

Public Abstract

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Title:Increasing Chinese Chestnut Primary Nut Weight and Bur Production by Hand Removal of Secondary Burs

A study was conducted on Chinese chestnut trees to determine the effect of secondary (2o) bur removal on vegetative characteristics, primary (1o) nut weight and 1o bur production in the subsequent year. Secondary burs were removed (R) or not removed (N) from shoots which produced 1o burs. Shoots producing only 1o burs (PO) were also labeled. R and N treatments had greater shoot diameters, lengths, and numbers of leaves than those of PO treatments. Orrin R-treated shoots with equal numbers of 1o burs had greater 1o nut weight per shoot and average 1o nut weight than other treatments in 2006. Results for Willamette trees were generally similar to those of Orrin. Orrin R shoots treated in 2006 produced a greater number of bearing shoots than the other treatments in 2007. Primary nut weight on shoots originating from R-treated branches was greater than that produced on shoots originating from N-treated branches. Willamette shoots damaged by sub-freezing temperatures in 2007 produced marketable 2o nuts, whereas these nuts had less average weight and were unmarketable in 2006. Results from this study showed that 2o bur removal on Orrin shoots increased 1o nut weight per shoot at harvest and also increased the number of shoots bearing 1o burs in the subsequent growing season.