

Long Term Effect of Fumigant and Herbicide Combinations in Bell Pepper (*Capsicum annuum*)

James P. Gilreath¹, Joseph W. Noling², Timothy N. Motis¹, Erin Roskopf³, and Bielinski M. Santos^{1*}. ¹Gulf Coast Research and Education Center, IFAS, University of Florida. ²Citrus Research and Education Center, IFAS, University of Florida. ³US Horticultural Research Laboratory, ARS, US Department of Agriculture.

Four field trials were conducted between spring 2001 and fall 2002 to determine the effect of combinations of soil fumigants and herbicides on bell pepper. All the trials were repeated in the same plots. Soil fumigant levels were: a) methyl bromide + chloropicrin (67:33) at a rate of 400 kg/ha (350 lb/A); b) Telone C-35[®] at 330 L/ha (35 gl/A); c) Vapam[®] at 710 L/ha (75 gl/A); d) chloropicrin + Vapam at 150 kg/ha + 710 L/ha (130 lb/A + 75 gl/A); e) Inline[®] at 330 L/ha (35 gl/A); and f) an untreated control. Herbicide levels were: a) napropamide at 2.25 kg ai/ha (2 lb ai/A); b) trifluralin at 0.85 kg ai/ha (0.75 lb ai/ha); and c) an untreated control. There were no significant fumigant by herbicide interactions for fruit weight in the trials. Throughout most of the trials, the pepper fresh yield for methyl bromide + chloropicrin was comparable to those for all the other fumigants, but superior to the non-fumigated control. Among the herbicide levels, trifluralin showed consistently higher yield than napropamide and than the non-treated control.