



Floriculture in Alaska

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Fairbanks, -50°F , 2010



Winter solstice, Ethan Stiegel



Kaktovik, Barter Island, Alaska



Spinach Creek Greenhouse, Fairbanks
(summer veggies)



Chena Hot Springs, Hydroponic veggies, herbs



Fritz Creek Gardens, Homer hardy perennials



P&M Garden Services, Eagle River

All agricultural crops = \$30 million

All horticultural crops = \$21 million

Greenhouse & Nursery = \$ 15 million



Population

Portland, OR = 584,000

Oregon = 3.8 million

Alaska 710,000



Alaska is huge

Bigger than Texas, Montana and California combined

572,000 square miles





Ketchikan, temperate rain forest
154 inches rainfall per year
Average High = 50.8°F
Pop 8000



Fairbanks,
subarctic boreal
forest
10 inches rainfall
per year
Av. high 37°F.
Pop 87,000

Barrow, arctic tundra
4 inches of rainfall per year
Average high 15.7°F
Pop 4500

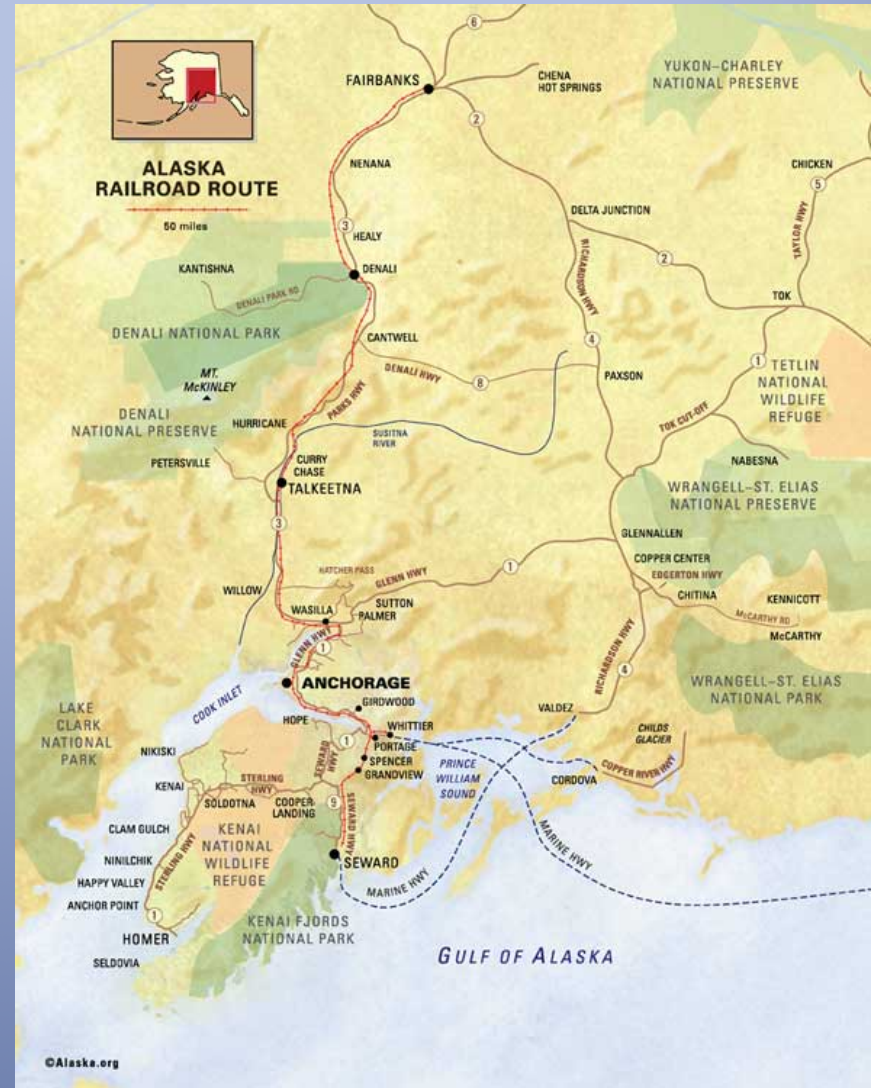
Anchorage, coastal maritime
16 inches rainfall
Average high 60°F
Pop 292,000



Alaska's railbelt area:

Majority of Alaska horticulture businesses:

- Small family greenhouses
- 2 large wholesale greenhouses
- Small family farms
- Community Supported Agriculture
- 4 horticultural researchers (new markets, new crops)
- No horticultural exports until 2007





Sansone Family
Forest Grove, Oregon
Organic cut flower production



Oregon Connections

Annual Dutch Auction Sales of Peonies 2001

| Month | Percent total stem sales |
|----------------|--------------------------|
| January- March | 0 |
| April | 3 |
| May | 52 |
| June | 44 |
| July- December | 0 |

Traditional Favorites



Dr. Alexander
Fleming



Sarah Bernhardt

Duchess de Nemours

Felix Crouse



Mons. Jules Elie



Coral Charm

Market Color Preference- other seasons

1. White



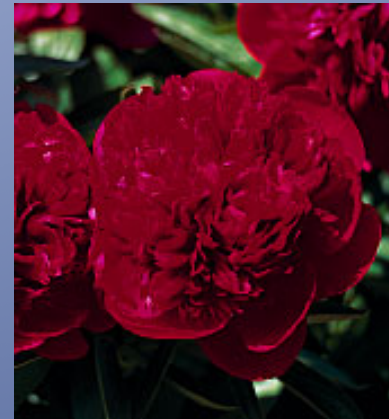
3. Coral



2. Light
Pink, rose



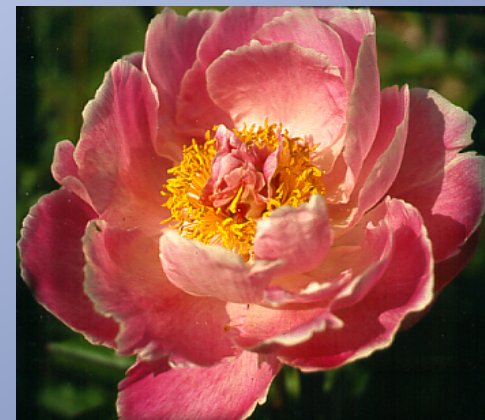
4. Red



Doubles preferred over singles



Grower experimentation with new cultivars



Peony fields- lower 48

- Perennial beds
- 10 to 15 year life
- Year 1-3 = planting, cultivating, weeding, maintenance
- Year 4-5= harvest begins



Peony stems for market

- Marshmallow stage
- U.S. No 1
 - Min 20 inches
 - 1-inch diameter bud
 - Straight stems
 - No damage, disease



Processing

- 1-2 hours in water, 38F
- Bundles of 5 or 10
- Store dry up to 12 weeks, 32-38F
- Fresher is better



Shipping

- Shipped in cardboard floral cartons, 20-40 bunches per box
- 10 - 15 boxes minimum per shipment



Transportation

- Germany, Holland- Lufthansa
 - No certificates required
- L.A., Seattle, Denver wholesale markets- Alaska Airlines, truck via barge or Alaska Highway (3 days)
 - No certificates required
- Tokyo- Lufthansa
 - Phytosanitary certificate required at port of exit

Peony Experiments begun in Fairbanks, 2001

- Cultivar trials (Kansas State)
- Spacing, soil amendments (Sansone)
- Insect pests?
- Diseases?
-



Best cultivars



- Dr. Alexander Fleming
- Sarah Bernhardt
- Felix Crouse
- Duchess de Nemours
- David Harum
- Karl Rosenfield

Flowering Season

| Cultivar | June Week 4 | July Week 1 | Week 2 | Week 3 | Week 4 |
|--------------------|----------------|----------------|--------|--------|--------|
| Sarah Bernhardt | X | X | X | X | X |
| Felix Crouse | | X | X | X | |
| David Harum | X | X | X | X | |
| Karl Rosenfield | | | X | X | X |
| | | | | | |

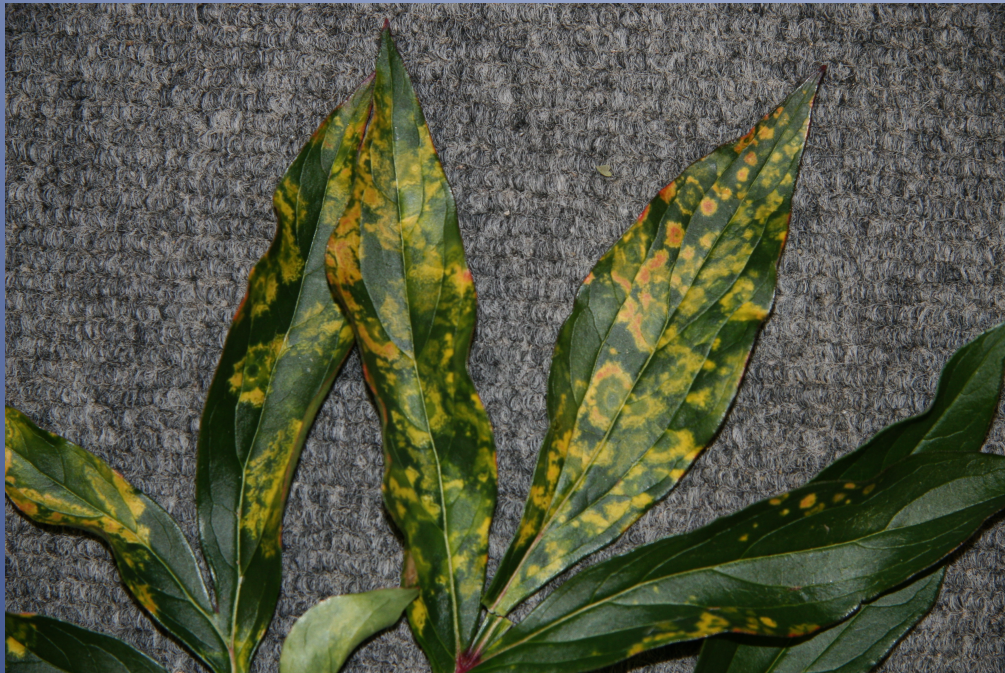
Disorders



Bud blast



Botrytis paeoniae

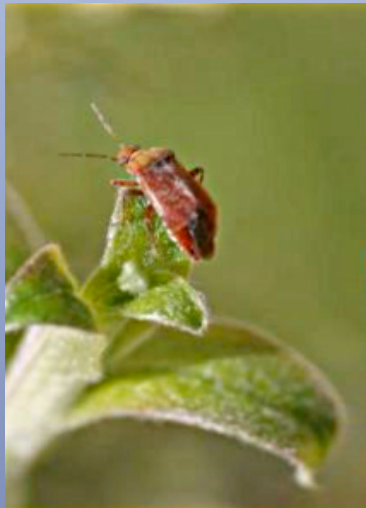


Tobacco rattle virus
Nematode vector

Insect Pests

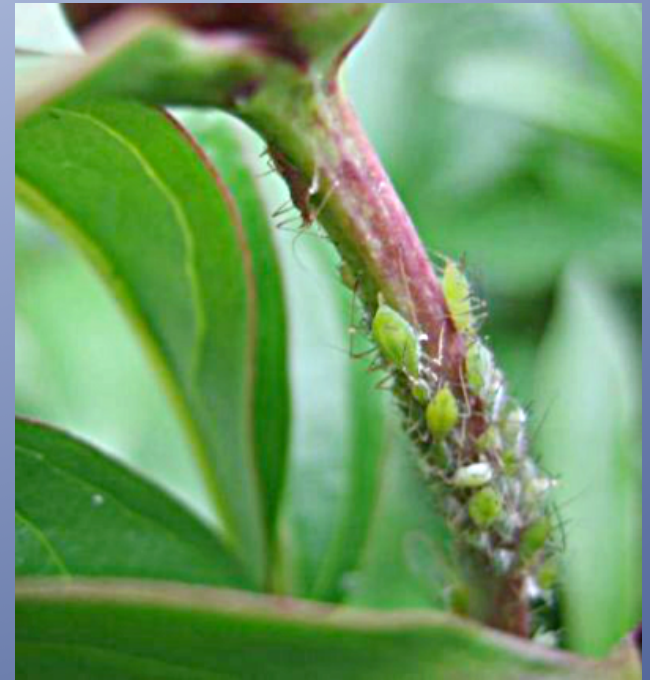


Western flower thrips
Frankliniella occidentalis



Lygus spp.

Aphids
Macrosiphum euphorbiae



No ants!

Peony Post Harvest

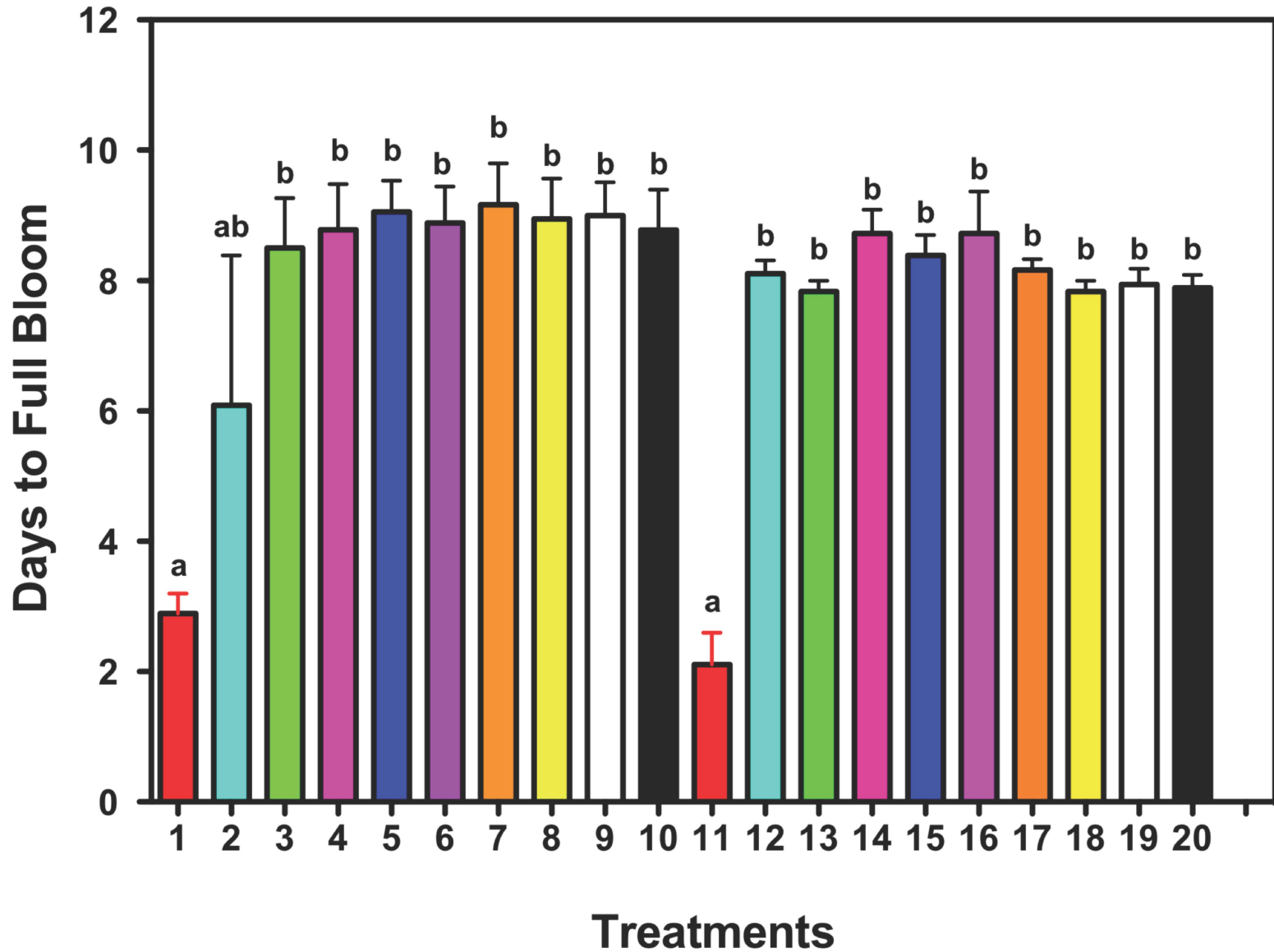
Post harvest handling

- Put in buckets of water right away
- Warm water
- Water not necessary, get into cold within the hour
- Cut the stems
- Chilling 1 hour + dry storage
- No hydration
- Chill then 1 hour hydration before packing

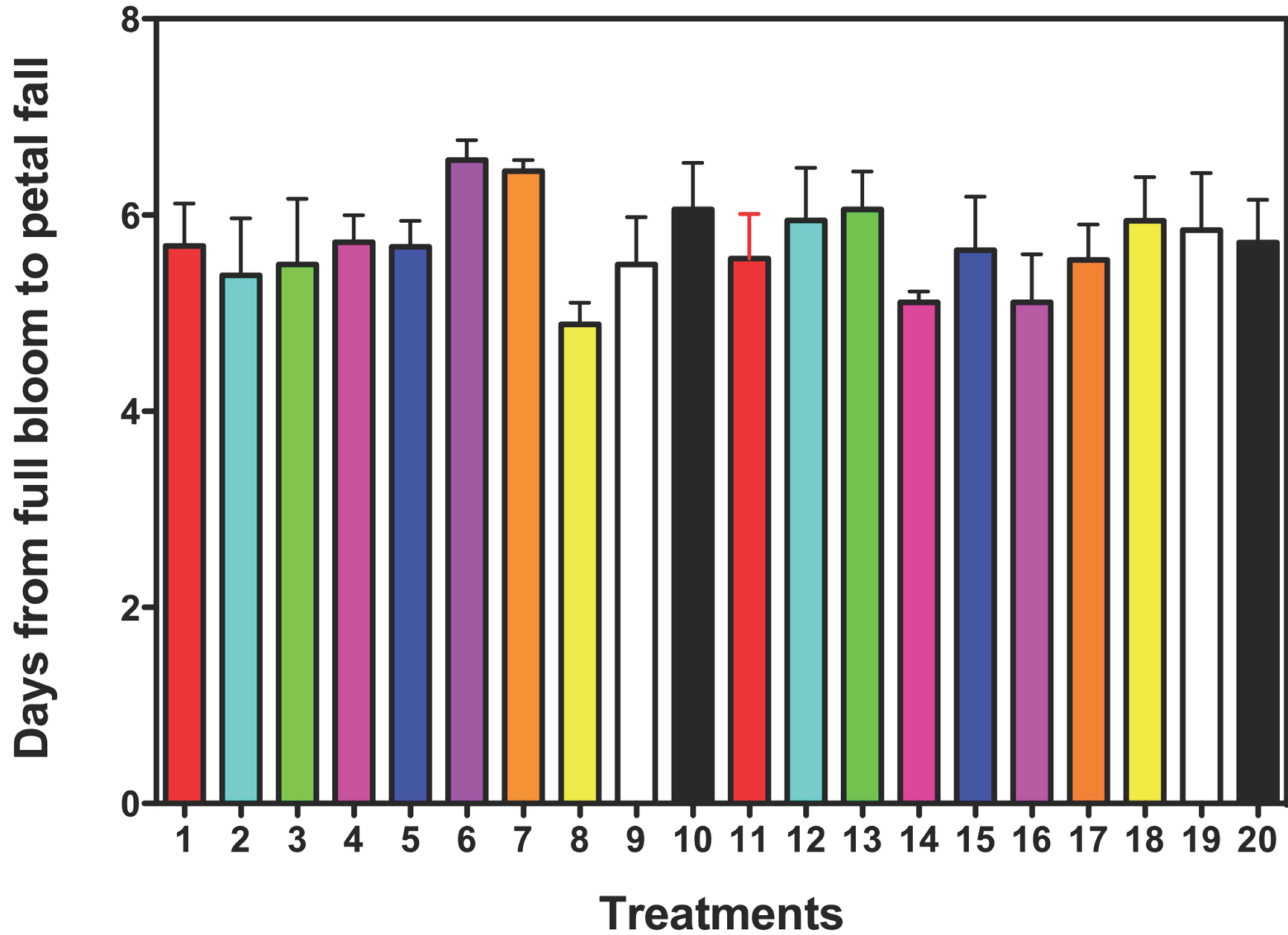


| Treatment | Control directly into vase | Cold water right away | 1 hour dry outdoors | 3 hours dry outdoors |
|---|----------------------------|-----------------------|---------------------|----------------------|
| Control Directly into vase | 1 (11) | | | |
| 1 week hydration cooler (1°C) | | 8(18) | 2(12) | 5(15) |
| 1 hr hydration, 1 wk dry cooler | | 9(19) | 3 (13) | 6(16) |
| 1 hr hydration, 1 wk dry cooler, 1 hr hydration | | 10(20) | 4(14) | 7(17) |

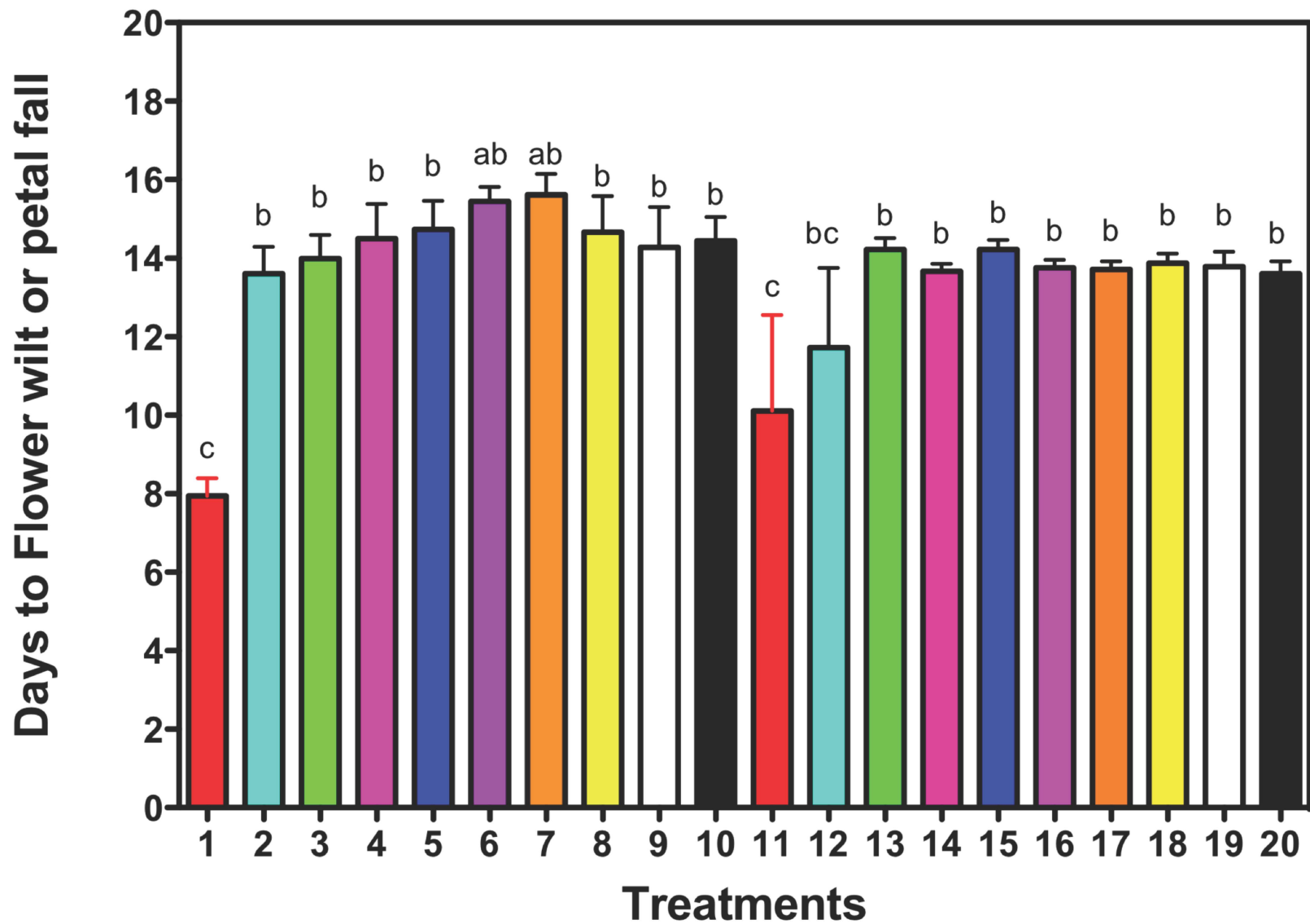
Days to full bloom of peonies following a variety of cutting and storage treatments



Full bloom duration



Vase life of peonies following a variety of cutting and storage treatments



And was about the industry?

- 47 full and part time peony growers
- Homer to Fairbanks
- July through September



Sue Kent, Clay Sullivan, Soldotna. Alaska

And was about the industry?

- 25 to 10,000 roots in the ground
- Alaska Peony Growers Association
- 2007- first commercial exports (2000 stems)



Eaglesong
Lodge, 40 air
miles N of
Anchorage



What's next?

