

ON FARM SAMPLING OF WEED MANAGEMENT SYSTEMS IN TOMATO PRODUCTION.  
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Recent concerns over herbicide use, in addition to economic and registration constraints, have limited the number of herbicides available for use in minor crops such as vegetables. The adoption of multi-option integrated weed management systems is vital to the sustainability of vegetable production. However, information on the effects of alternative management systems must be available to producers before they alter their current management systems. The objective of this two year study is to investigate how the management practices of producers affect weed communities and weed control in vegetable production. An advisory board composed of farmers, extension personnel and county agents has been established to identify continuing and emerging problems in weed control, facilitate on-farm data collection, and assess the relative advantages and limitations of different management systems. Twenty producers from Indiana and Michigan representing three tomato production systems (organic, fresh market and processing) supplied detailed field history information and access to their fields for sampling. Weed species diversity and abundance were estimated during summer 2003. Weed seedbank characteristics will be determined by subjecting collected soil samples to a greenhouse germination technique. We are currently conducting multivariate analyses to characterize the relationships between farm management practices and weed communities and control. The results of this study will be made available to growers through outreach activities, extension publications and web-based manuals.