



### ROOTSTOCK AFFECTS POSTHARVEST DECAY AND STEM-END RIND BREAKDOWN (SERB) OF FRESH CITRUS

Rootstocks affect a wide range of citrus tree and fruit quality characteristics. However, nothing has been published of their affects on SERB, an important postharvest physiological disorder, and very little has been published of their affects on postharvest decay. **Ritenour et al. (p. 315)** found that rootstock can affect the development of both with fruit from trees grown on Gou Tou (*Citrus* hybrid) consistently developing low SERB, and fruit from trees grown on Cleopatra mandarin (*C. reticulata*) consistently developing relatively low amounts of decay. The authors suggest that evaluations of postharvest quality retention be included when developing new citrus rootstocks.

### LONGEVITY OF VIRUS-TESTED SWEETPOTATO IN PRODUCTION FIELDS

Sweetpotato growers in the U.S. now use plant stock originating from virus-tested sweetpotato to improve yield and quality. Virus-tested plants are those that appear free of known viruses. What is not known is how long the beneficial aspects of virus-tested plant stock last in a production environment. **La Bonte et al. (p. 320)** present data showing that yield of virus-tested 'Beauregard' plant stock was highest in the second production season in comparison to a virus-infected control. Yield by the third production season was no different in comparison to the control. Longevity might be extended as growers saturate production regions with virus-tested sweetpotato.

### PERSPECTIVES OF COMMUNITY-SUPPORTED AGRICULTURE GROWERS

Community-supported agriculture (CSA) is an alternative model of farming in which growers contract directly with consumers to provide a harvest share. Through case study interviews, **Worden (p. 322)** investigated perspectives of growers involved with CSA. Few CSA growers have family backgrounds in agriculture, and few rely on conventional sources of agricultural information (i.e., cooperative extension and formal agricultural education). Instead, informal communication among growers, conferences, and selected publications are commonly utilized. Many growers are philosophically motivated, viewing CSA as a vehicle to right livelihood and an associative economy that redefines society's relationships to food and land.

### PLANT POPULATIONS FOR VINING AND SEMI-VINING PUMPKIN VARIETIES

Recommended plant populations for commercial pumpkin production in the southeastern U.S. vary widely depending on the source of the information. With a goal of defining these recommendations more narrowly, **Cushman et al. (p. 326)** grew a semi-vining var-

riety (Aspen) and a vigorous-vining variety (Howden Biggie) at populations of 600 to 3000 plants/acre during 2000 and 2001. Population density affected almost all yield components. Optimum plant populations for semi-vining varieties should be about 2000 plants/acre, and about 1000 plants/acre for vining varieties.

### MODIFIED ATMOSPHERE PACKAGING IMPROVES QUALITY AND SHELF-LIFE OF SWEET CHERRIES GROWN IN THE NORTHEASTERN U.S.

Sweet cherries grown in the Northeast typically have shorter shelf life and less storage potential than cherries from the western U.S. Growers would benefit from any method to extend the postharvest life of cherries while maintaining quality. **Padilla-Zakour et al. (p. 331)** evaluated the potential of modified atmosphere packaging (MAP) at 37.4 °F for 4 weeks to improve the shelf-life of 'Hedelfingen' and 'Lapins' cherries grown in New York state. MAP cherries had better color and appearance, robust and green stems, minimal loss of moisture, and better eating quality when compared to air-stored cherries, thus extending the shelf-life to at least 3 to 4 weeks.

### MONITORING AND TRAPPING INSECTS USING LIGHT-EMITTING DIODES

Insects in a commercial poinsettia-growing greenhouse were monitored with yellow sticky card traps (YC) and YC equipped with 530-nm lime-green light-emitting diodes (LED-YC) by **Chen et al. (p. 337)**. Compared with YC, LED-YC captured more of three major pests (dark-winged fungus gnat, sweet potato whitefly, and leafhopper), did not catch more beneficial minute pirate bugs and parasitic wasps, but did catch significant numbers of rove beetles. The results suggest that LED-YC may be useful to monitor and reduce pest populations in greenhouses.

### CALCIUM CHLORIDE SPRAYS CONTROL BITTER PIT IN 'HONEYCRISP' APPLES

'Honeycrisp' is a new apple variety that is generating both consumer demand and high prices for producers. 'Honeycrisp' is highly susceptible to the calcium-related fruit disorder known as bitter pit. **Rosenberger et al. (p. 342)** evaluated bitter pit control achieved with various formulations of calcium chloride and with several other products reputed to affect bitter pit development and/or stress responses in plants. Trifloxystrobin fungicide, harpin protein, and sodium borate sprays were applied either alone or in conjunction with calcium chloride. Only calcium chloride consistently reduced losses to bitter pit.

### WINTER-KILLED COVER-CROPPING SYSTEMS FOR EARLY SEASON SNAP PEAS

Cover crops reduce soil erosion and nutrient loss while suppressing weeds. Controlling cover crops can be difficult. Using winter-killed cover crops, such as oat and mustard, may be one solution if adequate biomass is produced. **Grimmer and Masiunas (p. 349)** found that white mustard produced the most residue in the fall, but it did not persist into the spring. Barley and oats produced less fall residue, but had more residue in the spring. White mustard had the best weed control, although additional weed management was necessary. The cover crops did not directly interfere with snap pea growth and yield.

### ROOTING OF KINNICKINNICK CUTTINGS ENHANCED BY MYCORRHIZAL FUNGI

The influence of different types of mycorrhizal inoculum on rooting of hardwood 'Massachusetts' kinnickinnick cuttings was

evaluated by Scigel (p. 355). Using inoculum of arbuscular mycorrhizal fungi in the rooting substrate did not alter rooting. Inoculation with arbutoid mycorrhizal fungi (EMF) or roots from kinnikinnick enhanced rooting. Using root fragments from kinnikinnick during cutting propagation did not appear to be more beneficial than using EMF hyphae. To reduce potential transfer of deleterious organisms into the propagation substrate, using a hyphal inoculum of a known species of EMF may be a better propagation practice.

#### **PRECISION VACUUM SEEDER USED FOR HILL DROPPING**

Uniform germination and a high percentage of usable plants are the keys to success in direct seeding of vegetables. One practical solution to germination problems is hill dropping. Karayel and Özmerzi (p. 364) assessed the use of a precision vacuum seeder for hill dropping seeds of melon and watermelon. The optimum forward speeds for a precision vacuum seeder were 1.64 and 3.28 ft/s for hill dropping of melon and watermelon seeds, respectively.

#### **VERMICOMPOST DOES NOT IMPROVE TURFGRASS VISUAL QUALITY OR CLIPPING YIELD WHEN APPLIED AS A FERTILIZER**

A variety of vermicomposts are being marketed as fertilizer materials for turfgrass management, particularly in the golf course industry. Gardner (p. 372) evaluated vermicomposts from several sources, including a material made from turfgrass clippings, compared to commercially available natural organic fertilizers. Few differences in either turfgrass visual quality or clipping yields were observed during a 6-week period after application, regardless of application rate or source of vermicompost.

#### **DEVELOPMENT OF FRESH-MARKET BROCCOLI INDUSTRY ON VIRGINIA'S EASTERN SHORE REQUIRES NEW VARIETIES**

Sterrett et al. (p. 376) evaluated 16 varieties and breeding lines in 1997 and 15 in 1998 for yield, crop maturity, and head quality characteristics for fall broccoli production. Few entries met criteria for bunched broccoli, but the head quality of several was acceptable for crown-cut. 'Captain' showed potential as an early variety for the Eastern Shore. No main-season varieties included in both years were recommended because of poor yield or unacceptable head quality. Additional evaluations of main-season broccoli varieties are needed by growers interested in fall broccoli production.

#### **ESTIMATING CABBAGE HEAD VOLUME USING GEOMETRIC FORMULAE**

Radovich and Kleinhenz (p. 388) tested the ability of two volume formulae (sphere and spherical ellipsoid) to estimate cabbage head volume across a population of heads varying widely for shape. Both formulae provided estimates of volume more rapidly than the displacement method. The sphere formula underestimated volume in very flat heads and overestimated volume in very tall heads. Use of the spherical ellipsoid formula reduced the shape-dependency of volume estimates and was determined to be a valuable tool for the accurate, precise, and rapid measurement of head volume.

#### **ADDING UREA TO SOAK WATER INCREASES PRODUCTION OF SHIITAKE ON SAWDUST BLOCKS**

Instead of adding supplements to the sawdust block for growing shiitake mushrooms, Sabota et al. (p. 393) investigated adding urea or sucrose to the soak water. When 2400 ppm of urea was

added, more mushrooms were harvested per block, resulting in a 12% increase in biological efficiency. By adding 16.9 oz of urea per tank to obtain 2400 ppm urea, growers would realize \$0.74 more return from each block. In a mushroom block production facility containing 500 blocks, addition of 2400 ppm urea to each soak water would provide an increased return of about \$375 over the entire season.

#### **PERSONAL DIGITAL ASSISTANTS (PDAs) AID IN FIELD DATA COLLECTION**

When properly configured, PDAs are viable tools for data collection. Electronic data collection reduces repetitive tasks and eliminates the need of manually reviewing for erroneous entries. Villordon et al. (p. 402) document their experiences in integrating PDAs and database forms for collecting data from field trials. A comparison of "pen-and-paper" and PDA-assisted data collection methods showed that PDAs reduce the time required to store records into desktop computer files, making data rapidly available for archiving and statistical analysis. The use of database forms as user interfaces to database tables circumvented the space limitations of PDA screens and simplified recording of numeric and text data.

#### **PREVENTING LEAF YELLOWING IN CUT ORIENTAL LILIES**

Several pulsing solutions were tested on cut oriental lily varieties to determine their effectiveness in reducing leaf yellowing. Leonard and Nell (p. 405) found that a new commercial product called Chrysal BVB (containing proprietary amounts of cytokinin and gibberellic acids) was the most effective product tested, with no detrimental effects on bud opening or vase life. Fascination (containing 1.8% gibberellins and 1.8% benzyladenine) had an intermediate effect, followed by thidiazuron. Results varied by variety, with the most sensitive varieties to leaf yellowing being less but moderately responsive.

#### **GROWTH CONTROL OF POT SUNFLOWERS WITH FLURPRIMIDOL**

Short-stature varieties of sunflowers are available for use as potted plants, but plant size is still often disproportionate to pot size. Whipker et al. (p. 411) found flurprimidol substrate drenches at 2 mg a.i. per 6-inch-diameter pot to be more effective on 'Pacino' pot sunflowers than foliar sprays of  $\geq 30$  ppm, but both treatments resulted in significantly smaller plant height and diameter than the control. Flurprimidol drenches of 2 mg were comparable in controlling plant height and diameter to the commercial drench recommendations of 2 mg paclobutrazol.

#### **NEW WINEGRAPE VARIETIES AND SELECTIONS EVALUATED IN BRITISH COLUMBIA**

Eighty-five winegrape varieties from breeding programs in Germany and Hungary were evaluated under organic management in the arid conditions and cold winters of British Columbia's Okanagan Valley (Reynolds et al., p. 420). Several Geisenheim (e.g., 'Gm 7117-10') and Würzburg (e.g., 'Cantaro') varieties emerged as 'Riesling' alternatives, while others from Alzey (e.g., 'Faberrebe'), Freiburg (e.g., 'Nobling') and Weinsberg (e.g., 'Holder') produced wines superior to standard 'Müller-Thurgau.' Several Hungarian muscat-flavored varieties (e.g., 'Zefir' and 'Zengo') exceeded standard 'Csabagyongye.' Weinsberg varieties Heroldrebe and Helfensteiner showed promise as 'Pinot noir' alternatives. Noteworthy miscellaneous red wine varieties included Geilweilerhof variety Regent, and Hungarian selections Kozma 55 and Kozma 525.