High Tunnels—Season Extension Technology for Production of Horticultural Crops

Introduction to the Colloquium

Karen L. Panter¹

ADDITIONAL INDEX WORDS. hoop houses, greenhouses, protected cultivation, protected structures

Sponsored by the ASHS Commercial Horticulture Extension Working Group (CHEX), this colloquium brought together eight leaders in high tunnel research. Gathered from across the country, the speakers discuss topics ranging from integrated pest management to soil management to the various crops being grown with this season-extending technology.

The colloquium objectives were two-fold. The first was to impart applied information on the commercial practices used to produce horticultural crops (vegetables, small fruit, tree fruit, and floral crops) in protected culture in high tunnels. The second was to present and discuss research results on growing under high tunnels.

Plasticulture technology and season-extending technology such as high tunnels provide a way to improve environmental conditions for crop production and to intensify crop production in limited land area. High tunnels, although resembling traditional plastic-covered greenhouses, use a different set of growing technologies. In their purest form, they are considered nonpermanent structures because they lack electrical service or automated ventilation or heating systems. High tunnels are typically covered by a single layer of plastic compared with two layers used in traditional plastic-covered greenhouses. They can be used as season extenders in colder climates or as protection from the elements in warmer areas. In this colloquium, researchers from across the United States provided current information on horticultural crop production in high tunnels, practical procedures, physiological responses, and engineering principles pertaining to plant growth in high tunnels.

The CHEX Working Group would like to acknowledge and thank all of our speakers: Ted Carey, Kathy Demchak, Gene Giacomelli, Bill Lamont, Greg Lang, Adam Montri, Laura Pottorff, and Chris Wien. We also extend a thank you to the American Society for Horticultural Science working groups that cosponsored the colloquium: Consumer Horticulture/Master Gardener (CHMG), Organic Horticulture (ORGH), Production and Harvest Mechanization (MECH), and Vegetable Crops Management (VCM).

¹Extension Horticulture Specialist, past chair Commercial Horticulture Extension Working Group, colloquium convener, and colloquium moderator.

Department of Plant Sciences 3354, University of Wyoming, 1000 East University Avenue, Laramie, WY 82071 307-766-5117, kpanter@uwyo.edu