



Spotlight

Sowing and Transplanting Dates Affect Onion Yield and Quality

In southeastern Georgia, short-day onions generally are sown in September in high-density plantings and transplanted to their final spacing November–January. **Boyhan et al. (p. 66)** investigated the effects of different sowing and transplanting dates on onion yield and quality. Short-day onions transplanted in November and December consistently produced good yields, while yields decreased with late January or February transplanting. Some varieties with a propensity to form doubled bulbs can be sown later to reduce the occurrence of this phenomenon. However, later transplanting with these varieties only lowered doubled bulbs with earlier-sown seeds.

Transplant Size and Plant Population Affect Onion Production

In southeastern Georgia, onions are grown from on-farm-produced bareroot transplants that are transplanted in mid-winter (November–December). **Boyhan et al. (p. 145)** found that increasing the plant population by 75% (from 63,360 to 110,880 plants/acre) also increased yield per acre. Large transplants (260–280 g per 20 plants) produced the highest yields compared to medium (130–150 g per 20 plants) or small (40–60 g per 20 plants) transplants. A complete fertilization program that included either 133 or 183 lb/acre nitrogen did not affect yield regardless of population density.

Cold Hardiness of Containerized Christmas Trees after Time Indoors

Containerized conifers increasingly are used as live Christmas trees and transplanted into the landscape after the holiday season. In order to assess changes in cold hardiness following indoor exposure, **Gooch et al. (p. 72)** examined changes in bud mortality, needle damage, chlorophyll fluorescence, and plant survival of douglas fir, black hill spruce, and balsam fir. Cold hardiness was reduced by 5.5 to 10 °C, depending on the species, after 10 and 20 days of indoor exposure at 19 to 22 °C. Chlorophyll fluorescence followed similar patterns. The high tree mortality observed raises questions about the advisability of using dug and containerized trees as live Christmas trees.

Christmas Trees Protected from Weeds with Residual Herbicides

Young Christmas trees are very sensitive to weed competition. **Richardson and Zandstra (p. 181)** found that flumioxazin (either alone or in combination with pendimethalin) applied in fall or spring provided 80% or more control of many serious weeds, including common catsear, horseweed, virginia pepperweed, and common ragweed. Fraser fir and colorado blue spruce were very tolerant of flumioxazin. Flumioxazin appears to be a good alternative herbicide for Christmas tree production.

Flowering and Fecundity of Norway Maple Varieties

Norway maple is considered to be a potentially invasive species. **Conklin and Sellmer (p. 91)** evaluated mature trees of norway maple and six norway maple varieties to study flower and seed productivity and to determine the invasive potential (via seed propagation) of each variety. ‘Columnare’, ‘Emerald Queen’, and the species produced many seeds; thus, these trees may be problematic in landscapes that adjoin natural areas. ‘Crimson King’, ‘Globosum’, ‘Faasen’s Black’, and ‘Rubrum’ produced the fewest seeds; thus, these varieties may be suitable alternatives for landscape use.

Suppression of Soilborne Plant Pathogens by Coir

Coir increasingly has been used as a substitute for peat in soilless container media because of its high water-holding capacity, excellent drainage, and physical resilience. Studies have shown that coir can suppress certain soilborne plant pathogens. **Hyder et al. (p. 96)** investigated the ability of coir to suppress pathogens in vitro. Agar amended with unsterilized coir or coir suspension strongly suppressed growth of *Fusarium solani* and *Phytophthora capsici*, respectively. This suppression was largely due to microorganisms associated with coir. *Aspergillus terreus* recovered from coir suppressed 12 soilborne pathogens by up to 75%.

Chestnut Attributes Important to Consumers in Missouri

Aguilar et al. (p. 216) studied preferences for chestnut attributes among current and potential consumers in Missouri. Quality, locally grown, and nutrition–diet–health were consistently perceived as the most important attributes influencing decisions to purchase chestnuts. Another study explored preferences for different characteristics, including nut size, production process, and geographic origin. Results suggest consumers strongly prefer locally and U.S.-grown chestnuts compared to imported chestnuts, with additional preferences for chestnuts that are medium-sized and organically certified. Growers that supply chestnuts meeting these characteristics are most likely to capture premium prices.

Lettuce Growth Increased by Microbubbles in Hydroponic Solution

Park and Kurata (p. 212) report the effects of applying microbubbles in hydroponic nutrient solution on lettuce growth during a 2-week period. Although the electrical conductivity, pH, oxidation-reduction potential, and dissolved oxygen concentration in nutrient solution were not much different between micro- and macrobubble treatments; fresh and dry weights of lettuce in the microbubble treatment were 2.1 and 1.7 times larger, respectively, than those of lettuce in the macrobubble treatment in a deep-flow technique culture system.

Risk-prediction System for European Corn Borer in Sweet Corn

Harvest infestations of sweet corn by European corn borer larvae were examined in central Pennsylvania. **Spangler et al. (p. 173)** found a strong relationship between degree-days from 1 Jan. and the proportion of infested ears. Based on this and the ability to predict sweet corn harvest dates and European corn borer life stages, a risk-prediction system is proposed that anticipates harvest infestation. The system will allow growers to anticipate the risk of ear infestations at planting time, thus providing on-farm and landscape (map) predictions that will help with management decisions.

Floral Consumption Values Differ for Genders and Geographic Regions

Knowing consumer consumption values is believed to have diagnostic value in the analysis of consumer choice behavior, and is helpful in improving the efficiency of the market. **Yeh and Huang (p. 101)** report that the consumption values attached to flowers were composed mainly of the values of sensory hedonics, emotion conditioning, curiosity fulfillment, monetary worth, and showing care to others. Consumers of different gender or geographic regions revealed different perception patterns for these values. The study findings provide florists an insight into value creation to increase the attractiveness of flowers to consumers.

Employers of Latino Workers Recommend Educational Programming

Horticultural managers hiring Spanish-speaking workers face many language and cultural challenges. Focus group research conducted by **Justen et al. (p. 224)** found that communication gaps, cultural differences, and safety knowledge are some of the major obstacles in managing Spanish-speaking employees. Participants of focus groups also recommended learning a few Spanish phrases, developing publications about horticultural practices in Spanish, and easy access to university extension materials as opportunities to overcome these challenges.

Production Costs on Two Pennsylvania Organic Vegetable Farms

Conner and Rangarajan (p. 193) studied two Pennsylvania organic vegetable farms and discuss six crop budgets that were vastly different in scale, management, and marketing strategies. On-farm cost allocations to labor, input and fixed expenses, and calculate prices at actual farm yields met all expenses (break-even) and contributed a hypothetical income of \$40,000. These costs were compared to previous studies of organic production costs. The authors recommend research into budgets for long-term vegetable rotations in order to understand the tradeoffs made by diversified organic farmers.

Performance of Annual Bedding Plants Grown in Pine Tree Substrate

Due to their increasing costs, there is a need for alternative substrates to peat moss and pine bark for container plant production. A wide range of plants, including annual bedding plants, have been shown to grow well in a substrate produced from 100% ground pine trees. **Wright et al. (p. 78)** report that annuals produced in pine tree substrate, when transplanted to the landscape, grew as well as plants grown in pine bark regardless of landscape fertilizer rate.

Pecan Orchard Damage and Recovery from Ice Storms

Four damaging ice storms during an 8-year period allowed **Smith and Rohla (p. 83)** to make numerous observations of pecan tree damage, orchard clean-up, and subsequent tree recovery. The quantity of ice accumulation was the primary factor affecting damage severity. Variety and tree size also affected the amount of limb breakage. Damage was least on trees smaller than 15 ft tall. The greatest damage and most expensive clean-up costs were on trees 15 to 30 ft tall. In the most severely damaged orchards, clean-up costs were \$419/acre, and recovery of full production potential was estimated to be 7 years.

Core Apple Temperature Affects Fresh-cut Slice Quality

It has been assumed that warm apples respond better to cutting than cold fruit. This assumption was tested on two standard varieties ('Gala' and 'Granny Smith') and two new varieties ('Ambrosia' and Aurora Golden Gala™). **Toivonen and Hampson (p. 108)** prepared slices from fruit conditioned at 1, 5, 13, and 20 °C. Fruit temperature did not influence quality of 'Granny Smith' slices. 'Ambrosia' and Aurora Golden Gala™ slices showed improved quality ratings when processed at 13 and 20 °C versus 1 and 5 °C. In contrast, 'Gala' had poorer quality ratings when processed at warmer temperatures.