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## **Successful laboratory mass rearing of the gall midge, *Spurgia esulae* Gagne, for field release**

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Previous attempts by this laboratory to mass rear the shoot tip gall midge, *Spurgia esulae* Gagne, over an extended period of time failed after the 8th generation in culture. Plant quality was suspected to be a major contributing factor to the decline of the colony. A new attempt was initiated in 1989 with starter material collected with the permission of USDA-ARS at their establishment site in Bozeman, MT. High quality host plant material is maintained by use of an integrated-greenhouse pest management program utilizing predatory mites and whitefly parasites in conjunction with soap sprays. The gall midge colony is maintained in an environmental chamber with temperature range of 18° C to 24° C, a humidity range of 68% to 90% and a 15-hour light period. Results were improved over the previous year with an average yield of 364% over starting numbers for 15 generations. Some individual cages yielded over a 20-fold increase with one cage having a 30-fold increase. Material from this colony is being field released at several locations. The colony, now in its 17 generation, will be changed out with newly collected field material later this year.