment. Follow label directions for **Zaltus SX** 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 must not be used as the sole source of fertilizer, as the **Zaltus SX** 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 **Zaltus SX** mixture for sale.

Zaltus SX 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 **Zaltus SX**. Use a minimum of 6 pts. of the **Zaltus SX** slurry 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 **Zaltus SX** required can be calculated with the following formula:

Ounces of **Zaltus SX** per Ton of Fertilizer = Ounces of **Zaltus SX** per Acre X 2000 ÷ Pounds of Fertilizer per Acre

Thoroughly clean dry fertilizer blending equipment after **Zaltus SX** 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 **Zaltus SX**. 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 **Zaltus SX** at the listed rate. Planting earlier than the specified 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 Zaltus SX.**

ZALTUS SX RATES	CROPS	ROTATION INTERVALS
1 oz./A	Cotton (no-till or strip-till only)	14 days[1]
1.5 to 2 oz./A	Cotton (no-till or strip-till only)	21 days[1]
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[1]
	Barley, Dry and Snap Beans, Flax, Pea, Rye, Safflower and Sweet Corn	3 months
	Alfalfa, Canola, Clover, Oats, Potato, Sugar Beet and all other crops not listed[2]	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[1]
	Cotton, Rice, Sunflower, Tobacco and Wheat	2 months[1]
	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[2]	6 months if soil is tilled prior to planting 12 months if no tillage is performed
	Lentil	7 months
	Raised Beds Only: Head and Stem Brassica Except Cabbage	2 month (if the top 4 inches of the beds have been removed)
Up to 4 oz./A	Sugarcane	Immediately
	Alfalfa, Canola, Potato, Sugar Beet and all other crops not listed[2]	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
	Raised Beds Only: Cabbage, Melon, Pepper and Tomato	2 months (if the top 4 inches of the beds have been removed)
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[2] Trees can be transplanted 2 months after application of **Zaltus SX**[3]	12 months if soil is tilled prior to planting 18 months if no tillage is performed

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

[2] Successful soil bioassay must be performed prior to planting these crops.

[3] Transplanted avocado, bushberries (including blueberry), caneberries, citrus fruit, fig, grape, nut trees, olive, pome fruit, pomegranate and stone fruit can be planted 2 months after a **Zaltus SX** application of 2 to 12 oz./A.

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

BROADLEAF WEED SPECIES SECTION A				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Carpetweed	*Mollugo verticillata*	Up to 5%	All Soil Types	2 oz./A
Chickweeds				
Common	*Stellaria media*			
Mouseear	*Cerastium vulgatum*			
Dandelion	*Taraxacum officinale*			
Eclipta	*Eclipta prostrata*			
Eveningprimrose, Cutleaf	*Oenothera laciniata*			
Field Pennycress[1]	*Thlaspi arvense*			
Florida Pusley	*Richardia scabra*			
Henbit	*Lamium amplexicaule*			
Lambsquarters, Common	*Chenopodium album*			
Little Mallow	*Malva parviflora*			
Marestail/Horseweed	*Conyza canadensis*			
Mayweed/False Chamomile	*Matricaria maritima*			
Nightshades				
Black	*Solanum nigrum*			
Eastern Black	*Solanum ptycanthum*			
Hairy	*Solanum sarrachoides*			
Pigweeds				
Redroot	*Amaranthus retroflexus*			
Smooth	*Amaranthus hybridus*			
Spiny Amaranth	*Amaranthus spinosus*			
Tumble	*Amaranthus albus*			
Prickly Lettuce	*Lactuca serriola*			
Prickly Sida (Teaweed)	*Sida spinosa*			
Puncturevine	*Tribulus terrestris*			
Purslane, Common	*Portulaca oleracea*			
Radish, Wild	*Raphanus raphanistrum*			
Redmaids	*Calandrinia ciliata* var. *menziesii*			
Shepherd's-purse	*Capsella bursa-pastoris*			
Smallflower Morningglory	*Jacquemontia tamnifolia*			
Sowthistle, Prickly	*Sonchus asper*			
Spotted Spurge	*Euphorbia maculata*			
Venice Mallow	*Hibiscus trionum*			

[1] Except CA.

BROADLEAF WEED SPECIES SECTION B - All weeds listed in **SECTION A** plus:				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE[2]**
Coffee Senna	*Cassia occidentalis*	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[1]	*Ambrosia artemisiifolia*			
False Chamomile[4]	*Tripleurospermum maritima*			
Florida Beggarweed	*Desmodium tortuosum*			
Golden Crownbeard	*Verbesina encelioides*			
Hairy Indigo	*Indigofera hirsuta*			

(continued)

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

BROADLEAF WEED SPECIES SECTION B *(continued)* - All weeds listed in **SECTION A** plus:				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE[2]**
Hemp Sesbania	*Sesbania exaltata*	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
Jimsonweed	*Datura stramonium*			
Kochia	*Kochia scoparia*			
London Rocket[4]	*Sisymbrium irio*			
Morningglories[3]				
Entireleaf	*Ipomoea hederacea* var. *integriuscula*			
Ivyleaf	*Ipomoea hederacea*			
Red/Scarlet	*Ipomoea coccinea*			
Tall	*Ipomoea purpurea*			
Mustard, Wild	*Brassica kaber*			
Palmer Amaranth	*Amaranthus palmeri*			
Spurred Anoda	*Anoda cristata*	3 to 5%	Fine Soils: (silty clay, silty clay loam, clay, clay loam)	2 oz./A Cotton and Dry Bean 2 oz./A Field Corn, Peanut*, Soybean* and all other labeled crops
Tropic Croton	*Croton glandulosus*			
Waterhemps[1]				
Common	*Amaranthus rudis*			
Tall	*Amaranthus tuberculatus*			
Wild Poinsettia	*Euphorbia heterophylla*			
Yellow Rocket[4]	*Barbarea vulgaris*			

[1] A postemergence herbicide, including lactofen, or glyphosate (Roundup Ready® soybeans only) may be needed following a pre-emergence application of **Zaltus SX** to adequately control common ragweed or waterhemp in soybean fields with heavy pressure.

[2] Due to differences in crop canopy timing between peanuts and soybeans, use 3 oz./A of **Zaltus SX** in peanuts, regardless of soil type and organic matter content, except in the states of California, North Carolina, Oklahoma and Virginia (refer to the **DIRECTIONS FOR USE IN PEANUT** section of this label). **Zaltus SX** will provide residual control of these weeds at 2 oz./A when applied under a cotton canopy.

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

[4] Except CA.

* Not for use in California.

Table 2. Weeds Suppressed by Residual Activity of Zaltus SX

BROADLEAF WEED SPECIES			
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**OUNCES PER ACRE**
Bristly Starbur	*Acanthospermum hispidum*	Up to 5%	2 to 3
Copperleaf, Hophornbeam	*Acalypha ostryifolia*		
Ragweed, Giant	*Ambrosia trifida*		
Russian Thistle	*Salsola iberica*		
Smartweeds			
Ladysthumb	*Polygonum persicaria*		
Pennsylvania	*Polygonum pensylvanicum*		
Smellmelon[1]	*Cucumis melo*		
Velvetleaf	*Abutilon theophrasti*		
Wild Buckwheat	*Polygonum convolvulus*		
Wormwood, Biennial	*Artemisia biennis*		
GRASS WEED SPECIES			
Barnyardgrass	*Echinochloa crus-galli*	Up to 5%	2 to 3
Bluegrass, Annual	*Poa annua*		
Crabgrass, Large	*Digitaria sanguinalis*		
Foxtail, Giant	*Setaria faberi*		
Goosegrass	*Eleusine indica*		
Lovegrass, California	*Eragrostis diffusa*		
Panicums			
Fall	*Panicum dichotomiflorum*		
Texas	*Panicum texanum*		
Ryegrass, Italian	*Lolium multiflorum*		
Signalgrass, Broadleaf	*Brachiaria platyphylla*		
Cheat	*Bromus secalinus*		1.5 to 3
Downy Brome[1]	*Bromus tectorum*		

[1] Except CA.

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DIRECTIONS FOR USE IN FALL AND SPRING PREPLANT BURNDOWN AND FALLOW SEEDBED PROGRAMS IN FIELD CORN, PEANUT AND SOYBEAN

(Pre-emergence to Crop)

RESTRICTIONS

- **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.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb a.i.) per acre per single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre.
- **DO NOT** make more than one fall burndown and fallow seedbed application per year.
- **DO NOT** make more than one spring burndown application per year.
- **DO NOT** make more than 2 applications per year.

FALL BURNDOWN AND FALLOW SEEDBED PROGRAMS

Zaltus SX, 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. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide (SECTIONS A and B)**; **Table 3. Weeds Controlled by Fall and Spring Preplant Burndown Programs**; and **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**. If weeds have emerged at the time of application, use **Zaltus SX** in combination with a labeled burndown herbicide. **Zaltus SX** 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:

PROGRAM 1[1]	
HERBICIDE	**RATE**
Zaltus SX **Plus**	2 to 3 oz./A
glyphosate **Plus**	0.5 to 1.0 lb. a.i./A
2,4-D LVE (2,4-D for use on preplant soybeans only) **Plus**	0.5 to 1.0 a.i./A
NIS + AMS	0.5% v/v + 17 lbs./100 gals. of water

or

PROGRAM 2[1]	
HERBICIDE	**RATE**
Zaltus SX **Plus**	2 to 3 oz./A
glyphosate **Plus**	0.5 to 1.0 lb. a.i./A
COC[2] **or** NIS + AMS	1 pt./A **or** 0.5% v/v + 17 lbs./100 gals. of water

or

PROGRAM 3[1]	
HERBICIDE	**RATE**
Zaltus SX **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 a.i./A
COC	1 pt./A

[1] The labeled rate of Dicamba can be added to Programs 1, 2 & 3 to assist in the control of emerged broadleaves. Refer to dicamba label for rotational restrictions.

[2] Crop oil concentrate has been found to increase glyphosate burndown of emerged cutleaf eveningprimrose and Carolina geranium.

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

WEEDS CONTROLLED[1]		POSTEMERGENCE			RESIDUAL
COMMON NAME	SCIENTIFIC NAME	PROGRAM 1	PROGRAM 2	PROGRAM 3	
		WEEDS 3 INCHES OR LESS			
Chamomile, False	*Matricaria maritime*	Yes	Yes	No	Yes
Cheatgrass	*Bromus tectorum*	Yes	Yes	No	Yes
Chickweed, Common	*Stellaria media*	Yes	Yes	No	Yes
Chickweed, Mouseear	*Cerastium vulgatum*	Yes	Yes	No	Yes
Cockle, White	*Silene latifolia*	No	Yes	Yes	Yes
Dandelion	*Taraxacum officinale*	Yes	No	Yes[2]	Yes
Deadnettle, Purple	*Lamium purpureum*	Yes	Yes	Yes	Yes
Groundsel, Cressleaf	*Senecio glabellus*	Yes	Yes	-	Yes
Henbit	*Lamium amplexicaule*	Yes	Yes	Yes	Yes
Kochia	*Kochia scoparia*	Yes	Yes	Yes	Yes
Marestail/Horseweed	*Conyza canadensis*	Yes	Yes[3]	Yes	Yes
Mallow, Common	*Malva neglecta*	Yes	Yes	No	Yes
Prickly Lettuce	*Lactuca serriola*	Yes	Yes	Yes	Yes
Wormwood, Biennial	*Artemisia biennis*	Yes	Yes	Yes	Yes
		WEEDS 12 INCHES OR LESS			
Canola, Volunteer	*Brassica napus*	Yes	Yes	Yes	Yes
Carolina Geranium	*Geranium carolinianum*	Yes	Yes	Yes	-
Eveningprimrose, Cutleaf[4]	*Oenothera laciniata*	Yes	Yes	Yes	Yes
Flixweed	*Descurainia sophia*	Yes	Yes	Yes	Yes
Mustard, Tansy	*Descurainia pinnata*	Yes	Yes	Yes	Yes
Mustard, Wild	*Brassica kaber*	Yes	Yes	Yes	Yes
Shepherd's-purse	*Capsella bursa-pastoris*	Yes	Yes	Yes	Yes

[1] Refer to glyphosate and/or 2,4-D labels for additional weeds controlled and rotational restrictions.
[2] Use the labeled rate of 2,4-D LVE for control of emerged dandelion.
[3] Program 2 will not control emerged glyphosate-resistant marestail/horseweed.
[4] Use Program 1 to control cutleaf eveningprimrose that are nearing 12 inches in height or are past the rosette stage. Use Programs 2 or 3 to control cutleaf eveningprimrose that are 12 inches or less and in the rosette stage.

SPRING BURNDOWN PROGRAMS

Zaltus SX 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 **Zaltus SX** 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). **Zaltus SX** cannot be applied after planting field corn.

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

Zaltus SX 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*

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply to frozen or snow-covered soil.
- **DO NOT** perform any tillage operation after application or residual weed control will be reduced.
- A minimum of 30 days must pass, and 1 inch of rainfall/irrigation must occur, between **Zaltus SX** application and planting of conventionally-tilled cotton.
- A minimum of 14 days must pass, and 1 inch of rainfall/irrigation must occur, between **Zaltus SX** application and planting of no-till or strip-till cotton when a **Zaltus SX** rate of 1 oz./A is used and 21 days when a **Zaltus SX** rate of 1.5 to 2 oz./A is used. The field must contain the stubble from the previous crop.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb a.i.) per acre per single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre.
- **DO NOT** make more than one fall burndown application per year.
- **DO NOT** make more than one spring burndown application per year.
- **DO NOT** make more than 2 applications per year.

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Zaltus SX can be used at 1 to 2 oz./A with labeled burndown herbicides to enhance the speed of burndown and increase weed spectrum. **Zaltus SX** 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

Zaltus SX, 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 **Zaltus SX** 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

Zaltus SX, 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, SUNFLOWER, TOBACCO AND WHEAT

(Preplant to Crop)

RESTRICTIONS

- **DO NOT** apply to frozen or snow-covered soil.
- **DO NOT** perform any tillage operation after application or residual weed control will be reduced.
- A minimum of 30 days must pass, and 1 inch of rainfall/irrigation must occur, between **Zaltus SX** application and planting of rice, sorghum, sunflowers, tobacco or wheat. Refer to most restrictive label for minimum interval between application and planting.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre.
- **DO NOT** make more than one fall burndown application per year.
- **DO NOT** make more than one spring burndown application per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb a.i.) per year.

Zaltus SX can be used at 1 to 2 oz./A with labeled burndown herbicides to enhance the speed of burndown and increase weed spectrum. Observe all rotational intervals prior to planting as listed in the **ROTATIONAL RESTRICTIONS** table.

FALL BURNDOWN PROGRAMS

Zaltus SX 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

Zaltus SX 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 RESTRICTIONS** 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

- **DO NOT** apply to frozen or snow-covered soil.
- **DO NOT** perform any tillage operation after application or residual weed control will be reduced.
- **Zaltus SX** 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 cannot be exceeded. **DO NOT** mix **Zaltus SX** with any product containing a label prohibition against such mixing.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb a.i.) per acre per single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre per year.
- **DO NOT** make more than one fall burndown application per year.

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

FALL BURNDOWN PROGRAMS

Zaltus SX 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 **Zaltus SX** application. Refer to most restrictive label for minimum interval between application and planting.

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DIRECTIONS FOR USE IN FALLOW LAND

RESTRICTIONS

- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre per year.
- **DO NOT** make more than one fall fallow field application per year.
- **DO NOT** make more than one spring fallow field application per year.
- **DO NOT** make more than 2 applications per year.

Zaltus SX may be used as a pre-emergence fallow treatment. Weeds controlled by residual activity are listed in **Table 1**.

Zaltus SX, 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 **Zaltus SX** in combination with a labeled fallow herbicide.

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

Zaltus SX, 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 ESTABLISHED ALFALFA

RESTRICTIONS

- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 8 oz. of **Zaltus SX** (0.255 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential **Zaltus SX** application within 60 days of the first **Zaltus SX** application.
- **DO NOT** apply to alfalfa with greater than 6 inches of growth. Application will result in burning of treated leaves and stems.
- **DO NOT** apply within 25 days of harvest or grazing.
- Only apply with an adjuvant or tank mix with products formulated as an emulsifiable concentrate (EC) when targeting control of emerged weeds (crop burn and/or stunting must be expected and accepted if **Zaltus SX** is used with an adjuvant, a tank mix partner formulated as an emulsifiable concentrate (EC) or a tank mix partner formulated with an adjuvant.)
- **DO NOT** use on intended mixed alfalfa-grass stands.
- Application with paraquat can be used to burndown winter annuals prior to winter dormant period.

TIMING TO ALFALFA

Zaltus SX may be applied to established alfalfa with a maximum amount of growth of 6 inches or less for the pre-emergence control of the weeds listed in **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**. Established alfalfa is defined as alfalfa planted in the fall or spring which has gone through a first cutting/mowing. Application to alfalfa with greater than 6 inches of growth may result in unacceptable crop injury.

For control of winter annual weeds: the best timing for pre-emergence control is in the fall immediately after the last cutting or sheeping-off has occurred.

For control of summer annual weeds: the best timing for pre-emergence control is in the spring prior to alfalfa growth and before 6 inches of growth.

TIMING TO WEEDS

Pre-emergence - Pre-emergence to Weeds

Apply **Zaltus SX** before alfalfa growth exceeds 6 inches in height for the pre-emergence control of weeds listed in **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**. Make applications as soon as possible after cutting and removing alfalfa to minimize injury to alfalfa growth.

Postemergence Dodder Suppression*

Apply **Zaltus SX** at 4 oz. per acre with an adjuvant for postemergence suppression of dodder. Tank mixes with imazethapyr, ammonium salt or imazamox will increase control.

*Not for use in California.

DIRECTIONS FOR USE IN ARTICHOKE

RESTRICTIONS

- **DO NOT** apply more than 4 oz./A of **Zaltus SX** (0.128 lb. a.i.) per acre during a single application on annual or perennial artichoke varieties after new planting.
- **DO NOT** apply more than 6 oz./A of **Zaltus SX** (0.191 lb. a.i.) per acre during a single application on perennial artichoke varieties after cutback.
- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- Application to artichoke foliage may result in unacceptable crop injury.

TIMING TO ARTICHOKE

Annual Varieties: Zaltus SX may be applied to artichoke beds prior to transplanting. Application of **Zaltus SX** must be made to the beds no later than 2 days prior to transplanting. Irrigation or rainfall after transplanting is necessary to activate **Zaltus SX**. **DO NOT** irrigate the **Zaltus SX** before transplanting. Heavy irrigation or rainfall may result in crop injury. The injury is usually transitory and the plants will quickly grow out of the crop damage. Take care to minimize soil disturbance during transplanting, as pre-emergence weed control will decrease as soil disturbance increases.

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Perennial Varieties: Zaltus SX may be applied to artichokes after planting of crown pieces of "cut back" of mature plants. Applications of **Zaltus SX** must be made within 2 days after planting or cut back and prior to artichoke emergence. Application after the artichokes have begun to crack, or are emerged, will result in crop injury. Application may not be made when artichokes have begun to emerge (cracking).

TIMING TO WEEDS

Preplant (annual)/Pre-emergence (perennial) to Artichokes - Pre-emergence to Weeds

Apply **Zaltus SX** preplant to annual artichokes for pre-emergence control of the weeds. For perennial artichokes apply before cracking for pre-emergence control of weeds. Make application prior to weed emergence. A post-emergence herbicide may be necessary to control emerged weeds. **Zaltus SX** may be applied to annual or perennial artichokes as specified above for pre-emergence control of weeds listed in **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**.

DIRECTIONS FOR USE IN ESTABLISHED ASPARAGUS

RESTRICTIONS

- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- Apply only to dormant asparagus no less than 14 days before spears emerge. Application to non-dormant asparagus may result in unacceptable crop injury.
- **DO NOT** work soil within 60 days prior to application in the spring. Soil can be worked after spear harvest in preparation for **Zaltus SX** application prior to fern emergence. Treated soil that is splashed onto the ferns may result in spotting.

TIMING TO ASPARAGUS - Dormant

Zaltus SX may be applied to dormant asparagus for pre-emergence control of the weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**. Application to non-dormant asparagus will result in unacceptable crop injury. Make applications no less than two weeks prior to spear emergence and must be sprinkler or rainfall incorporated with 0.5 to 0.75 inches of water or some scoring may result.

TIMING TO ASPARAGUS - Post Harvest

Apply **Zaltus SX** after the final harvest of the season, but prior to fern emergence, for pre-emergence control of the weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**. Application after fern emergence will result in unacceptable crop injury. Apply no less than two weeks prior to fern emergence and must be sprinkler or rainfall incorporated with 0.5 to 0.75 inches of water. Add a burndown tank mix partner for the control of emerged weeds labeled for asparagus in accordance with the most restrictive labeled limitations and precautions.

TIMING TO WEEDS

Burndown - Dormant Asparagus, Postemergence to Weeds

Zaltus SX may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where asparagus is dormant. For control of emerged weeds, tank mix **Zaltus SX** with paraquat. Refer to paraquat label for specified rate and application parameters. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. **Zaltus SX** tank mixes applied to assist in the control of emerged weeds must be applied with a non-ionic surfactant at 0.25% v/v. 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.

Burndown - After Last Harvest of Season, Postemergence to Weeds

Use **Zaltus SX** for residual weed control and to assist in postemergence burndown for many annual and perennial weeds where asparagus harvest has been completed for the year. For control of emerged weeds, use a labeled tank mix partner with activity on the emerged weeds.

Pre-emergence - Dormant Asparagus or After Last Harvest of Season, Pre-emergence to Weeds

Apply **Zaltus SX** to dormant asparagus for the pre-emergence control of weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**.

DIRECTIONS FOR USE ON CACTUS (PRICKLY PEAR)*

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- Use a maximum **Zaltus SX** rate of 6 oz./A (0.191 lb. a.i.) per application on any soil that has a sand plus gravel content over 80% if plants are less than 3 years of age.
- **DO NOT** make a sequential 6 oz./A (0.191 lb. a.i.) application of **Zaltus SX** within 60 days of the first 6 oz./A (0.191 lb. a.i.) **Zaltus SX** application.
- **DO NOT** apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- **DO NOT** mow treated areas. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- **DO NOT** apply within 60 days prior to harvest.
- **DO NOT** apply to plants established less than one year.

PRECAUTIONS

- Raise mower height during all mowing to reduce dust. Dust created by mowing can drift onto desirable vegetation resulting in injury.
- Follow the most restrictive label limitations and precautions of the tank mix product(s) being used.
- Avoid direct or indirect spray contact to foliage.

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Apply **Zaltus SX** as a uniform broadcast application to the plantation floor or as a uniform band directed at the base of the cactus. The preferred application timing for **Zaltus SX** is in the fall to maximize the potential for rainfall to activate and set the herbicide. **DO NOT** apply over the top of crop or allow spray to come in contact with crop as a result of application or drift.

Pre-emergence Application

Apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) of **Zaltus SX** per broadcast acre as a pre-emergence application. **Zaltus SX** applications must be made prior to weed emergence for control of weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**. Make pre-emergence (to weed emergence) applications of **Zaltus SX** to a weed-free soil surface. Pre-emergence application of **Zaltus SX** must be completed prior to weed emergence. Moisture is necessary to activate **Zaltus SX** on soil for residual weed control. Dry weather following application of **Zaltus SX** may reduce effectiveness. However, when adequate moisture is received after dry conditions, **Zaltus SX** will control susceptible germinating weeds.

Postemergence Application

Apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) of **Zaltus SX** 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 **Zaltus SX** activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of **Zaltus SX**.

Refer to **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide** for weeds controlled by the residual activity of **Zaltus SX**. **Zaltus SX** may be tank mixed with a labeled burndown herbicide for control of the emerged weeds.

Residual weed control will be reduced if vegetation prevents the **Zaltus SX** from reaching the soil surface. If vegetation is heavy, it is advised to use a burndown herbicide with **Zaltus SX** and make a sequential **Zaltus SX** application prior to the emergence of new weeds.

Carrier Volume and Spray Pressure

To ensure thorough coverage in burndown applications, use a minimum of 15 gallons of spray solution per acre. Use higher gallonage if dense vegetation or heavy crop residue is present.

Nozzle selection must meet manufacturer's gallonage and pressure specifications.

Banded Application

Rates listed in **Table 13. Weeds Controlled by Postemergence Activity of Zaltus SX Tank Mixes**, refer to a broadcast application covering the entire acre. Refer to the **BAND APPLICATION** table in **USE INFORMATION** section to calculate amount needed per acre when making a banded application.

DIRECTIONS FOR USE IN CELERY

RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a pre-transplant application.
- In the state of California, use as a pre-transplant application only.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a post-transplant application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** use with an adjuvant.
- Post transplant applications must be made between 3 to 7 days following transplanting.
- **DO NOT** apply as part of a tank mix.

TIMING TO CELERY

Apply **Zaltus SX** at 3 oz./A prior to transplanting, or between 3 and 7 days following transplanting, for pre-emergence control of the weeds listed in **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide**.

TIMING TO WEEDS

Use **Zaltus SX** prior to weed emergence for residual control.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Zaltus SX, when applied according to label use directions, will control the weeds listed in Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide. This label makes no claims concerning control of other weed species.

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DIRECTIONS FOR USE IN CLOVER

For Use in Idaho, Oregon and Washington Only

RESTRICTIONS

- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** apply within 25 days of harvest or grazing.
- **DO NOT** apply to clover with greater than 6 inches of growth. Application will result in burning of treated leaves and stems.
- **DO NOT** use on intended mixed clover-grass stands.

PRECAUTIONS

- Only apply with an adjuvant or tank mix with products formulated as an emulsifiable concentrate "EC" when targeting control of emerged weeds (expect and accept crop may be burned and/or stunting when applying tank mixes of **Zaltus SX** with an adjuvant).
- Application with paraquat can be used to burndown winter annuals prior to winter dormant period.
- Application to clover with greater than 6 inches of growth may result in unacceptable crop injury.

TIMING TO CLOVER

Zaltus SX may be applied to established clover with a maximum amount of growth of 6 inches or less for the pre-emergence control of the weeds listed in **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**. Established clover is defined as clover planted in the fall or spring which has gone through a first cutting/mowing.

For control of winter annual weeds: the best timing for pre-emergence control is in the fall immediately after the last cutting or sheeping-off has occurred.

For control of summer annual weeds: the best timing for pre-emergence control is in the spring prior to clover growth and before 6 inches of growth.

TIMING TO WEEDS

Pre-emergence - Pre-emeergence to Weeds

Apply **Zaltus SX** before clover growth exceeds 6 inches in height for the pre-emergence control of weeds listed in **Table 7. Weeds Controlled by Residual Activity of Zaltus SX**. Make applications as soon as possible after cutting and removing clover to minimize injury to clover growth.

Postemergence Dodder Suppression

Apply **Zaltus SX** at 4 oz. per acre with an adjuvant for postemergence suppression of dodder. Tank mixes with imazethapyr, ammonium salt or imazamox will increase control.

DIRECTIONS FOR USE IN COTTON

RESTRICTIONS

- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential **Zaltus SX** application within 30 days of the first **Zaltus SX** application.
- **DO NOT** apply within 60 days of harvest.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL PERFORMANCE

Hooded, Shielded and Layby Application

For best results, apply **Zaltus SX** to actively growing weeds within the growth stages indicated in this label. Applying **Zaltus SX** under conditions that **DO NOT** promote active weed growth will reduce herbicide effectiveness. **DO NOT** apply **Zaltus SX** 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. **Zaltus SX** is most effective when applied under sunny conditions at temperatures above 65°F.

Zaltus SX is rainfast one hour after application. Applications must 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, apply **Zaltus SX** 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 **Zaltus SX**. Weeds that are controlled through residual activity of **Zaltus SX** are listed in **Table 1**. Weeds that are suppressed by residual activity of **Zaltus SX** are listed in **Table 2**.

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Table 4. Emerged Broadleaf Weeds Controlled by Hooded, Shielded and Layby Application of Zaltus SX Tank Mixes with Glyphosate or MSMA in Cotton

BROADLEAF WEED SPECIES		
COMMON NAME	**SCIENTIFIC NAME**	**WEED HEIGHT (inches) 2 OZ./A**
Bindweed, Field[1]	*Convolvulus arvensis*	4
Carpetweed	*Mollugo verticillata*	4
Chickweed, Common	*Stellaria media*	4
Cocklebur, Common	*Xanthium strumarium*	4
Florida Beggarweed	*Desmodium tortuosum*	2
Hemp Sesbania	*Sesbania exaltata*	6
Jimsonweed	*Datura stramonium*	4
Lambsquarters, Common	*Chenopodium album*	4
Morningglories		
Entireleaf	*Ipomoea hederacea* var. *integriuscula*	4
Ivyleaf	*Ipomoea hederacea*	4
Pitted	*Ipomoea lacunose*	4
Red	*Ipomoea coccinea*	4
Tall	*Ipomoea purpurea*	2
Mustard, Wild	*Brassica kaber*	6
Nightshades		
Black	*Solanum nigrum*	4
Eastern Black	*Solanum ptycanthum*	4
Hairy	*Solanum sarrachoides*	4
Pigweeds		
Palmer Amaranth	*Amaranthus palmeri*	4
Redroot	*Amaranthus retroflexus*	4
Smooth	*Amaranthus hybridus*	4
Plaintain, Broadleaf	*Plantago major*	6
Prickly Sida (Teaweed)	*Sida spinosa*	4
Purslane, Common	*Portulaca oleracea*	2
Ragweeds		
Common	*Ambrosia artemisiifolia*	2
Giant	*Ambrosia trifida*	4
Rice Flatsedge	*Cyperus iria*	2
Sicklepod	*Senna obtusifolia*	4
Smartweeds		
Ladysthumb	*Polygonum persicaria*	4
Pale	*Polygonum lapathifolium*	4
Pennsylvania	*Polygonum pensylvanicum*	4
Spotted Spurge	*Euphorbia maculata*	4
Velvetleaf	*Abutilon theophrasti*	4
Venice Mallow	*Hibiscus trionum*	2
Waterhemps		
Common	*Amaranthus rudis*	2
Tall	*Amaranthus tuberculatus*	2

[1] **Zaltus SX** 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 must meet manufacturer's gallonage and pressure specifications for application method being used. **DO NOT** use "Flood Jet" nozzles, as they tend to increase the chance of crop injury.

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ADDITIVES

Hooded, Shielded and Layby Application

Weed control from hooded, shielded or layby application of **Zaltus SX** 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. Verify mixing compatibility qualities by a jar test. **The use of crop oil concentrates, methylated seed oils, organo-silicate surfactants or products containing these ingredients, may result in severe crop injury and must not be used.**

APPLICATION EQUIPMENT

Apply **Zaltus SX** tank mixes with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. Use only application equipment that is clean and in good repair. Nozzles must meet manufacturer's specifications for spray pattern and placement on spray boom and must be checked frequently for accuracy.

TIMING TO COTTON

Hooded and Shielded Application

Zaltus SX 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 **Zaltus SX** 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 **Zaltus SX** applications. **Zaltus SX** application must be directed to the lower 2 inches of the cotton stem to avoid crop injury.

TIMING TO WEEDS

Zaltus SX tank mix application must be made to weeds within the height range given in **Table 4**.

TANK MIXES

Zaltus SX 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 Zaltus SX 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[1]
MSMA	Annual Grasses Yellow Nutsedge	X	X

[1] For use only in cotton with the Roundup Ready gene.

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DIRECTIONS FOR USE ON TRANSPLANTED MELON, PEPPER AND TOMATO BEDS*

For use in the states of Arizona and Hawaii only

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

Many weather related factors, including high wind or heavy rains or cool conditions at or near crop transplanting, may result in crop injury in fields treated with **Zaltus SX**. On occasion this has resulted in a delay in maturity.

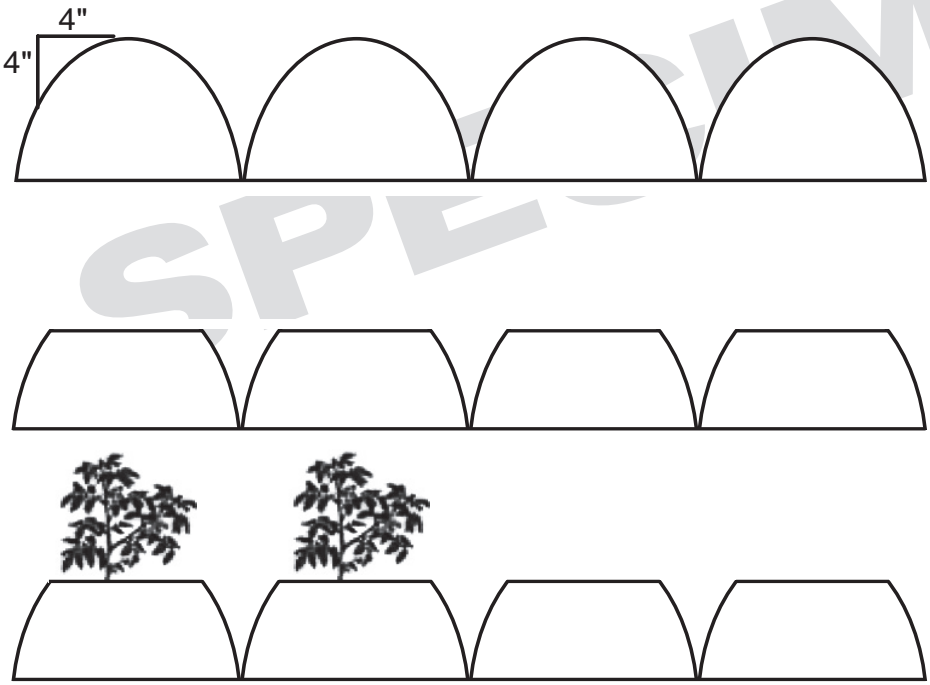
TIMING TO CROP

Zaltus SX Fallowbed Use Prior to Transplanting

ZALTUS SX RATES	ADJUVANT	GPA	TRANSPLANTING INTERVAL
4 oz./A	Required by burndown tank mix partner	Ground - 20 to 40	2 Months
Application Method: Apply with a burndown herbicide labeled for the control of emerged weeds. **Zaltus SX**, when used alone, will not provide satisfactory control of emerged weeds.			

USE RESTRICTIONS FOR PRE-EMERGENCE FALLOWBED WEED CONTROL PRIOR TO TRANSPLANTING

- Always read and follow all label directions when using any pesticide alone or in tank mix combinations.
- The top 4 inches of the bed, from a horizontal and vertical perspective, where the crop will be transplanted, must be removed prior to transplanting.
- Use only healthy transplants. **DO NOT** use on direct seeded crops.
- This use pattern makes no claim for in-season weed control after the beds have been disturbed.
- **DO NOT** apply when weather conditions favor spray drift.



Beds are formed and **Zaltus SX** is applied with a burndown herbicide.

A minimum of 2 months after **Zaltus SX** application, the tops of the beds are removed and the soil from the tops of the beds is placed in the area between the beds.

Crops are transplanted into beds.

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DIRECTIONS FOR USE IN DRY BEANS

Dried cultivars of bean *(Lupinus)*; bean *(Phaseolus)* (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean *(Vigna)* (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean and lentil

WEED SUPPRESSION

RESTRICTIONS

- In Arizona, California, Colorado, Hawaii, Idaho, Nebraska, Oregon, Washington **DO NOT** apply more than 1.5 oz. of **Zaltus SX** (0.048 lb. a.i.) per acre during a single application to dry beans; however up to 2.0 oz. (0.064 lb. a.i.) per acre may be applied to chickpea (garbanzo beans) in these states. For all other states, **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre during a single application.
- In Arizona, California, Colorado, Hawaii, Idaho, Nebraska, Oregon, Washington **DO NOT** apply more than 1.5 oz. of **Zaltus SX** (0.048 lb. a.i.) per acre per year to dry beans; however up to 2.0 oz. (0.064 lb. a.i.) per acre per year may be applied to chickpea (garbanzo beans) in these states. For all other states, **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

Many weather-related factors, including high wind, splashing or heavy rains or cool conditions at or near crop emergence, may result in dry bean injury in fields treated with Zaltus SX. On occasion this has resulted in a delay in maturity.

TIMING TO DRY BEAN

Zaltus SX may be applied to dry beans within 2 days after planting for the pre-emergence suppression of the weeds listed in **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide** or **Table 8. Weeds Suppressed by Residual Activity of Zaltus SX at 1.5 oz./A**. **Zaltus SX** may be tank mixed with other labeled herbicides for broad spectrum weed control.

TIMING TO WEEDS

Zaltus SX may be applied to dry beans prior to planting or pre-emergence (after planting). Pre-emergence application of **Zaltus SX** must be made within 2 days after planting and prior to dry bean emergence. To avoid severe crop injury, **DO NOT** apply to dry beans after beans begin to crack or have emerged.

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

ADDITIONAL RESIDUAL GRASS CONTROL

Zaltus SX can be tank mixed with pendimethalin for additional grass control.

HARVEST AID* RESTRICTIONS

***NOT FOR USE IN CALIFORNIA**

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** harvest within 5 days of application.

Desiccation from **Zaltus SX** 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 2% v/v. 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 **Zaltus SX** with glyphosate or paraquat will increase control or 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 must meet manufacturer's gallonage and pressure specifications for postemergence application.

DIRECTIONS FOR USE IN FIELD CORN

RESTRICTIONS

- 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 **Zaltus SX** (0.096 lb. a.i.) per acre per single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** irrigate between emergence and 2-leaf corn.
- **DO NOT** use on popcorn, sweet corn or corn grown for seed.

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TIMING TO FIELD CORN

- Apply **Zaltus SX**, 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 Zaltus SX Herbicide**.
- Apply **Zaltus SX** 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 **Zaltus SX** at 3 oz./A between 14 and 30 days prior to planting field corn.

Burndown Use Directions - For Preplant Applications in Field Corn

Zaltus SX, 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, **Zaltus SX** 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 directed application pressure and directed adjuvant systems.

INCREASING SPEED OF GLYPHOSATE BURNDOWN ACTIVITY

Zaltus SX, at 1 oz./A, may be tank mixed with glyphosate 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 **Zaltus SX** rates as low as 1 oz./A. Applications of **Zaltus SX** at 1 oz./A must be made a minimum of 14 days prior to planting field corn.

TANK MIXES

Zaltus SX may be tank mixed with the herbicides listed in **Table 6** for preplant burndown applications. Refer to tank mix partner's label for adjuvant directions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

TANK MIX PARTNERS[1]	
2,4-D ethylhexyl ester	metribuzin
atrazine	paraquat
clopyralid + flumetsulam	rimsulfuron
dicamba	simazine
dicamba dimethylamine salt + 2,4-D dimethylamine salt	thifensulfuron + rimsulfuron
flumetsulam	tribenuron-methyl
glyphosate	

[1] Refer to tank mix product labels for specific directions.

TANK MIX RESTRICTIONS

Tank mixes with flufenacet, metolachlor or s-metolachlor, dimethenamid or dimethenamid-p, alachlor, or acetochlor may result in injury to field corn when application is followed by prolonged periods of cool wet weather and must not be used with **Zaltus SX** Herbicide.

DIRECTIONS FOR USE IN FIELD PEAS*

*NOT FOR USE IN CALIFORNIA

WEED CONTROL RESTRICTIONS

- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

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 Zaltus SX. On occasion this has resulted in a delay in maturity.

TIMING TO FIELD PEAS

Zaltus SX may be applied to field peas within 2 days after planting for the pre-emergence control of the weeds listed in **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide** or **Table 8. Weeds Suppressed by Residual Activity of Zaltus SX at 1.5 oz./A**. Tank mix **Zaltus SX** with other labeled herbicides for broad spectrum weed control.

TIMING TO WEEDS

Zaltus SX may be applied to field peas prior to planting or pre-emergence (after planting). Pre-emergence application of **Zaltus SX** 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

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

HARVEST AID RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** harvest within 5 days of application.

Desiccation from **Zaltus SX** 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 **Zaltus SX** with glyphosate will increase control of emerged weeds and aid in harvest.

TIMING TO FIELD PEAS

Apply **Zaltus SX**, 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 **Zaltus SX** 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 specifications for postemergence application.

DIRECTIONS FOR USE IN FLAX*

***NOT FOR USE IN CALIFORNIA**

HARVEST AID RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** harvest within 5 days of application.

Desiccation from **Zaltus SX** 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.

TIMING TO FLAX

Apply **Zaltus SX**, 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 specifications for postemergence application.

DIRECTIONS FOR USE IN GARLIC

RESTRICTIONS

- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

TIMING TO GARLIC

Zaltus SX may be applied, at 6 oz./A, to garlic prior to garlic emergence. Apply within 3 days after planting garlic.

TIMING TO WEEDS

Pre-emergence - Pre-emergence to Weeds

Apply **Zaltus SX** to weed free garlic for pre-emergence control of the weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**.

DIRECTIONS FOR USE IN HOPS*

***NOT FOR USE IN CALIFORNIA OR NEW YORK**

RESTRICTIONS

- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 6 oz. of **Zaltus SX** (0.191 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** allow spray to contact green stem (unless used for sucker control), foliage, flowers or cones or unacceptable injury may occur.
- **DO NOT** apply within 30 days of harvest.
- **DO NOT** use with an adjuvant.

Zaltus SX can be used in hops for pre-emergence weed control as well as sucker control.

TIMING TO HOPS FOR SUCKER CONTROL

Apply **Zaltus SX** at 6 oz./A as a directed application after hops have reached a minimum of 6 feet in height for sucker control. Direct application to the lower 2 feet of the hops.

TIMING TO HOPS FOR PRE-EMERGENCE WEED CONTROL

Apply **Zaltus SX** at 6 oz./A as a 1 to 1.5 foot band to each side of the hop row, to dormant hops January through March to ensure time for rain incorporation and activation. If weeds are emerged at the time of application, tank mix **Zaltus SX** with a labeled burndown herbicide such as paraquat or glyphosate to assist with control of emerged weeds. **DO NOT** mow or rake over treated areas, as dust created by mowing may drift onto sensitive crops or vegetation resulting in injury.

TIMING TO WEEDS

Zaltus SX applications must be made prior to weed emergence for control of weeds listed in **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX**.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Zaltus SX, when applied according to label use directions, will control the weeds listed in Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX. This label makes no claims concerning control of other weed species.

DIRECTIONS FOR USE IN LENTILS*

***NOT FOR USE IN CALIFORNIA**

HARVEST AID RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** harvest within 5 days of application.

Desiccation from **Zaltus SX** 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 **Zaltus SX** with glyphosate or paraquat will increase control of emerged weeds and aid in harvest.

TIMING TO LENTILS

Apply **Zaltus SX**, 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 **Zaltus SX** 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 specifications for postemergence application.

DIRECTIONS FOR USE IN MINT

(Peppermint and Spearmint)

RESTRICTIONS

- **DO NOT** apply more than 4 oz. of **Zaltus SX** (0.128 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 8 oz. of **Zaltus SX** (0.255 lb. a.i.) per acre per year.
- **DO NOT** apply more than 2 applications per year.
- **DO NOT** make a sequential **Zaltus SX** application within 60 days of the first **Zaltus SX** application.
- Apply only to dormant mint. Application to non-dormant mint may result in unacceptable crop injury.
- **DO NOT** apply within 80 days of harvest.

To avoid crop injury:

- **DO NOT** apply to stands established longer than 3 years.
- **DO NOT** apply if roots and rhizomes are weak, thin or damaged.
- **DO NOT** apply **Zaltus SX** on mint in Southern Union County (south Ladd Canyon) or Baker County in Oregon.
- **DO NOT** apply to row or baby mint, use only on established meadow mint.
- **DO NOT** apply to mint that has been weakened by diseases, insects (example mint root borer), nematodes, drought, soil salts, high soil pH, previous pesticides, winter injury or double cutting, as severe injury may occur. Apply only to healthy vigorous mint with undamaged rhizomes.
- **DO NOT** apply before November 25 or after March 1.

Many weather related factors, including high wind, splashing or heavy rains or cool conditions at or near mint emergence, may result in mint injury in fields treated with Zaltus SX.

Tank mixes with labeled rates of paraquat are advised to control emerged weeds and increase crop safety.

TIMING TO MINT

As a spray, **Zaltus SX** may be applied only to established, dormant mint for pre-emergence control of the weeds listed in **Table 7** as well as to assist in the postemergence control of emerged weeds. Application to non-dormant mint or to baby (row) mint (time from planting of mint roots through the first cutting), may result in unacceptable crop injury. As a bulk fertilizer application, **Zaltus SX** may be applied at least 80 days prior to harvest. Leaves must be dry at the time of applications or severe injury may occur.

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TIMING TO WEEDS

Burndown - Postemergence To Weeds

Zaltus SX may be used for residual weed control, as well as to assist in postemergence burndown of many annual and perennial weeds where established mint is dormant. For control of emerged weeds, tank mix **Zaltus SX** with paraquat. Refer to paraquat label for specified rate and application parameters. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. **Zaltus SX** tank mixes applied to assist in the control of emerged weeds must be applied with a non-ionic surfactant at 0.25% v/v. 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.

Pre-emergence - Dormant Mint, Pre-emergence To Weeds

Apply **Zaltus SX** to dormant mint for the pre-emergence control of weeds listed in **Table 7**. Fall application of **Zaltus SX**, followed by a sequential application in the Spring has resulted in better Summer annual weed control than a single Fall or single Spring application.

Fall application is most effective for Fall germinating weeds, for example groundsel. Fields plowed or harrowed after a **Zaltus SX** application will result in less effective pre-emergence activity. In furrow-irrigated fields, corrugating that is done after a **Zaltus SX** application will expose untreated soil and break the herbicide barrier, resulting in poor weed control.

Table 7. Weeds Controlled by Residual Activity of Zaltus SX

BROADLEAF WEED SPECIES				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Bristly Starbur	*Acanthospermum hispidum*	Up to 5%	All Soil Types	4 oz./A
Carpetweed	*Mollugo verticillata*			
Chickweeds				
Common	*Stellaria media*			
Mouseear	*Cerastium vulgatum*			
Coffee Senna	*Cassia occidentalis*			
Copperleaf, Hophornbeam	*Acalypha ostryifolia*			
Dandelion	*Taraxacum officinale*			
Dodder (suppression only)[1,2]	*Cuscuta* spp.			
Eclipta	*Eclipta prostrata*			
Eveningprimrose, Cutleaf	*Oenothera laciniata*			
False Chamomile[2]	*Tripleurospermum maritima*			
Fiddleneck, Coast[2]	*Amsinckia menziesii*			
Field Pennycress[2]	*Thlaspi arvense*			
Fleabane, Hairy[2]	*Conyza bonariensis*			
Flixweed[2]	*Descurainia sophia*			
Florida Beggarweed	*Desmodium tortuosum*			
Florida Pusley	*Richardia scabra*			
Golden Crownbeard	*Verbesina encelioides*			
Groundsel, Common	*Senecio vulgaris*			
Hairy Indigo	*Indigofera hirsuta*			
Hemp Sesbania	*Sesbania exaltata*			
Henbit	*Lamium amplexicaule*			
Jimsonweed	*Datura stramonium*			
Kochia	*Kochia scoparia*			
Lambsquarters, Common	*Chenopodium album*			
Little Mallow	*Malva parviflora*			
London Rocket[2]	*Sisymbrium irio*			
Marestail/Horseweed	*Conyza Canadensis*			
Mayweed/False Chamomile[2]	*Matricaria maritima*			
Morningglories				
Entireleaf	*Ipomoea hederacea* var. *integriuscula*			
Ivyleaf	*Ipomoea hederacea*			
Red/Scarlet	*Ipomoea coccinea*			
Smallflower	*Jacquemontia tamnifolia*			
Tall	*Ipomoea purpurea*			
Mustard				
Tansy[2]	*Descurainia pinnata*			
Tumble[2]	*Sisymbrium altissimum*			
Wild	*Brassica kaber*			

(continued)

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

BROADLEAF WEED SPECIES *(continued)*				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Nettle, Burning[2]	*Urtica urens*	Up to 5%	All Soil Types	4 oz./A
Nightshades				
Black	*Solanum nigrum*			
Eastern Black	*Solanum ptycanthum*			
Hairy	*Solanum sarrachoides*			
Pigweeds				
Palmer Amaranth	*Amaranthus palmeri*			
Redroot	*Amaranthus retroflexus*			
Smooth	*Amaranthus hybridus*			
Spiny Amaranth	*Amaranthus spinosus*			
Tumble	*Amaranthus albus*			
Prickly Lettuce (China Lettuce)	*Lactuca serriola*			
Prickly Sida (Teaweed)	*Sida spinosa*			
Sowthistle, Prickly[2]	*Sonchus asper*			
Puncturevine	*Tribulus terrestris*			
Purslane				
Common	*Portulaca oleracea*			
Horse[2]	*Trianthema portulacastrum*			
Radish, Wild	*Raphanus raphanistrum*			
Ragweed, Common	*Ambrosia artemisiifolia*			
Redmaids	*Calandrinia ciliata* var. *menziesii*			
Russian Thistle	*Salsola iberica*			
Shepherd's Purse	*Capsella bursa-pastoris*			
Smartweeds				
Ladysthumb	*Polygonum persicaria*			
Pennsylvania	*Polygonum pensylvanicum*			
Smellmelon[2]	*Cucumis melo*			
Spotted Spurge	*Euphorbia maculata*			
Spurred Anoda	*Anoda cristata*			
Tropic Croton	*Croton glandulosus*			
Velvetleaf	*Abutilon theophrasti*			
Venice Mallow	*Hibiscus trionum*			
Waterhemps				
Common	*Amaranthus rudis*			
Tall	*Amaranthus tuberculatus*			
White Cockle[2]	*Silene latifolia*			
Wild Poinsettia	*Euphorbia heterophylla*			
Wormwood, Biennial	*Artemisia biennis*			
Yellow Rocket[2]	*Barbarea vulgaris*			

(continued)

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

GRASS WEED SPECIES				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Barnyardgrass	*Echinochloa crus-galli*	Up to 5%	All Soil Types	4 oz./A
Bluegrass, Annual	*Poa annua*			
Crabgrass, Large	*Digitaria sanguinalis*			
Foxtail, Giant	*Setaria faberi*			
Goosegrass	*Eleusine indica*			
Lovegrass, California	*Eragrostis diffusa*			
Panicums				
Fall	*Panicum dichotomiflorum*			
Texas	*Panicum texanum*			
Ryegrass, Italian[2]	*Lolium multiflorum*			
Signalgrass, Broadleaf	*Brachiaria platyphylla*			

[1] **Zaltus SX** at 4 oz./A will provide postemergence dodder suppression when applied in combination with imazethapyr, ammonium salt or imazamox at labeled rates. The use of imazethapyr, ammonium salt and imazamox require the use of a NIS, which will result in burn and stunting of alfalfa. Growers must expect and accept this prior to using this tank mix.
[2] Except CA.

DIRECTIONS FOR USE IN ONION (DRY BULB)

For Use in the States of Michigan, New York, North Dakota and Wisconsin Only

RESTRICTIONS

- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 6 applications per year at the 0.5 oz rate.
- **DO NOT** make sequential application within 14 days of the first application.
- **DO NOT** apply within 45 days of harvest.
- **DO NOT** apply more than 1 oz. of **Zaltus SX** (0.032 lb. a.i.) per year on soils that contain greater than 90% sand plus gravel.
- **DO NOT** apply as part of a tank mix, other than with pendimethalin, or unacceptable injury may result. Other formulations of pendimethalin must not be tank mixed with **Zaltus SX** for use in onions.
- **DO NOT** apply with any type of adjuvant.

Use of Zaltus SX may result in necrotic spotting of onion leaves that come in contact with the spray.

Microrate Application

Sequential applications of **Zaltus SX** may be applied to onions (dry bulb), between the 2-leaf and 6-leaf stage, at rates of 0.5 to 1 oz./A, on a 7 day interval.

TIMING TO ONIONS (dry bulb)

Apply **Zaltus SX** to transplanted onions (dry bulb) between the 2-leaf and 6-leaf stage and on direct seed onions (dry bulb) between the 3-leaf and 6-leaf stage.

TIMING TO WEEDS

Pre-emergence - Emerged Onions (dry bulb), Pre-emergence To Weeds

Apply **Zaltus SX** to weed free onions (dry bulb) for pre-emergence control of the weeds listed in **Table 1, SECTION A**.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Zaltus SX, when applied according to label use directions, will control the weeds listed in Table 1.

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CHEMIGATION

Zaltus SX may be applied through sprinkler irrigation systems in onions (dry bulb). Follow all label directions for these 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 **Zaltus SX** applied corresponds to the specified rate.

Apply **Zaltus SX** 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, contact your State Extension Service Specialist, equipment manufacturers or other experts.

Chemigation Restrictions

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 if 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, for example 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, discharge the water from the public water system 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 **Chemigation Restrictions**.

DIRECTIONS FOR USE IN PEANUT*

*NOT FOR USE IN CALIFORNIA

RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per single acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** irrigate when peanuts are cracking.
- **DO NOT** graze treated fields or feed treated hay to livestock.
- In California, refer to the section **DIRECTIONS FOR USE IN FALL AND SPRING PREPLANT BURNDOWN AND FALLOW SEEDBED PROGRAMS IN FIELD CORN, PEANUT AND SOYBEAN** on this label.
- **DO NOT** apply more than 2 oz./A (0.064 lb. a.i.) in the states of North Carolina, Oklahoma or Virginia where climatic conditions may result in unacceptable injury to peanuts except as described in the **NORTH CAROLINA, OKLAHOMA AND VIRGINIA ONLY - PRE-EMERGENCE APPLICATION IN PEANUT** section below.

PRECAUTIONS

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 Zaltus SX. 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 **Zaltus SX** may be reduced.

TIMING TO PEANUTS

Zaltus SX may be applied to peanuts prior to planting or pre-emergence (after planting). Pre-emergence applications of **Zaltus SX** 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 must not be made when peanuts have begun to crack. Select **Zaltus SX** rate from **Table 1** according to anticipated weed spectrum.

TIMING TO WEEDS

Burndown - Pre-emergence to Peanuts, Postemergence to Weeds

Zaltus SX, 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 **Zaltus SX** before planting, during planting or after planting, but before the crop emerges. For control of emerged weeds, tank mix **Zaltus SX** with glyphosate. Refer to glyphosate label for specified rate and application pressure. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. **Zaltus SX** tank mixes applied to assist in the control of emerged weeds must be applied with an adjuvant, including 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.

Pre-emergence (conventional tillage) application of **Zaltus SX** must be applied prior to weed emergence.

ADDITIONAL RESIDUAL GRASS CONTROL: SEQUENTIAL

Zaltus SX may be applied sequentially following a preplant incorporated application of trifluralin (states of New Mexico, Oklahoma and Texas only), ethalfluralin, metolachlor, pendimethalin or dimethenamid.

ADDITIONAL RESIDUAL GRASS CONTROL: TANK MIXED

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

NORTH CAROLINA, OKLAHOMA AND VIRGINIA ONLY - PRE-EMERGENCE APPLICATION IN PEANUT

DO NOT apply more than 2 oz./A in these states where climactic conditions may result in unacceptable injury to peanuts, except as described below.

Zaltus SX, at 3 oz. (0.096 lb a.i.) per acre, can be applied within 2 days of planting to control common ragweed, tropic croton and entireleaf, ivyleaf and tall/scarlet morningglories. Cool temperatures near emergence (2 consecutive nighttime lows in the 50's F) in combination with heavy rainfall may result in severe crop injury. Use **Zaltus SX**, at 3 oz./A, in these states when other alternatives are not available for adequate control of the weeds listed on this label and the user acknowledges the risks associated with this use rate under the adverse environmental conditions listed above.

DIRECTIONS FOR USE IN POTATO

For Use Only in Arizona, California, Colorado, Delaware, Florida, Hawaii, Idaho, Maryland, Minnesota, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Oregon, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, Washington DC, and Wyoming

RESTRICTIONS

- **DO NOT** apply more than 1.5 oz. of **Zaltus SX** (0.048 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 1.5 oz. of **Zaltus SX** (0.048 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** apply to Rill (Furrow) irrigated potatoes.

PRECAUTION

Many weather related factors, including high wind, splashing or heavy rains or cool conditions at or near potato emergence, may result in potato injury in fields treated with Zaltus SX. On occasion this has resulted in a delay in maturity.

TIMING TO POTATOES

Zaltus SX may be applied to potatoes after hilling for the pre-emergence suppression of the weeds listed in **Table 8**. **Zaltus SX** may be tank mixed with other labeled herbicides for broad spectrum weed control. A minimum of 2 inches of settled soil must cover the vegetative portion of the potato plant at the time of **Zaltus SX** application. Application to potatoes with less than 2 inches of soil covering the vegetative portion of the potato may result in crop injury. In areas with historically higher amounts of rainfall during the time of pre-emergence herbicide applications, including the Red River Valley, Minnesota and North Dakota, the requirement for 2 inches of settled soil is critical to avoid crop injury. Mechanical incorporation of **Zaltus SX** will result in decreased weed control and must be avoided. In areas with sprinkler irrigation, incorporate **Zaltus SX** with 0.25 to 0.75 inches of irrigation, after application and before **any** sprouts are within 2 inches of the settled soil surface if a rainfall event has not yet occurred.

TIMING TO WEEDS

Pre-emergence - Soil Covered Potatoes, Pre-emergence To Weeds

Apply **Zaltus SX** to soil covered potatoes for the pre-emergence suppression of the weeds listed in **Table 8**. Harrowing, cultivation or corrugating after **Zaltus SX** application will reduce weed control.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

CHEMIGATION

Zaltus SX may be applied through sprinkler irrigation systems in potatoes. Follow all label directions for this crop 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 **Zaltus SX** applied corresponds to the specified rate.

Apply **Zaltus SX** in 1/2 to 3/4 inches of water during the first sprinkler set. Allow for 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, contact your State Extension Service Specialist, equipment manufacturers or other experts.

Chemigation Restrictions

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 if 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, for example, 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, discharge the water from the public water system 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 **Chemigation Restrictions**.

Table 8. Weeds Suppressed by Residual Activity of Zaltus SX at 1.5 oz./A

COMMON NAME	SCIENTIFIC NAME	ORGANIC MATTER	ZALTUS SX HERBICIDE RATE
Lambsquarters, Common	*Chenopodium album*	Up to 5%	1.5 oz./A
Mustard, Wild	*Brassica kaber*		
Nightshades			
Black	*Solanum nigrum*		
Eastern Black	*Solanum ptycanthum*		
Hairy	*Solanum sarrachoides*		
Pigweeds			
Palmer Amaranth	*Amaranthus palmeri*		
Redroot	*Amaranthus retroflexus*		
Smooth	*Amaranthus hybridus*		
Spiny Amaranth	*Amaranthus spinosus*		
Tumble	*Amaranthus albus*		
Prickly Lettuce (China Lettuce)[1]	*Lactuca serriola*		
Radish, Wild	*Raphanus raphanistrum*		

[1] Except CA

DIRECTIONS FOR USE IN SOYBEAN*

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per single application.
- **DO NOT** apply more than 3 oz of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** graze treated fields or feed treated hay to livestock for 21 days following application of this product.
- **DO NOT** tank mix **Zaltus SX** with flufenacet, metolachlor or dimethenamid 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.
- In California, refer to the section **DIRECTIONS FOR USE IN FALL AND SPRING PREPLANT BURNDOWN AND FALLOW SEEDBED PROGRAMS IN FIELD CORN, PEANUT AND SOYBEAN** in this label.

TIMING TO SOYBEANS

Zaltus SX may be applied to soybeans prior to planting or pre-emergence (after planting). Pre-emergence application of **Zaltus SX** 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 must not be made when soybeans have begun to crack. Select **Zaltus SX** rate from **Table 1** according to anticipated weed spectrum.

TIMING TO WEEDS

Burndown - Pre-emergence to Soybeans, Postemergence to Weeds

Zaltus SX, 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 9**. Apply **Zaltus SX** 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 directed application pressure. All **Zaltus SX** 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

Zaltus SX, at rates as low as 1 oz./A, may be tank mixed with glyphosate 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 **Zaltus SX** rates as low as 1 oz./A.

TANK MIXES

Zaltus SX may be tank mixed with the herbicides listed in **Table 9** for increased burndown activity, additional residual broadleaf and/or additional grass control. Refer to tank mix partner's label for adjuvant directions.

Table 9. Tank Mix Partners for Control of Emerged Weeds in Reduced Tillage Soybeans

TANK MIX PARTNER	TARGET WEEDS[1]
2,4-D ethylhexyl ester	Dandelion Marestail Giant Ragweed
clethodim	Annual Grasses
dicamba dimethylamine salt + 2,4-D dimethylamine salt	Dandelion Marestail Giant Ragweed
glyphosate	General Burndown
imazaquin	Cocklebur Common Sunflower
paraquat	Annual Grasses Henbit

[1] Refer to tank mix product labels for specific directions for control of emerged weeds present.

ADDITIONAL RESIDUAL BROADLEAF CONTROL

Zaltus SX can be tank mixed with metribuzin, cloransulam-methyl, linuron, imazethapyr, flumetsulam, or imazaquin for additional broadleaf control.

ADDITIONAL RESIDUAL GRASS CONTROL

Zaltus SX can be tank mixed with pendimethalin or clomazone for additional grass control. In the states of Alabama, Arkansas, Delaware, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia, **Zaltus SX** can be tank mixed with micro-encapsulated acetochlor at 2 oz. per acre. Tank mixes with flufenacet, metolachlor or dimethenamid may result in severe injury to soybeans when application is followed by prolong periods of cool wet weather and must not be used with **Zaltus SX**.

ROUNDUP READY PROGRAM

Zaltus SX may be applied as part of a burndown program or pre-emergence in conventional tillage programs, at 2 to 3 oz./A to reduce early season weed competition from waterhemp, velvetleaf, nightshade and morninglories 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 **Zaltus SX**.

DIRECTIONS FOR USE IN STRAWBERRY

RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

PRECAUTIONS

- **Zaltus SX**, at 3 oz. per acre, can be applied to the soil a minimum of 30 days prior to transplanting strawberries provided the strawberries will be transplanted through a plastic mulch.
- **Zaltus SX** at 3 oz. per acre can be applied to dormant (established or newly planted) strawberries for the pre-emergence control of the weeds listed in **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide**.
- **Zaltus SX**, at 3 oz. per acre, can be applied in strawberry row middles with a shielded or hooded sprayer for the pre-emergence control of the weeds listed in **Table 1. Broadleaf Weeds Controlled by Residual Activity of Zaltus SX Herbicide**.

APPLICATION METHOD	MINIMUM TIME FROM APPLICATION TO HARVEST (PHI)	USE RATE PER ACRE PER APPLICATION (oz.)	USE RATE PER ACRE PER YEAR (oz.)	SPECIAL USE INSTRUCTIONS
Pre-transplant	Not applicable	3	3	Apply a minimum of 30 days prior to transplanting and prior to plastic mulch being laid. Apply as part of a tank mix to control emerged weeds.
Pre-emergence to dormant strawberries	Not applicable	3	3	Crop oil concentrate, at 1% v/v, or non-ionic surfactant, at 0.25% v/v, may be added to help control emerged broadleaf weeds.
Hooded or shielded sprayer application to row middles	**DO NOT** apply after fruit set	3	3	**Apply only to row middles - DO NOT apply over strawberries.** Apply prior to weed emergence. Crop spotting may occur if an adjuvant is added. **Avoid application after fruit set as this may result in spotting of fruit.** **DO NOT** allow spray drift to come in contact with fruit or foliage.

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Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX

BROADLEAF WEED SPECIES				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Bristly Starbur	*Acanthospermum hispidum*	Up to 10%[1]	All Soil Types[2]	Asparagus, Caneberries, Garlic, Hops 6 oz./A Sugarcane 6 to 8 oz./A Bushberries, Cactus, Citrus Fruit, Grapes, Nut Trees, Olive, Pome Fruit, Pomegranate, Stone Fruit and Non-Bearing Fruit Trees 6 to 12 oz./A[2] To Maintain Bare Ground on Non-Crop Areas of Farms, Orchards & Vineyards 6 to 12 oz./A
Carpetweed	*Mollugo verticillata*			
Chickweeds				
Common	*Stellaria media*			
Mouseear	*Cerastium vulgatum*			
Coffee Senna	*Cassia occidentalis*			
Dandelion	*Taraxacum officinale*			
Eclipta	*Eclipta prostrata*			
Evening primrose, Cutleaf	*Oenothera laciniata*			
False Chamomile[3]	*Tripleurospermum maritima*			
Filaree				
Redstem	*Erodium cicutarium*			
Whitestem	*Erodium moschatum*			
Fiddleneck, Coast[3]	*Amsinckia menziesii*			
Fleabane, Hairy	*Conyza bonariensis*			
Field Pennycress[3]	*Thlaspi arvense*			
Florida Beggarweed	*Desmodium tortuosum*			
Florida Pusley	*Richardia scabra*			
Golden Crownbeard	*Verbesina encelioides*			
Groundsel, Common	*Senecio vulgaris*			
Hairy Indigo	*Indigofera hirsuta*			
Hemp Sesbania	*Sesbania exaltata*			
Henbit	*Lamium amplexicaule*			
Jimsonweed	*Datura stramonium*			
Kochia	*Kochia scoparia*			
Lambsquarters, Common	*Chenopodium album*			
Mallow				
Common (Cheeseweed)	*Malva neglecta*			
Little	*Malva parviflora*			
Horseweed/Marestail	*Conyza canadensis*			
Mayweed/False Chamomile[3]	*Tripleurospermum maritimum*			
Morningglories				
Entireleaf	*Ipomoea hederacea* var. *integriuscula*			
Ivyleaf	*Ipomoea hederacea*			
Red/Scarlet	*Ipomoea coccinea*			
Smallflower	*Jacquemontia tamnifolia*			
Tall	*Ipomoea purpurea*			
Mustards				
London Rocket[3]	*Sisymbrium irio*			
Tansey[3]	*Descurainia pinnata*			
Tumble	*Sisymbrium altissimum*			
Wild	*Brassica kaber*			
Nettle, Burning[3]	*Urtica urens*			
Nightshades				
Black	*Solanum nigrum*			
Eastern Black	*Solanum ptycanthum*			
Hairy	*Solanum sarrachoides*			

(continued)

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Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX *(continued)*

BROADLEAF WEED SPECIES *(continued)*				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Pigweeds		Up to 10%[1]	All Soil Types[2]	Asparagus, Caneberries, Garlic, Hops 6 oz./A Sugarcane 6 to 8 oz./A Bushberries, Cactus, Citrus Fruit, Grapes, Nut Trees, Olive, Pome Fruit, Pomegranate, Stone Fruit and Non-Bearing Fruit Trees 6 to 12 oz./A[2] To Maintain Bare Ground on Non-Crop Areas of Farms, Orchards & Vineyards 6 to 12 oz./A
Palmer Amaranth	*Amaranthus palmeri*			
Redroot	*Amaranthus retroflexus*			
Smooth	*Amaranthus hybridus*			
Spiny Amaranth	*Amaranthus spinosus*			
Tumble	*Amaranthus albus*			
Prickly Lettuce (China Lettuce)	*Lactuca serriola*			
Prickly Sida (Teaweed)	*Sida spinosa*			
Puncturevine	*Tribulus terrestris*			
Purslane				
Common	*Portulaca oleracea*			
Horse[3]	*Trianthema portulacastrum*			
Radish, Wild	*Raphanus raphanistrum*			
Ragweed, Common	*Ambrosia artemisiifolia*			
Redmaids	*Calandrinia ciliata* var *menziesii*			
Redweed	*Melochia corchorifolia*			
Shepherd's-purse	*Capsella bursa-pastoris*			
Smellmelon[3]	*Cucumis melo*			
Sowthistle, Annual[3]	*Sonchus oleraceus*			
Spotted Spurge	*Euphorbia maculata*			
Spurred Anoda	*Anoda cristata*			
Thistle, Russian	*Salsola iberica*			
Tropic Croton	*Croton glandulosus*			
Venice Mallow	*Hibiscus trionum*			
Waterhemps				
Common	*Amaranthus rudis*			
Tall	*Amaranthus tuberculatus*			
Wild Poinsettia	*Euphorbia heterophylla*			
White Cockle[3]	*Silene latifolia*			
Wormwood, Biennial	*Artemisia biennis*			
Yellow Rocket[3]	*Barbarea vulgaris*			

(continued)

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Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX *(continued)*

GRASS WEED SPECIES				
COMMON NAME	**SCIENTIFIC NAME**	**ORGANIC MATTER**	**SOIL TYPE**	**ZALTUS SX RATE**
Barnyardgrass	*Echinochloa crus-galli*	Up to 10%[1]	All Soil Types[2]	Asparagus, Caneberries, Garlic, Hops 6 oz./A Sugarcane 6 to 8 oz./A Bushberries, Cactus, Citrus Fruit, Grapes, Nut Trees, Olive, Pome Fruit, Pomegranate, Stone Fruit and Non-Bearing Fruit Trees 6 to 12 oz./A[2] To Maintain Bare Ground on Non-Crop Areas of Farms, Orchards & Vineyards 6 to 12 oz./A
Bluegrass, Annual	*Poa annua*			
Crabgrass				
Large	*Digitaria sanguinalis*			
Smooth	*Digitaria ischaemum*			
Foxtails				
Bristly	*Setaria verticillata*			
Giant	*Setaria faberi*			
Green	*Setaria viridis*			
Yellow	*Setaria glauca*			
Goosegrass	*Eleusine indica*			
Guineagrass	*Panicum maximum*			
Johnsongrass, Seedling	*Sorghum halepense*			
Lovegrass, California	*Eragrostis diffusa*			
Panicum				
Fall	*Panicum dichotomiflorum*			
Texas	*Panicum texanum*			
Ryegrass, Italian[3]	*Lolium multiflorum*			
Signalgrass, Broadleaf	*Brachiaria platyphylla*			

[1] **Zaltus SX** 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.
[2] Use a maximum **Zaltus SX** Herbicide rate of 6 oz./A per application on any soil that has a sand plus gravel content over 80% if bushes, trees or vines are under 3 years of age.
[3] Except CA

DIRECTIONS FOR USE IN SUGARCANE*

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply more than 8 oz. of **Zaltus SX** (0.255 lb. a.i.) 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 **Zaltus SX** (0.383 lb. a.i.) per acre per year.
- **DO NOT** make more than 4 applications per year at the 3 oz rate.
- **DO NOT** apply within 90 days of harvest.
- Minimum Retreatment Interval: 14 days.

TIMING TO SUGARCANE

Zaltus SX may be applied from 2 weeks prior to planting to before the sugarcane emerges, post directed or at layby. Select the proper **Zaltus SX** rate from **Table 10** according to anticipated weed spectrum and soil organic matter content for pre-emergence applications. Select **Zaltus SX** rate from **Table 11** according to emerged weed spectrum and weed heights for post-directed and layby applications.

TIMING TO WEEDS

Burndown - Pre-emergence to Sugarcane, Postemergence to Weeds

Zaltus SX may be used for pre-emergence 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 12**. Apply **Zaltus SX before the crop emerges**. To ensure thorough coverage, use a minimum of 15 gals. of spray solution per acre. All **Zaltus SX** 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, for example, glyphosate, may be formulated with a suitable adjuvant and **DO NOT** require additional adjuvant.

Pre-emergence - Pre-emergence to Sugarcane, Pre-emergence to Weeds

Zaltus SX may be used for pre-emergence control of many annual broadleaf and grassy weeds in sugarcane. Select rate based on anticipated weed spectrum and soil organic matter content from **Table 10**. Apply **Zaltus SX before the crop emerges**.

Post-directed - Postemergence to Sugarcane, Postemergence to Weeds

Make post-directed applications to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height and has begun to joint. Post-directed applications must 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 **Zaltus SX** 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 **Zaltus SX** rate based on weed spectrum and weed height from **Table 11**.

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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 **Zaltus SX** 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 **Zaltus SX** rate based on weed spectrum and weed height from **Table 11**.

Table 11. Broadleaf Weeds Controlled by Post-directed or Layby Application of Zaltus SX in Sugarcane

BROADLEAF WEED SPECIES			
		WEED HEIGHT (Inches)	
COMMON NAME	SCIENTIFIC NAME	3 OZ./A	4 OZ./A
Bindweed, Field[1]	*Convolvulus arvensis*	4	8
Carpetweed	*Mollugo verticillata*	4	4
Cocklebur, Common	*Xanthium strumarium*	4	4
Florida Beggarweed	*Desmodium tortuosum*	2	2
Hemp Sesbania	*Sesbania exaltata*	6	8
Jimsonweed	*Datura stramonium*	4	4
Lambsquarters, Common	*Chenopodium album*	4	4
Morningglories			
Entireleaf	*Ipomoea hederacea* var. *integriuscula*	-	4
Ivyleaf	*Ipomoea hederacea*	4	4
Pitted	*Ipomoea lacunosa*	4	6
Red	*Ipomoea coccinea*	-	4
Tall	*Ipomoea purpurea*	2	4
Mustard, Wild	*Brassica kaber*	6	6
Pigweeds			
Palmer Amaranth	*Amaranthus palmeri*	4	6
Redroot	*Amaranthus retroflexus*	4	6
Smooth	*Amaranthus hybridus*	4	6
Plaintain, Broadleaf	*Plantago major*	6	6
Prickly Sida	*Sida spinosa*	4	6
Purslanes			
Common	*Portulaca oleracea*	2	4
Rock	*Calandrinia* spp.	-	2
Ragweeds			
Common	*Ambrosia artemisiifolia*	2	2
Giant	*Ambrosia trifida*	4	4
Rice Flatsedge	*Cyperus iria*	2	4
Sicklepod	*Senna obtusifolia*	4	4
Smartweeds			
Ladysthumb	*Polygonum persicaria*	4	4
Pale	*Polygonum lapathifolium*	4	4
Pennsylvania	*Polygonum pensylvanicum*	4	4
Spotted Spurge	*Euphorbia maculata*	4	4
Velvetleaf	*Abutilon theophrasti*	4	6
Venice Mallow	*Hibiscus trionum*	2	2
Waterhemps			
Common	*Amaranthus rudis*	2	2
Tall	*Amaranthus tuberculatus*	2	2

[1] **Zaltus SX** tank mixes will only control the above ground portion of field bindweed. Repeated applications will be needed to control regrowth.

TANK MIXES

Zaltus SX may be tank mixed with the herbicides listed in **Table 12** for additional weed control in burndown, pre-emergence, post-directed and layby applications. Refer to tank mix partner's label for adjuvant directions.

Tank Mixing Instructions:

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Table 12. Tank Mixes with Zaltus SX for Post-directed or Layby Use in Sugarcane

TANK MIX PARTNER[1]	TARGET WEEDS	BURNDOWN	POST-DIRECTED[2]	LAYBY
2,4-D amine	Annual and Perennial Broadleaf Weeds	X		
2,4-D amine + dicamba dimethylamine salt	Annual and Perennial Broadleaf Weeds	X		
ametryn[4]	Annual Grasses		X	X
asulam, sodium salt[3]	Annual Grasses		X	X
atrazine	Pigweeds Cocklebur	X	X	X
glyphosate[5]	Annual and Perennial Weeds	X		X
halosulfuron-methyl	Purple Nutsedge Yellow Nutsedge	X	X	X
metribuzin[6]	Broadleaf Panicum Goosegrass		X	X

[1] Refer to tank mix product labels for specific directions for control of emerged weeds present not listed in **Table 11**.

[2] Post-directed applications must only be made to upright sugarcane varieties after the sugarcane has exceeded 24 inches in height. Post-directed applications must 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.

[3] Apply to sugarcane at least 24 inches tall.

[4] Apply before weeds are greater than 6 inches tall.

[5] Glyphosate applications must be made with a hooded sprayer. Sugarcane must be a least 3 ft. tall. Contact with the sugarcane foliage by either the spray mixture or the treated weed foliage will result in sugarcane injury.

[6] Refer to metribuzin label for restrictions based on soil type.

ADDITIONAL PRE-EMERGENCE BROADLEAF CONTROL

Zaltus SX can be tank mixed with atrazine or diuron for additional pre-emergence broadleaf control.

ADDITIONAL PRE-EMERGENCE GRASS CONTROL

Zaltus SX 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*

***NOT FOR USE IN CALIFORNIA**

HARVEST AID RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** harvest within 5 days of application.

Desiccation from **Zaltus SX** 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 **Zaltus SX** with glyphosate or paraquat will increase control of emerged weeds and aid in harvest for sunflowers. Tank mixing **Zaltus SX** with glyphosate will increase control of emerged weeds and aid in the harvest for safflower.

TIMING TO SUNFLOWER AND SAFFLOWER

Apply **Zaltus SX**, 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 specifications for postemergence application.

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Cary, NC 27513

DIRECTIONS FOR USE IN SWEET POTATO

RESTRICTIONS

- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb a.i) per acre per single application.
- **DO NOT** apply more than 3 oz. of **Zaltus SX** (0.096 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **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 **Zaltus SX** 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

Zaltus SX must be applied prior to transplanting sweet potatoes.

TIMING TO WEEDS

Pre-emergence to Weeds

Apply **Zaltus SX** to soil prior to transplanting sweet potato slips for the pre-emergence control of the weeds listed in **Table 1**.

DIRECTIONS FOR USE IN WHEAT*

***NOT FOR USE IN CALIFORNIA**

RESTRICTIONS

- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 2 oz. of **Zaltus SX** (0.064 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.

PREPLANT APPLICATIONS, PRE-EMERGENCE WEED CONTROL

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

- For preplant weed control, use only on no-till or minimum tillage fields where the previous year's crops residue has not been incorporated into the soil.
- Plant wheat no sooner than 7 days after **Zaltus SX** application in the states of DE, KY, MD, NC, NJ, PA, SC, TN, or VA.
- Plant wheat no sooner than 14 days after **Zaltus SX** application in the states of ID, MN, MT, ND, OR, PA, 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

Zaltus SX, 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 SPRING WHEAT** for rates and timing of applications. For control of emerged weeds, **Zaltus SX** 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 directed adjuvant systems.

POST-PLANT, PRE-EMERGENCE WEED CONTROL

RESTRICTIONS

- For post-plant, pre-emergence weed control, use only on no-till or minimum tillage fields where the previous crop residue has not been incorporated into the soil.
- Apply **Zaltus SX** up to 2 days after planting.
- **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.

Use Directions

Zaltus SX, applied at 2 oz./A, may be used for residual weed control, where wheat has been planted directly into the residue of the previous year. Application must be made no later than 2 days after planting.

HARVEST AID

RESTRICTION

- **DO NOT** harvest within 10 days of application.

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940 NW Cary Parkway, Suite 200
Cary, NC 27513

Use Directions

Zaltus SX, 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 **Zaltus SX** with glyphosate will increase control of emerged weeds and aid in harvest.

To ensure 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 must meet manufacturer's gallonage and pressure specifications for postemergence application.

TIMING TO WHEAT

Apply **Zaltus SX**, 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. Atticus, LLC advises tank mixing with glyphosate.

DIRECTIONS FOR USE IN BUSHBERRIES, CANEBERRY, CITRUS FRUIT, GRAPE, TREE NUT, OLIVE, POME FRUIT, POMEGRANATE, STONE FRUIT AND NON-BEARING FRUIT TREES

Bushberry (Subgroup 13-07B): Aronia Berry, Blueberry, Highbush; Blueberry, Lowbush; Buffalo Currant; Chilean Guava; Cranberry, Highbush; Currant, Black; Currant, Red; Elderberry, European Barberry, Gooseberry, Honeysuckle, edible; Huckleberry; Jostaberry; Juneberry (Saskatoon Berry); Lingonberry; Native Currant; Salal; Sea Buckthorn; cultivars, varieties, and/or hybrids of these.

Caneberry (Subgroup 13-07A): Blackberry, Loganberry, Black Raspberry, Red Raspberry, Wild Raspberry cultivars, varieties and/or hybrids of these.

Citrus Fruit (Crop Group 10-10): Australian Desert Lime; Australian Finger-lime; Australian Round Lime; Brown River Finger Lime; Calamondin; Citron; Citrus hybrids; Grapefruit; Japanese Summer Grapefruit; Kumquat; Lemon; Lime; Mediterranean Mandarin; Mount White Lime; New Guinea Wild Lime; Orange, Sour; Orange, Sweet; Pummelo; Russell River Lime; Satsuma Mandarin; Sweet Lime; Tachibana Orange; Tahiti Lime; Tangelo; Tangerine (mandarin); Tangor; Trifoliate Orange; Uniq Fruit; cultivars, varieties and/or hybrids of these.

Tree Nut (Crop Group 14-12): African Nut-tree; Almond, Beechnut; Brazil Nut; Brazilian Pine; Bunya; Bur Oak; Butternut; Cajou Nut; Candlenut; Cashew; Chestnut; Chinquapin; Coconut; Coquito Nut; Dika Nut; Ginkgo; Guiana Chestnut; Hazelnut (Filbert); Heartnut; Hickory Nut; Japanese Horse-chestnut; Macadamia Nut; Mongongo Nut; Monkey-pot; Monkey Puzzle Nut; Okari Nut; Pachira Nut; Peach Palm Nut; Pecan; Pequi; Pili Nut; Pine Nut; Pistachio; Sapucaia Nut; Tropical Almond; Walnut, Black; Walnut, English; Yellowhorn, cultivars, varieties and/or hybrids of these.

Pome Fruit (Crop Group 11-10): Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear; Pear, Asian; Quince; Quince, Chinese; Quince, Japanese; Tejocote; cultivars, varieties and/or hybrids of these.

Stone Fruit (Crop Group 12-12): Apricot; Apricot, Japanese; Capulin; Cherry, Black; Cherry, Nanking; Cherry, Sweet; Cherry, Tart; Jujube, Chinese; Nectraine; Peach; Plum; Plum, American; Plum, Beach; Plum, Canada; Plum, Cherry; Plum, Chickasaw; Plum, Damson; Plum, Japanese; Plum, Klamath; Plum, Prune; Plumcot; Sloe and cultivars, varieties and/or hybrids of these.

RESTRICTIONS

- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application, except Caneberries; for Caneberries **DO NOT** apply more than 6 oz. **Zaltus SX** (0.191 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre per year, except Bushberries; for Bushberries **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre per year; for Caneberries **DO NOT** apply more than 6 oz. (0.191 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 30 days of the first application, except nut trees; **DO NOT** make a sequential application within 60 days of the first application.
- **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 pome fruit and stone fruit.
- **DO NOT** apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- **DO NOT** apply to nut trees established less than one year, unless protected from spray contact by non-porous wraps, grow tubes, or waxed containers.
- Preharvest Interval (PHI)
  - Citrus Fruit: 3 days
  - Bushberries: 7 days
  - Caneberries: 7 days
  - Grape: 60 days
  - Nut Trees: 60 days
  - Olive: 60 days
  - Pome Fruit: 60 days
  - Pomegranate: 60 days
  - Stone Fruit: 60 days
- Use a maximum **Zaltus SX** rate of 6 oz./A (0.191 lb. a.i.) per application on any soil that has a sand plus gravel content over 80% if bushes, trees or vines are less than 3 years of age. (Two applications of 6 oz./A in a 12 month period can still be made as long as there have been 60 days between applications).

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940 NW Cary Parkway, Suite 200
Cary, NC 27513

PRECAUTIONS

- Raise mower height during all mowing to reduce dust. Dust created by mowing can drift onto desirable vegetation resulting in injury.
- Follow the most restrictive label limitations and precautions of the tank mix product(s) being used.
- Avoid direct or indirect spray contact to foliage and green bark (non-barked trunk and non-barked vines with the exception of undesirable suckers).
- Irrigate after application with minimum of 1/4 inch of water to activate the herbicide and to reduce wind displacement of soil.

For bushberries, caneberries, citrus fruit, grape, nut trees, olive, pomegranate and non-bearing fruit trees, apply **Zaltus SX** as a uniform broadcast application to the orchard or vineyard floor or as a uniform band directed at the base of the bush, trunk or vine. For stone fruit and pear, **Zaltus SX** can only be applied as a uniform band directed at the base of the trunk prior to "bud break". For apple, **Zaltus SX** can only be applied as a uniform band directed at the base of the trunk prior to "pink bud". For other pome fruit, check with your Atticus, LLC representative for application timing. The preferred application timing for **Zaltus SX** is in the fall to maximize the potential for rainfall to activate and set the herbicide. **DO NOT** apply over the top of crop or allow spray to come in contact with crop as a result of application or drift.

Pre-emergence Application

Apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) (maximum of 6 oz./A for caneberries) of **Zaltus SX** per broadcast acre as a pre-emergence application. Make pre-emergence (to weed emergence) applications of **Zaltus SX** to a weed-free soil surface. Pre-emergence applications of **Zaltus SX** must be completed prior to weed emergence. Moisture is necessary to activate **Zaltus SX** on soil for residual weed control. Dry weather following application of **Zaltus SX** may reduce effectiveness. However, when adequate moisture is received after dry conditions, **Zaltus SX** will control susceptible germinating weeds.

Postemergence Application

If weeds are emerged at the time of application, apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) (maximum 6 oz./A for caneberries) of **Zaltus SX** 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 **Zaltus SX** activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of **Zaltus SX**. **Zaltus SX** will not control emerged weeds without the addition of a labeled burndown product.

Refer to **Table 10. Weeds Controlled by Pre-emergence Application of Zaltus SX** for weeds controlled by the residual activity of **Zaltus SX**. Tank mix **Zaltus SX** with a labeled burndown herbicide for control of the emerged weeds listed in **Table 13**. Refer to tank mix partner's label for additional weed species and increased weed heights claimed. Refer to tank mix partner's label for additional restrictions, including minimum carrier volume and crops in which tank mix partner may be used. Tank mixes with glyphosate or 2,4-D containing products are not advised during the period after bloom through final harvest to ensure crop safety from drift.

Residual weed control will be reduced if vegetation prevents the **Zaltus SX** from reaching the soil surface. If vegetation is heavy, it is advised to use a burndown herbicide with **Zaltus SX** and make a sequential **Zaltus SX** application prior to the emergence of new weeds.

Carrier Volume and Spray Pressure

To ensure thorough coverage in burndown applications, use a minimum of 15 gallons of spray solution per acre. Use higher gallonage if dense vegetation or heavy crop residue is present.

Nozzle selection must meet manufacturer's gallonage and pressure specifications.

Banded Application

Rates listed in **Table 13. Weeds Controlled by Postemergence Activity of Zaltus SX Tank Mixes**, refer to a broadcast application covering the entire acre. Refer to the **BAND APPLICATION** table in **USE INFORMATION** section to calculate amount needed per acre when making a banded application.

USE RESTRICTIONS FOR BUSHBERRIES

- **DO NOT** use in the states of Idaho, Oregon or Washington except west of the Cascade Mountains in the following counties:
  Oregon: Benton, Clackamas, Clatsop, Columbia, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Umatilla, Yamhill and Washington
  Washington: Benton, Clallam, Clark, Cowlitz, Franklin, Grant, Grays Harbor, King, Jefferson, Kitsap, Lewis, Pacific, Pierce, Skagit, Snohomish, Thurston, Wahkiakum, Walla Walla and Whatcom
- **DO NOT** apply to bushberries established less than 2 years unless they are protected from spray contact by non-porous wrap, grow tubes or waxed containers.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre per year.
- **DO NOT** make more than 1 application per year.
- **DO NOT** apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.

USE RESTRICTIONS FOR GRAPES

- **DO NOT** apply to grapes established less than 2 years unless they are trellised at least 3 ft. from the soil surface or are protected from spray contact by non-porous wrap, grow tubes or waxed containers.
- **DO NOT** apply to grapes that are not trellised or staked unless they are free standing.
- Avoid direct or indirect spray contact to foliage and green bark (non-barked vines, with the exception of undesirable suckers).
- Plant new plantings of "own-rooted varieties", for example, Concord, so that all roots are a minimum of 8 inches below the soil surface to be treated. In some situations, this may require hilling soil around newly planted vines so that the settled depth of the hill will be 4 to 5 inches above the vineyard floor.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 30 days of the first application.
- **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 powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.

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Cary, NC 27513

Juice, Raisin and Wine Grapes

- **DO NOT** apply during the period after bud break through final harvest, unless using shielded application equipment and applicator can ensure spray drift will not come in contact with crop fruit or foliage. Shielded applications during this time period must not be made with glyphosate or products containing glyphosate.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 30 days of the first application.
- **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 powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.

Table Grapes

- **Zaltus SX** may be applied during the period following final harvest up to bud break.
- **DO NOT** apply after bud break.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 30 days of the first application.
- **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 powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.

USE PRECAUTIONS FOR CITRUS FRUIT, TREE NUTS, OLIVE, POME FRUIT, POMEGRANATE AND STONE FRUIT

- For pome fruit and stone fruit, **Zaltus SX** can only be applied as a uniform band directed at the base of the trunk prior to silver tip in apples and bud break in stone fruit.
- For pome fruit and stone fruit **DO NOT** apply to row middles (area between berms).
- For nut trees, olive and pomegranate apply after bud break through final harvest using shielded application equipment if the applicator can ensure the spray drift will not come into contact with non-target vegetation, crop fruit and/or foliage. Shielded application equipment is not required if the following application parameters are followed:
  - Application pressure (at boom) < 30 PSI.
  - Application speed < 5 MPH.
  - Applicator can ensure the spray drift will not come into contact with non-target vegetation, crop fruit and/or foliage.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre per year.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 60 days of the first application.
- **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 pome fruit and stone fruit.
- **DO NOT** apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- **DO NOT** apply to nut trees established less than one year, unless protected from spray contact by non- porous wraps, grow tubes, or waxed containers.

USE RESTRICTIONS FOR CITRUS FRUIT, TREE NUTS, OLIVE, POME FRUIT, POMEGRANATE AND STONE FRUIT

- **California Only:** For almonds and stone fruit in the counties of Merced, San Joaquin and Stanislaus, refer to use precautions below.
- **DO NOT** apply to pears in the states of Oregon or Washington.
- **DO NOT** apply to trees established less than one year, unless protected from spray contact by non-porous wraps, grow tubes, paint or waxed containers.
- **DO NOT** use in the states of Oregon or Washington except in the following counties unless the additional restrictions listed below are followed:
  Oregon: Benton, Clackamas, Clatsop, Columbia, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Morrow, Multnomah, Polk, Tillamook, Umatilla, Yamhill and Washington. **Washington:** Clallam, Cowlitz, Grays Harbor, King, Jefferson, Kitsap, Lewis, Pacific, Pierce, Skagit, Snohomish, Thurston, Wahkiakum and Whatcom
  - For apples east of the Cascade Mountains in Washington (counties not listed above), follow the restrictions above plus:
  - Apply between final harvest and January 1.
  - Apply only to apple blocks with an established (2 years or older) permanent cover crop that covers a minimum of 60% of the surface area in the block.
  - Application must be incorporated with a minimum of one half inch of water within 48 hours after application.
  - **DO NOT** apply to powdery soils or soils susceptible to wind displacement.
  - Apply only to orchard berms.
  - **DO NOT** mow the treated berm areas of the orchard.
- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.

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Cary, NC 27513

- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre during a 12 month period.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** make a sequential application within 60 days of the first application.
- **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 pome fruit and stone fruit.
- **DO NOT** apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- **DO NOT** apply to nut trees established less than one year, unless protected from spray contact by non- porous wraps, grow tubes, or waxed containers.

USE RESTRICTIONS ON ALMONDS AND STONE FRUIT IN DEFINED AREAS OF MERCED, SAN JOAQUIN AND STANISLAUS COUNTIES OF CALIFORNIA

The use of **Zaltus SX** in soils common in parts of Merced, San Joaquin and Stanislaus counties in California is known to have resulted in injury to almonds under drought stress conditions. These soils are characterized by having been cut or filled, high sand content, low clay content and shallow profiles. The Defined Area can be seen on the Map or by the description that follows:

- Intersection of Highway 4 and Escalon-Bellota Road at Farmington in San Joaquin County;
- Directly South on Escalon-Bellota to the Santa Fe Avenue and railroad tracks at Escalon;
- Southeast on Santa Fe Avenue down to the Merced River;
- East following the Merced River to the Merced/Mariposa County line;
- Northwest following the Merced County line through the intersection of Merced and Stanislaus County line following the Stanislaus/Tuolumne County and Calaveras County line to Highway 4;
- West on Highway 4 back to the Farmington intersection of Escalon-Bellota Road.

USE RESTRICTIONS FOR NON-BEARING FRUIT TREES

Non-bearing Avocado and Fig

- **DO NOT** apply more than 12 oz. of **Zaltus SX** (0.383 lb. a.i.) per acre during a single application.
- **DO NOT** apply more than 24 oz. of **Zaltus SX** (0.765 lb. a.i.) per acre during a 12 month period.
- **DO NOT** make more than 2 applications per year.
- **DO NOT** harvest fruit from treated trees within one year of application.
- **DO NOT** apply to trees established less than one year, unless protected from spray contact by non-porous wraps, grow tubes or waxed containers.
- **DO NOT** apply during the period after flowering through leaf drop, unless using shielded application equipment and the applicator can ensure spray drift will not come in contact with the crop foliage.
- **DO NOT** make a sequential application within 60 days of the first application.
- **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 pome fruit and stone fruit.
- **DO NOT** apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- **DO NOT** mow treated areas between bud break and final harvest. Dust created by mowing may drift onto desirable vegetation resulting in injury.
- **DO NOT** apply to nut trees established less than one year, unless protected from spray contact by non- porous wraps, grow tubes, or waxed containers.

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Table 13. Weeds Controlled by Postemergence Activity of Zaltus SX Tank Mixes

BROADLEAF WEED SPECIES			
COMMON NAME	**SCIENTIFIC NAME**	**WEED HEIGHT/LENGTH (inches)**	**ZALTUS SX HERBICIDE RATE**
Bindweed, Field[1]	*Convolvulus arvensis*	8	6 to 12 oz./A
Carpetweed	*Mollugo verticillata*	4	
Chickweeds			
Common	*Stellaria media*	4	
Mouseear	*Cerastium vulgatum*	4	
Cocklebur, Common	*Xanthium strumarium*	4	
Eveningprimrose, Cutleaf[2]	*Oenothera laciniata*	12	
Filaree			
Broadleaf	*Erodium botrys*	4	
Redstem	*Erodium cicutarium*	4	
Florida Beggarweed	*Desmodium tortuosum*	2	
Hemp Sesbania	*Sesbania exaltata*	8	
Jimsonweed	*Datura stramonium*	4	
Lambsquarters, Common	*Chenopodium album*	4	
Morninglories			
Entireleaf	*Ipomoea hederacea* var. *integriuscula*	4	
Ivyleaf	*Ipomoea hederacea*	4	
Pitted	*Ipomoea lacunosa*	6	
Red/Scarlet	*Ipomoea coccinea*	4	
Tall	*Ipomoea purpurea*	4	
Mustard, Wild	*Brassica kaber*	6	
Pigweeds			
Palmer Amaranth	*Amaranthus palmeri*	6	
Redroot	*Amaranthus retroflexus*	6	
Smooth	*Amaranthus hybridus*	6	
Plantain, Broadleaf	*Plantago major*	6	
Prickly Sida (Teaweed)	*Sida spinosa*	6	
Purslanes			
Common	*Portulaca oleracea*	4	
Rock	*Calandrinia* spp.	2	
Ragweeds			
Common	*Ambrosia artemisiifolia*	2	
Giant	*Ambrosia trifida*	4	
Rice Flatsedge	*Cyperus iria*	4	
Sicklepod	*Senna obtusifolia*	4	
Smartweeds			
Ladysthumb	*Polygonum persicaria*	4	
Pale	*Polygonum lapathifolium*	4	
Pennsylvania	*Polygonum pensylvanicum*	4	
Spotted Spurge	*Euphorbia maculata*	4	
Velvetleaf	*Abutilon theophrasti*	4	
Venice Mallow	*Hibiscus trionum*	4	
Waterhemps			
Common	*Amaranthus rudis*	2	
Tall	*Amaranthus tuberculatus*	2	

[1] **Zaltus SX** will only provide control of the above-ground portion of bindweed. Repeated applications will be needed to control regrowth.

[2] For acceptable control, cutleaf eveningprimrose must be 12 inches or less and in the rosette stage. Add crop oil concentrate, at 1 pt./A, or non-ionic surfactant at 0.25% v/v, to glyphosate tank mixes for cutleaf eveningprimrose control, including glyphosate formulations that contain a built-in adjuvant system.

ADDITIONAL RESIDUAL WEED CONTROL

Zaltus SX may be tank mixed with oryzalin, simazine or diuron for additional residual weed control. Always read and follow label use directions for all products being used.

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DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS, ORCHARDS AND VINEYARDS

RESTRICTIONS

- **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.
- As a preemergent application, **DO NOT** apply more than 12 oz (0.38 lb. ai/A) per acre per year.
- As a postemergent application, **DO NOT** apply more than 12 oz (0.38 lb. ai/A) per acre per year.

Zaltus SX, when used as directed, can be used on farms, orchards and vineyards 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**.

Zaltus SX 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 (aceto-lactate synthase) resistant weeds. **Zaltus SX** can be tank mixed with the herbicides listed in **Table 14** 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. **Zaltus SX** rates of 6 to 12 oz./A are required to provide residual control of the weeds listed in **Table 10**.

PRE-EMERGENCE APPLICATION

Apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) of **Zaltus SX** per broadcast acre as a pre-emergence application. Make pre-emergence (prior to weed emergence) applications of **Zaltus SX** to a weed-free soil surface. Pre-emergence applications of **Zaltus SX** must be completed prior to weed emergence. Moisture is necessary to activate **Zaltus SX** on soil for residual weed control. Dry weather following application of **Zaltus SX** may reduce effectiveness. However, when adequate moisture is received after dry conditions, **Zaltus SX** will control susceptible germinating weeds.

POSTEMERGENCE APPLICATION

Apply 6 to 12 oz. (0.188 to 0.38 lb. a.i./A) of **Zaltus SX** 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 **Zaltus SX** activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of **Zaltus SX**. Emerged weeds are controlled postemergence with **Zaltus SX**; however, translocation of **Zaltus SX** 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 **Zaltus SX** occurs when applied in combination with a surfactant to weeds less than 2 inches in height. Use a tank mix partner in combination with **Zaltus SX** for the postemergence control of weeds larger than 2 inches. Advised tank mix partners are listed in **Table 14**.

IMPORTANT: Completely read and follow the label of any potential tank mix partner with **Zaltus SX**. 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 14. Tank Mix Combination to Maintain Bare Ground on Non-crop Areas

2,4-D	glufosinate	glyphosate	paraquat

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STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage, disposal or cleaning of equipment.

STORAGE: Keep pesticide in original container. Store in a cool, dry, secure place. **DO NOT** put formulation or dilute spray solution into food or drink containers. **DO NOT** contaminate food or foodstuffs. **DO NOT** store or transport near feed or food. Not for use or storage in or around the home.

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:

Container statement for Nonrefillable container small enough to shake.

Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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.

Container statement for Nonrefillable container with liner greater than 50 lbs.

Nonrefillable Bag: DO NOT reuse or refill this bag. Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into equipment. **DO NOT** reuse bag. Dispose of bag in a sanitary landfill or by incineration if allowed by State and local authorities. Offer for recycling if available. **Liner:** Completely empty liner by shaking and tapping sides and bottom to loosed clinging particles. Empty residue into equipment. **DO NOT** reuse liner. Dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities.

Container statement for Nonrefillable drum with liner.

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. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Liner:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into equipment. **DO NOT** reuse liner. Dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities.

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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