ABSTRACT

Treatments were imposed on shoots of ‘Orrin’ and ‘Willamette’ Chinese chestnut (Castanea mollissima Bl.) trees to characterize vegetative characteristics of bearing branches and to determine the effect of secondary (2°) bur removal on primary (1°) nut weight and 1° bur production in the subsequent year. Treatments imposed in 2006 included hand removal of 2° burs on shoots bearing 1° and 2° burs (R), 2° burs not removed on shoots bearing 1° and 2° burs (N), and labeling of shoots bearing 1° burs only (PO). Treatments were imposed on shoots with equal numbers of 1° burs to ensure a similar crop load of 1° nuts. In 2006, R and N treatments had greater shoot diameters, lengths, and numbers of leaves than those of PO treatments. R treatments on ‘Orrin’ trees had greater 1° nut weight per shoot than the other two treatments. Results for ‘Willamette’ trees were generally similar to those of ‘Orrin’ trees. In 2007, R treatments on ‘Orrin’ produced a greater number of bearing shoots, which generally had more 1° burs per shoot than the other treatments. Following an April 2007 freeze, ‘Willamette’ trees produced few 1° burs but produced a saleable crop of 2° nuts, whereas 2° nuts produced in 2006 were unmarketable due to low nut weights.