



alstasan  
**SilvoX**



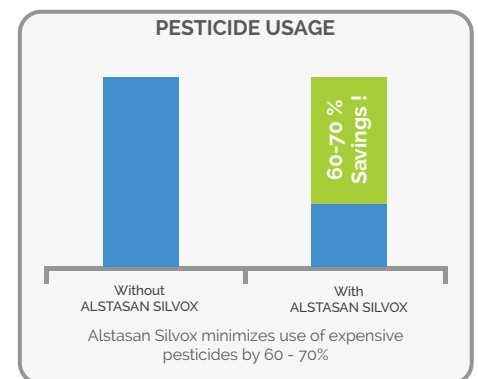
## FEATURES

- Broad spectrum biocide
- Colourless, odourless, safe and nontoxic to humans
- **Eco-friendly**, degrading into water and oxygen and no harmful by-products
- Applied by spraying, drench, drip and fumigation for disease control
- Active in a wide range of pH and temperature
- Silver acts on the microbial DNA, rendering them incapable of replication
- **Effective** against bacterial, fungal, nematodal infections
- Non carcinogenic and non-mutagenic to humans
- Store & depot effect of silver makes it effective at a low concentration



## BENEFITS

- Minimizes use of harmful pesticides by 60 - 70%
- Used both as **preventive and curative** treatment for diseases
- No water rinsing after use, preventing nutrient depletion
- Extends shelf life of fruits and vegetables
- Replaces use of expensive fungicides
- No **phytotoxic** effect and no alteration in taste or smell of the produce
- Works on a short contact time
- **Prevents clogging of drip lines** by removing biofilms, and their re-growth



## ALSTASAN SILVOX: NANO SILVER HYDROGEN PEROXIDE

Alstasan Silvox is a synergy of hydrogen peroxide and silver nano particles in presence of a catalyst, stabilized to prevent quick oxidation and degradation. This combination provides high efficacy in killing of microorganisms in almost all possible applications such as soil, water, air and surface. The process of disinfection is controlled by 'store and depot' action where hydrogen peroxide gets activated only in presence of microbial contact and once it is killed, silver quickly stabilizes the peroxide, storing its activity for further use and not allowing peroxide to degrade.

Additional features of Silver in Hydrogen Peroxide:

Oligo-dynamic function: Nano silver particles show toxicity on bacterial cells even in relatively low concentrations. Silver inactivates enzymes by reacting with their thiol groups precipitating as sulphides.

Stabilizer function: Hydrogen Peroxide degrades into water and oxygen, meaning unstable. Silver added as a stabilizer prevents the slow decomposition of hydrogen peroxide. The  $Ag^+$  ions keep the  $O_2^-$  ions.

Activator function: The silver performs as an activator. The singularity of this silver activator is that it only activates the peroxide when it is exposed to bio-foulants.



## APPLICATION & DOSAGE



### Treatment by Drip Method

Alstasan Silvox dosed at 1-2 ml/ltr of irrigation water is fed to the plant root zones through a drip line. This must be repeated once in every 15 days or as advised. This prevents re-growth of infectious pathogens. Prolonged use of drip lines lead to formation of biofilms. With Alstasan Silvox, the clogging of drip lines and venturi meters can be averted.

### Soil Fumigation/ Soil Sterilization

Soil Fumigation is a pre-plantation treatment over soil-borne pathogens, and stubborn nematodes. Alstasan Silvox dosed at 35 ml/3 ltrs/m<sup>2</sup> of water can be applied uniformly over moistened soil beds using spout. Requires no water rinsing or plastic covering. After 12 hours, the soil is ready for plantation. This method kills most disease causing organisms.



### Treatment by Drench Method

It is best to drench the soil early in the growing season giving it time to disperse within the plant before the pathogens flourish. The soil can be drenched with 2-5ml/1ltr solution of Alstasan Silvox, every 15-30 days or as advised by your CSL representative. Frequency of drenching rely on the weather and age of the crop.

### Foliar Spraying

Foliar spray should be applied in the early morning before the sun becomes hot. Alstasan Silvox solution at 1-3ml/1 ltr of water sprayed once in every 7-15 days to control white powdery growth on leaves. This serves as a prophylactic measure. The spraying schedules must be fixed consulting CSL Agronomist.



### Pruning Tools Sterilization

All kinds of tools used in agriculture from sowing trays, cutting knives, scissors, boots, clothes, must be disinfected both before and after use to prevent cross contamination and pathogen vectors. To safely sterilize them, the pruning tools must be dipped in a 1% solution of Alstasan Silvox for 10 - 20 minutes.

## Soil less/ Hydroponics Treatment

Growing hydroponically in a range of substrates can be a good alternative to regular soil but they harbour pathogens such as *Pythium sp.*, etc., requiring their timely disinfection. Alstasan Silvox at the rate of about 5ml per ltr of water can be made and the cocopeat can be allowed to soak for 4-6 hours till soggy wet. It prevents cross contamination.



## Seed Treatment

80% of the seed sown is untreated. Treatment with 1% solution of Alstasan Silvox for 8-12 hours before plantation protects the seeds from soil borne diseases, protects the emerged seedlings from sucking insect pests affecting crop emergence and development. It increases the seed germination, reduces mortality, enhancing root formation.

## Seed Bed Treatment

Adoption of plant protection measures catalyzes efficient development of nursery plants. Soil contains pathogens that affect the growth and development of seedlings. Alstasan Silvox at the rate of 10ml per ltr of water to be drenched in the seed bed after 7 - 15 days of germination.



## Post Harvest Wash:

Pesticide applications leave unwanted taste, and toxic residues on the produce prompting consumer rejection. Washing with Alstasan Silvox at 1ml/ ltr of water ensures farm-fresh appearance, eliminates toxic surface residues, increases shelf life of the produce, even after prolonged storage.

For knowing the exact dosage and method of application for your given requirement, crop specific dosage, please refer to your nearest Chemtex representative or visit us at [www.silverhydrogenperoxide.com](http://www.silverhydrogenperoxide.com) or call us at +91-8961-111111

\*Please note: Alstasan Silvox should not be used with any other chemicals, and should be consumed within 45 minutes of dilution.

## AREAS OF APPLICATION

**Open Field Cultivation:** Grapes, Apple, Pomegranate, Chili, Capsicum, Tomato, Potato, Tea, Cucumber, Carrot, Cabbage, Cauliflower, Sugarcane, Rubber, Rice Paddies, Wheat, Barley, Almond, Turnip, Parsley, Pistachio, etc.

**Protective Cultivation:** Capsicum, Cherry Tomato, Cucumber, Apricot, Mushroom, Cabbage, Beetroot, Pea, Banana, Broccoli, etc.

**Floriculture:** Gerbera, Carnation, Rose, Anthurium, Daisy, Liliun, Orchid, Chrysanthemum, Gladiolus, Vanilla, etc.

**Cocopeat/ Soil less Media:** Mushroom, Tomato, Lettuce, Spinach, etc.

## ALSTASAN SILVOX EFFICIENTLY REDUCES THE USE OF COMMON FUNGICIDES/ BACTERICIDES

| Pathogen Type         | Pathogen Diseases   | Application Method               |
|-----------------------|---------------------|----------------------------------|
| Fungi                 | Powdery Mildew      | Foliar Spraying                  |
|                       | Downy Mildew        | Foliar Spraying                  |
|                       | Bortrytis Blight    | Foliar Spraying                  |
|                       | Damping off         | Soil Drenching, Drip Method      |
|                       | Anthraco nose       | Soil Drenching, Foliar Spraying  |
|                       | Rust                | Foliar Spraying                  |
|                       | Black Rot           | Foliar Spraying, Soil Drenching  |
|                       | Dieback             | Foliar Spraying                  |
|                       | Root Rot            | Soil Drenching, Drip Method      |
| Bacteria              | Bacterial Cankers   | Foliar Spraying                  |
|                       | Leaf Wilting        | Soil Fumigation                  |
|                       | Leaf Spots          | Foliar Spraying                  |
|                       | Crown Gall          | Soil Fumigation, Foliar Spraying |
| Pests (Larvae & Eggs) | Root Knot Nematodes | Soil Fumigation, Soil Drenching  |

### CHEMICAL SPECIFICATIONS:

| Particulars  | Value             |
|--|-------------------|
| Assay as Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> ) IP | 49.5 - 50.0 %     |
| Assay as Nano Silver IP Grade                                  | 490 - 510 ppm     |
| pH value (neat)  | 1.5 - 2.0         |
| Odour  | Odourless         |
| Shelf Life   | 24 months         |
| Packed in HDPE containers with vented caps                     | 1, 10, 20 kg jars |

\*The above values are only indicative and not specific. Please refer to technical specifications

### CERTIFICATIONS & APPROVALS:

Alstasan Silvox is FDA (Food & Drugs Administration) approved product by NTC (National Toxicology Center) and has been tested as safe for even direct human consumption in drinking water at up to 25ppm concentration. Alstasan Silvox has also been tested by SGS Laboratory for nil content of arsenic, lead, cadmium and tin. Tested for high efficacy on bacteria by NDRI, Karnal.



### HANDLING MEASURES AND PRECAUTIONS

Gloves should be worn while handling concentrated chemical. Splashes on skin may cause temporary (for few hours) whitening of skin and itching sensation for some time. In such situation skin should be washed with water and apply moisturizing lotion or oil. While opening the container lid, the mouth of the container should be away from face. In case of splashing into the eyes, flush it with fresh water and obtain medical attention. Should not be injected. Keep away from children. Please refer MSDS for more details.

### STORAGE AND SHELF LIFE

Alstasan Silvox is an oxidizing product. It is packed in vented containers, to be stored in original containers in a cool and dry place, away from sources of heat, flame and direct sunlight. If the membrane of the vented cap is choked or product is kept in heat for long then this may cause bulging of the container, in such event loosen the lid with precaution and leave the container idle for sometime till the built in gas is released. Shelf life of Alstasan Silvox is 2 years, however solutions should be used within 45 minutes of dilution.



The name Chemtex simply depicts 'Technology in Chemistry'.

Chemtex, an advanced technology driven company has been in the core sector of speciality chemicals for about five decades, since 1970. The brand enjoys a considerable market share in global speciality chemicals industry.

Chemtex chemicals contribute substantially to the priority areas of energy conservation and environment protection and has been certified with NS-EN ISO 14001:2004 (EMS) certification.

Chemtex Speciality Limited is a public limited organization registered under Company's Act 1956. The quality management system is certified by ISO 9001:2008 certification and has obtained CRISIL SE-1B verification.

The company is backed by about a gross of qualified professionals having a collective experience of over a hundred decades in the industry. Chemtex is certified under the Occupational Health and Safety Management system by OHSAS 18001:2007 certification, ensuring the industry's best work environment.

Chemtex follows Goods Manufacturing Process (GMP) as certified by WHO standards.

Chemtex is chosen for its integrity and observance for high quality standards with commitment to customer value. The company has served over 22,000 clients worldwide so far and still counting.

The company has been awarded with the Best Growing Business Award by WBBA in 2010 and 2012, and by ABID in 2013 for Best Place to Work.

Chemtex has wide spread applications and serves to various industries, amongst which the major are Agriculture, Automobile, Dairy, Food & Beverage, Iron & Steel, Institution, Paper, Pharmaceuticals, Power and Textile. As such, with the wide range of products offered by the company it may not be wrong to say that there is something to offer for every industry.

The main product line of Chemtex is divided in four major verticals, viz., Water Treatment Chemicals, Cleaning & Hygiene Chemicals, Heat Transfer Fluids and Performance Chemicals.

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