Specialty Cut Flowers & Season Extension

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Marketing: The First Step!

◆ Assess:
  – Who are your buyers?
  – Where will you sell?
  – How large is your market?
  – What prices will your market bear?
  – What season(s) is your market accessible?
**Post Harvest Handling: Our Ace in the Hole**

- Imported Flowers can be 8-10 days old
  - Airfreight to Miami: 1-2 days
  - Processing by Importer: 2-3 days
  - Regional Wholesale Handling: 2-3 days
  - Florist: 1+ days
  - Consumer: 8-10 day old flowers

- Pretty tough on a product with a max. life of 21 days.

- Some flowers do not ship well
  - Zinnia, sunflower, snapdragons, hydrangea…
Typical Cut Flower Markets

- Wholesale
- Direct to Florist
- PYO (cut your own)
- Farmstand
- Farmers Market
- Subscription
- Cooperative***
- Auction

Bouquets at CVA
Packaging Specialty Cut Flowers

- Standards on the Web at USDA site
  - www.ams.usda.gov/marketnews.htm
- Package size
  - Singly
  - Bunch of ten
  - Mixed Bouquet
- Water filled buckets
- Preservatives
Production Considerations

- Site Selection
- Planting
- Irrigation
- Labor
- Refrigeration
- Equipment
- Wind Protection and Support
Pest Control

- Weeds
- Insects
- Diseases
- Deer
Harvest and Post-Harvest

- Cut after dew is off, but before heat is on.
- Remove spent blooms
- Place in water as cut
- Adjust pH of water (3.5)
- Cool rapidly
- Know your flower (when best to cut)
Vase Life Triangle

- Cultural Practices
- Vase Life
- Shipping & Storage
- Handling Practices
Know when to cut:

- Sunflowers: just full open
- Snapdragons: 1/2 to 2/3 full open
- Gladiolus: 1-5 flowers showing color
- Zinnias: Full open
- Salvia: Just showing color
- Asters: 2-4 flowers open
Variables in Post Harvest Handling

- Temperature
- Sanitation
- Processing
- Ethylene
Temperature

- Ideal Temperature = 33-35F
- Flowers continue to open at 36F+
- Flowers start to senesce at 40F+
- Speed to final destination is not a substitute for 33-35F
- Zinnias are damaged below 45F
Sanitation

- Everything must be sanitized
  - Buckets
  - Clippers
  - Flowers
- Bacterial counts rise quickly
- Would you drink this solution (visual)?
Processing

◆ Speed is critical
  – Cut and place in floral preservative
◆ Recut as the tip is probably incapable of water transport.
◆ Cut DRY!
  – This avoids cross contamination of stems in dirty water.
◆ Floral preservatives
  – Carbohydrate supply
  – Bacterial control
◆ Warm or Cold water?
◆ Rehydration
Factors affecting PostHarvest Quality

- Variety
- Pre-harvest Factors
  - Insect and Disease Free
  - Fertilized properly
  - Irrigated well
- Maturity
- Harvest Temperature
- Food Supply
Additional Factors affecting Postharvest life

- Light
- Water Supply
  - Air embolism
  - Bacterial plugging
  - Hard water (high pH)
- Water quality
  - Sodium - carnations
  - Fluoride - glads, freesia, gerbera
  - Water softeners
Choosing Cultivars

- Flower color
- Flower form
- Shelf-Life
- Stem length
- Ease of production
- Market
Some Strong Suggestions

- Know your market and flowers well
- Have refrigeration
  - Not shared with fruit & vegetables
- Install irrigation***
- Access to a raised-bed machine
- Keep up on production and market changes
- Visit trial gardens
Annuals Worth Starting With

- Calendula
- Cosmos
- Mexican Marigold
- Mexican Sunflower
- Orn. Pepper
- Salvia
- Strawflowers
- Sunflowers
- Sweet Pea
- Zinnia
- China Asters
- Snapdragons
- Larkspur
- Celosia
- Lisianthus
Perennials worth starting with

- Black-Eyed Susan (Rudbeckia)
- Columbine (Aquilegia)
- Bellflower (Campanula)
- Wild Indigo (Baptisia)
- Yarrow (Achillea)
- Shasta Daisy (Leucanthemum)
- Cornflower (Centaurea)
Specific Flowers for use:
USDA AMS Florist survey 2003-4

- All rated from don’t need to must have (1-7)
- Lisianthus: 73.3% (4+)
- Hydrangea: 64.2% (4+)
- Snapdragon: 79.4% (4+)
- Celosia, spike: 46.6% (4+)
- Celosia, cockscomb: 79.4% (4+)*
- Sunflower: 79.2% (4+)*
More on specific flowers

- Ageratum: 38.5% (4+)
- Peonies: 57.5% (4+)
- Calla lilies: 72.9% (4+)*
- Lilies: 80.2% (4+)*
- Aster: 62.1% (4+)
- Daisy: 68.6% (4+)
- Statice: 70.3% (4+)
- Zinnia: 56.6% (4+)
- Yarrow: 64.7% (4+)
Flowers that pulled low numbers

- Agastache
- Ammobium
- Strawflowers
- Globe amaranth
- Salvia

S. Gruppenblau

A. Opopeo
Strongly Recommended Sunflowers

- Brilliance (4.00)
- Double Solar (4.00)
- Full Sun (4.75)
- Goldburst (4.00)
- Joker (3.50)
- Moonbright (5.00)
- Sunbeam (4.00)
- Sunbright (5.00)
- Sunbright Supreme (4.00)
Brilliance

Double Solar

Premier Light Yellow

Florenza

Double Quick Orange
Site Selection

- Accessibility
  - Irrigation
  - Harvest
  - Deer control
  - PYO
- Good Drainage
- Wind Protection
Wind & Rain protection

- High Tunnels
  - PSU style, Haygroves
- Windbreaks
- HortoNova mesh
Planting

- Spacing
  - Manages flower and stem size
- Method
- Plug size
- Succession
- Season
Irrigation

- Drip is best!
  - Emitter spacing

- Strongly suggested
  - Affects yields
  - Required for good stems
  - Affects quality
  - Timing is critical
Signage

Opening in Summer
Pick Your Own Sunflowers

Welcome to Homestead Farm...
Pick Your Own

- Blackberries $1.50/lb
- Raspberries $2.50/lb
- Sunflowers 50c multi-stem
- Zinnias 25c per flower
- Tomatoes!! 10 lbs or less - 89c/lb
- 10-20 lbs - 59c/lb
- over 20 lbs - 39c/lb
Where to get information

- Growing for Market Magazine
- Penn State Statewide Trials:
  - APD site
  - SE Research Farm, Landisville
  - Contact me for info.
- Assoc. of Specialty Cut Flower Growers
  - ASCFG, ascfg.org
- OFA (Ohio Florists Association)
This Space for rent as we transition from Cut Flowers to more generic Season Extension portion of this presentation. For rates, inquire with the educator on-hand.
Season Extension Systems

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Vegetable Systems

- Field grown on soil
- Field grown on plastic
- Field grown raised-bed plastic
- Season Extension:
  - Row covers
  - Low tunnels
  - High tunnels
  - Greenhouse grown
Transplant production

- **Timing is everything**
  - Tomatoes require 6-8 weeks for 12-15” heavy transplants
  - Peppers require 8-10 weeks for 10-12” heavy transplants
- **Johnnys’ seed catalog for timing**
  - Planting date – germination date – planting date.
- **Succession planting for constant supply.**
Approaching the Problem

◆ Marketing: the key to any and all decisions regarding what and how to grow!

◆ Isolate the problem:
  – Who are you selling to?
  – What are you selling them?
  – When will you be selling it?
  – What will they pay?
Direct Seeded through Plastic

- Onions
- Garlic
- Sweet Corn
- Zucchini
- Large seeds are easier, but there are modern planters for many through plastic applications.
Transplants on Plastic
Field-Grown Raised-Bed Plastic
Season Extension: Row Covers

Early planted sweet corn under row cover
Season Extension: Low Tunnels
Season Extension: High Tunnels
Season Extension: Greenhouse Grown

- Raspberries
- Strawberries
- Peppers
- Tomatoes
- Green Beans
- Cucumbers
- Greens
- Herbs
What is your reason for season extension and does it pay?

- Is this a marketing decision?
  - Early to market for market share
  - Maintaining customer base
  - Cash flow
  - Quality of product issues
  - Locally / on-farm produced

- Is this a profitable operation
  - What does it cost per crop unit?
Variations on Greenhouse-Grown

- Hydroponics
- Grow Bags
- Troughs
- Pots
- In-ground
- Aquaponics
Heated Tunnel In-Ground Tomatoes
Late and Early Strawberries
Aquaponics
Transplanting Sweet Corn
Sweet corn and plasticulture
Harmony Essentials System
High Tunnel Spinach & Greens
Haygrove Tunnel Cherries
Cut Flower Production
More on cut flowers
Beans and Cucumbers in Troughs
Parthenocarpic Cucumbers
Grow beds and perlite bags
Perlite bags w/irrigation
Trough tomato system
Greenhouse management tools
My proposal:

- Construct a modified tunnel / greenhouse (delta T of 30°F =/-)
- Grow 80% tomatoes and 20% peppers from March to field season price collapse
- Remove plants, water heavily, close and cook for 2 weeks.
- Plant with greens starting at bolt resistant types from August to winter holidays
- Ski from December 26 to Feb 25, replant with tomatoes and peppers.
- Send me the extra cash in $100’s (I have the storage capabilities).
Thank You
Your Questions, Comments and
Rebuttals Please!

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