

## Kentucky Garden Flowers

# Pansy, Viola

Robert Anderson, Extension Floriculture Specialist

### Pansy, Garden Pansy, Ladies Delight – *Viola x wittrockiana*

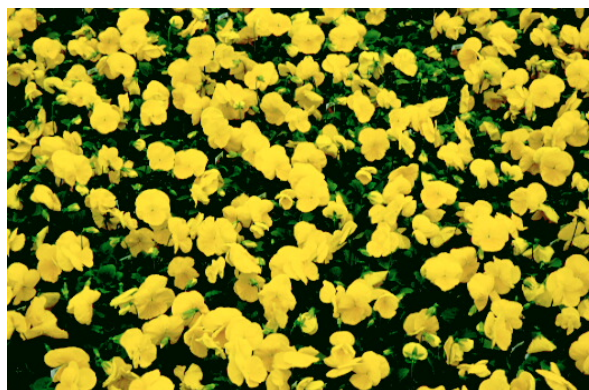
| Flower Color   | Height  | Season       | Pests | Uses            | Propagation |
|--|---------|--------------|-------|-----------------|-------------|
| yellow, blue, orange, purple, cream, bronze-red, white | 8 - 15" | spring, fall | few   | bedding, edging | seeds       |

**Performance** - Pansy is typically grown as an annual in Kentucky gardens. It is probably best to think of these plants as winter annuals, *i.e.*, planted and flower in the fall, over-winter, flower in the spring, and deteriorate in the summer. Pansies are cool season plants; they prefer the cool weather of fall, winter and spring. The plants are very tough. Flowers are usually not damaged until temperatures fall below 15° F and leaves don't freeze until temperatures drop below 10° F. The root system will survive through the winter.

**Comments** - Pansies can be quite fragrant in the garden. Trials at the University of Kentucky have shown that over-wintered pansies will produce 30-50 flowers at the same time in early May, compared to spring planted plants that will only produce 4-6 flowers at the same time. However, pansies can be difficult to over-winter in Kentucky. If we get adequate snow cover, the pansies will be hardy through the winter. But if we have no snow cover and temperatures below 0 F., plants may be lost. Mulch does not seem to help this situation. It seems important, also, to plant pansies by mid October so the extensive root system can get established.

**Varieties** - Many cultivars are available. Each series may have 8 to 20 different colors. In general, the small flower types have small, but many flowers and the most cold tolerance; medium flower types have medium flower size and number; large flower types have large, but fewer flowers.

Small flowers (violas) - 'Penny' series, 'Gemini' series, 'Jewel' series, 'Princess' series, 'Sorbet' series



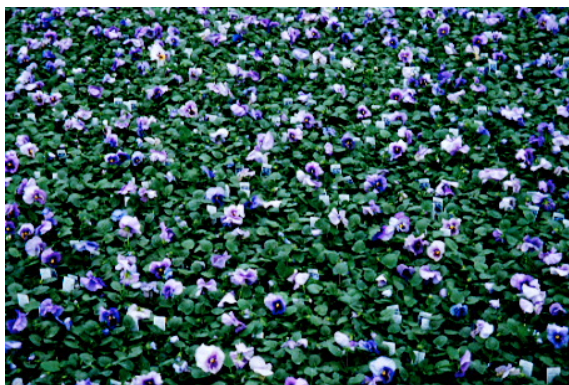
'Crown Golden'



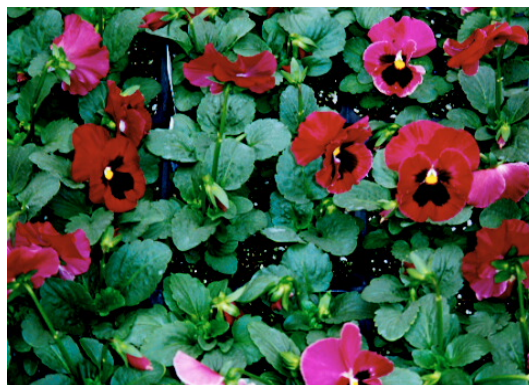
'Delta White'

Medium flowers - 'Accord' series, 'Baby Bingo' series, 'Crystal Bowl' series, 'Maxim' series, 'Panola Panache' series, 'Supreme' series, 'Ultima' series, 'Universal Plus' series.

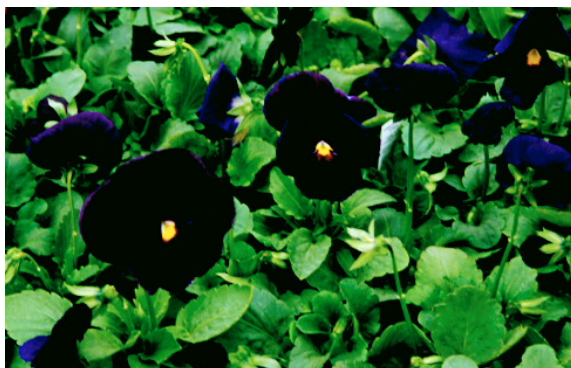
Large flowers - 'Atlas' series, 'Bingo' series, 'Crown' series, 'Dancer' series, 'Delta' series, 'Dynamite' series, 'Fama' series, 'Happy Face' series, 'Imperial' series, 'Majestic Giant' series, 'Super Majestic Giant' series.



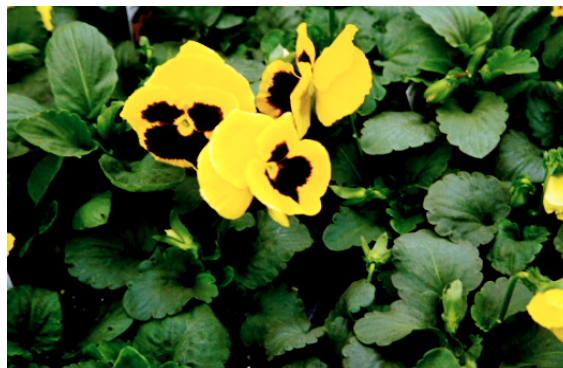
'Delta Light Blue w/blotch'



'Delta Rose w/blotch'



'Majestic Giant Violet'



'Majestic Giant Yellow'



'Frizzle Sizzle'



'Microla' violas from Kieft Seeds

The following article was published in BPI News (Newsletter of Bedding Plants, Inc., a national greenhouse trade organization) in 1982. This article reminded greenhouse and garden center operators that pansies could be sold in the fall and perform superbly through the winter and spring in southern markets. Most pansy cultivars available in 1979-1981 were used in the trials; none of the cultivars in the trials are available today. Over 400 cultivars of pansies are now available to commercial greenhouse operators from breeding companies throughout the world. Pansies are the number one plant sold in the southern and Pacific Coast states today; Kentucky wholesale sales are over \$1.7 million each year and U.S. sales are over \$111 million each year.

# Pansies: Winter Annuals for the Spring Garden

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Pansies have provided a beautiful spring floral display in the University of Kentucky trial gardens for the past three years. The pansies were planted into the garden in early fall. Flowering began in March or early April and the plants produced 35 to 50 flowers at one time throughout May. Pansies planted in the fall and over-wintered were twice as large as pansies planted in the spring.

The garden pansy, *Viola wittrockiana*, is a cool season annual or a short-lived perennial garden flower. Traditional cultural techniques described in publications such as Hortus III or USDA Home and Garden Bulletin G-149, "Growing Pansies" refer to the use of pansies during the cool temperatures in spring and fall. Home gardeners are advised to sow pansy seed outdoors in mid-summer. The plants then grow during the fall, over-winter and flower normally in the spring. Today, however, home gardeners rarely grow pansies from seed. Instead they purchase pansies as spring transplants. Pansies sold as spring transplants are quite successful in gardens in cooler climates around the Great Lakes, the Northeast, coastal California and the Northwest. But summer comes much too early for spring pansy transplants in the mid-South and South. Pansies transplanted as early as possible in late winter or early spring, grow vigorously for only a short period of time. Flower size is reduced and finally the plants die because of the warm June weather.

In an effort to learn how to use pansies wisely in the mid-South, hardiness zones 6, 7, 8, trials were begun at the University of Kentucky, College of Agriculture's Landscape Garden Center in 1979 and continued to June 1981. These trials compared the growth, hardiness, and flowering of over 50 cultivars of pansies when grown as winter annuals.

## Results of the Trials

Pansies are winter hardy in the mid-South. A recent catalogue mentions that pansies are "tough enough to tolerate a little frost". Indeed, pansy flowers are not damaged until temperatures go below 15°F (-10°C). Flowers were observed to close and bend downward at temperatures just above 15°F; these flowers opened normally when temperatures increased. Some foliage is damaged by temperatures less than 10°F and most is killed at 0°F. Terminal portions of the stems were damaged also by 10°F but

basal portions were hardy to temperatures of -15°F (-23°C), the coldest temperatures to occur in Lexington during the three year trials. Hardiness was similar for plants whether they were grown on bare soil, on black plastic mulch or with light straw mulch, regardless of the presence or absence of snow. The earliest growth and flowering occurred on plants grown on black plastic mulch.

Pansies began to flower March 10<sup>th</sup> to April 1<sup>st</sup>, depending on spring weather, and continued to flower through June. Pansies reached their peak when tulips normally open, April 15 to May 10 in Lexington. Individual plants were 10-15 inches across with 30 to 50 flowers at any one time. Flower size started to decrease in early June and plants continued to deteriorate throughout June because of hot weather and less rainfall. Pansies were nearly dead by July 1, even when irrigated. Pansies planted in the spring tolerated summer heat better than pansies planted in the fall, but their floral display was mediocre compared to pansies planted in the fall.

Cultivars of pansies were judged for overall floral display and hardiness (Table 1). Plants were rated visually for plant vigor and flower production in the fall after planting (November 15) and in the spring on April 10, May 1 and May 20. The best cultivars had 80% to 100% survival both winters. In general, the yellow and blue pansy cultivars rated higher than the red, rose, orange and bronze cultivars. Yellow and blue lines in a cultivar series generally performed better, as well, although no specific reasons were evident. Flowering of 'Hiverna' and 'Early Alaska' began earlier than other cultivars.

## Considerations for Pansy Production

Pansies grown as winter annuals in the Lexington area (USDA hardiness zone 6b) should be transplanted to the garden by early October. Therefore, transplant production should begin by sowing seed in early July. The seeds should be germinated at 65-70°F. In 3 to 4 weeks, the seedlings can be transplanted to cell packs. Plants could be grown in the greenhouse, but it may be similar and cheaper to grow the transplants outdoors under light shade during the summer. The plants will be ready to sell in September. Standard watering, fertilization and pest control should be used during production.

**Observations on Pansy Growth and Advice for Home Gardeners**

A colorful floral display in the spring garden generally includes, and is often limited to, spring flowering bulbs, such as tulips, daffodils, crocus, etc. Yet pansies can provide an equally spectacular display. Pansies are well adapted to survive the cool spring weather and are suitable for commercial plantings as well as special spring occasions. Pansies provide color and color combinations not found in other spring flowers and will remain attractive the whole spring season.

Pansies prefer a full sun location in the garden. Plants in the fall until Christmas and begin to flower in early March, if they are planted in a protected southern exposure. Plants in partial or full shade performed poorly in spring but flowered throughout the summer. It seems unnecessary to remove dead pansy blossoms in early spring to stimulate flowering. In these studies, pansies flowered regularly in the fall and spring even though old flowers were not pruned. Evidently, pollinating insects do not cause enough seed set in April and May to reduce flowering.

Table 1. Overall floral display and hardiness rankings of pansy cultivars grown as winter annuals in 1979, 1980 and 1981.

| <b>The best cultivars</b>   |   |   |
|---|---|---|
| Paramount Pure Yellow F <sub>1</sub> '80, '81<br>Hiverna Choice Mix '80, '81<br>Hiverna Yellow with Eye '81<br>Hiverna White with Eye '81<br>Early Alaska Formula Mix '80, '81<br>Early Alaska Golden Yellow '81  | Early Alaska Golden Yellow with Eye '81<br>Sunny Boy F <sub>1</sub> '80, '81<br>Sunny Gold F <sub>1</sub> '80, '81<br>Golden Chief F <sub>1</sub> '80, '81<br>Yellow Chief F <sub>1</sub> '80, '81<br>Universal Mix '81 | Azure Blue '81<br>Butterfly Mix '80, '81<br>Angel Breath F <sub>1</sub> '80<br>Yellow with Blotch F <sub>1</sub> '80<br>Monarch Mix (Viola cornuta) '81<br>Giant Winterblooming Ice Pansy '81 |
| <b>Good Cultivars</b>   |   |   |
| Blue Boy '80, '81<br>Westland Giants Special Florist Strain '80, '81<br>Steele's Jumbo Mix '80, '81<br>Steele's Jumbo Moon Moth '80   | Steele's Jumbo Paydirt '81<br>Moody Blues '81<br>Majestic Giant Mix '81<br>Forerunner Mix, Winter Blooming Giant '81<br>Swiss Giants Lake of Thun '81   | Coronation Gold '81<br>Roggli's Genuine Original Swiss Giant<br>Eiger (Yellow) '81<br>Roggli's Genuine Original Swiss<br>Hohenfeuer (Orange) '81  |
| <b>Other Cultivars</b>  |   |   |
| Orange Prince '80, '81<br>Raspberry Rose F <sub>1</sub> '80<br>Red F <sub>1</sub> '80<br>World's Fair Kingsize Mix '80<br>Swiss Giant Ullswater (Blue) '81<br>Picotee Titania '81<br>Dream Giant Blue Dream '81<br>Swiss Giant Mix '81  | Goldsmith Giant '81<br>Red Chief '81<br>Trimardeau Mix '80<br>Postillon Formula Mix '80<br>Saint Tropez Mix F <sub>2</sub> '80<br>Rose Chief '80, '81<br>Masterpiece Mix '81<br>Jumbo Sunset Mix '81                    | Roggli Elite Mix '81<br>Alpenglow Swiss '81<br>Clear Crystals Mix '81<br>Majestic Giants Scarlet and Bronze<br>Shades '81<br>Mammoth Giant Mix '81<br>Giant Winterblooming Climbing Pansy '81 |
| The following seed companies donated seed for these trials: Ball Seed Company, West Chicago, IL; Burpee Seeds, Philadelphia, PA; H.G. German Seeds, Smethport, PA; Park Seed, Greenwood, SC; Royal Sluis, Enkhuizen, Holland; Sluis & Groot, Enkhuizen, Holland; Vaughn-Jacklin, Downer's Grove, IL |   |   |

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