

Do Tomatoes Love Basil But Hate Brussels Sprouts? Evaluating Popular Companion Planting Claims in Garden-Scale Studies. (NE_05-bomford156693-oral)

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Abstract:

Companion planting is the practice of growing two or more crops together to increase yields, reduce pest levels, improve flavor, or derive other benefits. Garden-scale studies conducted between 2000 and 2003 compared the yield and pest abundance of tomato, basil, and Brussels sprout, and the taste of tomatoes, grown in monoculture or companion pairs. Companion planting altered the yield of component crops, but did not produce any Land Equivalency Ratio (LER) significantly greater than one. Competition for water and light were highly correlated, being higher in treatments containing Brussels sprout, and lower in those containing basil. Insect pests of Brussels sprout, including the cross-striped cabbageworm, *Evergestis rimosalis* (Guenée), and imported cabbageworm, *Pieris rapae* (L.), responded to differences in plant vigor due to competition between plants, but not to companion crop selection. The palestriped flea beetle, *Systema blanda* (Melsheimer), was more common on basil grown in monoculture than in companion pairs. Insect pests present on tomato did not respond to companion planting. Differences in tomato taste were not consistent between years.

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