

CeraSulfur[®] SC

The Natural Way to Higher Yield

CeraSulfur[®] SC is a unique liquid fungicide containing bio-sulfur that has a high efficacy and provides protection against disease.

Ceradis[®]
Agro Formulations



CeraSulfur® SC

The Natural Way to Higher Yields



CeraSulfur® SC is a liquid fungicide containing bio-sulfur - a new concept in the conventional sulfur market. Bio-sulfur has a unique chemical structure, thereby increasing the efficacy of the product and reducing the pesticide dosage in the field. Due to bio-sulfur's hydrophilic nature, **CeraSulfur® SC** leaves no residue on the plant and has a low environmental impact. **CeraSulfur® SC** is safe and easy to use, and is suited for organic farming.



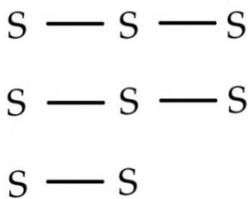
CeraSulfur® SC has been developed in cooperation with Wageningen University and Research Center. Its unique formulation based on bio-sulfur is patented.



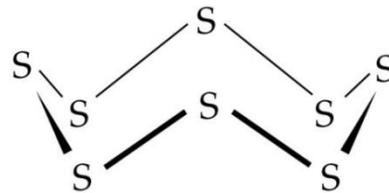
Mode of Action



The main ingredient of **CeraSulfur® SC** is bio-sulfur which is obtained as a byproduct from waste industry. Microorganisms used in water purification and the production of bio-ethanol, oxidize toxic H_2S to elemental S. This bio-sulfur has a unique chemical structure - it is linear and hydrophilic, and therefore leaves no residue on the plant. The risk of disease resistance development in crop protection is also low when using elemental sulfur. **CeraSulfur® SC** has been developed for foliar application and can be combined with crop protection programs. Due to its low toxicity and environmental impact, it is suitable for organic application.



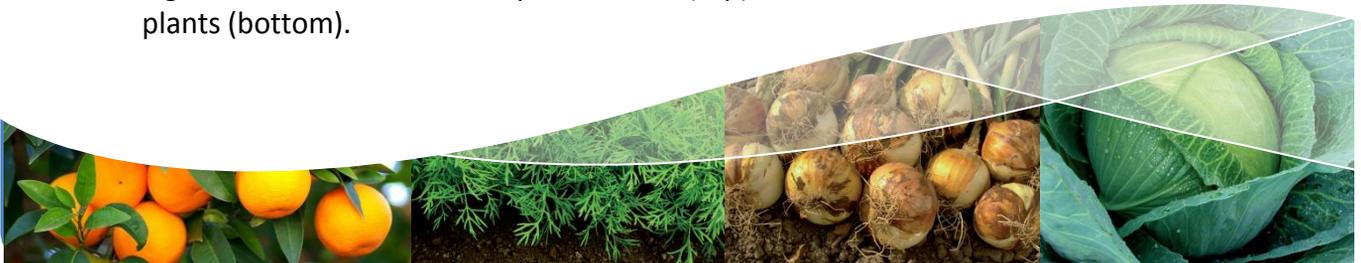
Bio-Sulfur



Sulfur (side view)



Figure 1: Bio-sulfur has a unique structure (top) and leaves no residue on plants (bottom).

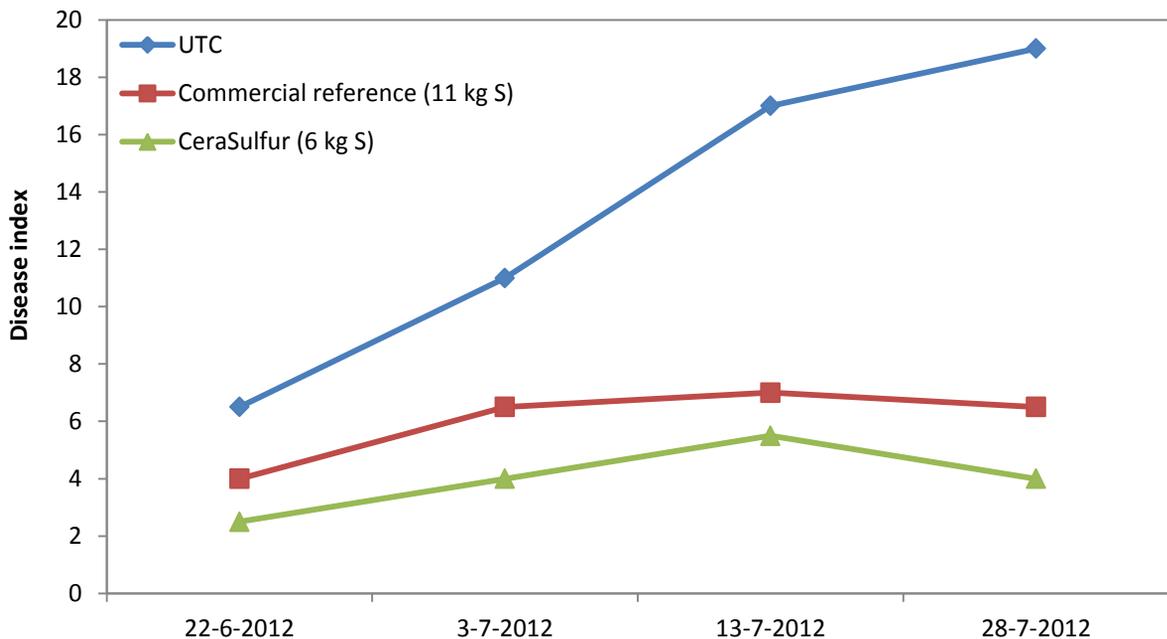


Experimental Results



CeraSulfur® SC can be applied as a disease management product against powdery mildew on tomato.

Powdery mildew on tomato



Location: California (USA). Cultivar: Sunseed 6366. Spray interval: 7-9 days.

Figure 2: **CeraSulfur® SC** was compared to a commercial product in the control of powdery mildew (*Oidium lycopersici*) on tomato. **CeraSulfur® SC** had a lower disease index than the tested commercial product.



Experimental Results



CeraSulfur® SC has a low runoff and therefore a higher efficacy under rainy conditions.

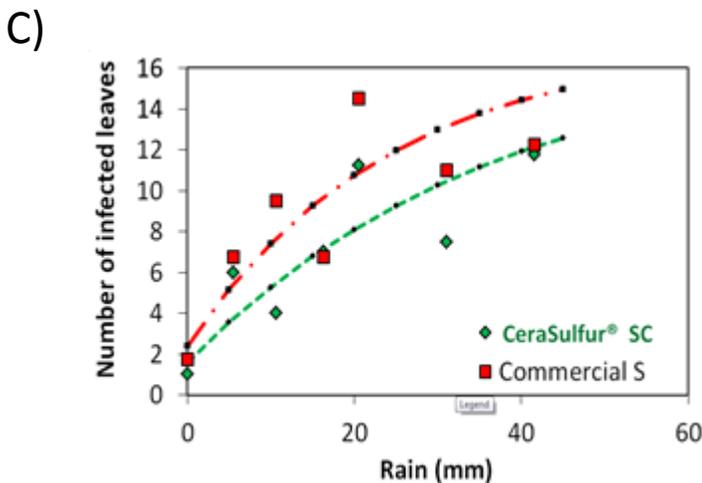
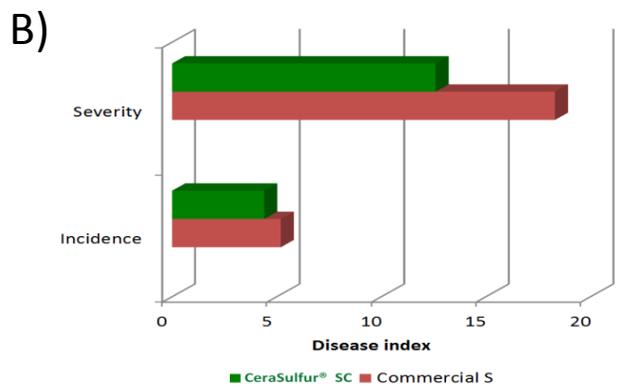
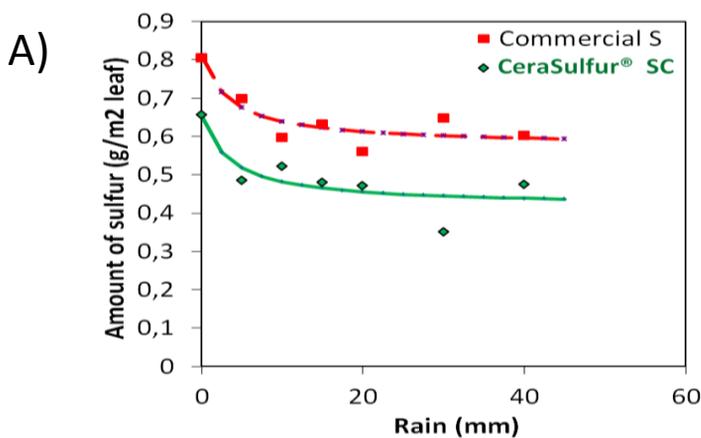


Figure 3: The performance of **CeraSulfur® SC** was evaluated under outdoor conditions in the control of apple scab (*Venturia* spp.) of apples. A) **CeraSulfur® SC** has a high resistance to runoff compared with the commercial product. B) **CeraSulfur® SC** had a higher efficacy under rainy conditions in both severity and incidence of the disease. C) **CeraSulfur® SC** had a lower number of infected leaves under rainy conditions compared to the commercial product.



Application & Mixture Preparation



Use:

CeraSulfur® SC is primarily a protectant and has to be applied before infection. **CeraSulfur® SC** is stable in a solution and easy to use.

For most crops, we recommend using 3 L/ha. Because bio-sulfur has a higher efficacy than conventional sulfur, the application dose is lower than for most commercially available products.

Preparation:

Add **CeraSulfur® SC** in a tank mix filled with 50% water of the total volume. Then, add other fungicides or insecticides as desired. Fill the tank with water to the total volume and keep stirring until fully dissolved.

Crops:

CeraSulfur® SC has a wide range of application. It has successfully been tested on apple, grape, tomato, pear, cucumber, melon, strawberry, cereals and ornamentals.



Additional Information



Benefits

- Leaves little or no residue due to its hydrophilic nature
- Can be used in organic and integrated production systems
- High efficacy and high resistance to runoff
- Reduction of dosage use by 25% - 50% depending on natural circumstances
- Low environmental impact and low toxicity
- Compatible with conventional crop protection products
- Low risk of disease resistance development against sulfur
- Provides protection against fungal disease



Composition

Elemental bio-sulfur

700 g/l



Benefits of CeraSulfur® SC

- Unique liquid formulation based on bio-sulfur
- Provides protection against infection
- High efficacy at a lower dose
- Leaves no residue



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