

Assessment of the hot pepper fruiting stage most susceptible to gall midge (Diptera: Cecidomyiidae) infestation.

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[Abstract]

The gall midges *Contarinia lycopersici* (Felt) and *Prodiplosis longifila* (Gagne) (Diptera:Cecidomyiidae) have been frequently intercepted in shipments of hot pepper from Jamaica to the USA. The result has been a mandate that all hot peppers for export be fumigated with methyl bromide. The Research and Development Division in the Ministry of Agriculture undertook a study to determine the susceptibility of hot pepper development stages to gall midge attack. Approximately 4.5 kg of hot peppers were collected from each of six farms across the Island. These were sorted into five fruiting stages: bud, button, intermediate, green-mature and ripe. Each pepper was dissected and the number of larvae found recorded. Significant differences in infestation levels ($p < 0.001$) were observed among the five fruiting stages; levels increasing with pepper maturity. Ripe and green mature peppers had levels of 37% and 39.6% respectively. Intermediates had 15.8% and buttons 8.5%. No larvae were found in the bud stage. When sampling hot peppers for gall midges therefore, it should be sufficient to collect mature peppers.