

Inheritance and Expression of Transgenes through Anther Culture of Transgenic Hot Pepper

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Anther cultures have been developed from transgenic donor peppers carrying HPT/J1-1. Eight out of sixteen plants produced from an anther culture set pepper fruits. Southern blot analysis of donors revealed two independent plants with a single copy of the integrated transgene. PCR and RT-PCR results showed the inheritance of HPT/J1-1 and expression of J1-1 in A₁. All A₁ progeny derived from transgenic anthers had resistance to hygromycin. They grew normally and showed similar phenotypes to the wild-type. Therefore, the use of an anther culture system coupled with genetic transformation in breeding programs will greatly facilitate the genetic improvement of pepper plants.

Key words: *Capsicum annuum*, T-DNA, Transgenes