

Notes

Chefs' Perceptions and Uses of 'Colossal' Chestnuts

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Chestnuts (*Castanea sativa*) are consumed by people all over the world, with the highest consumption in Asia. Koreans, Japanese, and Chinese have an approximate annual per capita consumption rate of 5.7 lb (2.5 kg) of the total 500,000 tons (454,000 t) of chestnuts produced each year (Vossen, 2000). European countries account for an additional 1.0 lb (0.5 kg) annual per capita consumption rate with the United States having a 0.1 lb (0.05 kg) annual per capita consumption rate while producing 5,000 tons (4,540 t) of chestnuts each year (Vossen, 2000). Chestnuts are high in carbohydrates and low in fat [0.06 oz (1.7 g) per 0.3 lb (149.7 g) serving], and they have 3% protein (Schmidt, 2000). Statistics show that the US imports 10 to 20 million lb (4.5 to 9 million kg) of chestnuts each year, and US farmers need to grow 5,000 acres (2,000 ha) of chestnuts to meet this demand, which has an annual value of \$500,000 (Vossen, 2000). With the loss of native chestnut trees in the 20th century due to chestnut blight (*Cryphonectria parasitica*), the use of chestnuts in North America decreased, however, if per capita consumption increased to 1.0 lb., 100,000 acres (40,500 ha) of chestnuts would need to be harvested each year to fulfill the demand (Vossen, 2000).

During August 2000, 20 restaurants in Michigan were asked to participate in chestnut research using 'Colossal' chestnuts, a larger, sweeter chestnut than traditional Asian or European chestnuts. Restaurants were chosen primarily from two metropolitan areas in Michigan. Conversations and follow-up telephone interviews with chefs revealed that few knew how to properly prepare chestnuts and several

were having difficulty removing the shells and pellicle. Comments indicated that peeling the chestnuts was a labor intensive job. Some chefs had either a small or inadequate staff to perform this duty. Chefs commented that they made the extra effort to remove the shell since the nuts were free, but seven would have preferred them peeled. Eleven additional chefs who would prefer to purchase unpeeled chestnuts expressed several reasons for their choice: a) a belief that the shell protected nuts from harvest to arrival at the restaurant, preserving freshness; b) a desire to roast food and a liking for the taste and texture of the nut after roasting, because some moisture was removed; c) a preference for the shells intact because roasting the shells traps steam and keeps the nut moister; and d) a desire to pay the lowest price possible and belief that unpeeled chestnuts were less expensive than peeled chestnuts. One chef noticed that as the nuts aged and the space between the nut and the shell increased, the shells were easier to remove.

All chefs reported that they stored chestnuts in a walk-in type of refrigeration unit. Chefs noted that the nuts needed to be removed from either the plastic bags (which caused condensation) or nylon netting (which caused moisture loss). One chef would prefer that nuts be placed in perforated bags to allow air movement. Another stored nuts in a cooler in a bucket of water to keep them anaerobic. One chef with an extensive facility stored them in a 0 to 1 °C (32 to 24 °F) meat aging box with little air movement and low humidity. Nuts were stored for as few as 2 d to more than 30 d. A few chefs processed the nuts and froze them for later use. Overall, chefs need additional information about storing chestnuts and must have proper storing materials when chestnuts are delivered. Research is underway to address storage concerns.

Chefs prepared a variety of chestnut dishes, from entire meals to desserts. Meals included a chestnut soup with corn; chestnut gnocchi with garlic, parmesan, and parsley; sauteed pork tenderloin with chestnut cornmeal breading, mashed potatoes, and sugar snap peas with peppers; baby greens with grilled apples, stilton cheese, and dried chestnut vinaigrette; and chestnut creme brulee. During the follow-up survey, the chefs conveyed how they enjoyed being included in the research and had a wonderful time creating the recipes and dinners and competing with fellow chefs.

Because of results from this study, we believe that 'Colossal' chestnuts can be marketed to chefs. A high percentage of chefs answered questions about the nut's characteristics positively and enjoyed working creatively with the nuts. There is a precedent for using chestnuts with wild game, during fall and winter, in the restaurants that participated in this experiment. With local growers supplying the chestnuts, we will be able to meet the chefs' demand and increase sales for growers. Although this is only the first step in a multidirectional marketing study, researchers have now made a connection with the chefs that will allow testing of other chestnuts and chestnut products.

Literature cited

- Schmidt, J. 2000. Chestnuts back for the holidays. Knight-Ridder/Tribune News Services. pK5239.
Vossen, P. 2000. Chestnut culture in California. University of California, Division of Agriculture and Natural Resources, Publication 8010.

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