

## *Plant Propagation*

What's new,  
and a few tips  
across the years

*We'll visit an old greenhouse again...*



### *1950s Vegetable and Flower Transplant Culture*

Choosing from a limited number of cultivars  
Starting from seeds in homemade flats  
Transplanting into compost beds  
“Dibbling” up mature seedlings  
Wrapping in newspaper for sale to gardeners

### *Growing transplants in soil beds*



### *Wooden Flats and Dibble Boards*



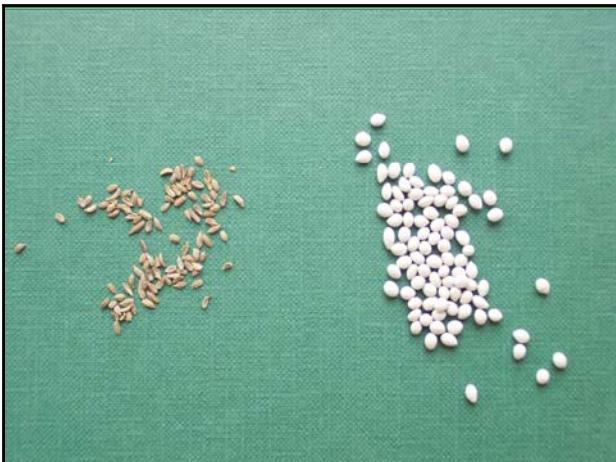
### *Things Change*

Seed germination goes from open flats, to row-trays, to plugs of all sizes (50 to 640 per flat).  
Automation for faster and more efficient seeding.  
Number of varieties available explodes.  
Faster and more uniform germination through research.  
Dislodging and transplanting equipment.



## *Other Seed Issues and Changes*

Germination percentage  
Seed storage  
Vernalization & other dormancy treatments  
Growing with DIF  
Germ. Temperatures, RZH (Root Zone Heating)  
Primed seed, IG (Improved Germination) seed  
Pelleted seed



## *Now, how about plants from cuttings?*

Gardening trends change:  
Transplant sizes  
Consumer choices in species, height, and color  
More marketing outlets from garden centers to the “big box” stores  
Gardeners became outdoor “instant color” designers

## *The rise of “vegetative” annuals*

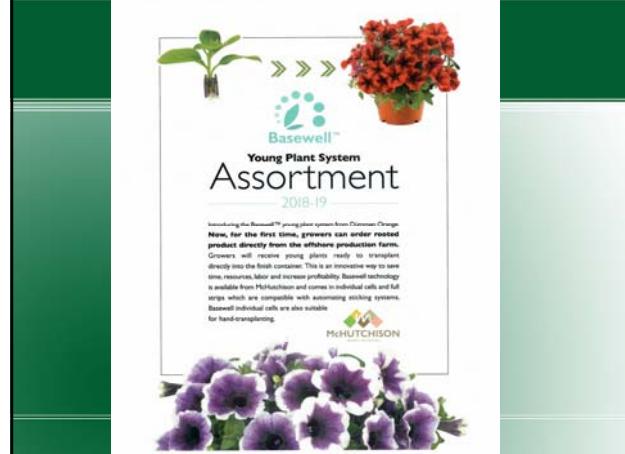
Growing from cuttings rather than from seeds  
Uniform production  
Improved disease and/or drought resistance  
Improved growth habit (look at petunias)  
Larger number of species, colors, growth habits  
Many are patented or copyrighted cultivars

## *Propagation points to consider*

Plug size & depth (deep cells for better drainage)  
Temperature, light, humidity, and sanitation  
Bottom heat (RZH) beneficial for both seed and cutting production  
Water pH is VERY critical, especially when using PGRs (Plant Growth Regulators)  
Water pH also a large factor in fertilizing (20-3-19 Petunia FeED a perfect example)

## ***Rooted or Unrooted Cuttings?***

Many great sources of both RC and URC material, often from “off-shore” facilities  
Use a reputable broker  
Carefully inspect material for insects or disease  
Be prepared with proper media, plugs, and mist if required  
Try some of the recent technologies



## ***Handling Unrooted Cuttings***



## ***Mist chamber with many species***



## ***Quick rooting with little or no loss***



### *Other propagation methods*



### *Problems (and some of my “pet peeves”)*



