

Muttart Annual Trial Beds 2010

The Edmonton Horticultural Society (EHS) plants and maintains three annual trial beds at the Muttart Conservatory with the beds located on the west side of the parking lot and by the gazebo area. EHS Signage is displayed at each of the beds.

The Muttart Greenhouses start the annual seeds selected by EHS. Volunteers do the planting in early June and then maintain the beds on a weekly basis until early September, then in October, the beds are cleared and dug, ready for planting the following year. The selected plants will be trialed for up to a period of five years, to evaluate how they respond to local growing conditions (wet or dry weather, sunny or shady location, high or low temperature). The plants are observed for height, width, blooming aspect, etc.

This year, 2010, the plants selected were from 'All American Selections (AAS) and Ball Horticultural Company. Many new plants were trialed this year, and some from previous years were trialed again.

One bed was chosen to include edible plants, herbs and flowers as a demonstration garden, to show that it is possible to grow many plants in one area which can be useful and beautiful at the same time. As these beds are not formal trial sites but public display sites, some non-trial plants were included this year to add design interests. They will not be included in this trial report.

The plants were evaluated on a semi-weekly basis from June to September by two dedicated volunteers. The information gathered is on file at the EHS office, and made available on the EHS website at

<www.edmontonhort.com>

The beds were maintained (weekly spot watering, weeding, deadheading, staking) from June to October by EHS City Gardeners, a volunteer team that maintains not only the annual trial beds, but also the two rose beds, a perennial bed and the EHS Centennial Garden.

EHS City Gardeners:

Lucy Chang

Maggie Easton

Marie Beddis

Marilyn Short

Acting Chair

Co-Chair

Trial Beds Monitor

Trial Beds Monitor Assistant

Ann Bate
Arthur Bauman
Bona-Mae Aitken
Deb Anders
Jane Starr
Judy Rybaczok
Linda Frigon
Loretta Russell

Core maintenance Team
Core maintenance Team
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Core maintenance Team
Core maintenance Team
Core Maintenance Team
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Plants Trialed in 2010

<i>Angelonia angustifolia</i> ‘Serena Purple’	Summer snapdragon
<i>Antirrhinum majus</i> ‘Aromas Peach Breeze’	Snapdragon
<i>Begonia x hybrida</i> ‘Dragon Wing Red’	Begonia
<i>Begonia x hybrida</i> ‘Gryphon’	Begonia
<i>Capsicum annuum</i> ‘Black Pearl’	Ornamental pepper
<i>Catharanthus roseus</i> ‘Mediterranean Dark Red Vinca’	Vinca
<i>Catharanthus roseus</i> ‘Mediterranean Hot Rose Vinca’	Vinca
<i>Echinacea purpurea</i> ‘PowWow White’	Coneflower
<i>Echinacea purpurea</i> ‘PowWow Wild Berry’	Coneflower
<i>Gaillardia x grandiflora</i> ‘Mesa Yellow’	Blanketflower
<i>Impatiens walleriana</i> ‘Super Elfin XP Red Starburst’	Busy Lizzies
<i>Lavandula angustifolia</i> ‘Ellagance Snow’	Lavender
<i>Osteospermum ecklonis</i> ‘Asti White’	Blue Eyed Daisy
<i>Petunia x hybrida</i> ‘Shock Wave Coconut’	Petunia
<i>Solenostemon scutellarioides</i> ‘Versa Kong Scarlet’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Burgundy to Green’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Crimson Gold’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Green Halo’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Lime’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Rose to Lime’	Coleus
<i>Solenostemon scutellarioides</i> ‘Versa Watermelon’	Coleus
<i>Viola cornuta</i> ‘Endurio Sky Blue Martien’	Viola
<i>Viola cornuta</i> ‘Skippy XL Plum-Gold’	Viola
<i>Viola cornuta</i> ‘Skippy XL Red-Gold’	Viola
<i>Zinnia marylandica</i> ‘Zahara Fire’	Zinnia
<i>Zinnia marylandica</i> ‘Zahara Double Fire’	Zinnia

Some Diseases We Noticed



Coleus plants showing effects of downy mildew - blighted appearance and stem rot.

Growing Season Synopsis for 2010

June: Cool and rainy
Not very many warm days

July: One or two fairly warm days with normal summer temperatures of 25 to 30 degrees C.
Many cool, cloudy rainy days during this month
Windy one or two days

August: Cool and rainy most of the month
Average temperatures around 20 degrees C, or cooler
Some sunny days

September: First two weeks of the month the same as August
Killing frost mid month

The cool, damp weather and lower than normal sunshine and heat encouraged fungal diseases on several plants this year. The plants that were hit the hardest by this weather were: coleus, zinnias, Osteospermums, and other plants that prefer higher temperatures and dryer growing conditions. We also observed green moss growing on the soil between the plants.

Angelonia angustifolia ‘Serena Purple’



- Botanical Name: *Angelonia angustifolia* ‘Serena Purple’
- Common Name: Summer snapdragon
- Height: 11 to 12 inches
- Spread: 11 to 12 inches
- Description: Compact sub-shrub with upright stems.
Leaves are bright green, lanceolate.
Small lilac-purple flowers in terminal racemes.
- Performance: Plants in full sun were more robust.
Bloomed from mid-July to frost.
Did well in spite of cool, rainy weather.
Started to go to seed by mid-September.
Recommended!

***Antirrhinum majus* ‘Aromas Peach Breeze’**



- Botanical Name: *Antirrhinum majus* ‘Aromas Peach Breeze’
(Registered under *A. majus* hybrids)
- Common Name: Snapdragon
- Height: 22 to 26 inches
- Spread: 8 to 10 inches
- Performance: Plants very uniform in growth habit.
Plants were well branched.
Early flowering; carried a lovely scent.
Bloomed from mid-July until frost.
Many stems had gone to seed at end of August.
Highly recommended!

Begonia x hybrida 'Dragon Wing Red'



Botanical Name: *Begonia x hybrida* 'Dragon Wing Red'

Common Name: Dragon wing red begonia

Height: 12 to 17 inches tall

Spread: 10 to 14 inches across

Performance: These plants prefer shade. We noticed that the ones planted in full sun were smaller and not as bright and showy as the ones planted in deeper shade. Plants were slow to start growing in the spring. By mid-August they were doing well, nice and showy, with plenty of red flowers. At the end of August, the plants were getting a bit top-heavy and were bending over. Overall, these adapted well to outdoor conditions, became nice plants and were quite showy.

Begonia x hybrida ‘Gryphon’



- Botanical Name: *Begonia x hybrida* ‘Gryphon’
- Common Name: Snapdragon
- Height: 7 to 11 inches tall
- Spread: 5.5 to 10 inches
- Performance: The plants on the shady side of the bed (north end) were healthier and flowered better than on the sunny side. They were very slow to start and not much change was apparent until mid-July. Not many flowers produced though foliage was very attractive. Leaves were mottled silver on top and dark burgundy on undersides. Plants had bushed out only a bit by mid-September. Bushiness may be encouraged by pinching the tips.

***Capsicum annuum* 'Black Pearl'**

AAS Award Winner 2006

(Trialed in 2009)



Botanical Name: *Capsicum annuum* 'Black Pearl'

Common Name: Ornamental pepper

Height: 20 to 21 inches

Spread: 10 to 11 inches

Performance: The plants were really branching out well and blooming by the end of July.
By mid-August, all the plants were well branched with blooms and peppers developing.
On my last visit on September 11, 2010, there were many peppers showing.
The cool, damp summer did not seem to affect the plants, and all grew very well.
Note: there was a difference in growth between those on north and south sides of the bed.
This can be a very attractive accent plant with dark, almost black foliage. Recommended!

Catharanthus roseus 'Dark Red Vinca'



- Botanical Name: *Catharanthus roseus* 'Dark Red Vinca'
(Mediterranean XP series).
- Common Name: Madagascar periwinkle (commercially labeled
under trade name Mediterranean XP Vinca)
- Height: 5 to 7 inches
- Spread: 5 to 8 inches
- Performance: Plants started blooming while still small.
By mid-July, nearly all the plants were flowering.
By mid-August, some of the plants were getting
crowded out by tall dill plants in the center of the
gazebo bed.
There was a lot of die off by the end of August.
The plants seemed to be attacked by a similar
fungus that attacked a lot of other plants this year.

Catharanthus roseus 'Hot Rose Vinca'



- Botanical Name: *Catharanthus roseus* 'Hot Rose Vinca'
(Mediterranean XP series)
- Common Name: Madagascar periwinkle (commercially labeled
under trade name Mediterranean XP Vinca)
- Height: 5 to 7 inches
- Spread: 5 to 8 inches
- Performance: Plants started blooming while still small.
By mid-July, plants were flowering well.
By mid-August, some of the plants were swamped
by taller plants in the center of the gazebo bed.
There was a lot of die off by the end of August;
plants showed symptoms of fungal diseases similar
to that of other plants this year.

Echinacea purpurea 'PowWow White'



- Botanical Name: *Echinacea purpurea* 'PowWow White'
- Common Name: Coneflower
(Commercially labeled under trade name Echinacea PowWow)
- Height: 18 to 24 inches
- Spread: 7 to 8 inches
- Flowers: 3 inches across with pure white petals and dark golden centers.
- Performance: First year flowering perennial.
Plants were very slow to start; swamped and shaded by other faster growing plants.
Started blooming late, but bloomed freely toward the end of the growing season.
Needed longer growing season, more heat and sun exposure to reach peak performance.

Echinacea purpurea 'PowWow Wild Berry'



- Botanical Name: *Echinacea purpurea* 'PowWow Wild Berry'
- Common Name: Coneflower (Commercially labeled under trade name Echinacea PowWow).
- Height: 9 to 12 inches
- Spread: 6 to 8 inches
- Flowers: 3 inches across, with intense rose petals and dark rose centers
- Performance: First year flowering perennial.
Plants had a slow start; very late to bloom.
They only really started to bloom freely toward the end of the growing season.
Probably needed longer growing season and more sun exposure to reach full potential.

Gaillardia x grandiflora 'Mesa Yellow'



- Botanical Name: *Gaillardia x grandiflora* 'Mesa Yellow'
(Registered under *Gaillardia* F1 hybrid)
- Common Name: Blanket flower
- Height: 20 to 26 inches
- Spread: 14 to 20 inches
- Performance: Plants were healthy in spite of cool, damp summer. Fairly slow to start. First flowers appeared in mid-July. Many buds were apparent at that time also. Plants were branching out well. By the end of August, all the plants displayed many flowers, and the first blossoms were forming into seed heads. At the last visit in September, there were still many flowers, and more seed heads. Overall, these plants performed very well. Highly recommended!

Impatiens walleriana ‘Super Elfin XP Red Starburst’



- Botanical Name: *Impatiens walleriana* ‘Super Elfin XP Red Starburst’
- Common Name: Busy Lizzie, Patience plant (Commercially labeled under trade name Super Elfin XP Impatiens)
- Height: 7 to 10 inches
- Spread: 7 to 10 inches
- Performance: Plants were very slow to show any growth. On our visit in early July, some of the plants were almost dead due to lack of moisture. Once watering resumed, they recovered and were starting to branch out by the middle of July. The flowers at first appeared washed out and pale. At the end of July, the plants were becoming rounded clumps, with all of the flowers above the foliage. By mid-August, all the plants were in full bloom and had improved greatly in appearance from just two weeks before. They bloomed well, right to frost in September. Overall, this Impatiens performed well, displaying neat rounded plants with flowers held above glossy bright green foliage. Liked the semi-shaded location and the cool, rainy summer!

Lavandula angustifolia 'Ellagance Snow'



- Botanical Name: *Lavandula angustifolia* 'Ellagance Snow'
- Common Name: Lavender (Commercially labeled as Lavandula Ellagance)
- Height: 20 to 23 inches
- Spread: 6 to 9 inches
- Appearance: Plants have silvery foliage, and lilac hued flowers in short spikes above foliage.
- Performance: First year flowering.
Overall growth quite uneven.
Two plants were beginning to flower by mid-July, while some did not bloom until the end of August.
By the end of July, the plants were starting to branch out quite well and most of the plants were flowering.
Plants give off pleasing aroma in all stages of growth.
A nice plant!

***Osteospermum ecklonis* ‘Asti White’**

AAS Bedding Plant Award Winner 2008

Trialed in 2009



- Botanical Name: *Osteospermum ecklonis* ‘Asti White’ (Registered under *Osteospermum* F1 hybrid)
- Common Name: Blue eyed daisy, African daisy
- Height: 14 to 17 inches
- Spread: 12 to 14 inches
- Flowers: To 2 inches in diameter, blue centers, petals bluish on undersides.
- Performance: The plants were very slow growing the first month after planting out. By the end of July most of the plants were blooming; however, some of the flowers formed unevenly and some petals were distorted. By the end of August, the plants at the southern end of the bed were very stressed and some were dying. By mid September, at our last visit, many of the plants were displaying the ravages of some type of fungal blight, and many had died.

Usually this daisy does very well, but it could have been the cool, rainy summer that affected them this year.

(Addendum: At transplanting time, the seedlings were small compared to their companion plants – snapdragons and petunias – they did not compete well and were shaded by the taller, faster growing snapdragons).

***Petunia x hybrida* ‘Shock Wave Coconut’**



- Botanical Name: *Petunia x hybrida* ‘Shock Wave Coconut’
- Common Name: Spreading petunia
- Height: 11 to 15 inches
- Spread: 10 to 14 inches or more
- Performance: All the petunia plants were in bloom by mid-July and were spreading out well. By the end of July, all the plants were in full bloom and the plants had filled the space allotted to them. When we checked the plants in the middle of August, many stems had been broken off and some of the plants appeared distressed. By September, quite a few of the plants were dying off. There were still many flowers overall, but the total appearance was scruffy and ragged. Pinching required to maintain tidy shape. They also hid many weeds very well!

Solenostemon scutellarioides ‘Versa Kong Scarlet’



Botanical Name: *Solenostemon scutellarioides* ‘Versa Kong Scarlet’

Common Name: Coleus

Height: 13 to 17 inches

Spread: 9 to 14 inches

Appearance: Leaves very large and colorful, 5 inches across and elongated. Flowers insignificant; blue.

Performance: Plants started growing very slowly. Plants grew significantly by July 1st. Some of the plants did not look as if they would survive on July 1st visit. Later in the season, many of the leaves were ragged and full of holes. At the end of July, plants had blooms that were pinched out. The plants branched out well by mid-August. Insects flew up when plants disturbed. The stems of these plants were very brittle and broke easily. We did not notice the mildew problems that were affecting the other coleus plants in the parking lot bed.

Solenostemon scutellarioides ‘Versa Burgundy to Green’



- Botanical Name: *Solenostemon scutellarioides* ‘Versa Burgundy to Green’ (sometimes listed as *Solenostemon solenostemon* ‘Versa Burgundy to Green’)
- Common Name: Coleus
- Height: 5 to 12 inches
- Spread: 7 to 10 inches
- Performance: The plants provided a colorful, non-fading display, but presented several problems. The insignificant blue flower stems were removed as they appeared. The plants had brittle stems that were snapped off easily by the wind or by sudden hand contact. Thin leaves were damaged by strong wind. By summer’s end about half the plants were affected by downy mildew and stem rot, perhaps due to the cool, wet summer. Some of the plants were still the same size as at planting time.

Solenostemon scutellarioides ‘Versa Crimson Gold’



- Botanical Name: *Solenostemon scutellarioides* ‘Versa Crimson Gold’
- Common Name: Coleus
- Height: 10 to 11 inches
- Spread: 10 to 11 inches
- Performance: The plants provided a colorful, non-fading display, but exhibited several problems. The insignificant blue flowering terminal stems were pinched off to encourage branching. The plant stems were very brittle and snapped off easily by the wind or by sudden contact. By the end of the growing season, about half the plants were affected by downy mildew, due perhaps to the cool, wet summer. Some of the plants had not developed much from the initial planting.

Solenostemon scutellarioides ‘Versa Green Halo’



- Botanical Name: *Solenostemon scutellarioides* ‘Versa Green Halo’
- Common Name: Coleus
- Height: 4 to 12 inches
- Spread: 5 to 12 inches
- Performance: The plants provided a bright creamy to green leafy display, but developed problems. The insignificant blue flowering terminal stems were removed to develop bushiness. The plants had very brittle stems that were snapped off easily by the wind or by sudden contact. The thin leaves were susceptible to wind damage. By summer’s end about half the plants had stem rot brought on by downy mildew, perhaps due to the cool, wet summer. Some of the plants were still the same size as at planting time.

Solenostemon scutellarioides ‘Versa Lime’



- Botanical Name: *Solenostemon scutellarioides* ‘Versa Lime’ (also listed as *Solenostemon solenostemon* ‘Versa Lime’)
- Common Name: Coleus
- Height: 12 to 13 inches
- Spread: up to 12 inches
- Performance: The plants provided a bright green display, but exhibited several problems. The terminal blue flowering stems were pinched to increase bushiness. The stiff plant stems were snapped off easily by strong wind or by sudden contact. The thin leaves were susceptible to strong wind. By summer’s end, about half the plants were affected by downy mildew and stem rot, due perhaps to the cool, wet summer. They did not appear to have developed much between May and September.

Solenostemon scutellarioides ‘Versa Rose to Lime’



- Botanical Name: *Solenostemon scutellarioides* ‘Versa Rose to Lime’
- Common Name: Coleus
- Height: 5 to 11 inches
- Spread: 6 to 12 inches
- Performance: The plants provided a colorful, non-fading display, but developed mildew problems. The insignificant blue flower stems were removed to encourage branching. The brittle stem snapped off easily in the wind or by sudden contact. By summer’s end about half the plants were blighted by mildew, perhaps due to the cool, wet summer. Some of the plants remained the same size as at planting time.

Solenostemon scutellarioides ‘Versa Watermelon’



Botanical Name: *Solenostemon scutellarioides* ‘Versa Watermelon’

Common Name: Coleus

Height: 8 to 12 inches

Spread: 8.5 to 12 inches

Performance: The plants provided colorful staying power, but developed mildew problems. The terminal blue flowering stems were removed to stimulate bushiness. By the end of the growing season, about half the plants were affected by stem rot and fungal diseases, perhaps due to the cool, wet summer. The plants were very brittle and the stems and fragile leaves were snapped off easily by the wind or by sudden contact. Some of the plants remained the same size as at planting time.

***Viola cornuta* ‘Endurio Sky Blue Martien’**
2010 AAS Cool Season Award Winner’



- Botanical Name: *Viola cornuta* ‘Endurio Sky Blue Martien’
(Registered under *Viola* F1 hybrid)
- Common Name: Viola
- Height: 7 to 10 inches
- Spread: 7 to 9 inches
- Performance: All the plants were in full bloom by mid-July. By mid-August a lot of the plants had flopped over, but still kept blooming fully. Deadheading required to maintain round upright form. Overall, these violas formed nice, compact plants showing a pleasing variation in blossom color from pale yellow to violet. Where there was deeper shade, the flower color was more intense. Plants bloomed right up to cleanup time in September. Recommended! Very attractive! It likes to grow where it is shady and cool.

Viola cornuta ‘Skippy XL Plum-Gold’



- Botanical Name: *Viola cornuta* ‘Skippy XL Plum-Gold’ (Registered under *Viola* F1 hybrid)
- Common Name: Viola
- Height: 7 to 9 inches
- Spread: 7 to 12 inches
- Performance: Plants started blooming in June while still small. All the plants in the parking lot bed were in bloom by the end of July, but those planted by the east facing lilac bed were slower to flower. Flowered all summer, forming attractive, rounded plants covered with blooms. Likes cool, damp weather. Highly recommended!

***Viola cornuta* ‘Skippy XL Red-Gold’**
AAS Award Winner 2006
Trialed in 2009



- Biological Name: *Viola cornuta* ‘Skippy XL Red-Gold’
(Registered under Viola F1 hybrid)
- Common Name: Viola
- Height: 8 to 10 inches
- Spread: 8.5 to 12 inches
- Performance: Plants began to bloom while still very small. Those in full sun grew taller and broader than those in full shade. All the plants were in full bloom by the end of July, and continued all summer forming attractive mounds of flowers. Overall, an attractive plant that loved the coolness and dampness of the past summer. Highly recommended!

Zinnia marylandica 'Double Zahara Fire'



- Botanical Name: *Zinnia marylandica* 'Double Zahara Fire'
(Double Zahara series)
- Common Name: Zinnia
- Height: 14 to 19 inches
- Spread: 10 to 12 inches
- Blossoms: 1.5 to 3 inches diameter, colors varied from orange to red and single blooms to double.
- Performance: Plants were a little slow to start. A few plants were beginning to show first blossoms at the beginning of July, while still small. By the end of July, most of the plants were in bloom, showing a wide variation in color and form. Plants slowly grew taller and spread further as summer progressed. At the last visit in September, some of the plants were dying from fungal spot, powdery mildew and stem rot - probably precipitated by the cold, rainy summer. Moss was also visible on any open ground and the soil looked compacted. Attractive plant, but it loves heat and sun!

Zinnia marylandica ‘Zahara Fire’



- Botanical Name: *Zinnia marylandica* ‘Zahara Fire’
(Zahara series)
- Common Name: Zinnia
- Height: 13 to 16 inches
- Spread: 10 to 12 inches
- Blossom: Fiery orange to red color 3 inches in diameter
- Performance: Only four plants were starting to bloom by the middle of July, and the color variations were already noticeable. By the end of July, most of the plants were blooming, or developing buds. In August, we noticed moss growing on the ground between the plants and the zinnias were starting to show signs of disease. At the end of August, many plants were already dead – likely due to the wet, cool nights and early frost. At our last visit on September 11th, most of the zinnias had succumbed. These plants prefer heat and sun, and this past summer was just the opposite of the preferred conditions for any zinnia!