Introduction

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The colloquium, Organic Horticulture, was a well-attended set of talks at the ASHS conference in Minneapolis on 30 July 1999. The broad interest in the topic was evident by the diverse ASHS working groups that served as cosponsors: Consumer Horticulture and Master Gardeners (CHMG), Marketing and Economics (MKEC), Mineral Nutrition (MNUT), Vegetable Crops Management (VCM), and Waste Utilization in Horticulture (WUH). The papers from the colloquium covered divergent issues in economics, production, and extension of knowledge.

A diverse group of consumers purchase organic products. Organic food sales have grown dramatically throughout Europe, Asia, and the Americas (Thompson, 2000). Organic produce is now widely available in major supermarkets, and has expanded to include most fruits and vegetables. Organic meat and nursery crops are also increasing in abundance. Consumption has moved from a small group of activists into the mainstream. Fresh, frozen, and processed products are now available at most grocers.

Organic farming is sometimes recognized more for the fervor of its advocates than the products produced. Indeed, the organic movement has led to real changes in national agricultural policy, including programs to decrease pesticide residues and increase the sustainability of rural communities (Miles, 2000). But many conventional growers are now farming a portion of their land as organic or incorporating some of the central concepts of organic production into otherwise traditional farming systems. All segments of agricultural industry have scrambled to adapt with new methodology (Gaskel et al., 2000) and training (Creamer, 2000).

Many of these changes are evident in California's Coachella Valley, the low desert area surrounding Palm Springs. Researchers from the University of California Cooperative Extension and USDA have been experimenting with cover crops as a way to maintain soil quality in many cropping situations (Cavanaugh, 1998). But vegetable producers plant two or more high value crops per year to recover high land and water costs. It seemed impractical to invest additional land, labor, and other production costs into the uncertain payback of cover crops.

But growers began to experiment. They found a gap between spring and fall plantings when the land was usually fallow (Ngouajio and McGiffen, 2000). A cowpea (*Vigna unguiculata* (L.) Walp. ssp. *unguiculata*) cover crop was inexpensive, required little water and no fertilizer, and produced abundant biomass and nitrogen (Aguiar et al., 1998). Cowpea cover-crop acreage went from virtually none in 1997 to over 1,000 ha (2,471 acres) in 1999.

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Some of this increase was driven by the increased demand for organic produce. Many limited resource farmers view organic vegetables as a niche market that allows them to remain competitive (Vischer, 1994). Since production costs and market value are generally higher for organic produce, some growers wondered whether the costs of growing organically certified produce was worth the benefit (Brumfield et al., 2000). But they also recognized that cover crops offer many advantages in vegetable production, including nitrogen fixation, recycling nutrients, reducing soil erosion, and adding organic matter to the soil (Gaskell et al., 2000; Stirzaker et al., 1992; Stirzaker et al., 1993). Strong grower interest led to increased breeding and pest management research to develop cover crop cultivars with enhanced resistance to nematodes (Matthews et al., 1998), weeds (Hutchinson and McGiffen, 2000), and other pests (Hall et al., 1997). Because nematode, weed, and other pest populations decline after planting resistant cowpeas, it appears possible that novel cover crop cultivars could replace fumigation and other chemical pest control. Cover crop cultivars may eventually be developed to solve specific problems from conventional agriculture, such as the loss of methyl bromide and other pesticides.

Organic horticulture has increased in size and scope to become a vital component of traditional market and production systems. This colloquium addresses how production and marketing systems have changed in response to the increased demand for organic horticultural products. For those who began their careers in conventional agriculture, this has also meant learning how we can work with a diverse and different group of clientele. The articles from the organic horticulture colloquium are aimed gaining a better understanding at what the organic movement means and how we can all adapt to take advantage of the opportunities it presents.

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