



## Revolutionize Farming with Nano Silver Hydrogen Peroxide for Agriculture

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Agriculture, one of the biggest patrons to the country's GDP, takes a huge sector in the country's economy by being the primary livelihood for 58% of the population. It all narrows down to soil health and fertility, making it essential to safeguard the same. The usual options for soil disinfection may seem cheap and efficient, but are actually not. They come with a toxic price.

### Silver Hydrogen Peroxide - A Potential Eco-Friendly Disinfectant

Silver Hydrogen Peroxide has earned its name as an eco-friendly disinfectant that can be used universally. The silver here functions both as a stabilizer and activator, keeping the peroxide ions stable. The resultant silver hydrogen peroxide is both safe and nontoxic for people and surroundings. This synergy of hydrogen peroxide and silver provides high efficacy in killing of microorganisms in all possible media applications of air, water, surface, and soil. It proves to be a powerful antibacterial, fungicide, virucide, amoebicide, algacide that chips away at a wide range of microorganisms. This combination of hydrogen peroxide and silver is about twenty times more powerful than hydrogen peroxide alone.

Hydrogen Peroxide is highly unstable, causing the molecule to break along the oxygen-oxygen bond, releasing free hydroxyl radicals (OH) that serve to oxidize organic matter. The oxidizing hydrogen peroxide is corrosive on the cell membranes and inner cellular structures; then silver being non mutagenic in nature consequently changes the DNA structure, rendering them incapable of reproduction. It finds application as a disinfectant in fields of agriculture, food and beverage industries, process industries and other institutions to maintain a safe hygiene.

### Available Products in Market

Silvox is a commercial product that is available in the market. It is a nano silver hydrogen peroxide based agricultural disinfectant for use both in and out field which synergizes the powerful oxidative properties of hydrogen peroxide and antimicrobial silver.

Alstasan Silvox is a broad spectrum biocide, effective against bacterial, fungal, and nematodal infections, active over a wide pH and temperature range. a broad spectrum biocide This revolutionary product has been certified by SGS for nil content of heavy metals, FDA approved for potable water disinfection up to 25 ppm, alongside a high efficacy rate on bacteria by NDRI.

## Applications in Agriculture

- ✓ **Field sanitation** - Powdery mildew, downy mildew, botrytis blight, anthracnose, bacterial leaf spots and cankers, pests like nematodes, and mites are well heard amongst farmers, and usage of silver hydrogen peroxide for complete field sanitation eradicates the same.
- ✓ Fumigating the soil with Silver Hydrogen Peroxide requires no flushing with water, no polythene covering for days, saving time, money, water, labour. Moreover, the bed is ready for plantation in four to six hours.
- ✓ Curative treatment with silver hydrogen peroxide includes drip, drench, spraying methods, frequency of application and dosage depending upon the severity of the infection.
- ✓ Plant pruning tools act as vectors for diseases and application of silver hydrogen peroxide sterilizes the same.
- ✓ Post harvest wash with silver hydrogen peroxide eliminates the toxic pesticidal residues which prompt customer rejection.
- ✓ Field water sanitation, unclogging of drip lines and venturi meters, biofilm elimination all are catered with the use of this product.

