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# Garlic Germplasm Variation, Isozymes, Fertility, and Virus Infection

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Although garlic has been asexually propagated throughout its long history of cultivation, it has a relatively high level of diversity, as reflected by variation in genetic markers such as isozymes, RAPD's, and RFLP's. We analyzed a collection of approximately 150 garlic clones for isozyme variation, evaluating diaphorase, esterase, glucose 6-phosphate dehydrogenase, and phosphoglucomutase. We also evaluated variation in male fertility (pollen stainability) and virus infection. Approximately 10% duplication occurred in this garlic germplasm collection, based on isozyme polymorphism. Some clones with identical isozyme patterns differed in traits such as bulb morphology and flowering. Some association between fertility and isozyme pattern was found but exceptions occurred. Incidence of infection by onion yellow dwarf virus and leek yellow stripe virus was high in a preliminary screening.