THE WHAT, WHEN AND WHERE OF PONCHO®/VOTiVO™

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Abstract

Poncho/VOTiVO has been developed as a seed treatment by Bayer CropScience for corn and soybean seeds. EPA registration is pending for cotton seed. Poncho has been used in the corn industry for eight years providing excellent insect control by means of a seed treatment. Poncho provides protection against multiple insects including: aphids, wireworms, white grubs, thrips, cutworms, seedcorn maggots, grape colaspis and chinch bugs. Poncho/VOTiVO is the first combination of a biological active substance with traditional chemistry for the seed industry. Combining Poncho with VOTiVO often results in improved plant vigor and better yields.

VOTiVO's active ingredient is a specific bacteria strain of *Bacillus firmus* that protects roots from early season nematode damage. The bacterium is classified as a Plant Growth Promoting Rhizobacteria meaning that it colonizes the roots and the immediate environment around the roots. Beyond root colonizing the bacteria can induce plant growth. The same environment that triggers a seed germination, moisture and temperature, is the same environment that cause the bacteria to begin to multiple. Each seed is treated with between 5 and 10 million spores and once the bacteria start to exponentially multiple it can actually keep pace with the growing root. The bacteria utilize root exudates as a food source to continue its' multiplication. The resulting colonization can block root receptor sites that nematodes use to locate the root surface. Nematodes are obligate parasites, so if they can not reach a root they can not feed or reproduce. The colonization of plant roots is similar across the various crops, thus VOTiVO provides protection against nematode feeding – regardless of the target nematode species.

Poncho/VOTiVO is a partner for integrated pest management programs and complements both seed genetics; as well as cultural practices by protecting seed from the moment it is planted from early season insects and nematodes.