SULFURYL FLUORIDE GAS FUMIGANT: REGISTRATION TIMELINE, SOIL EMISSIONS AND ENVIRONMENTAL FATE.

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Sulfuryl fluoride is being evaluated as a pre-plant soil fumigant for the control of nematodes, insects, weeds and soil diseases. Sulfuryl fluoride gas fumigant is specifically under development as a methyl bromide replacement for the control of plant parasitic nematodes such as root knot, root lesion, lance, ring, spiral, stubby root, dagger and sting; and soil diseases such as *Fusarium* wilt, *Fusarium* crown rot, White mold/Southern blight, *Phytopthora, Rizoctonia, Phythium*; and weeds such as yellow and purple nutsedge, grasses and broadleaves.

As with other soil fumigants, the rate of emission from and degradation in the soil must be understood to evaluate potential exposure to humans and the environment. Data evaluating emission and degradation properties were developed during the conduct of aerodynamic flux field volatility studies conducted in FL and GA. The results of those studies were favorable to development of sulfuryl fluoride by demonstrating low estimated of mass loss from the soil. Soil gas levels of sulfuryl fluoride and soil fluoride levels were evaluated in conjunction with the field volatility studies. Soil gas measurements demonstrated that of sulfuryl fluoride rapid moved through the treated bed and declined in the soil.