



Fungicides Improve Sea Oats Seedling Production from Seed

Sea oats is a vital plant to beach restoration projects in Louisiana; however, the germination and seedling survival are poor. **Barrios et al. (p. 630)** applied four commercial fungicides at seeding to assess the impact on seedling production, and found that thiophanate-methyl at twice the recommended rate had the greatest mean germination and seedling survival and the tallest seedlings after 8 weeks. When fungicide application cost and additional revenue from increased production of higher quality sea oats seedlings are considered, thiophanate-methyl (23 oz/1000 ft²) is an economical option to rapidly produce genetically diverse sea oats plants.

Overhead Irrigation of Tomato Tested in California

Overhead, mechanized irrigation is used widely for the production of many different crops around the world; however, the potential of this technology as a replacement for drip irrigation in California has not been investigated. In a 2-year study, **Mitchell et al. (p. 637)** found that yields with subsurface drip were 38% greater in 1 year and 48% higher in the other year than with the overhead system. Production costs for changing to sprinkler or surface drip from subsurface drip were \$130 to \$429 per acre lower with the overhead system.

Horticultural Therapy Job Task Analysis Survey

Competence in horticultural therapy requires knowledge in plant science, human science, and the application of horticultural therapy. **Starling et al. (p. 645)** surveyed professionally registered horticultural therapists of the American Horticultural Therapy Association (AHTA) to identify the knowledge, skills, and abilities currently utilized in horticultural therapy practice. Survey respondents rated all statements of job knowledge, skills, and abilities presented at least “moderately important” for professional practice. The results will be used by AHTA to establish a generalized horticultural therapist job description and to begin the development of a certification exam for professional certification of horticultural therapists.

Overwinter Onion Production with Low Tunnels in New Hampshire

Sideman et al. (p. 655) showed that onion seeded in August and September and then transplanted into the field and covered with low tunnels for the winter showed a high percentage of survival

in USDA hardiness zones 4B and 5B. Several varieties, including Bridger, Top-Keeper, Keepsake, and T-420, showed very low percentages of bolting and produced large marketable bulbs in late May or early June. This has the potential to expand early season offerings for cold-climate vegetable producers.

Weed Control in Sweet Bell Pepper Using Pelargonic Acid

Vegetable producers are exploring alternative herbicides to meet the consumer’s desire for more naturally produced vegetables. Pelargonic acid is naturally occurring in many plants, animals, and foods, but has also been shown to be phytotoxic to plants as a contact herbicide, injuring and killing plants by destroying the cell membranes. **Webber et al. (p. 663)** investigated pelargonic acid as an herbicide in sweet bell pepper production. They determined that post-directed applications of pelargonic acid significantly controlled weeds compared to the weedy-control, and resulted in four times the fruit production (fruit/acre) and three times the yield (pounds/acre) than no weed control.

Increasing Vase Life of Cut Roses

Roses continue to be the most popular cut flower in the world and proper postharvest handling is critical. **Moody et al. (p. 676)** showed that variety selection is important as the vase life of nine varieties in distilled water ranged from a low of 7.1 days for Queen 2000 to a high of 15.3 days for Forever Young. Application of the anti-ethylene agent silver thiosulfate improved vase life in five of nine varieties tested, but 1-methylcyclopropene did not. Increasing the amount of stem cut off the base up to 10 cm increased vase life.

Animal Tissue Compost as a Container Substrate Amendment

Animal tissue compost (ATC) has historically been used as a soil amendment or fertilizer on cropland, but may have the potential to be used as a substrate amendment for ornamental plant container production. **Getter and Roozeboom (p. 686)** found that ATC has the potential to be a peat extender in floriculture substrates when used in ratios of 20% or less, assuming that substrate contains 20% perlite.

Controlling Flowering with LEDs in a Coordinated Grower Trial

Lighting during the middle of the night under short days can promote flowering of long-day plants and inhibit flowering of short-day plants. In a coordinated trial with five commercial floriculture crop producers, **Meng and Runkle (p. 702)** showed that red+white+far-red light-emitting diode (LED) lamps were as effective as lamps traditionally used in greenhouses at controlling flowering of ornamental crops. Factors including lamp energy efficiency, life span, and costs should be considered to determine whether installation of these LED lamps is economically favorable.

Best Cool-season Lawn Grass Mixtures for Use with Deicing Salts

Seed mixtures of kentucky bluegrass, creeping red fescue, and alkaligrass at different ratios were evaluated for lawn quality as affected by deicing salts under 2.5-inch mowing height and 150 lb/acre annual nitrogen regime. **Yuan et al. (p. 712)** observed

that the botanical component of the stands of grasses shifted over a 2-year period for all salt levels. In particular, at 320 lb/acre (typical annual salt application rate in the upper-midwestern U.S.) the best lawn quality was achieved from mixing kentucky bluegrass and red fescue in 48% and 52% of their respective full seeding rates of 150 and 300 lb/acre.

Foliar Treatment with 2,4-D Reduces Fruit Splitting in Mandarin

Fruit splitting is a physiological disorder in citrus that entails cracking of the rind and eventual splitting of the endocarp and abscission of the fruit. **Stander et al. (p. 717)** evaluated foliar applications of 2,4-D, calcium, and potassium (K) for efficacy to reduce fruit splitting in two mandarin varieties, Marisol and Mor. A foliar treatment with 10 ppm 2,4-D directly after physiological fruit drop, applied alone or combined with K, reduced fruit splitting by up to 50% in both varieties. In addition, treatments increased rind thickness and rind strength and reduced diameter:length ratio.

Comparison of Annual and Perennial Growth in Different Soils

Growth and quality of warm-season annuals, cool-season annuals, and perennial species was compared at three nitrogen rates in field soil versus raised beds filled with subsoil fill. Many new housing developments in central Florida have subsoil fill in place of native field soil. **Moore et al. (p. 724)** reported that growth and quality of most species was similar at all three nitrogen rates. For some of the species examined growth was better in the field soil than the subsoil fill. However, quality in most cases was similar between the two soil types.

Postharvest Handling Recommendations for Cut Pineapple Lily

Pineapple lily, a relatively new introduction to the floral industry, has attractive pineapple-like inflorescences that make great cut flowers. The effects of various postharvest treatments on cut stems of 'Coral' and 'Sparkling Burgundy' were evaluated by **Carlson and Dole (p. 731)** in order to determine best postharvest handling practices. Pineapple lily should be harvested when at least 50% of the florets are open, held in plain water, and cold stored for no more than 1 week (wet or dry). Other positive qualities include extensive vase life (up to 2 months) and ethylene insensitivity (up to 1 ppm).

Effect of Transient Heat Application to Wine Grapes

Wine grapes in eastern Washington (WA) were exposed to transient, mechanically applied heat generated from a commercial unit. This technology reportedly improves fruit set, advances phenology, and increases harvest soluble solids when used at weekly intervals.

Under eastern WA conditions, however, with high summer heat accumulation and regulated deficit irrigation, **Gohil and Moyer (p. 736)** did not observe these effects. No differences were seen in fruit set, vine development, or harvest soluble solids, pH or titratable acidity when compared to the control. The climate conditions in eastern WA are likely inappropriate for maximum effectiveness of this type of technology.

Year-round Production of Cut Sunflowers in the Rocky Mountain West

While the photoperiodic responses of sunflowers have been well documented, little research has been done to assess year-round greenhouse production of cut sunflowers under natural light conditions. Over a 14-month period, **Garfinkel and Panter (p. 743)** tracked the stem lengths and days from sowing to harvest of three cut sunflower varieties. Plants were grown in a greenhouse using a non-traditional containerized production system without supplemental or photoperiodic lighting. Results indicated that cut sunflowers could reliably be produced throughout the year, but with considerable differences in stem length and days from sowing to harvest depending on variety.

Warm-season Turfgrass Species for Sport Surfaces

Synthetic sports surfaces are subject to standardization of athlete-surface and ball-surface interactions, and this also may be beneficial for natural turf. In warm and temperate climates, many natural sport surfaces are established with warm-season species, due to their suitability to the environment. **Lulli et al. (p. 749)**, after evaluating the FIFA-standard playing characteristics of different sports surfaces obtained from three commonly used C₄ turfgrass species, found that surfaces of different C₄ turfgrass species generate different playability parameters. These differences were associated with specific canopy parameters (shoot density, horizontal stem density, leaf section) and plant tissue compounds (lignin and silica).

Simulating Apple Production Using an Interactive Economic Decision Support Tool

Rodriguez et al. (p. 757) developed an interactive sustainable apple budget that estimates both the expected profitability and the breakeven costs and returns of producing and marketing apples in Arkansas and across the southern U.S. The economic models provide a framework for producers to assess their operation costs and then analyze their operation with respect to different market prices or changes to production activities. Sensitivity and risk analyses functionality is included such that users can examine best case, most likely, and worst case yields and prices.