

STEAM AND HEAT FOR SOIL DISINFESTATION

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Summary. Steam is the oldest method of soil disinfestation, older than methyl bromide (MB). Steam for soil treatment was abandoned by many nursery growers due to high fuel costs. However, more strict regulations on fumigant use require that we evaluate non fumigant alternatives. Many of the critical use exemptions state that limitations to replacing MB with steam are “slow speed and high energy costs”. Regarding application speed, there are many ways to distribute steam in the field more rapidly by use of piping or drain steaming which is also the most energy efficient method of steam application. Methods of field scale steam distribution will be described. Regarding high energy costs, there are opportunities to improve efficiencies with modern fuel efficient burners, higher energy recovery from fuel, and use of supplemental solar energy to hold down fuel costs. This presentation will revisit the possibilities of using heat and steam more widely as an alternative to fumigants for soil disinfestation.