RESTRICTED USE PESTICIDE
Due to Toxicity to Fish and Aquatic Organisms
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

GROUP	3A	INSECTICIDE

SULTRUS™

FOR CONTROL OF CERTAIN INSECT PESTS ON FIELD, VEGETABLE, TREE AND VINE CROPS

ACTIVE INGREDIENT:
ß-cyfluthrin
Cyano(4-fluoro-3-phenoxyphenyl)methyl-3-(2,2-dichloroethenyl)-2,2-dimethyl-cyclopropanecarboxylate 12.86%
OTHER INGREDIENTS: 87.14%
TOTAL: 100.00%

Contains 1 lb Beta-cyfluthrin per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION / PRECAUCION
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.)

FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• 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 by mouth to an unconscious person.
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.
Note To Physician: ANTIDOTE – No specific antidote is available. Treat symptomatically.	
For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-424-9300. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.	

EPA Reg. No. 5905-599
EPA Est. No.: 5905-GA-001

NET CONTENTS: _____
AD 051216

MANUFACTURED FOR
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300
COLLIERVILLE, TENNESSEE 38017

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear goggles or protective glasses. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Harmful if inhaled. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

Personal Protective Equipment (PPE):
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Barrier laminate or Viton gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering controls statements: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations
User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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 pesticide is extremely toxic to fish and aquatic invertebrates. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate. Apply this product only as specified on this label.

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging the treatment area. Additional information may be obtained by consulting your Cooperative Extension Service.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Buffer Zone Requirements:
Vegetative Buffer Strip:
Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing Beta Cyfluthrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat. For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 2 1 pp.

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_023819.pdf

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)
Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes reservoirs, rivers, permanent streams; marshes or natural ponds, estuaries, and commercial fishponds).
Buffer Zone for ULV Aerial Application

Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams; marshes or natural ponds, estuaries, and commercial fishponds).

Buffer Zone for Non-ULV Aerial Application
Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams; marshes or natural ponds, estuaries, and commercial fishponds).

Spray Drift Requirements
Wind Direction and Speed:
Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion:
Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size:
Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications
Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Additional Requirements for Aerial Applications
The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wingspan or 80% rotor diameter.
Flight speed and nozzle orientation must be considered in determining droplet size.
Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

RUNOFF MANAGEMENT
Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When used on erodible soils, best management practices for minimizing runoff should be employed. Consult your local Soil Conservation Service for recommendations in your use area. Do not apply if soil is saturated with water. Do not apply under conditions that favor drift from runoff. Do not apply in the rain.

INSECT RESISTANCE STATEMENT
Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or State agricultural authorities for details. If resistance to this product develops in your area, this product alone may not continue to provide adequate control of resistant pests. If poor performance cannot be attributed to improper application, extreme weather conditions, etc., a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor/state Extension agent for the best alternative method of control in your area. Consult your state Cooperative Extension Service agent or agricultural advisor for insect resistance management strategies and recommended insect control methods in your area.

PHYSICAL OR CHEMICAL HAZARDS
Do not use or store near heat or open flame. Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE
Restricted Use Pesticide
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval (REI). 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 REI of 12 hours.

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

- Coveralls
- Barrier laminate or Viton gloves
- Shoes plus socks
- Protective eyewear

SULTRUS™ may be used for control of a broad spectrum of insect pests by contact action. Because of this contact activity, good spray coverage of the crop is needed for the highest level of control.

PRODUCT INFORMATION AND INSTRUCTIONS

Unless specified otherwise in the crop-specific application section, SULTRUS™ may be applied by the following methods:

Foliar Spray Application

Foliar applications may be made using properly calibrated ground sprayers, fixed- or rotary-winged aircraft or through properly designed, sprinkler-type, chemigation equipment (See Chemigation Application directions below). Thorough and uniform coverage of plants, with direct contact of the spray mixture to the target pests, is required for satisfactory control.

Avoid application procedures where thorough coverage of plant is not possible. Applications made with less than thorough coverage may result in slower activity and/or less overall control from a single application than an application made with higher gallonage. Refer to Spray Drift Reduction Management section for application guidelines on minimizing drift from all application methods.

Ground applications should be made in a minimum of 10 gallons/A unless specified otherwise in crop-specific application section.

Aerial applications should be made in a minimum of 2 gallons/A unless specified otherwise in crop-specific application section, however 5 gallons/A are recommended. See crop specific gallonage requirements. Aerial applications made to dense canopies may not provide sufficient coverage of lower leaves or interior plant portions to provide pest control. Higher labeled rates of SULTRUS™ may be necessary for aerial applications.

Chemigation applications (See Chemigation Application directions below) should be made as concentrated as possible. For best results apply at 100% input/travel speed, for center pivots or 0.1 inch (2,716 gallons) up to 0.15 inch (4,073 gallons) of water/A, for other systems. Higher labeled rates of SULTRUS™ may be necessary for chemigation applications.

Chemigation Application

Types of Irrigation Systems: SULTRUS™ may be applied through sprinkler type irrigation systems only. These types include; center pivot, lateral move, or solid set irrigation systems. Do not apply SULTRUS™ through any other type of irrigation system.

Injection for Chemigation: Inject the specified dosage of SULTRUS™ into the irrigation main, water stream: (1) through a constant flow, metering device; (2) into the center of the main line flow via a pitot tube or equivalent; (3) at a point ahead of at least one, right-angle turn in main stream flow such that thorough mixing with the irrigation water is ensured.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of SULTRUS™ treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in or on the crop can result from non-uniform distribution.

The system must be calibrated to uniformly distribute the rates specified for chemigation application to specific crops. If you have questions about calibration, contact your Cooperative Extension Service agent, equipment manufacturers, or other experts.

Chemigation Monitoring: A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the

responsible person, shall shut the system down and make necessary adjustments should the need arise.

Required Injection and Sprinkler System Safety Devices: The 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 back-flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must also 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. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor/engine stops or in cases where there is no water pump, when water pressure decreases to the point where pesticide distribution is adversely affected. Injection systems must use a metering pump or equivalent, such as a positive displacement injection pump (e.g., diaphragm pump, venturi injection) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Using Water from Public Water Systems: Public water system means a system for the provision to the public of piped water for human consumption if such 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. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction.

As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. 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. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Chemical Supply Tank Dilution and Agitation: For injection of SULTRUS™, use a chemical supply tank for pre-mixing SULTRUS™ with either water or non-emulsifiable oil before injecting mixture into the irrigation line. Dilution ratio should be at least 4 parts of either water/ or non-emulsifiable oil to 1 part SULTRUS™. If necessary, constant mechanical or hydraulic agitation should be maintained in the chemical supply tank during the entire period of application. Determine the required amounts of SULTRUS™ and either water or non-emulsifiable oil to mix in the tank. The amount of SULTRUS™ needed equals the number of fluid oz of SULTRUS™ to be applied per acre multiplied by the number of acres to be chemigated. The amount of emulsion needed equals the gallons of emulsion delivered per hour by the injection pump, multiplied by the number of hours chemigation will take place. The amount of either water or non-emulsifiable oil needed equals the amount of emulsion needed minus the amount of SULTRUS™ needed.

Cleaning the Chemical Injection System: In order to apply pesticides accurately, the chemical injection system must be kept clean; free from chemical or fertilizer residues and sediments. Refer to your owner's manual or ask your equipment supplier for the cleaning procedure for your injection system.

Flushing the Irrigation System: At the end of the application period, allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Center-Pivot and Automatic-Move Linear Systems: Inject the specified dosage per acre continuously for one complete revolution (center pivot) or move of the system. The system should be run at maximum speed. It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, pumps, and system safety devices be plugged to prevent chemical contamination of these areas. The use of END GUNS is NOT recommended. End guns that provide uneven distribution of treated water can result in crop injury, lack of effectiveness, or illegal pesticide residues in or on the crop.

Solid Set and Manually Controlled Linear Systems: Injection should be during the last 30 to 60 minutes of a regular irrigation period or as a separate 30 to 60 minute application not associated with a regular irrigation.

CROP ROTATION STATEMENT

Treated areas may be replanted with any crop as soon as practical after last application.

Maximum usage when applying both cyfluthrin and beta-cyfluthrin products to the same crop within the same season:

Do not apply more than the maximum seasonal total for each product when used alone, and do not apply more than the combined maximum seasonal total for both products as outlined in the table below.

Crop	Maximum Seasonal Total for Either Product Used Alone (pounds active ingredient/acre)		Maximum Seasonal Total When Applying Both Products to the Same Crop (pounds active ingredient/acre)
	beta-cyfluthrin*	cyfluthrin**	beta-cyfluthrin* Plus cyfluthrin**
Alfalfa	0.175	0.35	0.35
Corn (field, pop, seed)	0.088	0.175	0.175
Cotton	0.15	0.3	0.3
Grasses	0.089	0.176	0.176
Peanut	0.066	0.131	0.131
Sorghum	0.066	0.131	0.131
Soybean	0.088	0.175	0.175
Sugarcane	0.132	0.263	0.263
Sunflower	0.066	0.131	0.131
Tobacco	0.0022	0.0044	0.0044
Barley, Buckwheat, Millet (Pearl And Proso), Oat, Rye, Triticale And Wheat	0.038	0.076	0.076
Brassica (Cole) Leafy Vegetables, CG 5	0.1	0.2	0.2
Cucurbits, CG 9	0.088	0.175	0.175
Fruiting vegetables, CG 8	0.132	0.263	0.263
Leafy vegetables, CG 4	0.1	0.2	0.2
Dried Shelled Legume Vegetables, CSG 6C	0.05	0.1	0.1
Pea, Southern	0.083	0.165	0.165
Potato, and other tuberous and corm vegetables, CSG 1C	0.132	0.263	0.263
Carrot and Radish	0.11	0.22	0.22
Sweet corn	0.22	0.44	0.44
Citrus, CG 10	0.05	0.1	0.1
Grape	0.1	0.2	0.2
Hop	0.125	0.25	0.25
Pome fruit, CG 11	0.022	0.044	0.044
Stone fruit, CG 12	0.044	0.088	0.088
Tree nut crops, CG 14	0.022	0.044	0.044

*SULTRUS™
**Any cyfluthrin product approved for crop use.

FIELD CROPS
CROP USE DIRECTIONS

For all crops, apply specific dosage of SULTRUS™ at early threshold for target pest, as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part by the stage of pest development at application and infestation level of those pests.

Application timing should be based on careful scouting and local economic thresholds. SULTRUS™ may be applied before, during, or after planting. Use the higher rates for moderate to heavy insect pressure. Lower rates are generally adequate for low to moderate insect pressure but require careful scouting and may require more frequent application.

SULTRUS™ is an Emulsifiable Concentrate formulation and is active by contact and ingestion. Thorough coverage is necessary for optimum performance.

ALFALFA		
PESTS CONTROLLED	Rate Fluid oz/ Acre	Rate Lb A.I. / Acre
Alfalfa looper Army cutworm Cutworms Green cloverworm Meadow spittlebug Potato leafhopper	0.8-1.6	0.0065-0.0125
Alfalfa caterpillar Alfalfa plant bug Alfalfa webworm Alfalfa weevil Armyworm (1st and 2nd instar) Aster leafhopper Beet armyworm (1st and 2nd instar) Corn earworm Corn rootworms (adult) Cucumber beetles (adult) Egyptian alfalfa weevil Fall armyworm (1st and 2nd instar) Grape colaspis (adult) Japanese beetle (adult) June beetle (adult) Loopers Lygus bug Mexican bean beetle Stink bugs Tarnished plant bug Threecornered alfalfa hopper Velvetbean caterpillar Yellowstriped armyworm (1st and 2nd instar)	1.6-2.8	0.0125-0.022
Blotch leafminer Grasshoppers Western yellowstriped armyworm (1st and 2nd instar)	2.0-2.8	0.0155-0.022
PESTS SUPPRESSED		
Blue pea aphid Cowpea aphid Pea aphid Whitefly (adult)	2.8	0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI) / Pre-Grazing Interval: 7 days. Maximum SULTRUS™ allowed per cutting: 5.6 fluid oz/A (0.044 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 22.4 fluid oz/A 0.175 lb AI/Acre). Make applications as necessary but no closer than a 5-day interval. Due to potential injury to bees, do not apply to alfalfa grown for seed.		
Foliar Application Notes For applications to mixed-stands of ALFALFA with GRASSES intentionally grown for forage or hay, please see the section of this label entitled: GRASS – Pasture / Rangeland / Grass for Seed / Grass for Hay / Grass in mixed-stands with Alfalfa. Carefully observe the restrictions and use directions associated with both crops.		

CORN – Foliar Applications
Field Corn, Popcorn, Seed Corn, Teosinte – (see Sweet Corn application information in Vegetable Crops Section)

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Black cutworm Flea beetles Granulate cutworm Sand hill cutworm	0.8-1.6	0.007-0.013
Armyworm (1st and 2nd instar) Bean leaf beetle Cereal leaf beetle Chinch bug Click beetle (adult) Corn earworm Corn rootworms (adult) European corn borer* Grape colaspis (adult) Japanese beetle(adult) June beetle (adult) Leafhoppers Masked chafer (adult) Southern armyworm (1st and 2nd instar) Southern corn leaf beetle Southwestern corn borer* Stalk borer* Stink bugs Webworm Western bean cutworm Yellowstriped armyworm (1st and 2nd instar)	1.6-2.8	0.013-0.022
Grasshoppers	2.1-2.8	0.017-0.022
Fall armyworm (1st and 2nd instar)	2.8	0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI): Grain or fodder – 21 days; Green forage – 0 day.
Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 11.2 fluid oz/A (0.088 lb AI/Acre).
Maximum number of applications per season: 4. Three applications may be applied up to early dent stage. One application may be made between early dent and 21 days before harvest.
Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.
*Application must be made prior to the larva boring into the plant.

CORN – Soil Applications
Field Corn, Popcorn, Seed Corn, Teosinte – (see sweet Corn application information in Vegetable Crop Section)

PESTS CONTROLLED	Rate fluid oz/1000 row-ft	Rate** fluid oz/Acre
Seedcorn maggot Wireworm	0.12-0.16	2.0-2.8
PEST SUPPRESSED		
White grub	0.14-0.16	2.5-2.8

Soil Application Restrictions
Pre-Harvest Interval (PHI): Grain or fodder – 21 days; Green forage – 0 day.
Maximum SULTRUS™ allowed at planting: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 11.2 fluid oz/A (0.088 lb AI/Acre).

Soil Application Notes
APPLICATION INSTRUCTIONS: SULTRUS™ may be applied in water or in liquid, pop-up fertilizer at planting. Apply in a minimum of 2 GPA of total mix volume when applied in water. Good agitation must be maintained at all times during application.

INSTRUCTIONS FOR LIQUID POP-UP FERTILIZER APPLICATION: Perform a compatibility test prior to mixing the entire tank to ensure that SULTRUS™ will remain in solution while applying. Take a known amount of the fertilizer to be used as a carrier and place in a glass jar. Add the appropriate amount of SULTRUS™ based on the labeled use rate. Add other components to be tank mixed. Gently agitate the solution. Examine the solution for signs of incompatibility such as flocculation, precipitation, separation, etc.
If incompatibility occurs, contact your local Helena Chemical representative for additional information. Fertilizers containing zinc have been shown to be incompatible with SULTRUS™.
PLACEMENT: Total mix volume should be applied in the open furrow ahead of the closing wheels for optimum coverage.
**ROW WIDTH: The above rate calculations are based on standard 30 in. row spacing. For row spacing less than 30 inches, adjust rate not to exceed 2.8 fluid oz/A (0.022 lb AI/Acre). Diminished control may occur when rate is decreased below specified rate per 1000 row-ft.

COTTON		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cotton leafperforator Cotton leafworm Cutworms Thrips	0.8-1.6	0.007-0.013
Boll weevil Cabbage looper Cotton aphid Cotton bollworm* Cotton fleahopper Cucumber beetle European corn borer Flea beetles Garden webworm Lygus bug* Pink bollworm Saltmarsh caterpillar Southern garden leafhopper Stink bugs Tarnished plant bug* Threecornered alfalfa hopper Tobacco budworm* Ovicidal Control: Cotton bollworm and tobacco budworm	1.6-2.6	0.013-0.021
Grasshopper	2.0-2.8	0.016-0.022
Beet armyworm (1st and 2nd instar) Cotton leafminer Fall armyworm (1st and 2nd instar) Soybean looper Yellowstriped armyworm (1st and 2nd instar)	3.2	0.025
PEST SUPPRESSED		
Whitefly (adult)	3.2	0.025

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 0 day.
Maximum SULTRUS™ allowed per 5-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 19.2 fluid oz/A (0.15 lb AI/Acre).
Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.
Do not graze treated fields.
Do not make more than a total of 6 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.
*See INSECT RESISTANCE statement elsewhere on this label.

GRASS Pasture / Rangeland / Grass for Seed / Grass for Hay / Grass in mixed-stands with Alfalfa		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Armyworms Army cutworm Cereal leaf beetle Cutworms Green cloverworm Meadow spittlebug Potato leafhopper	1.6-1.9	0.013-0.015
Aster leafhopper Beet armyworm (1st and 2nd instar) Corn earworm Chinch bug Crickets Fall armyworm (1st and 2nd instar) Grass thrips Grasshoppers Japanese beetle (adult) June beetle (adult) Loopers Lygus bug Southern armyworm (1st and 2nd instar) Stink bugs Tarnished plant bug Velvetbean caterpillar Webworms Western Yellowstriped armyworm (1st and 2nd instar) Yellowstriped armyworm (1st and 2nd instar)	2.6-2.8	0.02-0.022
Foliar Application Restrictions: Grass for Pasture, Rangeland and Grass for Seed Pre-Grazing Interval: 0 day (minimum time between last application and beginning of foraging or seed harvest). Maximum SULTRUS™ allowed per 5-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 11.3 fluid oz/A (0.089 lb AI/Acre). Foliar Application Restrictions: Grass for Hay Pre-Harvest Interval (PHI): 0 day (minimum time between last application and baling for harvest). Maximum SULTRUS™ allowed per 5-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per cutting: 11.3 fluid oz/A (0.089 lb AI/Acre). Foliar Application Restrictions: Grass in mixed-stands with Alfalfa See additional PESTS CONTROLLED from ALFALFA section of Label. Pre-Harvest Interval (PHI) / Pre-Grazing Interval: 7 days (minimum time between last application and beginning of foraging or baling). Maximum SULTRUS™ allowed per cutting: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 11.3 fluid oz/A (0.089 lb AI/Acre).		

PEANUT		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Green cloverworm Potato leafhopper Rednecked peanutworm Velvetbean caterpillar	1.0-1.8	0.008-0.014
Armyworm (1st and 2nd instar)	1.8-2.4	0.014-0.019

Bean leaf beetle Corn earworm Corn rootworms (adult) Grape colaspis (adult) Grasshoppers Japanese beetle (adult) June beetle (adult) Stink bugs Threecornered alfalfa hopper Vegetable weevil		
Beet armyworm (1st and 2nd instar) Fall armyworm (1st and 2nd instar) Southern armyworm (1st and 2nd instar) Whitefringed beetle (adult)	2.4-2.8	0.019-0.022
PESTS SUPPRESSED		
Soybean looper Thrips Whitefly (adult)	2.8	0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI): 14 days (minimum time between final application and threshing for seed). Maximum SULTRUS™ allowed per 10-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 8.4 fluid oz/A (0.066 lb AI/Acre). Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.		

SORGHUM		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Sorghum midge	1.0-1.3	0.008-0.01
Armyworm (1st and 2nd instar) Beet armyworm (1st and 2nd instar) Black wooly bear European corn borer* Fall armyworm (1st and 2nd instar) False chinch bug Flea beetle Sorghum headworm (corn earworm) Sorghum webworm Southern armyworm (1st and 2nd instar) Southwestern corn borer* Stalk borer* Stink bugs True armyworm (1st and 2nd instar) Webworms Yellowstriped armyworm (1st and 2nd instar)	1.3-2.8	0.010-0.022
Chinch bug Grasshoppers Sugarcane rootstock weevil	2.0-2.8	0.019-0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI): 14 days.		

If more than 5.6 fluid oz/Acre is applied, allow at least 14 days between last application and grazing.
Maximum SULTRUS™ allowed per 10-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 8.4 fluid oz/A (0.066 lb AI/Acre).
Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.
*Application must be made prior to the larva boring into the plant.

SOYBEAN		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Bean leaf beetle (growth stage VC-V2) Cutworms Potato leafhopper Thrips Green cloverworm	0.8-1.6	0.007-0.013
Armyworm (1st and 2nd instar) Bean leaf beetle Bean leaf webber Beet armyworm (1st and 2nd instar) Blister beetle Cabbage looper Click beetle (adult) Corn earworm Corn rootworms (adult) Cucumber beetle European corn borer Fall armyworm (1st and 2nd instar) Grape colaspis (adult) Japanese beetle (adult) June beetle (adult) Lygus bug Masked chafer (adult) Mexican bean beetle Saltmarsh caterpillar Silverspotted skipper Southern armyworm (1st and 2nd instar) Stink bugs Tarnished plant bug* Threecornered alfalfa hopper Tobacco budworm* Velvetbean caterpillar Webworm Woolybear caterpillar Yellowstriped armyworm (1st and 2nd instar)	1.6-2.8	0.013-0.022
Grasshoppers Soybean aphid	2.0-2.8	0.016-0.022
PESTS SUPPRESSED		
Lesser cornstalk borer Soybean looper*	2.8	0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI) for seed: 21 days; dry vines (hay) and green forage may be fed 15 days after last application. Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 11.2 fluid oz/A (0.088 lb AI/Acre). Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.		

*See INSECT RESISTANCE statement elsewhere on this label.

SUGARCANE		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Sugarcane borer*	2.1	0.017
Rice stalk borer*	2.8	0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 15 days.
Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 16.8 fluid oz/A (0.132 lb AI/Acre).
For ground application, apply in a minimum of 10 GPA.
Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application.
Do not apply if soil is saturated with water.
Do not apply under conditions that favor runoff.
Do not apply in the rain.
*Application must be made prior to the larva boring into the plant.

SUNFLOWER		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Sunflower beetle	0.8-1.6	0.007-0.013
Sunflower stem weevil (adult)	1.6-2.4	0.013-0.019
Banded sunflower moth Grasshoppers Stink bugs Sunflower bud moth Sunflower headclipping weevil Sunflower midge Sunflower moth Sunflower seed weevil	2.0-2.8	0.016-0.022
Palestripped flea beetle	2.8	0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI) and Pre-grazing or Foraging Interval: 30 days.
Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 8.4 fluid oz/A (0.066 lb AI/Acre).
DO NOT apply by ULV application.
Use not permitted in California.

TOBACCO		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lbs AI/Acre
Cutworms	0.28	0.0022

Foliar Application Restrictions
Apply up to 7 days following transplanting as an individual plant treatment.
Maximum SULTRUS™ allowed per crop season: 0.28 fluid oz/A (0.0022 lb AI/Acre).
Maximum number of applications: 1.
Minimum application volume (water): 15 GPA – ground
Use not permitted in CA.

CEREAL GRAIN (EXCEPT RICE)
Includes all members of Crop Group 15 (except rice): Wheat, Corn, Millet (pearl and proso), Barley, Buckwheat, Oats, Popcorn, Rye, Sorghum, Teosinte, and Triticale

FORAGE, FODDER AND STRAW OF CEREAL GRAIN
Includes all members of Crop Group 16, Forage, Fodder, and Straw of all commodities included in group cereal grains (except rice).

See use instructions for each crop.

BARLEY, BUCKWHEAT, MILLET (PEARL and PROSO), OAT, RYE, TRITICALE and WHEAT		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Army cutworm Cereal leaf beetle Cutworms	1.0-1.8	0.008-0.014
Armyworm (1st and 2nd instar) Bird cherry-oat aphid* English grain aphid* Fall armyworm (1st and 2nd instar) Flea beetles Grasshoppers Grass sawfly Pale western cutworm Russian wheat aphid* Southern armyworm (1st and 2nd instar) Stink bugs Yellowstriped armyworm (1st and 2nd instar)	1.8-2.4	0.014-0.019
Chinch bug	2.4	0.019

Foliar Application Restrictions
Pre-Grazing or Foraging Interval: 3 days. Pre-Harvest Interval (PHI): 30 days.
Maximum SULTRUS™ allowed per 3-day interval: 2.4 fluid oz/A (0.019 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 4.8 fluid oz/A (0.038 lb AI/Acre).
*For best control, applications must be made prior to insects damaging the plants. Use the higher rate range and increased water volume for applications occurring after plant damage has taken place or following booting in order to receive better coverage. Once damage occurs or plant growth stage reaches booting, control may be limited to suppression only.

VEGETABLE CROPS
CROP USE DIRECTIONS

For all crops, apply specific dosage of SULTRUS™ at early threshold for target pest, as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part by the stage of pest development at application and infestation level of those pests.
Application timing should be based on careful scouting and local economic thresholds. SULTRUS™ may be applied before, during, or after planting. Use the higher rates for moderate to heavy insect pressure. Lower rates are generally adequate for low to moderate insect pressure but require careful scouting and may require more frequent application.

SULTRUS™ is an Emulsifiable Concentrate formulation and is active by contact and ingestion. Thorough coverage is necessary for optimum performance.

BRASSICA (COLE) LEAFY VEGETABLES Includes all members of Crop Group 5: Broccoli, Broccoli raab (rapini), Chinese (gai lon) broccoli, Brussels sprouts, Cabbage, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, and Turnip greens.		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper Thrips	0.8-1.6	0.007-0.013
Alfalfa looper Cabbage looper Cabbage webworm Imported cabbageworm Southern cabbageworm	1.6-2.4	0.013-0.019
Armyworm (1st and 2nd instar) Beet armyworm	2.4-3.2	0.019-0.025

(1st and 2nd instar) Cabbage flea beetle Corn earworm Diamondback moth (larvae)* Fall armyworm (1st and 2nd instar) Grasshoppers Japanese beetle (adult) Lygus bug Meadow spittlebug Southern armyworm (1st and 2nd instar) Stink bugs Tarnished plant bug* Vegetable weevil (adult) Yellowstriped armyworm (1st and 2nd instar)		
PEST SUPPRESSED		
Whitefly (adult)	3.2	0.025

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 0 day.
Maximum SULTRUS™ allowed per 7-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 12.8 fluid oz/A (0.1 lb AI/Acre).
For aerial applications, apply in a minimum of 5 GPA.
Due to potential injury to bees, do not apply to crops grown for seed.
*See INSECT RESISTANCE statement elsewhere on this label.

CUCURBITS (except crops grown for seed)
Includes all members of Crop Group 9: Balsam apple, Balsam pear, Bitter melon, Chayote, Chinese cucumber, Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes: hyotan, cucuzza, henchmia and Chinese okra), Muskmelon (includes: cantaloupe, true cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin, Summer squash (includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, and zucchini) Watermelon, Winter squash (includes: butternut squash, calabaza, hubbard squash, acorn squash and spaghetti squash)

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper	0.8-1.6	0.007-0.013
Armyworm (1st and 2nd instar) Cabbage looper Corn earworm Grasshoppers Melonworm Pickleworm Rindworm Stink bugs	1.6-2.4	0.013-0.019
Cucumber beetles Lygus bug Tarnished plant bug * Tobacco budworm	2.4-2.8	0.019-0.022
PEST SUPPRESSED		
Whitefly (adult)	2.8	0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 0 day.
Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 11.2 fluid oz/A (0.088 lb AI/Acre).
*See INSECT RESISTANCE statement elsewhere on this label.

FRUITING VEGETABLES
Includes all members of Crop Group 8: Eggplant, Groundcherry, Pepino, Pepper (includes: bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, and Tomato

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Celery leaftier Colorado potato beetle * European corn borer Garden webworm Potato aphid Potato leafhopper Stink bugs Tomato fruitworm (corn earworm) Tomato hornworm	1.6-2.8	0.013-0.022
Beet armyworm (1st and 2nd instar) Cabbage looper Southern armyworm (1st and 2nd instar) Tarnished plant bug * Thrips (except *Thrips palmi*) Tomato pinworm Variegated cutworm Western yellowstriped armyworm (1st and 2nd instar)	2.1-2.8	0.017-0.022
Flea beetles Garden symphylan	2.8	0.022
PESTS SUPPRESSED		
Leafminers (Adult) Pepper weevil Whitefly (adult)	2.8	0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI) for tomato: 0 day. PHI for all other fruiting vegetables included in this section: 7 days.
Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 16.8 fluid oz/A (0.132 lb AI/Acre).
For reduction of damage caused by garden symphylan, apply specified dosage to the top of the planting beds prior to transplanting.
Spray should cover the entire top of the beds. Thoroughly incorporate to a depth of approximately 4 to 6 inches. A maximum of 1 pretransplant application is allowed per crop season.
*See INSECT RESISTANCE statement elsewhere on this label.

LEAFY VEGETABLES
Includes all members of Crop Group 4: Amaranth (Chinese spinach), Arugula (rouquette), Cardoon, Celery, Chinese celery, Celtuce, Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Endive (escarole), Florence fennel, Lettuce (head and leaf), New Zealand spinach, Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, Swiss chard, Vine spinach

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper Thrips	0.8-1.6	0.007-0.013
Alfalfa looper Cabbage looper Green cloverworm Imported cabbageworm Saltmarsh caterpillar	1.6-2.4	0.013-0.019
Beet armyworm (1st and 2nd instar) Corn earworm Diamondback moth (larvae)*	2.4-3.2	0.019-0.025

European corn borer Fall armyworm (1st and 2nd instar) Flea beetles Grasshoppers Japanese beetle (adult) Leafhoppers Lygus bug Meadow spittlebug Southern armyworm (1st and 2nd instar) Stink bugs Tarnished plant bug* Vegetable weevil (adult) Yellowstriped armyworm (1st and 2nd instar)		
PEST SUPPRESSED		
Whitefly (adult)	3.2	0.025

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 0 day.
Maximum SULTRUS™ allowed per 7-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 12.8 fluid oz/A (0.1 lb AI/Acre).
For aerial applications, apply in a minimum of 5 GPA.
Due to potential injury to bees, do not apply to crops grown for seed.
*See INSECT RESISTANCE statement elsewhere on this label.

DRIED SHELLED LEGUME VEGETABLES
Includes all members of Crop Subgroup 6C: Adzuki bean, Blackeyed pea, Broad bean, Catjang, Chickpea (Garbanzo bean), Cowpea, Crowder pea, Field bean, Field pea, Guar, Kidney bean, Lablab bean, Lentil, Dry Lima bean, Lupin (grain, sweet, white and white sweet), Moth bean, Mung bean, Navy bean, Pigeon pea, Pinto bean, Rice bean, Tepary bean, Urd bean (Southern pea included in separate section.)

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper	0.8-1.6	0.007-0.013
Cowpea curculio* Stink bugs Tarnished plant bug*	1.6-2.4	0.013-0.019
Bean leaf beetle Bean leaf webber Beet armyworm (1st and 2nd instar) Blister beetle Cabbage looper Corn earworm Cucumber beetle European corn borer Fall armyworm (1st and 2nd instar) Grasshoppers Green cloverworm Japanese beetle (adult) Lygus bug Mexican bean beetle Pea leaf weevil Pea weevil Saltmarsh caterpillar Silverspotted skipper Soybean looper* Threecornered alfalfa hopper	2.4-3.2	0.019-0.025

Tobacco budworm* Velvetbean caterpillar Webworm Woolybear caterpillar Yellowstriped armyworm (1st and 2nd instar)		
PEST SUPPRESSED		
Pea aphid	3.2	0.025
Foliar Application Restrictions Pre-Harvest Interval (PHI): 7 days (minimum time between final application and threshing for seed). Maximum SULTRUS™ allowed per 14-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 6.4 fluid oz/A (0.05 lb AI/Acre). Do not feed treated vines or hay to livestock. *See INSECT RESISTANCE statement elsewhere on this label.		

PEA, SOUTHERN		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper	0.8-1.6	0.007-0.013
Beet armyworm (1st and 2nd instar) Corn earworm Cowpea curculio* Fall armyworm (1st and 2nd instar) Grasshoppers Lygus bug Southern armyworm (1st and 2nd instar) Stink bugs Tarnished plant bug* Thrips Yellowstriped armyworm (1st and 2nd instar)	1.6-2.1	0.013-0.017
Foliar Application Restrictions Pre-Harvest Interval (PHI): 3 day. Maximum SULTRUS™ allowed per 5-day interval: 2.1 fluid oz/A (0.017 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 10.5 fluid oz/A (0.083 lb AI/Acre). Due to potential injury to bees, do not apply to southern peas grown for seed. Do not feed treated vines or hay to livestock. Do not apply to cowpea or southern pea varieties grown for livestock feed. *See INSECT RESISTANCE statement elsewhere on this label.		

POTATO AND OTHER TUBEROUS AND CORM VEGETABLES Includes all members of Crop Subgroup 1C: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Edible canna, Cassava (bitter and sweet), Chayote root, Chufa, Dasheen (taro), Ginger, Leren, Potato, Sweet potato, Tanier, True yam, Turmeric, Yam bean		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Cutworms Potato leafhopper	0.8-1.6	0.007-0.013
Cabbage looper Colorado potato beetle* Cucumber beetles European corn borer Flea beetles Potato psyllid Potato tuberworm Sweet potato weevil (adults)	1.6-2.8	0.013-0.022

Tarnished plant bug*		
PEST SUPPRESSED		
Aphids	2.8	0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI): 0 day. If more than 5.6 fluid oz/Acre is applied, allow at least 14 days between last application and grazing. Maximum SULTRUS™ allowed per 5-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 16.8 fluid oz/A (0.132 lb AI/Acre). *See INSECT RESISTANCE statement elsewhere on this label.		

CARROT AND RADISH		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Aster leafhopper Cutworms Flea beetles Potato leafhopper	1.6-2.8	0.013-0.022
Carrot weevil	2.8	2.8
Foliar Application Restrictions Pre-Harvest Interval (PHI): 0 day. Maximum SULTRUS™ allowed per 7-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 14.0 fluid oz/A (0.11 lb AI/Acre). Do not harvest radish tops (leaves) for human consumption. Due to potential injury to bees, do not apply to crops grown for seed.		

SWEET CORN – FOLIAR APPLICATIONS		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Black cutworm Flea beetles Granulate cutworm Sand hill cutworm	0.8-1.6	0.007-0.013
Armyworm (1st and 2nd instar) Bean leaf beetle Cereal leaf beetle Chinch bug Click beetle (adult) Corn earworm Corn rootworms (adult) Corn silk fly (adult) European corn borer* Grape colaspis (adult) Japanese beetle (adult) June beetle (adult) Leafhoppers Masked chafer (adult) Southern armyworm (1st and 2nd instar) Southern corn leaf beetle Southwestern corn borer* Stalk borer* Stink bugs Webworm Western bean cutworm Yellowstriped armyworm (1st and 2nd instar)	1.6-2.8	0.013-0.022
Grasshoppers	2.0-2.8	0.016-0.022
Fall armyworm	2.8	0.022

(1st and 2nd instar)		
Foliar Application Restrictions Pre-Harvest Interval (PHI): 0 day. Maximum SULTRUS™ allowed per 2-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 28.0 fluid oz/A (0.22 lb AI/Acre). Minimum ULV application volume (once refined cotton seed/vegetable oil): 1.0 qt/A – aerial application. *Application must be made prior to the larva boring into the plant.		

SWEET CORN – Soil Applications		
PESTS CONTROLLED	Rate fluid oz/1000 row-ft	Rate fluid oz/Acre
Seedcorn maggot Wireworm	0.12-0.16	2.0-2.8
PEST SUPPRESSED		
White grub	0.14-0.16	2.5-2.8
Soil Application Restrictions Pre-Harvest Interval (PHI): 0 day. Maximum SULTRUS™ allowed at planting: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 28.0 fluid oz/A (0.22 lb AI/Acre). Use not permitted in California.		
Soil Application Notes APPLICATION INSTRUCTIONS: SULTRUS™ may be applied in water or in liquid, pop-up fertilizer at planting. Apply in a minimum of 2 GPA of total mix volume when applied in water. Good agitation must be maintained at all times during application.		
INSTRUCTIONS FOR LIQUID POP-UP FERTILIZER APPLICATION: Perform a compatibility test prior to mixing the entire tank to ensure that SULTRUS™ will remain in solution while applying. Take a known amount of the fertilizer to be used as a carrier and place in a glass jar. Add the appropriate amount of SULTRUS™ based on the labeled use rate. Add other components to be tank mixed. Gently agitate the solution. Examine the solution for signs of incompatibility such as flocculation, precipitation, separation, etc. If incompatibility occurs, contact your local Helena Chemical representative for additional information. Fertilizers containing zinc have been shown to be incompatible with SULTRUS™. PLACEMENT: Total mix volume should be applied in the open furrow ahead of the closing wheels for optimum coverage.		

TREE and VINE CROPS
CROP USE DIRECTIONS

For all crops, apply specific dosage of SULTRUS™ at early threshold for target pest, as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part by the stage of pest development at application and infestation level of those pests.

Specified application rates within this label are based on full-size mature trees and vines. Application timing should be based on careful scouting and local economic thresholds. Use the higher rates for moderate to heavy insect pressure or when applying by air. Lower rates are generally adequate for smaller trees/vines or low to moderate insect pressure but require careful scouting and may require more frequent application.

SULTRUS™ is an Emulsifiable Concentrate (EC) formulation and is active by contact and ingestion. For tree and vine crops, apply by ground or air equipment using sufficient water to obtain through coverage of target plant parts for optimum performance.

CITRUS (California and Arizona, Only) Includes all members of Crop Group 10: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sweet and sour), Pummelo, Satsuma mandarin, White sapote, and other cultivars and/or hybrids of these.		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Glassywinged sharpshooter	1.6-3.2	0.013-0.025
Foliar feeding cutworms Fuller rose beetle (larvae and adults on foliage) Grasshoppers Root-weevil complex (larvae and adults on foliage)	2.4-3.2	0.019-0.025
Asian citrus psyllid	2.4-6.4	0.019-0.05
Citrus thrips Katydid	6.4	0.05
Foliar Application Restrictions Pre-Harvest Interval (PHI): 0 day.		

Maximum SULTRUS™ allowed per 7-day interval: 6.4 fluid oz/A (0.05 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 6.4 fluid oz/A (0.05 lb AI/Acre). Minimum application volume (water): 25 GPA – ground, 25 GPA – aerial application.

GRAPE Includes: Table grape, Raisin, Wine and Muscadine grape		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Glassywinged sharpshooter Grape leaf skeletonizer Western grape leaf skeletonizer	1.6-3.2	0.013-0.025
Climbing cutworm Grape berry moth Grape bud beetle Grape cane gallmaker (adult) Grape flea beetle Grape leaffolder Grape leafhopper Grape leafroller Grape mealybug (crawlers) Omnivorous leafroller Orange tortrix Spiders (excluding black widow, brown recluse, and hobo) Thrips Variegated leafhopper	2.4-3.2	0.019-0.025
Foliar Application Restrictions Pre-Harvest Interval (PHI): 3 days. Maximum SULTRUS™ allowed per 14-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 12.8 fluid oz/A (0.1 lb AI/Acre). Minimum application volume (water): 50 GPA – ground, 10 GPA – aerial application.		

HOP		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Hop aphid Hop flea beetle Hop looper Hop plant bug	3.2	0.025
Foliar Application Restrictions Pre-Harvest Interval (PHI): 7 days. Maximum SULTRUS™ allowed per 14-day interval: 3.2 fluid oz/A (0.025 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 16.0 fluid oz/A (0.125 lb AI/Acre). Minimum application volume (water): 25 GPA – ground, 10 GPA – aerial application.		

POME FRUIT Includes all members of Crop Group 11: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental pear, Quince		
PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Green fruitworm Potato leafhopper White apple leafhopper	1.4-2.0	0.011-0.016
Codling moth Oriental fruit moth Spotted tentiform leafminer Stink bugs Tarnished plant bug Western tentiform leafminer	2.0-2.4	0.016-0.019
Apple leafroller	2.4-2.8	0.019-0.022

Apple maggot (adult) Ermine moth European apple sawfly Lesser appleworm Obliquebanded leafroller Pandemis leafroller Pear sawfly (larvae = pear slug) Periodical cicada Plum curculio Redbanded leafroller San Jose scale (crawlers) Tufted apple bud moth Variegated leafroller		
Foliar Application Restrictions Pre-Harvest Interval (PHI): 7 days. Maximum SULTRUS™ allowed per 14-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 2.8 fluid oz/A (0.022 lb AI/Acre). Minimum application volume (water): 100 GPA – ground application, 10 GPA – aerial application.		

STONE FRUIT
Includes all members of Crop Group 12: Apricot, Cherry (sweet and tart), Nectarine, Peach, Plum (includes Chickasaw, Damson, and Japanese), Plumcot, Prune (fresh and dried)

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Green fruitworm Lesser peach tree borer White apple leafhopper	1.4-2.0	0.011-0.016
Codling Moth Lygus bug Oriental fruit moth Stink bugs Tarnished plant bug	2.0-2.4	0.016-0.019
American plum borer Black cherry aphid Cherry fruit fly Obliquebanded leafroller Omnivorous leafroller Peach twig borer Periodical cicada Plum curculio Redbanded leafroller Western cherry fruit fly	2.4-2.8	0.019-0.022
Foliar Application Restrictions Pre-Harvest Interval (PHI): 7 days. Maximum SULTRUS™ allowed per 14-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre). Maximum SULTRUS™ allowed per crop season: 5.6 fluid oz/A (0.044 lb AI/Acre). Minimum application volume (water): 50 GPA – ground application, 10 GPA – aerial application.		

TREE NUT CROPS
Includes all members of Crop Group 14: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)

PESTS CONTROLLED	Rate fluid oz/Acre	Rate lb AI/Acre
Potato leafhopper White apple leafhopper	1.4-2.0	0.011-0.016
Ants (on foliage) Codling moth Common earwig Filbertworm	2.0-2.4	0.016-0.019

Leaffooted bug Navel orangeworm Pecan nut casebearer Pecan weevil Stink bugs Tarnished plant bug Twolined spittlebug		
Hickory shuckworm Obliquebanded leafroller Peach twig borer Walnut husk fly	2.4-2.8	0.019-0.022

Foliar Application Restrictions
Pre-Harvest Interval (PHI): 14 days.
Maximum SULTRUS™ allowed per 14-day interval: 2.8 fluid oz/A (0.022 lb AI/Acre).
Maximum SULTRUS™ allowed per crop season: 2.8 fluid oz/A (0.022 lb AI/Acre).
Minimum application volume (water): 100 GPA – ground application, 10 GPA – aerial application.

RATE CONVERSION CHART

FLUID OZ PER ACRE	LB AI PER ACRE	ACRES PER GALLON
0.8	0.0065	160
1.0	0.008	128
1.2	0.0095	107
1.4	0.011	91
1.6	0.0125	80
1.8	0.014	71
2.0	0.0155	64
2.2	0.017	56
2.4	0.019	53
2.6	0.0205	49
2.8	0.022	46
3.0	0.0235	43
3.2	0.025	40
6.4	0.05	20

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
PESTICIDE STORAGE: Store in a cool, dry place and away from open flame and extreme heat. Store in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Handle and open container in a manner as to prevent spillage. If container is leaking, invert container to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material.
Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.
PESTICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
CONTAINER HANDLING
Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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, or incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
CONTAINER DISPOSAL – RETURNABLE/REFILLABLE SEALED CONTAINER: Do not rinse container. Do not break seals. Replace the dust cover/cap and return container, intact to point of purchase.

CONDITIONS OF SALE–LIMITED WARRANTY
AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale–Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. To the extent consistent with applicable law, the Company makes no other warranties or representations of any kind; express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent consistent with applicable law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

SULTRUS™ is a trademark of Helena Holding Company.