The chestnut (Castanea sp.) is a unique tree crop with potential as an alternative crop for small farmers in North Florida. Few tree crops have had more historical significance than the chestnut. The American chestnut was one of the common trees in eastern United States forests until the early to mid 1900s. Chestnut blight (Cryphonectria parasitica) was accidentally introduced to the US from the Orient in 1904 and killed nearly every American chestnut (C. dentate) in the US by the 1940s. Less than 1% of the world production of this nut now occurs in the United States. Chestnuts are gaining popularity in response to its attributes of a high quality, nutritious, fresh, local product, low in fat. Chinese chestnut (C. mollissima) and Japanese chestnut (C. crenata) are resistant to blight. In Florida, varieties of Chinese and American chestnut crosses are being successfully grown, as well as Chinese chestnut cultivars. A chestnut cultivar trial was established at the North Florida Research and Education Center–Suwannee Valley near Live Oak, FL in 1989. The planting included seven cultivars planted in a 30 × 30 ft arrangement. The chestnut crop in this trial was harvested in 2006 and 2007 and nuts were counted and weighed to obtain total yield and nut size for each cultivar.

Materials and Methods

An observational chestnut cultivar trial was established at the North Florida Research and Education Center – Suwannee Valley near Live Oak, FL in 1989. The planting included seven varieties planted in a 30 × 30 ft arrangement (Table 1). The orchard received a minimum low maintenance care from 1989–2004. The maintenance of the orchard was increased beginning in 2005 with a higher level of weed management, fertilizer, water, and pruning care. A significant increase in tree vigor was observed in 2005–08.

One representative tree from each cultivar was identified and marked in both 2006 and 2007. The ground under each of these trees was raked clean of weeds and debris before harvest season to easily identify fallen nuts. All fallen nuts were picked up by hand once a week. Harvested nuts were weighed and a sample of each cultivar was counted to get a number per pound.

Results and Discussion

High total yields were found with ‘Seedling’ in both 2006 and 2007, 98.5 and 71.0 lbs per tree, respectively (Tables 1 and 2). ‘Auburn Cropper’ had high yield (85.6 lbs per tree) in 2006. In 2006, other than the high total yields in ‘Seedling’ and ‘Auburn Cropper’, all cultivars had yields of 20 to 30 lbs per tree. In 2007, chestnut yields were generally higher than in 2006. ‘Revival’ had a low yield of 22 pounds in 2007. Several others had intermediate yields in the range of 40-60 lbs per tree, including: ‘Williamette’, ‘Carpenter’, ‘Auburn Cropper’, ‘Carolina’, and ‘Auburn Leader’. In both years, the first yields were recorded in the first week of September. High early yields were found with ‘Seedling’ and ‘Auburn Cropper’ in both years (Tables 1 and 2).

The size of the harvested chestnut is very important. The larger nuts are preferred in the marketplace and demand much higher
prices, especially when direct marketed. In general, nut size was smaller in the 2007 season. Largest nut size was found in ‘Revival’, ‘Carpenter’, and ‘Williamette’ (Fig. 1). Very small nut size was found with ‘Seedling’ both years and ‘Auburn Cropper’ in 2007 and would likely be unattractive for direct markets.

**Literature Cited**


