

MODIFIED ATMOSPHERE TREATMENT AS ALTERNATIVE FOR METHYL BROMIDE TO CONTROL STRAWBERRY TARSONEMID MITES

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Strawberry tarsonemid mite (*Phytonemus pallidus*) is a severe pest in the production of strawberries (*Fragaria x ananassa*). The presence of tarsonemid mites in plant material results in a considerable loss of production. Until 2007 the Netherlands mother planting stock for runner production was treated with methyl bromide (MeBr) to eliminate tarsonemids. This chemical disinfestation method is banned from 2008.

During recent years research is carried out to replace MeBr preferably by a non-chemical method. After screening a wide range of non chemical disinfestation methods, in 2007 the choice was made to optimize the controlled atmosphere (CA) treatment. Mortality of the tarsonemid mites was over 99.5 % when CA-treatment during 48 hours was combined with a temperature of 35 °C. CA-treatment can have a slightly negative effect on plant vigour. Compared to the standard MeBr gas fumigation the CA-treatment is at the same level.

In 2008 promising results are obtained with up scaling CA-treatment. From 2009 CA-treatment is applied on a large scale by Dutch growers and is replacing MeBr for eliminating tarsonemids in planting stock.