

Transferable Technology Developed

Various technologies developed under AICRP on Floriculture in different crops by SKUAST-Kashmir centre till date and their dissemination to the farmers field are as under:

1. Gladiolus

a) Post harvest management

- **Wet storage:** In postharvest management of gladiolus cv. White Prosperity, with shorter duration of 0, 3, 6 and 9 days associated with tight bud stage of harvesting, the cut spikes proved best for maintaining the keeping quality of the flowers.
- **Dry refrigerated storage:** In dry refrigerated storage, cut gladiolus spikes cv. White Prosperity given pre-storage pulsing treatment with Sucrose 20% + $Al_2(SO_4)_3$ 300 ppm] and shorter storage levels of 0, 7 and 14 days, proved best in enhancing the vase life and maintaining the keeping quality than longer durations (21 and 28 days).
- **Varietal response to storage:** Gladiolus varieties (White Prosperity, Priscilla and Sanceree) when tested in storage durations (0, 6, 12 and 18 days), and harvested at stage II (when 5-6 florets showed colour) proved best in shorter durations of 0, 6, and 12 days than longer one i.e. 18 days.

a) Production technology

- **Weed control:** Six weeds viz., *Sorghum halepenses*, *Amaranthus viridis*, *Chenopodium album*, *Cruidus pulvestries*, *Verbesium* and *Cynodon dactylon* were identified in farm of gladiolus field. Weedicides viz Areizin, Metribuzin, Butachlor, Pendimethlin were used for controlling above weeds . Among these Pendimethalin used either @ 0.75 kg a.i/ha or 1.0 kg a.i /ha proved to be most effective controlling weeds. Metribuzin and butachlor had detrimental effect on the crop, though exhibited little

influence on weeds as on cooperative basis.

2. Liliium

a) Post harvest management

- **Post harvest management of Liliium:** Vase solution containing 2% sucrose + 200 ppm 8-HQC+200 ppm GA₃ was found promising for post harvest life of liliium.

3. Tulip

a) Post harvest management

- **Pulsing/ holding trials:** In post harvest studies of cut tulips cv. Apeldoorn pulsing and holding solutions were standardized for improving the quality and longevity of the cut scapes. The best pulsing solution was Sucrose (4%)+ Al₂(SO₄) 3-300 ppm followed by Sucrose (4%) + Silver thiosulphate 2mM and the best holding solution for keeping quality of cut tulips scapes was Sucrose (2%)+ STS 2mM followed by Sucrose (2%) + citric acid 300 pp

4. Daffodils

a) Post harvest management

- **Pulsing/ holding trials:** Regarding the post harvest technology of daffodils, pulsing and holding solutions were standardized for improving the keeping quality of daffodil cut Spathes cv. Tunis. In pulsing trial, the best treatment was STS 2mM followed by Al₂(SO₄) 3-300 ppm alone or with Sucrose 4% in combination and in holding experiment two solutions viz., STS 50 ppm and Al₂(SO₄)₃ -300 ppm alone (without Sucrose 2% in combinations) proved best for enhancing the keeping quality of cut daffodil scapes. Sucrose 2% alone or in combination with any chemical didn't influence much in improving the quality of cut daffodils.

VIIb. Breeding and testing of new varieties

In its programme of enrichment and assessment of germplasm of six crops viz; gladiolus, chrysanthemum, Tulip, Daffodils, Lilium and Alstroemeria at the AICRP on Floriculture centre, SKUAST-K, following varieties are recommended for commercial cultivation in region.

VIIIb1. Gladiolus

- **For cut flowers:** Amesterdom, Apple Blossom, Big Time Supreme, Eurovision, Jaskson Villa Gold, Jester, Jester Gold, Mescagami, Moralla, Oscar, Peter Pears, Priscilla, Rattna's Butterfly, Rose and Wine, Rose Delight, Rose Supreme, Sanceree, SKG-10, Sunset Jubilee, Traderhorn, Vink's Glory, Water Melon Pink, White Friendship, White Giant, White Goddess, White Prosperity, Wind Song, Yellow Stone.

White Giant

Days to sprout 33.20
 Spike length (90.15cm)
 No. of florets 16.10
 Fluorite size (9cm)
 No. of florets open at a time 3.33
 No. of corms/plant 1.20
 Vase life 8days

Yellow Stone

Days to sprout 34.10
 Spike length 90.10(cm)
 No. of florets 15.30
 Fluorite size (8.10cm)
 No. of florets open at a time 2.80
 No. of corms/plant 1.40
 Vase life 8 days

White Prosperity

Days to sprout 36.12
 Spike length 92.10(cm)
 No. of florets 17
 Fluorite size (9cm)
 No. of florets open at a time 4
 No. of corm/plant 12.10
 Vase life 9.10

Eurovision

Days to sprout 35.15
 Spike length 87.30(cm)
 No. of florets 15.80
 Fluorite size (8.30cm)
 No. of florets open at a time 3.33
 No. of corm/plant 2.14
 Vase life 8.20 days

Oscar

Days to sprout 32.20
 Spike length 86.80(cm)

Punjab Selection

Days to sprout 33.70
 Spike length (80.50cm)

No. of florets 15.60
 Fluorite size (7.30cm)
 No. of florets open at a time 4.10
 No. of corm/plant 2.16
 Vase life 9 days

No. of florets 14.30
 Fluorite size (8cm)
 No. of florets open at a time 3.14
 No. of corm/plant 1.40
 Vase life 7 days

Traderhorn

Days to sprout 34.10
 Spike length (90cm)
 No. of florets 16.80
 Fluorite size (8.50cm)
 No. of florets open at a time 4
 No. of corms/plant 2.15
 Vase life 9 days

Moralla

Days to sprout 31.16
 Spike length 90.20(cm)
 No. of florets 17
 Fluorite size (8.20cm)
 No. of florets open at a time
 No. of corms/plant 2.16
 Vase life 8.30

Purple King

Days to sprout 30.14
 Spike length (85.60cm)
 No. of florets 24.20
 Fluorite size (8.10cm)
 No. of florets open at a time 3.30
 No. of corms/plant 2.16
 Vase life 7.90 days

Pusa Suhagin

Days to sprout 35.20
 Spike length (88.70cm)
 No. of florets 16
 Fluorite size (9cm)
 No. of florets open at a time 3
 No. of corms/plant 2.15
 Vase life 8.8 days

Regency

Days to sprout 30.15
 Spike length (90cm)
 No. of florets 17
 Fluorite size (9.10cm)
 No. of florets open at a time 3.16
 No. of corms/plant 2.10
 Vase life 8.10

Buff Beauty

Days to sprout 35.10
 Spike length (84.10cm)
 No. of florets 15
 Fluorite size 7.10(cm)
 No. of florets open at a time 3
 No. of corms/plant 2.20
 Vase life 8.24

Following are the hybrids under gladiolus development for release and testing

Table: List of gladiolus hybrids under testing and release

S. No	Hybrids
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1. White Goddess x Rose Delight
 2. White Prosperity x Her Majesty
 3. White Prosperity x Rose Supreme
 4. White Prosperity x Big Time Supreme
 5. White Prosperity x Apple Blossom
 6. White Prosperity x White Friendship
 7. Priscilla x Princess Margaret Rose
 8. Friendship white x White prosperity
 9. White Prosperity x Princess Margat Rose
 10. White Prosperity x Peter Pears
 11. White Prosperity x Red Majesty
 12. Priscilla x Big Time Supreme
 13. Priscilla x Her Majesty
 14. Priscilla x Rose Delight
 15. Fidelo x Peter Pears
 16. Priscilla x Apple Blossom
 17. Fidelo x Big Time Supreme
 18. Traderhorn x White Prosperity
 19. Amsterdam x Rose Delight
 20. White Prosperity x Fidelo
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Hybrid varieties

(Traderhorn x White Prosperity)(SKG1)

Days to sprout 32.15
 Spike length (90.10cm)
 No. of florets 17.10
 Fluorite size (9.cm)
 No. of florets open at a time 3.12
 No. of cormels/plant
 Vase life 8.10

(White Prosperity x Red Majesty) (SKG2)

Days to sprout 30.
 Spike length (90 10cm)
 No. of florets 17.05
 Fluorite size (9.10cm)
 No. of florets open at a time 3
 No. of cormels/plant
 Vase life 9.10

(Amsterdam x Rose Delight) SKG3)

Days to sprout 33.10

(Priscilla x Big Time Supreme) SKG4)

Days to sprout 33.15

Spike length (89.10cm)
No. of florets16.20
Fluorite size (9.10cm)
No. of florets open at a time3.08
No. of corms/plant2
Vase life 8.40

Spike length (980cm)
No. of florets16.18
Fluorite size (9.m)
No. of florets open at a time3.40
No. of corms/plant2.30
Vase life 8.10

(White Prosperity x Rose Supreme) SKG5)

Days to sprout 34.10
Spike length (92cm)
No. of florets17.20
Fluorite size (9.50cm)
No. of florets open at a time 3.
No. of corms/plant 2.15
Vase life8.10

(White Prosperity x Big Time Supreme) SKG6)

Days to sprout 34.72
Spike length (90.10cm)
No. of florets16.32
Fluorite size (8.10cm)
No. of florets open at a time 3.20
No. of corms/plant 2.20
Vase life7.30

(Priscilla x Her Majesty) SKG7)

Days to sprout 35.20
Spike length (88cm)
No. of florets14.30
Fluorite size (9.12cm)
No. of florets open at a time 3.20
No. of corms/plant2.10
Vase life 8.

(Priscilla x Rose Delight) SKG8)

Days to sprout 35.15
Spike length (90cm)
No. of florets14
Fluorite size (9.10cm)
No. of florets open at a time 3
No. of corms/plant 2.10
Vase life 8.20

(Fidelo x Peter Pears) SKG9)

Days to sprout 35.10
Spike length (90.10cm)
No. of florets15
Fluorite size 8.20(cm)
No. of florets open at a time 2.16
No. of corms/plant2.40
Vase life9.10

(White Prosperity x Apple Blossom) SKG10)

Days to sprout 30.16
Spike length (84cm)
No. of florets
Fluorite size (cm)
No. of florets open at a time
No. of corms/plant2.15
Vase life8.30

(White Prosperity x White Friendship)
SKG11)

Days to sprout 34.16
Spike length (88cm)
No. of florets16.12

(Priscilla x Apple Blossom) SKG12)

Days to sprout 30.20
Spike length (90.10cm)
No. of florets17.12

Fluorite size (9.14cm)
No. of florets open at a time3.30
No. of corms/plant2.15
Vase life 8.40

Fluorite size (9.cm)
No. of florets open at a time3.14
No. of corms/plant2.20
Vase life 8

(Priscilla x Princess Margaret Rose) SKG13)

(Fidelo x Big Time Supreme) SKG14)

Days to sprout37.10
Spike length (88.30cm)
No. of florets14.40
Fluorite size (7.90cm)
No. of florets open at a time2.90
No. of corms/plant2.18
Vase life8.12

Days to sprout34.14
Spike length (90cm)
No. of florets16
Fluorite size (8.90cm)
No. of florets open at a time3
No. of corms/plant2
Vase life8.30

(Friendship white x White prosperity)
SKG15)

(White Goddess x Rose Delight) SKG16)

Days to sprout 34.15
Spike length (90.20cm)
No. of florets17.18
Fluorite size (9.10cm)
No. of florets open at a time3.10
No. of corms/plant2.10
Vase life 9.10

Days to sprout 30.50
Spike length (89cm)
No. of florets16.14
Fluorite size (9.10cm)
No. of florets open at a time3
No. of corms/plant2.16
Vase life 8.10

(White Prosperity x Fidelo) SKG17)

(White Prosperity x Her Majesty) SKG18)

Days to sprout36.15
Spike length (86.15cm)
No. of florets16
Fluorite size (9.10cm)
No. of florets open at a time
No. of corms/plant2.16
Vase life8.30

Days to sprout33.18
Spike length (78.10cm)
No. of florets14
Fluorite size (7cm)
No. of florets open at a time3
No. of corms/plant1.5
Vase life6

(White Prosperity x Peter Pears) SKG19)

(White Prosperity x Princess Margat Rose)
SKG20)

Days to sprout 36.15
Spike length (90cm)
No. of florets17.22
Fluorite size (9cm)
No. of florets open at a time3.20
No. of corms/plant2.10
Vase life 8.

Days to sprout 36.18
Spike length (80cm)
No. of florets16
Fluorite size (8.10cm)
No. of florets open at a time3
No. of corms/plant2.20
Vase life 8.30

VIIIb2. Chrysanthemum

- **For pot culture:** Arun Kumar, Arun Singar, Hemant Singar, Local White, Panchoo, Peet Singar, Sharad Singar, Sweta Singar.
- **For cut flower:** Alison, Apsara, Baggi, Basanti, Davidson, Donald, Flirt, Pink Cloud, Raja, Vinaya, C-25, C-38, C-68 and C-136 .
- **For Garland making:** Apsara, Aparajita, Kundon, Khusroo, Lilliput, Nanako, Phyllies, Vasantika, C-122, C-125, C-147 and C-156.
- **For garden decoration:** Aparajita, Bett, Dora, Fish Tail, Local yellow, Red Gold, White Quills, C-115, C-131 and C-136.

VIIIb3. Tulip

- **For cut flower:** Abba, Apledoorn, Ballerian, Cassini, Golden Melody, Inzell Lucky Stricke, Parade and Purrissima.
- **For garden decoration:** Cassini, Beethoven's Memory, Cantala, and Golden Melody

Apledoorn

Golden Melody

Inzell

Cassini

VIIIb4. Daffodils

- **For cut flower :** Vansion, Wrestler, N-23, White Well, Golden Pedestal N-26, N-31, N-22 and Tunis
- **For pot culture :** Scilly White, N-25, N-30 and Texas

Tunis

Vansion

Golden Pedestal

N-25

VIIb5. Liliu

- **For cut flower:** London, Merced Pollyanna, Royalttrinity, Monorca, Brindsi, Courier, DreamLand, Novocenta and Elite.

Brindsi

Royal trinity

Dreamland

Courier

VIIb6. Alstroemeria

- **For cut flower:** Allaha Din and No. 14
- **For pot culture:** Pluto, Serina and Rina.

Allaha Din

No. 14

Pluto

Rina

Allaha Din

No. 14

I. Natural drying

Flower drying

Native ornamentals subjected to natural drying were *Achillea Mellifolia*, *Luniaria* ssp. *Spirea Prcnifolia*, *Helichrysam baracteatum* and *Hydrangea* spp. These dried ornamentals are the best promising for interior decoration, floral arrangements for display in vases.

II. Microwave oven drying

A microwave power of 750 watts, time of 4 minutes and setting time of 120 minutes was found best for drying of herbaceous peony