



Improving Bean Harvest with Gibberellic Acid

Can direct harvest of dry edible beans be improved by applying gibberellic acid, a growth promoter? In a field study, **Pavlista et al. (p. 282)** applied gibberellic acid to newly expanded unifoliate leaves to stimulate lower stem growth. As a result, the lowest pods of varieties Poncho and Matterhorn were raised off the ground. At 22- and 30-inch row spacing, conventional, direct, and manual harvest methods were compared. Yields from conventional and direct harvest were increased by gibberellic acid. Yield from directly harvested treated plots was comparable to that from untreated conventionally harvested plots.

Ethephon Increases Tip Rot in Sweetpotato, but Curing Reduces It

Postharvest diseases reduce pack out efficiency, which affects profitability. The internal necrosis associated with sweetpotato tip rot can go unnoticed until consumer use, affecting quality perception and demand. Tip rot is a postharvest disease/disorder manifested as a restricted lesion at, or close to, the root proximal end. In many cases the lesion necrosis expands internally. **Arancibia et al. (p. 288)** found that sweetpotato tip rot incidence was associated with preharvest foliar applications of ethephon and that curing immediately after harvest reduced the incidence of this and other end rots, which improved pack out efficiency.

Clopyralid Applied to Four Strawberry Varieties at Fruiting Stage

Soil fumigant and pre-emergent herbicide applications are the most common methods of weed control in annual plasticulture strawberry production. While in some cases acceptable weed control can be obtained, many dormant hard-seeded annual weeds have the ability to escape treatment and become mid- to late-season problems. **Hunnicut et al. (p. 301)** conducted greenhouse studies to investigate the effects of a post-emergent spray application of clopyralid on four commonly grown strawberry varieties in Florida. At labeled rates, less than 12% leaf malformation was observed and marketable yield followed a linear increase as application rates increased.

Unique Fruit Development of Ornamental 'Teapot' Jujube

Normally jujube fruit is developed from ovary plus some nectary disk tissue and the fruit can appear smooth or bumpy on the surface. However, 'Teapot' ornamental jujube always has 1–5 protuberances on the fruit surface and few entirely lack protuberances. **Yao (p. 364)** observed the unique fruit shape development of 'Teapot'. 'Teapot' flowers had deformed stamens that were fewer in number and mislocated in the nectary disk. After blooming, the residue of stamens, nectary disk, and ovary were all constituents of the developing fruit. The residue of stamens developed into the protuberances on fruit surface and equaled them in number.

Dikegulac Sodium vs. Pruning of Little Lime™ Hydrangea

Cochran and Fulcher (p. 306) compared three plant growth regulators (two rates each) with hand-pruned and unpruned controls to evaluate branch and floral development of Little Lime™ hydrangea. They found dikegulac sodium (800 and 1600 ppm) increased branch number compared to all other treatments. Dikegulac sodium (both rates) and pruning increased plant quality. However, pruning reduced flower number by at least 78% compared with all other treatments. Dikegulac sodium caused phytotoxicity, but 4 months after treatment no damage was detected. Dikegulac sodium (either rate) was the only treatment that increased branch number and plant quality without reducing floral display.

Container-grown Ornamentals Tolerant to HPPD-inhibiting Herbicides

HPPD (*p*-hydroxyphenylpyruvate dioxygenase) inhibitors have the potential to improve weed management in ornamental plant systems. **Cutulle et al. (p. 319)** evaluated the impact of mesotrione, tembotrione, and topramezone herbicides on six ornamental plant species and three weed species. An additional study was conducted to further characterize the tolerance of 11 more ornamental plants to topramezone. Ten plant species exhibited less than 10% injury to at least one of the HPPD-inhibiting herbicides. All herbicides were effective at controlling redroot pigweed, particularly topramezone, which provided greater than 90% redroot pigweed at the lowest application rate.

Yield and Fruit Quality in Phytophthora-tolerant Bell Peppers

Bell pepper varieties with genetic tolerance to phytophthora blight are an important component of an integrated management strategy. Considerations in choosing resistant pepper varieties include green and red fruit yield, fruit size and quality, plant size, and disease tolerance. **Dunn et al. (p. 382)** evaluated marketable green fruit yield, fruit size and quality, and plant size in eight commercially available bell pepper varieties (susceptible and tolerant to phytophthora blight)

and four inbred lines, in the presence and absence of this disease. **Wyatt et al. (p. 356)** evaluated nine *Phytophthora capsici*-resistant inbred lines and hybrids derived from them for red harvest yield, ripe fruit characteristics, and phytophthora blight resistance compared to commercial varieties in conventional, organic, and drought-stressed environments. ‘Paladin’, ‘Intruder’, ‘Aristotle’, and the inbred lines were the most tolerant to phytophthora blight. All of these also yielded well in the absence of disease, but tended to produce smaller fruit than some of the less-tolerant varieties. The inbred lines also provided high levels of tolerance as hybrid parents. ‘Paladin’, ‘Intruder’, and ‘Aristotle’ are excellent commercially available options for growers with phytophthora blight, while the inbred lines are suitable for markets where small fruit size is acceptable and as hybrid parents.

Nutrient and Water use of Fresh Market Spinach

Fresh market spinach production methods have changed over the past 10–15 years. Spinach is now planted on high-density 80-inch-wide beds and is predominantly mechanically harvested. **Heinrich et al. (p. 325)** evaluated nutrient uptake and water use of spinach grown with these modern methods. Trials and surveys were conducted over the 2011 growing season on a range of soil types and microclimatic conditions. Measurements of residual soil nitrate-nitrogen at planting and before the first midseason fertilizer application were capable of guiding fertilizer application needs. Nitrogen uptake and water use are discussed.

Fertilization of Container-grown Bermudagrass in Nurseries

Transplanting single, pre-rooted, peat-plug plantlets is an innovative technique for establishment of warm-season grass species. Plantlets originate from one-node sprigs derived from stolons of donor plants grown in pots. **Baldi et al. (p. 347)** found that nitrogen, phosphorus, and potassium rates influenced sprig production in ‘Patriot’ bermudagrass. The number of stolons was affected mainly by phosphorus, while stolon length, number of nodes, and ramifications mainly by potassium. A control potassium rate of 198 mg·L⁻¹ substrate was appropriate. Nitrogen and phosphorus control rates (314 and 52 mg·L⁻¹ substrate, respectively) could be reduced by 50%.

Melon Fruit Cracking: Causes and Remedies

Cracking is becoming a serious problem in the muskmelon fruit industry, and is causing a major loss of marketable yield and revenue. This disorder is controlled by both genetic and genotype x environment components. **Fernández Trujillo et al. (p. 266)** found that thinner-rind melon fruit are highly prone to cracking. Certain varieties are more susceptible than others and controlling wide fluctuations in irrigation, temperature, and nutrition during late fruit maturation stages manages fruit cracking. Melon growers, extension specialists, and melon breeders will benefit from these findings.

Humic Substance Used to Reestablish Turf after Petroleum Spills

Damage caused by petroleum-based spills on turfgrass is difficult to correct. **Bai and Li (p. 334)** compared detergent, nitrate nutrient, humic substance, and activated flowable charcoal on the quality and germination of perennial ryegrass used at reseeding at 0, 1, and 2 weeks after gasoline, diesel, and hydraulic fluid spills. They found that using a liquid humic substance to remediate soil and reseed immediately after a gasoline spill was a practical method to recover acceptable turf in 5 weeks. Remediation of turf took 4 months after a diesel spill and more than 6 months for hydraulic fluid.

Oakleaf Hydrangea Responds to Ancymidol, Uniconazole, or Pinching

‘Alice’ and ‘Pee Wee’ oakleaf hydrangea were treated with four rates of ancymidol or uniconazole as a foliar spray or a substrate drench, or the growing points were pinched to control growth. **Cole et al. (p. 339)** noted that ancymidol did not reduce growth compared to control plants, regardless of application method. Uniconazole was more effective than ancymidol at controlling growth, but it also did not provide acceptable growth reduction by either application method. The industry practice of shearing oakleaf hydrangeas is recommended rather than using ancymidol or uniconazole for growth reduction.