

**KEEP OUT OF THE REACH OF CHILDREN**



Products for Plants

**AGRICROP**



## **PHOTON 500 SG - Environmental Stress Technology**

**ACTIVE: 500 g/kg of a mixture of dicarboxylic acids**

**CONTENTS: 500g**

# DIRECTIONS FOR USE

**Restraints:** \*When applying PHOTON 500 SG to crops at a per 100L rate, the rate per hectare SHOULD NOT go below 20 g/ha or exceed 40 g/ha. Photon 500 SG must be applied 4 –5 days prior to a stress event to achieve maximum performance.

## FOLIAR APPLICATION

Crop	Situation	State	Dilute Use Rate		Critical Comments
			Per ha	Per 100L	
Vegetables (Annual and Biennial Crops)					
<b>Fruiting vegetables</b> including tomato, pepper, capsicum. <b>Cucurbits</b> including melon, squash, cucumber, gourds. <b>Leafy vegetables</b> including lettuce, chard, spinach. <b>Brassicas</b> including: broccoli, cabbage, cauliflower, mustard. <b>Root crops</b> including beets, onions, garlic and EXCLUDING potato and sweet potato.	<b>Environmental stress mitigation program</b>  To reduce transplant shock  To reduce flower abortion and increase fruit set  To improve fruit size and quality	All states	20 g/ha		Apply 20 grams PHOTON 500 SG per ha beginning immediately after transplant or two leaf stage for seeded or tuber crops. Repeat applications at 14-21 day intervals through to harvest. Early applications can be made as a band over the row.  Apply after watering transplants.  Apply 7-14 days prior to flowering. Repeat at 14-21 day intervals while flowering continues.  Begin applications at flowering. Continue at 14-21 day intervals through to harvest.
<b>Potato, sweet potato.</b>	<b>Environmental stress mitigation program</b>  To reduce cold stress	All states	20 g/ha		Apply 20 grams of PHOTON 500 SG per ha beginning immediately after transplant (Sweet Potato) or two leaf stage for seeded or tuber crops. Repeat applications at 14-21 day intervals through to harvest. Early applications can be made as a band over the row.  Apply prior to a cold event, ensuring adequate coverage of the foliage.
Fruit Crops					
<b>Pineapples</b>	<b>Environmental stress mitigation program</b>  To reduce transplant shock  To reduce cold stress	All states	40 g/ha		Begin applications at flowering. Continue at 14-21 day intervals through to harvest.  Apply after watering in slips.  Apply PHOTON 500 SG before the onset of a cold event and continue throughout the cold period. Apply PHOTON 500 SG at 100g/ha for the first 2 applications at 21 days apart and 50g/ha for the third and subsequent applications, at 21 day intervals.
<b>Berries</b>	<b>Environmental stress mitigation program</b>	All states	20 g/ha		Apply to the foliage and fruit of the berry crop at 14 day intervals beginning at flowering. Use sufficient spray solution to provide complete coverage. For best results, begin applications when foliage is fully expanded. The addition of a wetting agent, such as a non-ionic surfactant, is extremely important for berries that have a waxy surface, such as blueberries.
Tree Crops					
<b>Pomefruit</b> including apple, pear, quince <b>Stonefruit</b> including apricot, peach, nectarines, cherries, plums, prunes <b>Nut crops</b> including macadamias, almonds, pistachios, walnuts <b>Tropical fruits</b> including Mango, avocado	<b>Environmental stress mitigation program</b>  To reduce cold stress in frost sensitive crops	All states	*See critical comments	4g/100L*	Apply PHOTON 500 SG at a rate of 4g/100 L of water*. The total volume applied per ha should be determined using the Tree Row Volume formula. Begin applications within 7 days of petal fall. Continue to apply at 14-21 day intervals until harvest.  Begin applications prior to a cold event. Better results will be obtained with two to three applications applied at 14 day intervals prior to a cold event. Apply in sufficient water to provide thorough coverage.
<b>Citrus</b>	<b>Environmental stress mitigation program</b>	All states	*See critical comments	4g/100L*	Apply PHOTON 500 SG in sufficient spray solution to wet all foliage. For best results, begin applications one month prior to flowering. Alternatively, PHOTON 500 SG applications may begin at flowering and be repeated at 21 day intervals through to harvest.

Vines					
Wine grapes Table grapes	Environmental stress mitigation program	All states	*See critical comments	4g/100L*	Begin applications between bloom and cap fall. If it is desirable to have a more open bunch, delay the first application till after capfall. Apply PHOTON 500 SG at 21 day intervals through just prior to harvest. For additional protection and better early season growth the following year, make 1 to 2 applications of Screen™ Duo beginning immediately after harvest.
<b>Row Crops</b> (For row crops, early PHOTON 500 SG applications can be applied in a band over the row at the equivalent broadcast rate).					
Cereals	Environmental stress mitigation program	All states	40g/ha		Apply PHOTON 500 SG to cereal crops between flag leaf and anthesis or pollen shed (Growth Stages 47 -59) in sufficient water to wet the foliage. Cereals may benefit from an early application of PHOTON 500 SG of 40g/ha, applied at tiller initiation (Growth Stage 21). This does not eliminate the need for a second application at heading.
Maize: Filed corn Sweet corn Waxy corn Starch corn	Environmental stress mitigation program	All states	40g/ha		Apply PHOTON 500 SG in sufficient spray solution to wet foliage. Application should be made between early silk emergence and pollination (Growth Stages R1-R3). An early application of PHOTON 500 SG can be made at the 6 leaf stage (Growth Stage V6). This does not eliminate the need for an application at silk emergence.
Soybeans	Environmental stress mitigation program	All states	40g/ha		Apply PHOTON 500 SG in sufficient spray solution to wet foliage. Application should be made between first flowering and early pod fill (Growth Stages R1-R3). An early application of PHOTON 500 SG can be made at V5-6 (5-6 trifoliolate). Follow with an R1-3 application as directed above.
Cotton	Environmental stress mitigation program	All states	40g/ha		Apply PHOTON 500 SG in sufficient spray solution to wet foliage. Application should be made between mid-pin stage and first flower. A second application can be made before vegetative growth stops (cutout) to protect later blooms.
	To reduce cold stress		20g/ha		Apply 20g/ha at 5cm of growth for mitigation of cold stress.
Canola	Environmental stress mitigation program	All states	40g/ha		Apply PHOTON 500 SG in sufficient spray solution to wet foliage. Apply PHOTON 500 SG when canola plants are between half and full bloom to protect flowers and small pods. PHOTON 500 SG must be applied at least 5 days prior to any heat events of 27°C or higher.

#### FERTIGATION APPLICATION

Crop	Situation	State	Use Rate		Critical Comments
			Per ha	Per 100L	
Trees, nuts & vines	Environmental stress mitigation program	All states	40g/ha	-	Use a "constant dose application system" to ensure even distribution of PHOTON 500 SG is achieved across the crop via irrigation. Apply every 14-21 days during the growing season. Commence spray program at least 7 days before the onset of a heat or chill event. For best results, the second application should have been applied before the onset of a stress event. If a significant period of stress is approaching, the application interval should be reduced to 14 days.
Vegetables	Environmental stress mitigation program	All states	20g/ha at 10-14 day intervals OR 30g/ha at 14-21 day intervals		Use a "constant dose application system" to ensure even distribution of PHOTON 500 SG is achieved across the crop via irrigation. Apply every 14-21 days during the growing season. Commence spray program at least 7 days before the onset of a heat or chill event. For best results, the second application should have been applied before the onset of a stress event. If a significant period of stress is approaching, the application interval should be reduced to 14 days.

## GENERAL INSTRUCTIONS

PHOTON 500 SG reduces the impact of environmental stressors, such as excess light, heat, drought, cold and other environmental conditions that negatively impact crop productivity. The active ingredients in PHOTON 500 SG are natural compounds, found in all plants that control a specific enzyme system associated with the stress response. PHOTON 500 SG effectively prepares the plant for the onset of environmental stress. The use of PHOTON 500 SG may result in higher yields of better quality crops. PHOTON 500 SG can be applied at any time during the growing season, from pre-plant to post-harvest, on all crops. PHOTON 500 SG does not leave a residue. All standard crop protection materials can be applied to PHOTON 500 SG treated crops.

### Application Information:

For the greatest protection against environmental stress damage, apply PHOTON 500 SG at the rates and specific crop stages noted in the Directions for Use. Repeat applications at the intervals noted in the crop specific section. Foliar applications should be made in sufficient water volume to provide adequate uniform coverage. A wetting agent should be added to aid in spreading over the leaf surface. Preferred surfactants include non-ionic or organo-silicone adjuvants.

**Note: Apply PHOTON 500 SG in sufficient spray volume to wet foliage. Applying to drip or beyond will be a waste of product. Best results are obtained from multiple applications. A single application will provide minimal benefit.**

### Mixing Instructions:

1. Fill spray tank one-third to one-half full, maintaining agitation
2. Add surfactant and other materials to the spray tank
3. Add appropriate amount of PHOTON 500 SG

**Maintain Vigorous Agitation of the spray solution containing PHOTON 500 SG.**

#### WARNING

**CAUSES SERIOUS EYE IRRITATION.**



Wash hands thoroughly after handling

Wear eye protection

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue Rinsing

If eye irritation persists: Get medical advice/attention.

### Compatibility:

To date, there have been no compatibility issues with PHOTON 500 SG and nutrients, pesticides, or other crop protection products. Since all combinations have not been tested, the compatibility of PHOTON 500 SG with any potential tank mix partners should be determined in small amounts, such as a jar test.

**PRECAUTIONARY STATEMENTS: Causes slight eye irritation. Avoid contact with eyes. Photon 500 SG may cause irritation to the respiratory system. Avoid breathing dust or mist.**

**PERSONAL PROTECTIVE EQUIPMENT: Applicators and other handlers should wear dust/mist-filtering respirator.**

**FIRST AID: If in eyes, hold eyes open and flood gently with water. For further information refer to Material Safety Data Sheet.**

**STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage and disposal. Store in a cool, dry, sheltered location. In case of a spill or leak, avoid breathing dust, clean up and dispose of wastes in compliance with applicable local regulations.**

**CONTAINER DISPOSAL: Completely empty bottle into application equipment. Dispose of empty bottle according to local regulations.**

### CONDITIONS OF SALE AND LIMITED WARRANTY AND LIABILITY

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of CMM, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold CMM and Seller harmless for any claims relating to such factors. CMM warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or CMM, and Buyer and User assume the risk of any such use.

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