

(30)

APPLICATION OF 2,4-D (CITRUSFIX) FOR FRUIT SIZE INCREASE OF MANDARINS AND MANDARIN HYBRIDS IN CALIFORNIA

C.T. Chao

Department of Botany and Plant Sciences, University of California-Riverside, Riverside, CA 92521-0124, USA

2,4-Dichlorophenoxyacetic acid (CitrusFix) was applied to 'Afourer' mandarin in S. Kern County and 'Minneola' tangelo oranges in Madera from the 2003 to 2005 seasons. Both experiments included combination treatments of three concentrations (12, 24, and 48 ppm) and two timings, 2- and 4-weeks after 75% petal fall, (dapf) and non-spray controls. The 48 ppm, 2 week dapf treatment was able to increase large sized fruit (including large-jumbo-mammoth sizes) of 'Afourer' mandarin by 13.3%, 24.1% and 35.8% for 2003, 2004 and 2005 seasons, respectively (average 25.1% increase over three seasons). This treatment was able to increase large sized fruit by 13,570 kg/ha, yielding an estimated additional net income of \$5,437/ha over three years. 24 ppm of 2,4-D, 30 dapf application was able to increase large sized fruit (including jumbo-mammoth-colossal sizes) of 'Minneola' tangelo by 6.8%, 24.8%, and 2.9% in 2003, 2004 and 2005 seasons, respectively. The benefits, problems and potential permanent registration of this use in California will be discussed.