POTENTIAL DROP-IN REPLACEMENTS FOR MeBr

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In 2011, Honeywell's Fluorine Products has announced the launch of the Solstice™ brand name for its family of low-global-warming-potential materials. The Solstice brand reflects the products' break-through environmental properties, including their insulating capabilities for foam and their superior cooling capabilities for automotive air conditioning and refrigerant applications. The family of compounds is known chemically as hydrofluoroolefins because there structure is composed of a carbon-carbon double bond, hydrogen and fluorine atoms. These compounds have an ozone depletion value of zero (ODP = 0) and a very low global warming potential (GWP = 3-5)

Fluorinated alkenes have long been known to control nematodes and insects when applied to the soil. The Stauffer Chemical Company, in 1965, reported the use of trifluorobutenylthiocarbamates as nematocides and herbicides. More recently, DuPont published the use of fluoroalokenyl derivatives as insecticides and nnematicides. Makhteshim Agan is investigating Fluensulfone, a novel fluoroalkene, as a plant protection product with global registration anticipated in 2014.

In this poster, we will report our results from fumigation tests with hydrofluoroolefins and various weed seeds. The broadleaf species Abutilon theophrastic Medik. and the grass weed species Loliium multiflorum Lam. were chosen as illustrative invasive plants.