





# FAKUS WORLD NES



NORTH AMERICA UNITED STATES OF AMERICA





SOUTH **AMERICA** 

> BRAZIL Sao Paulo I

Takii do Brasil Ltda.

TAKII SEED



The high quality of Takii's seed products, developed over a long history and experience of over 180 years, are widely recognized not only in Japan but also in many countries around the world. We continue to make every endeavor to improve seed quality in order to meet the highest level of demand.



Qingdao Huang Long

Seeds Co., Ltd

### All-America Selections and Fleuroselect Gold Medal Winners

Takii is a member of both All-America Selections (AAS) and Fleuroselect organizations. It is our great pleasure to present a number of prestigious varieties awarded by AAS and Fleuroselect in this catalogue. Varieties with logos of AAS and/or Fleuroselect are indicators for our recommendation of items for your variety selection.

T.W.Company Ltd



### **All-America Selections National Winner**

Awarded only to new varieties that perform best in garden performance trials over all of North America



### All-America Selections Regional Winner

Awarded only to new varieties that performed particularly well in certain regions in North America



### Fleuroselect Gold Medal

Rewards true breeding innovations evaluated through trials of new ornamental varieties at 18 private trial grounds across Europe



Only granted to new varieties showing clear improvements from existing varieties



Fleuroselect Approved Novelty
New varieties that have been recognized to be sufficiently new and different versus existing cultivars and have passed the rigorous requirement for uniformity

M Dianthus, F1 Carpet Snow Fire

**AUSTRALIA** 



All Zinnia, F1 Sun Red

### 1979

Zinnia, F1 Sun Gold

### 1982

Dianthus, F1 Telstar Mix

### 1989

Dianthus, F1 Telstar Crimson

Ab Dianthus, F1 Telstar Picotee

### 1990

Achillea, F2 Summer Pastels



### 1992

As Canna, Tropical Rose

### AB Selvia, Hummingbird Lady in Red

### 1997

Zinnia, Crystal White

Delphinium, F1 Centurion Sky Blue

### 1999

MS Osteospermum, Passion Mix

### 2007

Petunia, F1 Opera Supreme

Viola, F1 Floral Power Orange Red Wing

### 2011

Brassica, F1 Glamour Red

### 2011-2012

M See Salvia, Summer Jewel Red 2011 2012

### 2012

As Salvia, Summer Jewel Pink

Alcea, Spring Celebrities Crimson

### 2013

AB Canna, F1 South Pacific Scarlet

### 2015

As Salvia, Summer Jewel White

Salvia, Summer Jewel Lavender

MAPPROVED OF Verbena, Serenity Pink

AS Petunia, F1 Evening Scentsation

### 2018

Ab Capsicum, Onyx Red

Begonia, F1 Fiona Red

### Canna, F1 South Pacific Orange

APPROVED GO Zinnia, F1 Preciosa Orange

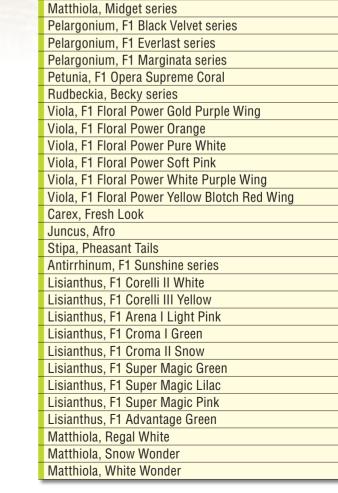


### Pot and Bedding

A	Achillea millefolium	Ø		<i></i> \$€	11
	Agastache aurantiaca	Ø	0		12
	Alcea rosea	Ø		<b>%</b>	13
	Antirrhinum majus (Snapdragon)	Ø		<b>%</b> €	14
В	Begonia semperflorens	Ø			15
	Brassica oleracea (Flowering Kale)	0		<b>%</b> €	16-18
C	Calendula officinalis	O		\$€	19
	Campanula persicifolia	Ø	0	<i></i> %€	19
	Canna generalis	Ø	0		20-22
	Capsicum annuum (Ornamental Pepper)	Ø	0		23-25
	Carex	O		\$€	56-57
	Celosia cristata	Ø			26
	Celosia plumosa	Ø	0		26
	Coleus blumei	0			27
	Chrysanthemum paludosum	0			27
D	Dianthus chinensis x barbatus	O			28-29
	Dianthus chinensis	0			29
	Dimorphotheca sinuata	Ø			30
E	Erysimum sp. (Cheiranthus / Wallflower)	0		\$€	30
F	Festuca	0		\$€	56-57
G	Gerbera iamesonii	0	0		31-33

H	Helianthus annuus (Sunflower)	00	34
Ι	Isolepis	0	<b>56-57</b>
J	Juncus	0	<b>₹</b> 56-57
L	Lavandula angustifolia	0	31
	Linaria maroccana	0	<b>34-35</b>
	Lisianthus (Eustoma grandiflorum)	0	36
M	Matthiola incana (Stock)	0	<b>37-38</b>
	Melampodium paludosum	0	39
0	Osteospermum ecklonis	Ø	<b>€</b> 40
P	Pansy (Viola wittrockiana)	Ø	<b>30-41</b>
	Petunia hybrida	0	42-44
	Pharbitis purpurea (Ipomoea)	Ø	45
S	Salvia coccinea	<b>Ø</b> 🕠	45-46
	Salvia splendens	00	46-47
	Senecio cruentus (Cineraria)	00	<b>%€</b> 47
	Stipa tenuissima	Ø	<b>€</b> 56-57
T	Tanacetum parthenium	Ø	47
$\mathbf{V}$	Verbena x hybrida	0	53
	Viola cornuta	Ø	<b>36</b> 48-52
Z	Zinnia angustifolia	Ø	52
	Zinnia elegans	Ø	54-55

(	Cut Flowers			
A	Antirrhinum majus (Snapdragon)	0	<b>₽</b> €	59-60
В	, , , , , , , , , , , , , , , , , , , ,	Ø	<i></i> \$€	61-64
C	Calendula officinalis	Ø	<i></i> \$€	64
	Callistephus chinensis (Aster)		8	65-67
	Carthamus tinctorius		8	67
	Celosia cristata		8	67
	Consolida spp. (Larkspur)		8	70
D	Delphinium elatum	Ø	8	68-69
	Dianthus barbatus	Ø	<b>%</b> \$€	70
	Dianthus hybrida	Ø	<b>₽</b> €	71
E	Echinacea purpurea	Ø	<b>₽</b> €	71
	Eryngium leavenworthii	Ø	\$ \$€	71
G	Gomphrena globosa		8	72
	Gomphocarpus physocarpus (Balloon Cottonbush)		8	72
Н	Helianthus annuus (Sunflower)		8	73-76
L	Limonium sinuatum (Statice)	Ø	8	76
	Lisianthus (Eustoma grandiflorum)		8	77-83
M	Matthiola incana (Stock)		<b>% €</b> €	84-86
T	Tanacetum parthenium		8	86
Z	Zinnia elegans		8	86











# NEW FLOWERS LINE UP



Petunia Page 43-44>>>



F1 Opera Supreme Purple Vein



F1 Trilogy Lime



F1 Trilogy Purple Vein

## Begonia







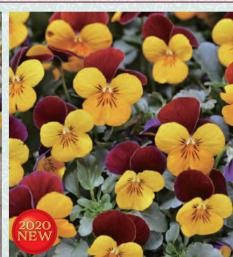
Viola



F1 Floral Power White



F1 Floral Power Indian Sunset



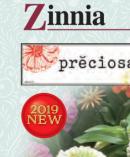
F1 Floral Power Yellow Red Wing

Helianthus





F1 Smiley





Page 55>>>





F1 Arena I Light Pink Imp.

F1 Arena I Purple



F1 Arena I Pure White



F1 Arena I White



F1 Corelli II Lavender



F1 Corelli II Light Lavender



F1 Croma II Champagne



F1 Arena III Clear Pink



F1 Croma III Pink Picotee Imp.



F1 Croma III Blue Picotee Imp.



F1 Jolly III Pink







F1 Sunrich Orange Summer DMR



F1 Ziggy



# **F2** Flowerburst™ Red Shades

**Achillea millefolium**◆ 17-20°C/ 63-68°F ◆ 3-4 days ◆ 4,500-5,000 sd/g









- •An energizing blend of mainly red, rose and violet shades
- •An attractive garden plant. Since it is a hardy perennial, it survives a cold winter and blooms every year unless exposed to extreme hot and humid conditions in summer



# F2 Summer<sup>TM</sup> series

Achillea millefolium

● 17-20°C/ 63-68°F ● 3-4 days ● 4,200-5,300 sd/g



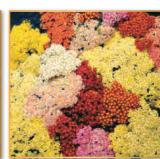






- Very hardy perennial for the garden, mass plantings in landscapes, pot use and as a cut
- The Summer series loves sunny conditions and will bloom in Summer - Autumn in the first year, earlier in the second year
- Remove old flowers to encourage new blooms











Pot and Bedding

A gastache

# Arizona<sup>TM</sup> series

Agastache aurantiaca ● 20-22°C/ 68-72°F ● 5-7 days ● 1,800-3,000 sd/g







- ●Very compact and floriferous, and performs well in containers and landscape
- Foliage has pleasant lemon / mint scent
- Fast crop from spring sowing. Easy maintenance
- •Will bloom continuously throughout the season without deadheading
- ●Maintain pH level at 6.4-7.5 and EC at 1.5-2.0. Agastache will exhibit chlorosis if media pH is below 6.2
- Suitable for dry and sunny location. Agastache will not tolerate wet conditions











Mint scent attracts butterflies.



# Spring Celebrities<sup>™</sup> series

● 15-20°C/ 59-68°F ● 8-10 days ● 210-300 sd/g







- Double- to semi-double dwarf Hollyhock which has excellent basal branching
- It flowers in the first year and keeps flowering for three months if conditions are favorable
- Carmine Rose and White may have around 15% single flowers. Other varieties may have a small percentage of single flowers





Antirrhinum (Snapdragon)









•Vigorous and uniform, Palette blooms early and continues to bloom throughout the season on well-branched plants

Dwarf plant for pack, pot, mixed container and garden



Palette will paint your garden with

















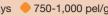


# F1 Fiona™ series

### Begonia semperflorens











- White and Pink are newly added to our semi-double type Begonia semperflorens with excellent uniformity
- Early flowering habit is same as standard single varieties. Plant habits are also comparable to them
- Fiona Red is awarded 2018 Fleuroselect Gold Medal















Brassica (Flowering Kale)

### Fringed leaved type

- The edges of all the leaves are finely ruffled
- Fringed-leaved types have better colour development under warm conditions compared to other types

# F1 Kamome™ series

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 350-640 sd/g





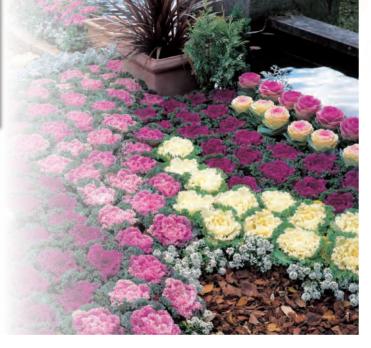


- Kamome can withstand frosts and freezes
- One of the few items that can be enjoyed in the winter garden





White



# F1 Glamour<sup>TM</sup> Red

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-6 days ● 260-290 sd/g









• First F1 shiny leave dwarf type brassica introduced in the world

Grown for its unique shiny leaves which create a dramatic colour contrast





### Round leaved type

• Compact, dwarf plants with uniform, round-shaped, solid heads and slightly waved leaves

# F1 Pigeon™ series

● 20-25°C/ 68-77°F ● 4-5 days ● 190-560 sd/g











• Pigeon series has a robust habit and is suitable for landscape use





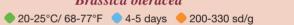




# F1 Song Bird™ series

Brassica oleracea









- Song Bird series has excellent doubleness with a compact habit
- Available in Pink, Red, and White, 3 colours that bring out the beauty in winter gardens and mixed containers













Brassica

(Flowering

### Feather leaved type

• These varieties are all deeply serrated and have a larger head than other types

# F1 Coral™ series

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 230-370 sd/g







- Vigorous plants with thick, sturdy stems with moderate length
- Recommended for culture to aim for large size head





Prince

# F1 Peacock™ series

Brassica oleracea

◆ 20-25°C/ 68-77°F ◆ 4-5 days ◆ 200-300 sd/g





•The plants can withstand moderate frosts and freezes and work well in wet conditions as their open feathery leaves are less likely to trap and hold water than fringed- and round-leaved types





### Variety Comparison among Bedding types Takii's Brassica: Unique in the garden landscape and combination planters ong Bird Red • Heads begin to show colour on the central leaves when ong Bird White D the air temperature regularly drops below 13-15°C/ Song Bird Pink Kamome Pink 55-60°F Kamome Red Kamome White Pigeon Purple Pigeon Red С Pigeon Victoria igeon White Coral Queen eacock Red eacock White Glamour Red

Dark required 21-24°C/70-75°F 8-10 days 100-200 sd/g





- •Uniquely compact, bushy plants with double flowers
- Suitable for both pot and bedding use
- •Flower size: 7-8 cm/3 inches





# **F1** Takion™ series













- Takion has a very good basal branching habit with 6-8 sturdy stems of showy, long-lasting bellshaped flowers in spring
- Very hardy and survives at least to -10°C/14°F
- Makes excellent garden perennial as well as a beautiful pot crop





FTU521

### **Vernalisation Tips for Takion**

- \* After plants attain mature vegetative growth, they require vernalisation
- \* The plants require about one month of temperatures below They endure light frost
- \* After vernalisation, heating at 10-15°C/50-60°F accelerates the flowering by approximately one month
- \* The advantage of Takion is that it grows faster and comes into flower in a shorter period of time Sow the seed in the autumn, it will flower in the spring



Calendula

Canna

# Tropical™ series

Canna generalis







- Canna Tropical series is a seed product and is extra dwarf
- Production period is fast and plants are characterized by readily producing offsets, making full finished pots with tremendous consumer appeal
- Tropical White produces flowers with or without pink spots, with the flowers on individual plants exhibiting the same degree of spotting
- Prefers warm and humid conditions over 25°C/77°F



It is possible to have a water garden with canna Tropical



Bronze Scarlet











Yellow

# F1 South Pacific™ series







- The first F1 Canna series from seed
- •Better uniformity at its early stage of germination compared with our existing variety, Tropical series
- Good basal branching
- Scarlet and Orange earned AAS awards
- Being from seed, the South Pacific series is not prone to diseases often transmitted in rhizome propagation
- ●The vibrant colours of the large flowers creates a dramatic and tropical feel
- •Use this striking beauty in planters, mixed containers, gardens, landscapes and in shallow areas of water features





Orange Shades

# F1 Cannova series

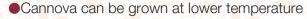
Canna generalis

◆ 20-30°C/ 68-86°F ◆ 10-15 days ◆ 4-5 sd/g









- High degree of uniformity and high percentage of saleable plants
- Early flowering, can also be grown in smaller pot size

Red Shades

- Good branching habit and excellent leaf quality
- •An attractive and broad range of bright colours on green or bronze leaved plants





# Onyx<sup>TM</sup> Red

● 20-22°C/ 68-72°F ● 5-7 days ● 450-500 sd/g







- ●2017 AAS award winner
- An unprecedented compact, blackleaved capsicum
- Compact, well-branched plant habit with eye catching dark black foliage
- Ball-shaped fruit matures from black to red











Onyx Red's young fruit is glossy black. The combination of black fruit and black foliage makes a very stylish impression.

5-7 days

220-250 sd/g

Capsicum (Ornamental Pepper)

# Capsicum ( (Ornamental Pepper)

# **Conga**™

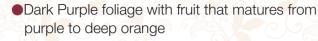
Capsicum annuum

● 20-22°C/68-72°F ● 5-7 days ● 280-300 sd/g









• A stand-alone variety with a plant habit between Mambo and Salsa series



# Cubana™ series

Capsicum annuum

◆ 20-22°C/ 68-72°F ◆ 5-7 days ◆ 150-210 sd/g









Oval type of fruit with five colours can be used in various combinations in mixed containers and pots

Multicolor Red



Multicolor Orange

Takii's Capsicum

Maya Uchu





Mixture

1.6-2 x 0.2

Cream

Variety Comparison among Series										
Series / Variety	Shape	fruit size (cm)	fruit size (inch)	Beginning colour of fruits	plant size					
Onyx Red	-	1 x 1	0.4 x 0.4	Black	А					
Maya Conga	-	3 x 1	1.2 x 0.4	Purple	С					
Maya Cubana		4.5 x 2	1.8 x 0.8	Green, Cream	В					
Maya Mambo	•	3.5 x 1.5	1.4 x 0.6	Green	С					
Maya Salsa	-	2.5 x 1	1 x 0.4	Green	D					
Mava Favorit		3.5 x 1	14×04	Green with slightly black	С					

4-5 x 0.5

# Favorit™ mixture

### Capsicum annuum

- 20-22°C/ 68-72°F
- 5-7 days 200-250 sd/g







- Pointed fruit on compact plants with dark green foliage
- Fruit is green with slightly black colouring at the start



## Mambo™ mixture

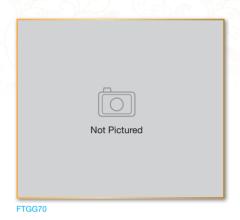
Capsicum annuum ● 20-22°C/ 68-72°F







 Longer, round fruit on compact plants with many branches





## Capsicum annuum

● 20-22°C/ 68-72°F

5-7 days • 180-260 sd/g







Pointed, small fruit on compact plants



# Uchu™ Cream Red Lepsicum May

### Capsicum annuum

- 20-22°C/ 68-72°F
- 5-7 days 270-370 sd/g







- variegated foliage
- •Fruit is cream coloured at the beginning



Celosia

# Armor™ series

Celosia cristata

Dark reaguired • 20-25°C/68-77°F • 8-10 days • 1,200-1,500 sd/g





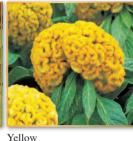
- Attractive large flower heads in bright colours on robust plants with lush foliage
- •Ideal item for hot summer gardens as well as pot use
- Yellow is relatively compact in the series







FKT241





# Castle™ series

Celosia plumosa

Dark required • 20-25°C/ 68-77°F • 8-10 days • 1,500-2,300 sd/g



FKT243









Orange





Scarlet







- Castle is semi-dwarf in height, vigorous and has a self-branching habit
- The long-lasting flowers easily withstand summer heat and drought
- Excellent for landscaping, containers and gardens

Castle can be enjoyed in pot by multiple sowing



Giant Exhibition™ series

Light required • 20-22°C/68-72°F • 4-6 days • 3,100-3,800 sd/g





- Extra-large leaves attract attention in the garden, also makes a great house plant
- Approximately 13 weeks from sowing to mature plant
- Remove any flower spikes to enhance the beauty of the foliage



Limelight

Rustic Red













may vary from image



# $Snowland^{\rm TM}$

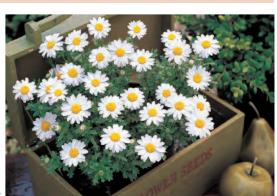
Chrysanthemum paludosum

● 15-20°C/ 59-68°F ● 5-10 days ● 1,200-1,900 sd/g





- Snowland has profuse clear white daisy-like flowers with yellow disks
- This variety has a uniform plant habit with large flowers that are bigger than other paludosum type Chrysanthemums
- •Under warm temperatures and long-day conditions they produce many flowers, under cool temperatures and shortday conditions, they produce many branches



Chrysanthemum

Dianthus

Dianthus chinensis

Dianthus

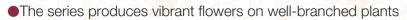
# F1 Telstar™ series

Dianthus chinensis x barbatus ● 21-24°C/ 70-75°F ● 5-6 days ● 700-1,900 sd/g









Telstar was developed to have a high degree of resistance to Phytophthora and other damp-off pathogens, and is also resistant to both heat and frost

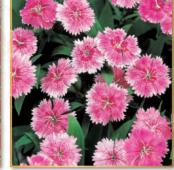
Telstar White may have some pinkish flowered plants depending on climate conditions



Burgundy



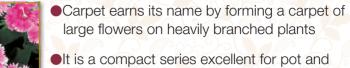












It is a compact series excellent for pot and bedding production

◆ 21-24°C/70-75°F ◆ 5-6 days ◆ 1,100-1,600 sd/g







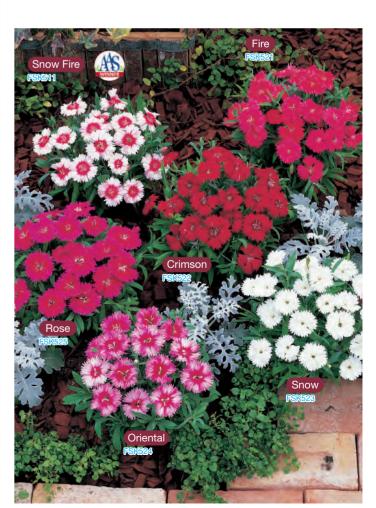
Carmine Rose



Coral









# **Jimorphotheca**

1 rysimum (Cheiranthus / Wallflower)

# **Spring Flash™ series**

Dimorphotheca sinuata

● 15-20°C/ 59-68°F ● 8-10 days ● 900-1,300 sd/g







- Spring Flash provides bright colour for the early spring garden
- Excellent for containers, it can also be used for landscaping





Yellow

# Charity™ Mix

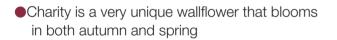
Erysimum sp.

● 18-22°C/ 64-72°F ● 8-10 days ● 480-650 sd/g









- •Flowers can withstand frosts as low as -4°C / 26°F with no damage, and plants can overwinter in mild climates
- Day-length neutral and no vernalisation required for blooming
- The compact plants are excellent for pots and garden use and its sweet fragrance greatly adds to consumer appeal





# Blue River<sup>TM</sup>

Lavandula angustifolia

● 18-20°C/ 64-68°F ● 20-25 days ● 1,000 sd/g





Lavandula

- Winter hardy, seed-propagated Lavender which has floriferous deep blue spikes
- •Its uniformity and vigour make it ideal for landscapes and mixed containers



# F1 Royal Semi-double<sup>TM</sup> series

Gerbera jamesonii

Light required • 21-23°C/ 70-73°F • 4-6 days • 250-350 sd/g







- •Unique semi-double flowers
- The plant habit is identical to F1 Royal series







Watermelon

Gerbera

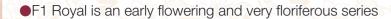
# F1 Royal<sup>TM</sup> series Gerbera jamesonii

Light required • 21-23°C/70-73°F • 4-6 days • 250-450 sd/g









- •It produces many eye-catching, large flowers in bright colour
- •The plants provide continuous flowering through the sales period as well as in the consumer's garden



Apricot FGBG41 (FGB151)



Deep Orange



Prince Red

Slightly more compact growth than Royal series. Suitable for 4 inch bench run programs.



Deep Pink



Deep Rose







Red



Red Bicolor







Yellow



Formula Mixture





Red Bicolor exhibits some colour variation with flower petal colour ranging from red to rose, and there is also some variation in the ratio of white to red/rose. Individual plants do not produce a mix of flower types.

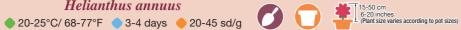
Helianthus

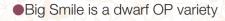
(Sunflower)

# Big Smile<sup>TM</sup>









- •Ideal for spring to summer production, but can also be used for production any time of year with sufficient temperature
- Big Smile is suitable for pots and containers, good for impulse sales at retail
- •It blooms in 50-55 days



# F1 Smiley™

Helianthus annuus

◆ 20-25°C/ 68-77°F ◆ 3-4 days ◆ 25-30 sd/g







- ●F1 hybrid pollenless dwarf Helianthus
- Smiley was named with our hope of spreading happiness and smile with exuberant flowers
- Improvement of Sunny Smile, high uniformity and more branching
- •Regarding day length, it flowers all year round in about 55 to 60 days when grown temperatures above 15°C/60°F



# **Fantasy™ Spring Mix**

Linaria maroccana

◆ 20-21°C/68-70°F ◆ 15-20 days ◆ 9,500-17,000 sd/g









- The crop grows year-round in cool, mild areas
- ■Will withstand frosts and short duration freezes to -4°C / 26°F without injury



# **Fantasista™ series**

### Linaria maroccana

◆ 20-21°C/ 68-70°F ◆ 15-20 days ◆ 9,500-17,000 sd/g







- All varieties of Fantasista are bred to be extra dwarf, good basal branching and extra early maturity
- Blooms 7-10 days earlier than Fantasy series and is more compact
- The crop grows year-round in cool, mild areas
- •Will withstand frosts and short duration freezes to -4°C / 26°F without injury
- •It is especially suitable for mass plantings and is often used in hanging baskets and mixed containers to provide bright colour accents







FLN133 (raw) FLN143 (multi pelleted)



Pink FLN132 (raw) FLN142 (multi pelleted)



Rose FLN131 (raw) FLN141 (multi





Yellow FI N134 (raw)



Fantasista (left) is more compact and has excellent basal branching compared with Fantasy (right)

### Takii's Linaria Variety Comparison among Series

	Earli	iness of Flo	Plant Height		
Variety	More Extra Early	Extra Early	Early	cm	inch
Fantasista Blue	•			8-12	3-5
Fantasista Pink	•			8-12	3-5
Fantasista Rose	•			8-12	3-5
Fantasista White	•			8-12	3-5
Fantasista Yellow	•			8-12	3-5
Fantasy Spring Mix			•	15-20	6-8

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and pe

# F1 Carmen™ series

Eustoma grandiflorum

Light required 15-20°C/ 59-68°F 20-25 days 700-1,300 pel/g





- Excellent pot Lisianthus bred especially for its high quality root system
- It has more disease resistance against damping off from soil bacteria such as fusarium
- Carmen produces many medium sized, long lasting flowers



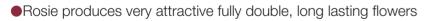
# F1 Rosie<sup>TM</sup> series

Eustoma grandiflorum

Light required • 15-20°C/ 59-68°F • 20-25 days • 900-1,200 pel/g







Genetically dwarf pot Lisianthus with improved root quality









### Selectable type

· Seedlings are selectable for doubleness

# Harmony™ series

Dark required • 18-21°C/ 64-70°F • 4-5 days • 450-900 sd/g



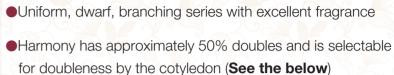












•Good for cool season production in pots or containers



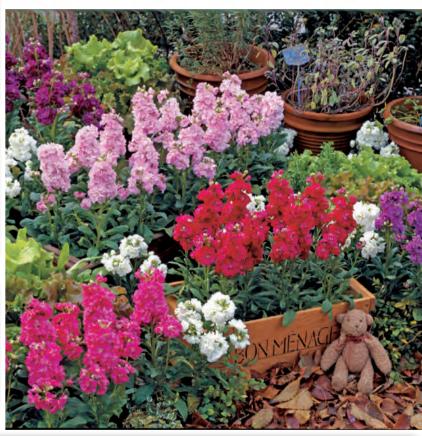














Series	Page	Timing of Selection		Selection Method
Harmony Xmas	47 104	A pair of cotyledons	Select by colour, size and shape of cotyledon, also by growing speed.	Double:  Lighter green Larger leaves  Darker  Single:  Darker  Smalle
Glory	104		3.,	Grow faster (Taller) Grow slower (Shorter)
Cinderella	48	Cotyledons and true leaves	Select by colour of leaves. Can be put in cold strage of 8°C/46°F for 2-3 days in cotyledon stage, then colour difference will be more clearly.	Double: Lighter green Larger leaves  Single: Darker green Smaller leaves
Canneto	102	Not needed		Average of 90% double-flowering type

The above data is based on trials completed in Japan

Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

Matthiola (Stock)

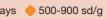
### Selectable type

Seedlings are selectable for doubleness

# **Cinderella**™ series

### Matthiola incana

Dark required • 18-20°C/ 64-68°F • 3-5 days • 500-900 sd/g







- Dwarf selectable Matthiola with hairy leaves
- The double flower plant ratio of Red and White is less than the remaining colours in the series
- •Seedlings are easily selectable for doubleness after they are exposed to cold temperatures below 8°C/ 46°F with light. Double flower seedlings will show pale green cotyledons and single flower seedlings will show dark green cotyledons (See page 37)



Antique



Appleblossom









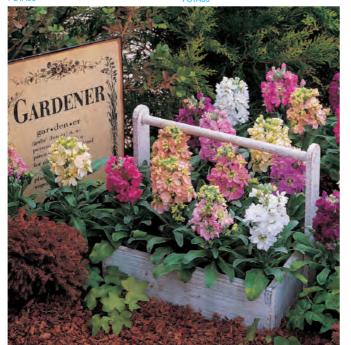








Yellow





Vivid Formula Mixture

# Jackpot Gold™

Melampodium paludosum

Temp. fluctuation is preferable 20-30°C/ 68-86°F 8-10 days 150-250 sd/g





- Improvement of Million Gold with larger flowers and round shaped leaves
- Vigorous plant habit and more floriferous than Million Gold
- •Self-cleaning habit, new flowers cover the old flowers so plant continues to have fresh flowers showing all season long
- Blooms continuously until first frost
- Blooms in 80 to 95 days from sowing
- These dwarf varieties are excellent for packs, 10 cm / 4 inches pots, and for landscapes





# Lemon Delight™

Melampodium paludosum

Temp. fluctuation is preferable 20-30°C/68-86°F 8-10 days 150-250 sd/g





- Bright yellow flowers make a good combination with Jackpot Gold in the garden
- Blooms continuously until first frost
- Blooms in 80 to 95 days from sowing
- These dwarf varieties are excellent for packs, 10 cm/4 inches pots, and for landscapes



## Passion™ series

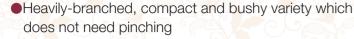
Osteospermum ecklonis

● 18-22°C/64-72°F ● 8-10 days ● 70-100 sd/g









- Passion Mix has been switched to Passion Formula Mix (set percentages of each colour)
- •Unlike the vegetative varieties, seed-raised Passion series retains its compact habit very well
- They grow and flower almost year-round in mild areas, with the heaviest blooming period in early spring through early summer
- Plants are well adapted to container culture such as colour bowls and combination planters

Passion Formula Mix is everybody's favorite









# Clean Scarlet™

Viola wittrockiana

- 18-20°C/ 64-68°F
- 7-13 days
- 700-1,000 sd/g

Pansies

It is excellent for bedding and

container use

Clean Scarlet

is among the

brightest of the

scarlet coloured













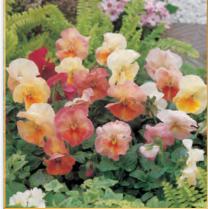
# F1 Imperial™ Antique Shades

Viola wittrockiana

- 18-20°C/ 64-68°F
- 7-13 days
- 650-800 sd/g







# F1 Nature™ series

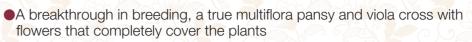
### Viola wittrockiana

● 18-20°C/ 64-68°F ● 7-13 days ● 550-1,400 sd/g











- Compact, very strong plants, very vigorous and extra floriferous
- •Wide colour range including many unique colours, excellent for both spring and fall sales
- Strong landscape performer fast rebound from rain and freezes, outstanding winter survivability
- "A Landscaper's Dream" perfect for mass plantings and mixed containers as well as for pots and packs







Beacon



Blue and Yellow



Frosty Blue



Frosty Rose



Lemon Yellow



Mulberry Shades





Orange



Plum Purple



Red with Blotch



Rose Picotee



Rose Pink



Rose with Blotch



White





Yellow with Blotch



Formula Mixture



Any landscape pattern is possible with Nature







Petunia

# F1 Evening Scentsation<sup>TM</sup>

Light required 22-25°C/72-77°F 5-10 days 650-850 pel/g



### Trailing type

- Evening Scentsation is the first petunia which earned an AAS regional award for its lovely fragrance and stunning colour
- Evening Scentsation's fragrance has notes of hyacinth, sweet honey and rose
- As its name implies, Evening Scentsation's fragrance is stronger in the evening hours, and can be experienced throughout the day as well

(Scent is perceived differently by each individual)









The basic fragrance of Evening Scentsation is derived from phenylacetaldehyde, which has a hyacinth-like scent, 2-phenylethanol, which has a rose-like scent, and methyl benzoate, which has a dry fruit-like scent. The largest release of scent compounds by Evening Scentsation occurs during the switch from light periods to dark periods.

The article of characteristic of floral scent compounds in Evening Scentsation was published in The Horticulture Journal.

https://www.jstage.jst.go.jp/article/hortj/advpub/0/advpub\_OKD-090/\_ article/-char/en

# F1 Opera Supreme™ series

Light required • 22-25°C/72-77°F • 5-10 days • 650-850 pel/g





### Trailing type

- Opera Supreme has a very floriferous habit, less day length sensitivity, and a low, spreading habit that are key characteristics preferred for trailing petunias
- Its flowers have a very attractive iridescent quality, or sheen, and are borne in great profusion from the centre to the tips on the spreading plants
- Outstanding in garden beds, window boxes, combination pots and hanging baskets
- •Red has a more vigorous plant habit than other trailing petunias in the red colour segment
- Opera Supreme White may have some pinkish flowered plants depending on climate condition









Its excellent spreading habit is suitable for hanging baskets.



F1 Opera Supreme provides season-long colour to city landscapes







Raspberry Ice





Pharbitis (Ipomoea

Salvia

# Petunia

# F1 Trilogy™ series

Light required 22-25°C/72-77°F 5-10 days 650-850 pel/g



### Mounding type

- The plant is a mounding type with a good branching habit, while keeping a tidy, compact habit
- Strong flower petals stand up to humid conditions
- Reaching a height of about 15-25 cm / 6-10 inches, and a width of 50-60 cm / 20-24 inches when fully mature, Trilogy is a fabulous landscape and container performer
- •Series requires less PGR use, adapts to any protocol







Lime





Purple Vein

Scarlet







Salmon Morn

White



Series	F1 Trilogy	F1 Evening Scentsation	F1 Opera Supreme						
Туре		Multiflora							
Турс	Mounding	Tra	iling						
	6.5-7.5 cm / 2.6-3.0 inches	7 cm / 2.7 inches	6.5-7.5 cm / 2.6-3.0 inches						
Flower size									
Plant habit in pot (10 cm/ 4 inches)			1						
	15-25 cm / 6-10 inches 50-60 cm / 20-24 inches	15-25 cm / 6-10 inches 80-90 cm / 32-35 inches	10-20 cm / 4-8 inches 80-100 cm / 32-39 inches						
Plant nabit	30								
in gordon	10								
	m 0 10 20 30 40 50 60	0 10 20 30 40 50 60 70 80	0 10 20 30 40 50 60 70 80 90						

# has advantages for

### Growers:

No special technique, adapts to your protocol

### Retailers:

Long shelf life, no more tangling

### Consumers:

Minimal care, maximum performance all season

# Cameo Elegance™

Pharbitis purpurea (Ipomoea purpurea) ● 20-30°C/ 68-86°F ● 4-5 days ● 40-60 sd/g





- Variegated foliage with flowers of rose-red with white throats make Cameo Elegance a novelty item
- Olt blooms most prolifically under short-day conditions
- Excellent packet seed item due to ease of culture
- The plant can be used in many different styles, such as trailing pot, landscape ground cover, hanging basket and climbing vine



FAA451 Trailing vines add dimension to containers

# **Summer Jewel™ series**

Salvia coccinea

● 20-25°C/ 68-77°F ● 5-10 days ● 600-700 sd/g







- •Amazing performance, blooms heavily all summer Excellent branching habit produces a multitude of
- Vivid flowers attract hummingbirds

flower spikes

- Significantly earlier than other existing varieties under long day conditions
- •All colours of Summer Jewel series are awarded by All-America Selections



















Salvia

Senecio (Cineraria)

# **Hummingbird™ series**

● 20-25°C/ 68-77°F ● 5-10 days ● 650-700 sd/g







- Extremely long blooming time attracts consumers
- Well branched plants with brilliant flowers appear about 11 weeks from sowing
- •Can be used for bedding, planters, baskets, pots and borders









# Fizz<sup>TM</sup> series

Salvia splendens

◆ 20-25°C/ 68-77°F ◆ 5-10 days ◆ 250-370 sd/g







- •Fizz series is early to flower with densely packed flower columns which give each plant a strong show of colour
- •Flowers are long lasting at consumer level as well as a long shelf-life at retail
- The branching habit gives a fullness to the plant and the flower colour contrast to the dark foliage gives a better colour show in the landscape















Raspberry

# Sangria<sup>IM</sup>

Salvia splendens

● 20-25°C/ 68-77°F ● 5-10 days ● 250-350 sd/g







- Sangria is a unique bicoloured salvia with red petals and lime green calyxes
- It also has an outstanding branching habit and exhibits excellent garden performance
- Sangria blooms about 15 days later than Fizz series



# **Early Perfection™ series**

Senecio cruentus







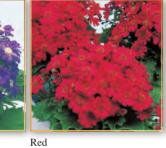


- Produces a beautiful display of colourful daisy-like flowers
- Dwarf, compact plants that are suitable for pot use











# Carlos™ and Santana Yellow™

Tanacetum parthenium

Light required 15-20°C/59-68°F 3-5 days 7,500-10,000 sd/g







Nice combination of white and soft yellow flowers in one container







Santana Yellow

Viola (Viola cornuta)

# F1 Floral Power® series

● 18-20°C/ 64-68°F ● 7-15 days ● 900-1,900 sd/g







•Mound type viola which produces an abundance of round-shaped, thick petaled flowers on compact yet vigorous plant

Excellent for early spring sales



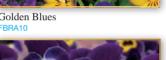


























Persian Pink





















Purple Rose White Face









Yellow Red Wing

Yellow Surprise



Viola (Viola cornuta)

# F1 Gem™ series

### Viola cornuta

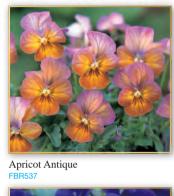
● 18-20°C/ 64-68°F ● 7-15 days ● 900-1,800 sd/g







- The wide and unique colour assortment of this series provides a complete range both for consumers as well as professional landscapers
- The Gem series has strong over-wintering ability as well as exceptional heat tolerance
- •Gem is excellent for colour bowls, containers, pots, hanging baskets, and landscapes





Electric Blue







Clear Ocean



Frosty Blue



Heavenly Blue



Lavender Antique









Orange





Rose with Blotch





Sapphire FBR554



Scarlet FBR569





Yellow



# Viola (Viola cornuta)

# **F1 Four Seasons™ series**

● 18-20°C/ 64-68°F ● 7-15 days ● 950-1,600 sd/g







- Trailing, without excessive creeping, floriferous even on the top of plants
- •Later flowering than normal type viola, excellent performance in the spring after plants produce some growth
- Suitable for hanging, large pot, landscaping



Blue with Yellow







Four Seasons Yellow may not make its whisker clearly under high light conditions

Viola comparison												
Plant Habit	upright	trailing										
small 🔊	Gem	Four Season										
large C	Floral Power	 										
large	Nature (See Page 54-55)											

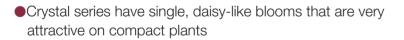
# Crystal™ series

Zinnia angustifolia

◆ 20-22°C/ 68-72°F ◆ 5-6 days ◆ 2,000-3,200 sd/g







 Crystal Zinnias show high tolerance to powdery mildew and have superior garden performance









Summer garden looks delightful with Takii's Crystal

# Serenity<sup>TM</sup> series

● 15-20°C/ 59-68°F ● 15-20 days ● 900-1,100 sd/g





Verbena

- Serenity Mix is an excellent mix of pastel lavenders, white, carmine red to pink
- Its deeply-cut fern-like foliage is dark forest green
- In cool climates it will stay dwarf, producing a carpet
- In warmer areas the Serenity series will be a perennial









Zinnia

# F1 Dreamland™ series

Zinnia elegans

● 20-22°C/ 68-72°F ● 5-6 days ● 100-200 sd/g





- Takii's Dreamland is an early, large dahlia-flowered type providing a great colour show both in containers and in the garden
- Much less instance of Xanthomonas and Alternaria disease problems with Dreamland than other varieties under warm weather conditions
- Excellent choice for pot and pack sales, with great consumer appeal











# F1 Preciosa<sup>TM</sup> series

Zinnia elegans

● 20-22°C/ 68-72°F ● 5-6 days ● 120-150 sd/g





- This new Zinnia series has outstanding vivid color and voluminous flowers with compact habit
- •More compact and well-branched plants produce lavish amounts of higher doubleness, muy atractivo!







APPROVED PLENS SELECT NOVELTY





prěciosa

FZN558 (raw) FZN588 (slick coated)









FZN556 (raw) FZN586 (slick coated)

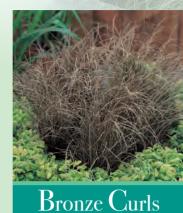




Grasses, Sedges and Rushes



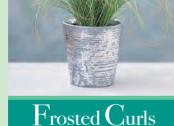




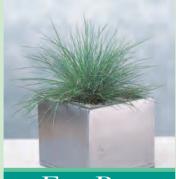
Carex comans (New Zealand Hair Sedge)



Carex flagellifera (Weeping Brown Sedge)





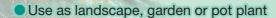






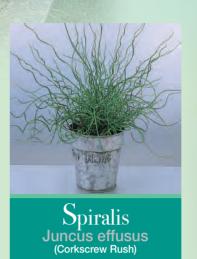
Fibre Optics Isolepis cernua (Fiber Optic Grass)

Genus	Species	Variety name	Germ Info	Germination	Temperature	Days to	Count	Type	Plant	Height	Remark
Gerius	Opecies	variety flame	Genn inio	°C	°F	Emergence	Count (Seed/Gram)	туре	cm	inch	Heman
Carex	comans	Bronze Curls	Light required	18-22	64-72	12-20	1,600- 1,800	<b>⊘</b> \$€	30	12	Fashionable component in planters and pots
Carex	flagellifera	Auburn	Light required	18-22	64-72	25-35	2,000- 2,400	<b>⊘</b> €	35	14	Bronze-red leaves
Carex	_	Frosted Curls	Light required	18-22	64-72	12-20	1,700- 2,000	<b>⊘</b> \$€	25	10	Very hardy ornamental grass which can be used for mixed containers and landscapes     5-6 months from sowing to sell, but can be shortened with multiple sowing
Festuca	glauca	Elijah Blue	Light required	18-20	59-68	7-14	900- 1,000	<b>∅</b> €	25	10	Extremely hardy perennial, it is one of the most important landscaping grasses     Prefers full sun and well drained conditions     Multiple sowing will shorten the growing time to finishing



- Easy to produce, high ornamental value
- Energy saving program

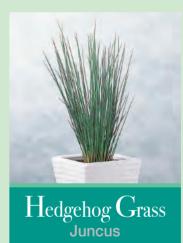
- Heat tolerant, low maintenance
- Develop your own grass assortment or combine with colour items
- Long shelf life = Long sales window

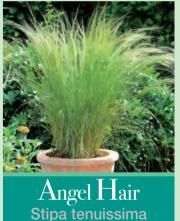












(Esparto Grass)

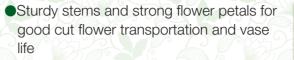
G	enus	Species	Variety name	Germ Info	Germination	Temperature	Days to	Seed	Type	Plant I	Height	Remark
	Cilus	Opecies	variety flame	Geriii iiiio	°C	°F	Emergence	Count (Seed/Gram)		cm	inch	Hemark
Iso	lepis	cernua	Fibre Optics	Light required	18-20	64-72	7-10	300- 330 pel	<b>Ø€</b>	20	8	Long-lived and easily maintained ornamental grass     Withstands low light conditions and wide range of temperatures     Can be used for pots, planters and terrariums
Jur	icus	effusus	Spiralis	Light required	22-24	72-75	35-45	1,000- 1,200 pel	<b>Ø</b> \$€	35	14	Strong twisted leaves on compact upright clumps
Jur	ncus	ı	Hedgehog Grass	Light required	20-22	64-72	35-45	7,000- 10,000	<b>Ø</b> \$€	60	24	Nice architectural evergreen plants
Stip	oa	tenuissima	Angel Hair	Light required	18-20	59-68	7-10	3,000- 4,000	<b>⊘</b> \$€	70	28	Thread-like, shiny light green leaves give a silky and elegant appearance It can be used in various ways such as for mixed containers and rock gardens as well as dried cut flowers

# F1 Legend<sup>TM</sup> series (Group I) Antirrhinum majus Light required \$15-20°C/59-68°F \$10-12 days \$5,300-7,300 sd/g \$\text{9}\$ \$\text{5}\$ \$\text{100-130 cm} \\ 39-51 inches









- Dense flower spikes and intense colours make an impressive accent in flower arrangements
- Light Pink is slightly shorter (95 cm / 37 inches) height than other colours (100-130 cm / 39-51 inches)

















Antirrhinum (Snapdragon)

# F1 Chantilly<sup>TM</sup> series (Group I)

Antirrhinum majus

Light required ● 15-20°C/ 59-68°F ● 10-12 days ● 5,000-9,000 sd/g











- Takii's open-faced Antirrhinum Chantilly has large flowers with an overall gorgeous impression
- Unique Snapdragon for short day and low temperature conditions

















Γakii's Antirrhinum Va	arietv Comr	oarison among	Series

	Vovietre	Plant	Flower Size			
Series	Variety	Height	cm	inch		
	Bronze	A	5.0	2.0		
	Cream Yellow	В	5.0	2.0		
	Deep Orange	С	5.0	2.0		
	Light Pink	В	5.0	2.0		
Chantilly	Light Salmon	A	5.0	2.0		
Criantiny	Pink	В	5.0	2.0		
	Purple	В	5.0	2.0		
	Velvet	В	5.0	2.0		
	White	С	5.0	2.0		
	Yellow	В	5.0	2.0		
	Light Pink	В	4.0	1.5		
	Light Yellow	В	4.0	1.5		
Legend	Pink	В	4.0	1.5		
	White	В	4.0	1.5		
	Yellow	В	4.0	1.5		
in Nagano pre	ased on trial results efecture, Japan. set at 8°C/46°F during night	Taller A  B Shorter C				

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.



White FKG591



Yellow

# F1 Flare<sup>TM</sup> series

### Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 200-400 sd/g









- Very early maturity and easy to get tall stem
- •Flare Rose and Flare White have very uniform, wavy leaves, upright habit
- •Flare White has such a pure white colour that is also well suited for dyeing







F1 Flare Rose with blue dye. After dyeing, Flare Rose presents a charming vintage look.



# F1 Crane™ series

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 200-480 sd/g









### Feather leaved type

- Cut flower Brassica with feathery leaves
- Feather Queen and Feather King have a very uniform, upright habit and complement each other very well

### Round leaved type

- •Winter bouquets are much more charming with the round shape, varied colours and long-lasting vase life of the Crane series
- •Genetically, the flower head was bred to be compact; however, plant spacing will determine the size of the flower as well
- •Crane Carmine, Pink, Red and White have a very uniform, upright habit and complement each other very well





Feather King





Arrange Green Green feathery leaves are suitable for filler materials in bouquets and flower arrangements.

Unique cut leaves accentuate flower arrangement.





Bicolor

FHB690

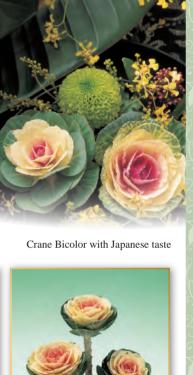
Carmine







Rose FHB685



# Sunrise<sup>TM</sup> and Sunset<sup>TM</sup>

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 300-500 sd/g











- The colours of Sunrise (creamy white with pink centre) and Sunset (red) complement each other, working well in any floral arrangement
- The size of the head is determined by plant spacing



FHB314





# F1 Lucir<sup>TM</sup> series

Brassica oleracea

● 20-25°C/ 68-77°F ● 4-5 days ● 200-400 sd/g











•In comparison to existing Brassica, the waxless glossy leaves of this Brassica show better colour contrast of the centre colouring



Lucir has glossy green leaves

Right: F1 Crane



The stunning Lucir Rose blended with the ever-popular rose brings beautiful colour, texture and lasting abilities in floral designs



FHB711

alendula





FHB712

# Star<sup>TM</sup> series

Calendula officinalis

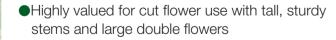












• The Star series is bred with special attention to higher disease resistance and good productivity





# **Fujimi™** series

Callistephus chinensis

● 15-20°C/ 59-68°F ● 6-8 days ● 450-800 sd/g





- Fujimi has three-dimensional shaped double-flowers
- Fujimi has more Fusarium resistance when compared to other varieties, resulting in reduced losses in production
- Spray type (less basal branching) plant habit and smaller leaves is suitable for dense planting













### Takii's Callistephus Variety Comparison among Series

until o ou	посорпи	tunoty comp	urioon u	mong o						
Туре	Series	Variety	Flowe	er Size	Branching	Plant	Stem	Fusarium	Characteristic	
Type	Jeries	Variety	cm	inch	Branching	Height (cm)	Strength	Resistance	Characteristic	
		Coral Rose	4-5	1.6-2	Less	90-100	Very Hard	R	Less basal branching (Upper branching)	
Double Flowered	Fujimi	Purple	4-5	1.6-2	Less	90-100	Hard	R	Less basal branching (Upper branching)	
		Scarlet	4-5	1.6-2	Less	90-100	Very Hard	R	Less basal branching (Upper branching)	
Semi-		Pink	4	1.6	Good	70-80	Hard	Non R	Hard stem. Relatively less branching	
double	Nina	Purple	4	1.6	Good	70-80	Hard	R	Hard stem. Good basal branching	
Flowered		Sarmon Pink	4	1.6	Good	70-80	Normal	Non R	Good basal branching	
		Blue Frost	2-3	0.8-1.2	Good	70-80	Hard	R	Flower colour changes from white to blue	
		Purple	2-3	0.8-1.2	Good	70-80	Hard	R		
Single		Red	2-3	0.8-1.2	Good	65-70	Very Hard	R		
Flowered	Daylight	Rose Frost	2-3	0.8-1.2	Good	70-80	Hard	R	Flower colour changes from white to rose	
		Rose	2-3	0.8-1.2	Good	70-80	Hard	R		
		White	2-3	0.8-1.2	Good	70-80	Hard	R		

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

- \*1. Takiif's Fusarium resistant Callistephus highly restricts the growth and development of the above stated pathogen and the damage they cause under normal pathogen pressure when compared to susceptible varieties. It may, however, exhibit some disease symptoms or damage under heavy pathogen pressure.
  \*2. New and / or atypical strains of the specified pathogen may overcome the resistance, sometimes completely.

allistephus

(Aster)

Callistephus

arthamus

Celosia

# Nina™ series

Callistephus chinensis ● 15-20°C/ 59-68°F ● 6-8 days ● 400-700 sd/g



- Nina has large numbers of small semi-double flowers on vigorous plants
- •Nina series has more disease resistance when compared to other varieties, resulting in reduced losses in production
- This spray-type Callistephus is excellent for mixed bouquets











# **Daylight™ series**

Callistephus chinensis

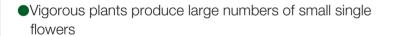
●15-20°C/59-68°F ● 6-8 days ● 380-700 sd/g











- •Blue Frost and Rose Frost change petal colours from white to blue or white to rose as each flower matures which makes an attractive colour gradation on each stem
- •All colours of Daylight series have Fusarium resistant















# Kurenai™ series

Callistephus chinensis ●20-25°C/68-77°F ● 6-8 days ● 420-700 sd/g







- Good branching habit
- Semi-double flowers of medium size











Kinko<sup>TM</sup> and Zanzibar<sup>TM</sup>

Carthamus tinctorius

Dark required 15-20°C/ 59-68°F 4-6 days 19-35 sd/g







•High quality cut flower item, can be harvested about 90 days after sowing

•Carthamus is sensitive for Manganese deficit. Leave fertilizing is effective to prevent this problem





# Kurume™ series

Celosia cristata

Dark required \$\int 20-25\circ C/ 68-77\circ F \$\int 8-10\ days \$\int 1,300-1,600\ sd/g\$





•Kurume varieties are crowned with grand combs of vivid colour

- They have very high tolerance to heat, drought and disease, and are prized for summertime cut flower use
- Dense planting, spaced 10-15 cm/ 4-6 inches apart will produce smaller combs and thinner stems







FKT113







# F1 Aurora™ series

Delphinium elatum

Dark required 15-20°C/ 59-68°F 10-12 days 300-550 sd/g









- Takii's F1 hybrid Aurora Delphinium's popularity continues to increase due to its outstanding performance as a cut flower as well as a garden perennial
- Excellent uniformity and quality
- •Stems are very sturdy and leaves are relatively small, which make it ideal for cut flower use



Aurora can be used as garden plants or large container plants





### **Variety Comparison among Series**

Voviet	Flowe	er Size	Plant Height			
Variety	cm	inch	Piant	neignt		
Blue	5.5	2.2	С	Taller A		
Deep Purple	5.5	2.2	A			
Lavender	6.0	2.5	С			
Light Blue	5.5	2.2	В	В		
Light Purple	5.5	2.2	С			
White	6.0	2.5	С	Shorter C		

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

### **Seed Storage**

Store seeds under dry and low temperature (approx. 5°C/40°F) condition. Storing seeds at room temperature (above 18°C/46°F) may result in very low germination.

### **Tips for cultivation**

- •Warm temperatures and long day conditions induce flowering.
- •Plug finish time is 5-6 weeks. During this time, optimal growing temperatures are
- •2-3 weeks after transplanting the flowering stems will start to elongate.
- •Short day conditions will induce rosetting. When plants have fewer than 5 true leaves, temperatures below approximately 15°C/60°F will also induce rosetting.
- •Under short day conditions, 4 hours of night interruption will help initiate and develop

# Dianthus

E chinacea

Eryngium

# Cannes<sup>TM</sup> series

Consolida spp.

Dark required 13-18°C/ 55-64°F 10-20 days 200-400 sd/g





• Cannes series is disease resistant when compared to the other varieties, with much reduced losses in production

- •Warm temperatures and long-day conditions induce flowering
- •For harvest in winter season under short-days and cold conditions, maintaining temperatures above 10-13°C/50-55°F at night and providing day-length extension of 4 to 6 hours encourages better stem elongation and flower development







flowering habit

FTD241

**Jianthus** 



FTD242







FTD255

# F1 Carousel<sup>TM</sup>

Dianthus barbatus











Plants need temperatures lower than 15°C/59°F for soft vernalisation

The plants have uniform masses of red

flowers on sturdy stems and a free-

stage (=pinch at 6th node). Leave

removing all other extra branches



# F1 First Love<sup>TM</sup>

### Dianthus hybrida

● 21-24°C/70-75°F ● 5-6 days ● 900-1.400 sd/g

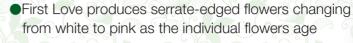












- Excellent continuous flowering habit until a hard freeze
- Thin but very sturdy spray-type stems are good performers as a cut flower as well as garden plant



# **Bravado**<sup>TM</sup>

100-120 cm 39-47 inches

### Echinacea purpurea

- 18-20°C/ 64-68°F
- 7-10 days
- 280-300 sd/g



- Olt is a first year flowering, hardy perennial plant
- •It normally blooms from summer to early autumn
- A particularly attractive garden plant, which attracts a lot of butterflies. It can be also used for cut flowers



It can be marketed as ornamental discs when petals are removed



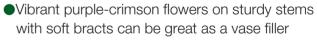
# Purple Sheen™

### Eryngium leavenworthii

- 20-25°C/ 68-77°F
- 12-20 days
- 600-1,000 sd/g







- •6-7 months from sowing to flower
- The plants prefer sunny and dry conditions







Jomphrena

# Jomphocarpus (Balloon Cottonbush)

# Audray™ series

Gomphrena globosa

● 22-25°C/72-77°F ● 10-12 days ● 300-500 sd/g





- Audray can be used both for fresh and dried arrangements
- •It is also an excellent tall garden plant that withstands hot and humid conditions



Bicolor Rose

Purple Red



FSE168



FSF173



Creative opportunities abound with Audray

# Hairy Balls<sup>TM</sup>

Gomphocarpus physocarpus

● 20-30°C/ 68-86°F ● 7-10 days ● 200 sd/g











- It also can be an attractive unique item for mixed bouquets
- ●12 hours day length is required for flower



# **F1** Sunrich™ series

● 20-25°C/ 68-77°F ● 3-4 days ● 15-26 sd/g





### 55-70 day type

- •The Sunrich series has superb quality and is maintaining its leading status in the Helianthus market
- Flowers of the Sunrich series are pollenless, long-lasting, densely petaled and have strong stems
- ●The series flowers in 55-70 days after sowing depending on growing conditions
- ●F1 Sunrich Orange DMR is the world's first downy mildew highly-resistant variety for ornamental Helianthus
- •With the introduction of F1 Sunrich Orange DMR, Helianthus production will be drastically changed. Growers have less to worry about when it comes to problems with downy mildew. This DMR breakthrough's added-value provides substantial benefits with high yield results and the reduction of chemical use
- •Resistant to multiple strains of downy mildew (plasmopara halstedii)
- •Plant height, growing speed as well as flower shape and colour are similar to F1 Sunrich Orange
- <Disclaimer>
- \*1. F1 Sunrich Orange DMR highly restricts the growth and development of the above stated pathogen and the damage they cause under normal pathogen pressure when compared to susceptible varieties. It may, however, exhibit some disease symptoms or damage under heavy pathogen pressure.















Orange DMR

### What is Downy Mildew (Plasmopara halstedii)?

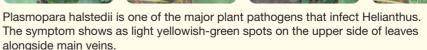












alongside main veins. It eventually grows and spreads to become a lesion, and on its underside light gray mold grows.

Severely infected plants will not have ornamental value.

The stems will not reach enough height and will not be good quality cut flowers.



Helianthus (Sunflower)

# F1 Sunrich Summer<sup>TM</sup> series

● 20-25°C/68-77°F ● 3-4 days ● 15-26 sd/g





### 50-65 day type

- Orange Summer DMR is newly introduced to our Sunrich Summer series. Plant height, growing speed as well as flower shape and colour are similar to F1 Sunrich Orange Summer
- •Limoncello Summer presents a stable bicolour of vibrant yellow transitioning to a light, creamy yellow at the tips. This uniqueness brings a great accent to the Helianthus market
- ●F1 Sunrich Orange Summer and Lemon Summer flower 5 to 10 days earlier than F1 Sunrich Orange and Lemon, but the flower shapes and colours are identical to Sunrich Orange and Lemon, respectively
- •Suitable for spring to summer cultivation with sowing and growing under longday conditions



Lemon Summer



Limoncello Summer



Orange Summer



Provence Summer



Orange Summer DMR

# F1 Premier<sup>TM</sup> series

Helianthus annuus

● 20-25°C/ 68-77°F ● 3-4 days ● 20-50 sd/g





### 45-55 day type

- Premier series is a nonbranching F1 hybrid pollenless Helianthus
- Premier is extra-early offering a very short crop time of approximately 45-55 days from sowing with excellent uniformity
- Sowing is recommended under long day conditions for early summer harvest to secure enough stem length Lemon







# **F1 Marley™**

● 20-25°C/ 68-77°F ● 3-4 days ● 15-28 sd/g









- Good plant height
- Genetically some colour variation





Helianthus annuus ● 20-25°C/ 68-77°F ● 3-4 days ● 15-28 sd/g





Compared to Marley,

- colour combination of yellow and brown
- less side-shooting
- 3-5 days late flowering
- Under warmer and strong light intensity condition, colour might be deeper
- Genetically some colour variation





Eustoma grandiflorum

Light required 15-20°C/ 59-68°F 20-25 days 900-1,200 pel/g

isianthus

(Eustoma)

# F1 Full Sun Improved™

### Helianthus annuus

● 20-25°C/ 68-77°F ● 4-6 days

● 16-20 sd/a



### 55-100 day type

- Olt can have sufficient stem length even under short-day conditions in the temperate climate area
- It is preferable to have 18°C/65°F at the lowest temperature for growth
- Depending on conditions such as low temperatures, the culture time can be even longer than the stated 55-100 days



# F1 Tiffany™

### Helianthus annuus

◆ 20-25°C/ 68-77°F ◆ 4-6 days ● 18-20 sd/a





### 60-80 day type

- Professional quality
- Round orange flowers with dark discs



### Takii's Helianthus Characteristics of the cut varieties

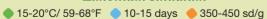
Variety	Petal	Disk	Days to bloom	Remark	
F1 Sunrich Orange DMR	Orange	Black		Downy mildew highly-resistant	
F1 Sunrich Orange	Orange	Black			
F1 Sunrich Lemon	Yellow	Black	55-70 days	The smaller standard in the sendent	
F1 Sunrich Gold	Orange	Green		The quality standard in the market	
F1 Sunrich Lime	Yellow	Green			
F1 Sunrich Orange Summer	Orange	Black	50-65 days	5-10 days earlier than Sunrich Orange	
F1 Sunrich Summer Orange DMR (NEW)	Orange	Black	50-65 days	Downy Mildew highly-resistance.	
F1 Sunrich Provence Summer	Deep Orange	Black			
F1 Sunrich Lemon Summer	Yellow	Black	50-65 days	5-10 days earlier than Sunrich Orange	
F1 Sunrich Limoncello Summer	Lemon with yellow base	Black			
F1 Premier Orange	Orange	Black			
F1 Premier Lemon	Yellow	Black	45-55 days	Extra-early varieties	
F1 Premier Light Yellow	Light Yellow	Black			
F1 Tiffany	Orange	Black	60-80 days	Round orange flowers with dark disks	
F1 Full Sun Improved	Dark Yellow	Black	55-100 days	Sufficient stem length even under short day conditions	
F1 Marley (NEW)	Cream/Purple bicolour	Black	45-70	Early flowering under short-day condition.	
F1 Ziggy (NEW)	Yellow/Brown bicolour	Black	45-70	Compare to Marley, 3-5 days late flowering.	

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

# Pastel Shades™

### Limonium sinuatum











- Pastel Shades is an early-flowering variety of Limonium (Statice)
- ●Long-lasting as a fresh cut flower, Pastel Shades is also excellent when used dried in arrangements





Flower Size | Flower Earliness | Flower Size | II~III\* | Large

into four groups according to earliness of flowering.

I : Early II: Middle

IV : Late

III: Mid-Late

- •Corelli has excellent large, double flowers with elegant fringed, curly petals
- Along with large flower buds it has an elegant yet playful appearance, and can create a classical ambience
- ●Top branching, superb for bouquet usage and excellent vase life





II Delft Blue







III Apricot





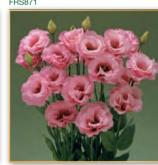
III Blue





III Light Pink





III Rose

### Variety Comparison among Corelli

	anoty companion among corom										
	Variety Name		er Size	Branching	Plant	Stem	Characteristic				
variety Name		cm	inch	Brancining	Height Height		Gildiacteristic				
	F1 Corelli II Delft Blue	8	3.2	Good	Medium	Normal	Unique marble colour with blue and white				
	F1 Corelli II Lavender (NEW)	8.5	3.4	Good	Short	Hard	Strong stable fringed flower. Deeper Lavender under cooler condition.				
	F1 Corelli II Light Lavender	NEW) 8	3.2	Good	Short	Normal	Strongest fringed petal within Corelli series.				
Double	F1 Corelli II Light Pink	8.5	3.4	Good	Medium	Very Hard	Stable flower colour and thick petals				
Flowered	F1 Corelli II White	8.5	3.4	Good	Medium	Hard	Large flower with stable fringed flower petals				
with fringed	F1 Corelli III Apricot	8.5	3.4	Good	Medium	Hard	Highest number of petal and stable doubleness within Corelli series				
	F1 Corelli III Blue	8.5	3.4	Good	Short	Normal	Easy to get single flower under high temperature				
	F1 Corelli III Light Pink	8.5	3.4	Good	Very Tall	Normal	Fringe is less compared to other colours in this series				
	F1 Corelli III Rose	8.0	3.2	Good	Tall	Very Hard	Thick petal with good transportability				

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

# F1 Arena™ series

Flower Earliness Flower Size

Eustoma grandiflorum

Light required 15-20°C/ 59-68°F 20-25 days 900-1,200 pel/g





- •Introducing new colours every year, the Arena series now totals 22 varieties, giving more choices for growers, florists and consumers
- •Selected for its high quality and fully double flowers on strong and sturdy stems
- Thick petals help transportability and large buds on the top increase the attractive character of the stems
- Arena III Pink may have less doubleness under high temperature conditions during flower bud formation stage









I Purple FRS897



I Pure White





FRS784

F1 Arena I Light Pink Imp.



II Light Pink





FRS781



Ill Apricot





III Blue Picotee FRS723



III Baby Pink



III Champagne



III Clear Pink FRS729



III Gold FRS732







F1 Arena III Clear Pink



III Purple



III Red



IV Rose



IV White

### **Variety Comparison among Arena**

	Variety Name	Flowe	er Size	Burnshine	Plant	Stem	Characteristic	
	variety Name		inch	Branching	Height	Strength	Gridiacteristic	
	F1 Arena I Light Pink Imp. (NEW)	8.0	3.2	Good	Short	Hard	More number of petals and eary flowering than Arena I Light Pi	
	F1 Arena I Purple (NEW)	8.5	3.4	Good	Medium	Hard	Easy to get long stem and good branching	
	F1 Arena I Pure White (NEW)	8	3.2	Good	Short	Hard	High stable doublenes. Very easy to grow.	
	F1 Arena I White (NEW)	7.5	3	Good	Tall	Normal	Good flower shape and easy to get long stem.	
	F1 Arena II Kilimanjaro	8.0	3.2	Excellent	Medium	Very Hard	Abundant flower under strong sunlight	
	F1 Arena II Light Pink	7.5	3.0	Good	Medium	Hard	Medium-size flowers with the colour like cherry blossoms	
	F1 Arena II Purple Picotee	8.0	3.2	Good	Short	Normal	Picotee edge is vivid and stable	
	F1 Arena II White	8.0	3.2	Good	Medium	Very Hard	Excellent flower shape, Strong stem	
	F1 Arena III Apricot	8.0	3.2	Good	Tall	Hard	Unique colour of flower	
	F1 Arena III Baby Pink	8.0	3.2	Good	Medium	Hard	Wavy, thick petals with good transportability	
	F1 Arena III Blue Picotee	7.5	3.0	Good	Tall	Very Hard	Thick petal and top flowering type	
Double	F1 Arena III Champagne	8.0	3.2	Good	Medium	Hard	Large flowers with many petals	
Flowered	F1 Arena III Clear Pink (NEW)	8.0	3.2	Good	Tall	Hard	Flower buds shape is like peony.	
	F1 Arena III Gold	8.0	3.2	Good	Tall	Hard	High performance with its yellow gold flower	
	F1 Arena III Green	7.5	3.0	Excellent	Medium	Hard	Nice thick flower petal, good sturdy stem	
	F1 Arena III Hot Pink	8.5	3.4	Good	Tall	Hard	Deep Pink. Stable doubleness under high temperature	
	F1 Arena III Pink	8.0	3.2	Good	Tall	Hard	Bright pink under fluorescent light	
	F1 Arena III Pink Flash	8.0	3.2	Good	Tall	Very Hard	Sturdy stem with high quality flower	
	F1 Arena III Purple	7.0	2.8	Good	Medium	Hard	Curly, thick petals with deep purple colour	
	F1 Arena III Red	6.0	2.4	Good	Tall	Hard	Vivid red, Unusual colour for Eustoma	
	F1 Arena IV Rose	7.0	2.8	Good	Very Tall	Very Hard	Suitable for season when it gets difficult to secure enough stem length	
	F1 Arena IV White	8.0	3.2	Good	Very Tall	Very Hard	Long stems suitable for cultivation under high temperature and strong light intensity	

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

# F1 Croma<sup>TM</sup> series

Eustoma grandiflorum

Light required 15-20°C/59-68°F 20-25 days 900-1,200 pel/g





- Croma has excellent rose-like flowers
- •Croma's thick, strong petals and extra-double flowers set it apart as a premium variety. Due to the strength of the flowers and stems, it is well suited for cold chain shipping.
- •Croma is attractive to florists with its versatility in arrangements along with its high consumer appeal
- •IV Lavender Imp is later flowering and with higher plant height than IV Lavender





F1 Croma II Champagne





III Blue Picotee Imp.



III Green





III Pink Picotee



III Pink Picotee Imp.





III Silky White





III Yellow



IV Lavender





### **Variety Comparison among Croma**

	Variety Name		er Size	Dyonobina	Plant	Stem	Characteristic
			inch	Branching	Height	Strength	Characteristic
	F1 Croma II Champagne (NEW)	6.0	2.4	Good	Medium	Normal	Stable flower colour under cold condition.
	F1 Croma III Blue Picotee	6.0	2.4	Excellent	Medium	Hard	Stable Picotee, high doubleness, top flowering
	F1 Croma III Blue Picotee Imp.(NEW)	6.0	2.4	Good	Tall	Hard	Stable picotee under high temperature conditon.
	F1 Croma III Green	6.0	2.4	Excellent	Tall	Normal	Slow growth at early stage, but vigorous growth at later stage
	F1 Croma III Pink Picotee	7.0	2.8	Good	Medium	Normal	Larger with more open flower shape within Croma series
	F1 Croma III Pink Picotee Imp. (NEW)	7.0	2.8	Good	Medium	Very Hard	Stable picotee even under cold condition.
	F1 Croma III Silky White	7.0	2.8	Good	Medium	Hard	Pure white. More open flower shape compared to Croma III White
	F1 Croma III White	7.0	2.8	Good	Medium	Hard	Rosy flower, Excellent performance, Nice shape flower with good doubleness
	F1 Croma III Yellow	6.0	2.4	Good	Tall	Hard	High doubleness
	F1 Croma IV Lavender	6.0	2.4	Excellent	Short	Very Hard	Late variety, Very hard stem
	F1 Croma IV Lavender Imp	7.0	2.8	Excellent	Medium	Very Hard	Taller, larger flower than Croma IV Lavender

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

# F1 Jolly<sup>IM</sup> III Pink

Eustoma grandiflorum

Light required 15-20°C/59-68°F 20-25 days 900-1200 pel/g





- •Plants produce an abundance of petite flowers with long vase life
- Very vigorous plant habit with very strong stem and flower petals

Vari	oty Namo	Flowe	r Size	Branching	Plant	
Variety Name		cm	inch	Brancing	Height	
Double Flowered Jolly III Pink		6.0	2.4	Excellent	Tall	
			em ngth	Characteristic		
		Very	Hard	Many flowers and vigorous plant habit.		



isianthus

(Eustoma

- Super Magic is a double flowered mid-early series
- Top flowering habit with large sized flowers
- The wide colour assortment, including spectacular colours of Apricot and Champagne, provides a complete range for professional growers



F1 Super Magic™ series

Eustoma grandiflorum

Light required 15-18°C/59-64°F 20-25 days 700-1,200 pel/g













Pure White



Champagne

White

FRSG79 (FRS138)



Yellow

### Takii's Lisianthus flowering earliness

I, II, III, IV, according to earliness of flowering.									
	Ш	III	IV						
Early-Middle	Middle	Middle-Late	Late						
Arena I	Arena II	Arena III	Arena IV						
Croma I	Croma II	Croma III	Croma IV						
	Corelli II	Corelli III							
Super	Magic								
	Advantage								
	Vulcan II								
	Falda II								

# F1 Vulcan™ II Blue Picotee

Eustoma grandiflorum

Light required 15-20°C/59-68°F 20-25 days 900-1,200 pel/g



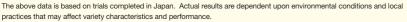




● The thick flower petals of Vulcan increase its transportability

•Vulcan II Blue Picotee presents a more uniform blue rim when compared to other blue picotee Lisianthus

Variety Name		Flower Size		Branching	Plant	Stem	Characteristic	
	variety (varie		inch		Height	Strength		
Single Flowered	F1 Vulcan II Blue Picotee	4.5	1.8	Excellent	Middle	Very Hard	Thick petal, top flowering	





# F1 Advantage™ series

### Eustoma grandiflorum

Light required 15-18°C/59-64°F 20-25 days 700-1,200 pel/g



- Middle flowering, fully double large flower
- •Thicker and stronger stems are more suitable for production under high temperature and long day conditions





Cherry Sorbet







# F1 Falda™ series

Flower Earliness	Flow
H*	М

SS	Flower Size	
	Middle	* See page 77

### Eustoma grandiflorum

Light required • 15-20°C/59-68°F • 20-25 days • 900-1,200 pel/g





- Gorgeous with its fringed single petals
- Abundant flowers on each stem
- •Uniqueness attracts florists, driving new ideas for bouquet arrangements
- Fringed flower makes voluminous bouquet, especially when many flowers are used in one vase

Thick flower petals and sturdy stems make for good transportability



II Light Apricot



II Salmon FRS672

Variety Comparison among Falda

variety C	variety Comparison among raida										
	Variety Name	Flow	er Size	Branching	Plant	Stem	Characteristic				
	Variety Name		cm inch	branching	Height	Strength	Characteristic				
Single	F1 Falda II Light Apricot	5.0	2.0	Good	Medium	Hard	Nice colour, Gorgeous in bouquet				
Flowered	F1 Falda II Salmon	5.0	2.0	Good	Medium	Hard	Unique colour, Thick petal				

The above data is based on trials completed in Japan. Actual results are dependent upon environmental conditions and local practices that may affect variety characteristics and performance.

Matthiola (Stock)

### High double type

Average of 90% double-flowering type

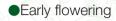
# Canneto White<sup>TM</sup>

Dark required 18-21°C/64-70°F 4-5 days 480-600 sd/g









- Approximately 7 to 10 days later than Noble series
- Dense flower spike with sturdy stem
- Hairy-leaved type





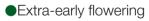
# Noble™ series

### Matthiola incana

Dark required 18-21°C/ 64-70°F 4-5 days 400-600 sd/g







- ●The full doubleness of Noble is breathtaking
- Closely arranged florets make a massive display on a sturdy stem
- Uniform growth makes Noble the grower's choice
- Hairy-leaved type



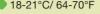


### Selectable type

· Seedlings are selectable for doubleness

# Glory™ series

Dark required 18-21°C/ 64-70°F 4-5 days 500-700 sd/g













80-95 cm 32-37 inches

- •Glory series is an improvement over the Xmas series
- Uniform blooms are produced on straight and sturdy stems
- Doubles can be identified by cotyledon colour (See page 37)















# Xmas™ series

### Matthiola incana









- •The non-branching gray-green leaved series produces a mass of blooms
- •Xmas can be grown both in unheated glasshouses as well as outdoor field production
- Doubles can be identified by cotyledon colour (See page 37)













Zinnia

## Virgo<sup>TM</sup> Tanacetum parthenium

Light required 15-20°C/59-68°F 3-5 days 6,500-7,000 sd/g



- Straight and stiff stem
- Excellent filler for mixed bouquets
- ●Virgo can be grown year round under 13-15°C/ 55-60°F with long-day conditions



# F1 Sun™ series

Zinnia elegans

◆ 20-22°C/ 68-72°F ◆ 5-6 days ◆ 100-150 sd/g





- This series produces masses of large, fully double flowers
- Sun series blooms 60-70 days after sowing





RR

# **Terms and Conditions of Sale**

### 1. DELIVERY

Unless otherwise agreed in advance, seller will endeavour to deliver the goods by the way which seller deems to be best. The seller will not take responsibility for any delay or loss after the goods have left seller's warehouse or stock depot.

### 2. USE OF SEED

All the seed is sold for the purpose of horticultural and/or agricultural crop only. It is expressly forbidden to use the seeds for multiplication or reproduction purposes.

No responsibility whatsoever, will be accepted for any seeds reproduced.

### 3. DELIVERY DUTY

Advanced orders for the seeds where seed crops have not yet been received by the seller are booked subject to the restriction of an average yield of standard germinating seeds and quality standards. Should the yield be lower than average, the seller has the right to deliver pro rata or will be dismissed from his delivery duty in case of total crop failure.

### 4. PROPERTY RIGHT

The seller remains an owner of the goods until the time full payment has been made.

### 5. COMPLAINTS

Any clams for quantity and appearance of seeds shall be submitted within 6 working days from the receipt of the seeds.

Any claims for the contents of invoice shall be submitted within 6 working days from the receipt of the seeds.

Any claims for germination and physical purity have to be submitted within 30 days from the receipt of the seeds. Complaints about varietal purity of the seeds supplied must be made as soon as possible, in any case, at the point of time that the crop can still be examined in the field by both parties.

No complaint can be considered unless clear proof can be given that the seed grown and alleged to have performed unsatisfactory was in fact the seed supplied by the seller and that it was sown on suitably prepared ground, including soil and any type of growing medium, treated carefully and correctly throughout and subject only to such conditions as were likely to produce a favorable crop.

### 6. NON PAYMENT

The seller reserves the right to withhold deliveries until all and any outstanding payments have been received and reserve a lien upon and the right to sell or otherwise dispose of all the goods for which payments have not been made.

If the buyer does not make full payment within a period agreed upon, an interest is charged at 1.5% per month.

### 7. SOLVENCY

Condition for the delivery duty is that the buyer has an unconditional solvency. If the seller receives before shipment, any information from a bank, credit office or any other reliable source which leads the seller to believe the buyer's solvency is at risk, the seller has the right to demand security for payment or to cancel the shipment.

### 8. LATENT DEFECT

Diseases of plants can be transmitted by the wind, insects, animals or by humans and may be seed borne or soil borne. It is not a condition of sale nor do we warrant that any seed sold by the seller shall be free from such a deficiency and the seller will not be responsible in any way for the resultant crop.

### 9. FORCE MAJEURE

The seller shall not be responsible for any delay of goods or any part thereof, caused by any act of God, action by any government, strike, lockout, combination of workers, riot or civil commotion, breakdown of machinery, power failure, fire, crop failures grown by the seller or on the seller's behalf and/or any other contingency beyond the control of the seller.

### 10. INSURANCE

Unless otherwise agreed upon in advance, the seller will insure the goods, at the cost of the buyer, for the damage in the transportation under the seller's open policy.

### 11. PRODUCT DESCRIPTIONS

Descriptions, illustrations and/or photographs shown in catalogues, leaflets and/or any other documents are based upon the results obtained under favorable conditions. Identical results are not guaranteed nor implied for all growing conditions.

### 12. DISEASE AND/OR PEST RESISTANCE

Resistance and susceptibility claimed by the seller in the descriptions of the varieties are based upon the results obtained under conditions and with strains (races) of pathogens available in Japan. The seller does not guarantee identical results when the seeds are grown under different conditions.

### 13. OTHER CONDITIONS

Conditions not stipulated in the terms and conditions of sale are subject to the International Seed Federation (ISF) Rules and Usages for the Trade in Seeds for Sowing Purpose.

### Limitation of Liability

All seeds we sell are properly cleaned, dried and graded up to our international standard, and the germination and purity are tested at our laboratory before the shipment, and data of the test will be furnished when so asked.

However, in view of the nature of merchandise and in accordance with universal custom of the seed trade, WE HAVE NO WARRANTY OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHER WARRANTY, EXPRESS OR IMPLIED.

No claim or liability shall be asserted unless the buyer or user shall have reported within a reasonable period as stipulated in clause-5 "Complaints" of terms and conditions of sale.

OUR LIABILITY IS LIMITED IN AMOUNT TO THE PURCHASE PRICE OF THE SEEDS, WHETHER ARISING FROM CONTRACT, NEGLIGENCE, WARRANTY, OR ANY OTHER CAUSE.

WE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

