



## FUTURE PRODUCTS

### WILDEST DREAMS

**“Special magnetic chips will be in the pots. To load a rack, all you do is switch the beam on and the right plants get loaded on the right racks. But beware if you’re in the crossfire. It will be like an asteroid field with plants flying around.”**

**-Delilah Onofrey, Editor, Greenhouse Grower**

**“A greenhouse cover that allows full sunlight in the daytime yet won’t let heat escape in the night.”**

**-Carol Steckle, Huron Ridge Acres, Canada**

**“Instruments that are able to diagnose disease without human intervention.”**

**-Marilena Vazquez, Patrick Studio Perennials, Canada**

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ing mixes due to its physical properties, but it will be used in lower percentages as we utilize locally available by-products from other industries that can provide consistent and predictable attributes to our mixes. These components will be recyclable, sustainable and economical.

Future growing media will be “designed” to become a “solid matrix” — after container filling and irrigation — resulting in plugs that can be transplanted on a fixed schedule and finished crops that can be shipped without their original plastic containers. These plants will be lightweight, easy to handle and environmentally friendly for the end user. This media will remove labor activities from the greenhouse and provide more efficient and ideal growing conditions for greenhouse crops.

Though we have a vivid vision for our growing media, we’ll continue to explore new technologies.



#### NUTRITION

**Fred Hulme, Ph.D.**

**Director of Technical Services**

**The Scotts Company**

The Scotts Company celebrated its 140th anniversary this year, and it evolved greatly since the days of O.M. Scott. The last 25 years have certainly brought many innovative changes to the ornamentals industry as a whole.

What will happen in the next 25 years? There will surely be many changes in ornamental production, some that will be impossible to predict at this point in time. However, some recent trends are expected to continue into the foreseeable future: more large production operations, more automation, increasing pressures to reduce material costs, labor and shrinkage, and additional need to reduce waste, environmental impact and adopt sustainable practices.

There’s little doubt that the sustainability movement within the horticulture industry will continue to be at the forefront of our industry’s consciousness. As a result, Scotts has developed “The e3 Approach to Sustainability,” which advocates the balance of three important elements – efficiency, economy and ecology – for a more sustainable growing operation. This approach will be at the core of our future product development in the years ahead.

Scotts is actively engaged in developing new technologies that answer these industry trends. In particular, we anticipate significant advances in coating technology that will provide both the greenhouse and nursery markets with a variety of cost-effective features and benefits – better crops, easier product application and increased efficiency. Perhaps most importantly, The Scotts Company will continue to develop products that offer consistent, reliable and outstanding performance.



#### COMPUTER TECHNOLOGY

**John Stallmer**

**President**

**Innovative Software Solutions**

As we look into the future, there will be two main areas that will define the software of the future: seamless connectivity between different software and hardware systems and increased automation to

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**"A VP of sales that understands production."  
-Anonymous**

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reduce labor costs. To better understand how software will play a role in the future of greenhouses, you must first get a glimpse of what the greenhouse of the future will look like.

The future greenhouse will not have an order entry staff. Instead, orders will be entered electronically by customers and sales reps using mobile devices that easily connect to the grower's Picas software. These orders will feed the Picas production system that will alert robotics as to what needs to be produced.

Supplier systems will automatically be alerted as to what supplies (seed, cuttings, trays, etc.) will be needed and when. As trays are produced, Picas will automatically track each tray via RFID chips that have been embedded in the plastic. Picas will then communicate with the environmental controls systems to determine where there is appropriate space for the product to be moved to. Picas will then alert the transport robots to pick up the trays and move them to the designated area.

Throughout the lifecycle of the crop, the software will communicate with the environmental controls system to control the environment, apply necessary applications and alert robotics as to when product needs to be moved. As the product is ready to ship, the software will alert the picking robots of what needs to be pulled and where the product can be found in the greenhouse. Once the product is pulled, Picas will inform the packing robots exactly which box or rack each container needs to be placed in. The software will then communicate with all parties involved (broker, customer/store, FedEx) that the order has been shipped. As finished product is sold at the stores, the store's system will communicate with Picas to identify replenishment needs. Greenhouse software of the future will be the brains that will keep all of the parts moving.

**GG**

## CO-EX POLYCARBONATE PANELS

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CO-EX Macrolux®  
Multiwall and Rooflite®  
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panels are ideal for  
greenhouse building.

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- Protects Tender Plants from U.V. Radiation
- Stands Up to Hail

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