

Biorationals and BASF

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Research at BASF



- Biorationals are becoming more important in today's world due to:
 - Maximum residue levels (MRL)
 - Resistance management
 - Reduced Re-entry interval (REI) and post-harvest intervals (PHI)
- BASF recognizes the importance of these issues and is actively involved in biorational research and development such as:
 - Semiochemicals including pheromones
 - Biological insecticides, fungicides, herbicides including pathogenic organisms, essential oils, plant extracts

BASF Products



- AgraQuest and BASF entered into a license, supply, and distribution agreement for Serenade (*Bacillus subtilis*) in 2009. Used in vegetables, fruit, nut and vine crops against diseases such as Fire Blight, Botrytis, Sour Rot, Rust, Sclerotinia, Powdery Mildew, Bacterial Spot and White Mold.
- Sulfur (primary registrant) – Ornamentals, turf, numerous crops.
- Diatomaceous earth – non –crop general insect control,
- Pyrethrins – non-crop general insect control, obtained from *Chrysanthemum*

- D-Limonene – non-crop, bees, wasp, hornets, spiders. Major constituent in citrus oils, is obtained as a by-product of the citrus juice industry. d-Limonene is included on the Food and Drug Administration's (FDA's) Generally Recognized as Safe List and is approved for use by the FDA as a food additive.
- Boric Acid – non-crop general insect control. Most boron compounds convert to boric acid in the environment. Boric acid naturally occurs in air, water (surface and ground water), soil, and plants, including food crops. It enters the environment through weathering of rocks, volatilization from seawater, and volcanic activity.

Products (Cont)

- Geraniol – non-crop, general insect control, Primary part of rose oil, used in cosmetics (perfume). Exempt from FIFRA registration.
- Lemongrass oil – non-crop, general insect control. Obtained from lemongrass. Exempt from FIFRA registration.
- Borax – non-crop, ant control, salt of boric acid.
- Phermone – for Control of Lepidopteran Stored Product Pests by Disruption of Mating Communication.
- Fruit Fly Trap – food grade attractant.
- Numerous insect light traps and glueboards

*Thank you,
Questions*