



Floriconnect

Newsletter of the Indian Society of Ornamental Horticulture

Volume 1, No. 2

January - February 2007

In this Issue

Message	1
National Symposium	1
Inaugural Issue of Floriconnect Released	3
Dr. B.P. Pal Birth Centenary Year Celebrations	4
Indian floriculture	6
A New Cut Flower in the Horizon	7
Trends from the Flower Council of Holland	7
Executive Council, 2006-2007	8



Message

The slight delay in the publication of the second issue of **Floriconnect** the Society Newsletter should not be taken as reduced enthusiasm after the initial burst of energy. Several reasons contributed to the delay in bringing to you this copy. Everyone at the release of the Newsletter, as well as many members later wrote to congratulate us on this new initiative, but no one sent any contributions. I had to depend on our colleague Dr. Prasad for developing the content for the present issue also. Hope the members will find time and help us with material for the future issues. We have failed to rope in anyone to sponsor this issue. It took us sometime to decide to go ahead with its publication at our cost.



N.K. Dadlani
Secretary

The Society organized a National Symposium during December 2006. A report on this major activity appears in this issue. The Symposium was well attended and we had members from north, south, east and west participating in this Symposium. Members appreciated the idea of organizing focused meetings on crop groups or specific subjects. This will facilitate organized developmental planning for the sector. Hope we are able to organize more of such events in the coming months.

We continue with information and news on what is new in floriculture and the growth of this sector in the Newsletter. Your suggestions, on what should constitute the core of the Newsletter to improve its meaningfulness to all of us, are welcome.

Enjoy your Newsletter and stay connected.

N.K. Dadlani

National Symposium on Ornamental Bulbous Crops

The Indian Society of Ornamental Horticulture (ISOH) in collaboration with Sardar Vallabh Bhai Patel University of Agriculture and Technology (SVBPUAT) organized a "National Symposium on Ornamental Bulbous Crops" on 5-6 December 2006 at Modipuram (Meerut). More than 160 scientists, researchers, floriculturists, nurserymen, industry and farmers, from all over the country participated in the Symposium.

The two day Symposium was inaugurated by Dr. M.L. Choudhary, Horticulture Commissioner, Government of India. Dr. M.P. Yadav,



Dr. P.L. Saroj, Organising Secretary welcoming the guests & participants. Seated (R-L) are A.P.S. Gill, President, ISOH, Chief Guest, Dr. M.L. Choudhary; Dr. M.P. Yadav, Vice Chancellor, SVPUAT, Dr S.C. Sirohi; Patron; Dr. N.K. Dadlani, Secretary, ISOH and Dr. K.P. Singh, Jt. Organising Secretary

Vice Chancellor, SVBPUAT presided over the Inaugural Function. The Inaugural Function began with a welcome by the Organising Secretary Dr.P.L.Saroj. After the Introductory Remarks by the President, ISOH Dr.A.P.S.Gill, a keynote presentation entitled '*Beyond the obvious*' was made by Dr.N.K.Dadlani.

The Chief Guest Dr. Choudhary released a '*Souvenir*' containing invited articles on topical subjects; and the '*Book of Abstracts*' before delivering his Inaugural Address. The Presidential Address by Dr.M.P.Yadav, was followed by the Vote of Thanks by Dr.K.P.Singh, Joint Organising Secretary.



Chief Guest Dr. M.L. Choudhary releasing the Souvenir published for the symposium

A small Exhibition was also organized at the Symposium. Several growers of the region displayed their produce, which was much appreciated by the Chief Guest Dr.Choudhary, who inaugurated the exhibition. In addition, a small exhibition of flower arrangements was also



Dr. Choudhary inaugurating the exhibition

organized at the Symposium.

The Symposium deliberations were structured to include five technical sessions, in which leading floriculture experts made their presentations. The Sessions covered:

Session I: Genetic Diversity & Crop Improvement (Chair: Dr.R.L.Misra, New Delhi; Co Chair: Dr.Ramesh Kumar, Ludhiana)

Session II: Production Technology (Chair: Dr.R.C.Upadhyay, Gangtok; Co Chair: Dr.B.K.Dhaduk, Navsari)

Session III: Integrated Pest Management (Chair: Dr.N.Ramachandran, Bangalore; Co Chair: Dr.Y.C.Gupta, Solan)

Session IV: Post Harvest Technology (Chair: Dr.S.P.S. Raghava, Gaziabad; Co Chair: Dr.J.Biswas, Kalyani)

Session V: Commercial Prospects and New Advancements (Chair: Dr.N.K.Dadlani, New Delhi; Co Chair: Dr.S.K.Datta, Lucknow).

Dr.I.P.Singh, Director of Research, SVBPUAT, chaired the Plenary Session, where based on the recommendations of the five sessions, presented by the respective Chair / Co Chair, the Symposium recommendations as given below were finalized.



Dr. I.P. Singh, Director Research, SVBPUAT addressing the Plenary Session of the Symposium

Recommendations

- Focus should be on breeding cut flower varieties, as against the garden varieties as was followed earlier.
- Area specific production technology for new crops like lillium, alstroemeria, zantedeschia, spider lily, etc. needs to be standardized.
- Estimation of cost benefit ratio would help in planning crop diversification with bulbous ornamentals.
- Improved access to low cost planting material is necessary to promote production of bulbous ornamentals.
- SAUs and KVKs should prepare special modules for training of farmers in commercial floriculture and recommend basic package of practices including information on growing bulbous ornamentals as part of the prevalent cropping systems in the area.
- Environment friendly measures for crop protection like use of biological agents and biopesticides should be promoted.
- Improved access to virus free planting material should be facilitated through testing at the facilities available at IIHR, Bangalore; IARI, New Delhi; IHBT, Palampur etc.

- h. Research on technology for organic production of flowers should be intensified for meeting the growing demand for such products in the global markets.
- i. Development of low cost flower food, based on the information generated is recommended.
- j. More work on modified storage methods should be initiated.
- k. Standards for cut flowers for domestic markets should be developed.
- l. Molecular aspects of flower senescence should be studied.

The Society also organized a Poster Presentation Competition for the papers submitted for the Symposium, but not selected for oral presentation. All the posters presented were judged by a panel of experts and the best three posters in different sessions were awarded prizes. The best posters in different sessions were:

Session I: 'Multidimensional research on *Hippeastrum*: an excellent bulbous ornamental at NBRI, Lucknow' (S.K.Datta, V.N.Gupta & D. Chakrabarty)

Session II: 'Studies on induction of early flowering in

tuberosa under low plastic tunnels' (Krishan P. Singh & M.C.Singh)

Session III: 'Population dynamics of reniform nematodes on seven varieties of tuberose, *Polianthes tuberosa* L. (Gautam Chawla, Krishan P.Singh & A.N.Srivastava).

Session IV: 'Post harvest technique protocol for extending storage, flower quality and vase life of gladiolus cut spikes' (Alka Singh, Jitendra Kumar & Pushpendra Kumar).

Session V: 'Status of floriculture and flori-business in Goa' (K.Ramachandrandrudu & Rahul Kulkarni).

A Cultural Programme was also organized on the first evening, where students of the University, besides a few invited artists from outside, presented songs, dances and skits, which were enjoyed by the Symposium delegates and others. Dr. M.P.Yadav, VC, SVBPUAT accompanied by his wife and Dr.N.K.Dadlani, Secretary, ISOH were Guests of Honour at the cultural evening.

The Society also released a 'Year Planner' at the Symposium. This Year Planner, sponsored by KF Bioplants, Pune, was distributed among the Symposium delegates.

Inaugural Issue of Floriconnect Released

The Inaugural Issue of 'Floriconnect' – the Society Newsletter (Vol. 1 No. 1; November – December 2006) was released by **Prof.V.L.Chopra**, Member, Planning Commission, Government of India, on 9 November 2006 at IARI, New Delhi. The Newsletter was released during the 'Brainstorming Session on Protection of Plant Varieties and Farmers' Rights: Issues and Priorities in Ornamental Crops' organized by Division of Floriculture & Landscaping, IARI, New Delhi.

Copies of the Newsletter were distributed among the participants of the Brainstorming Session, as well as the 'National Symposium on Ornamental Bulbous Crops' organized by the Society at Modipuram in December 2006. Copies were also sent by post to all the members of the Society. If any member has not received his copy, another one can be obtained from the Society Secretariat.



Prof. V.L. Chopra, Member, Planning Commission releasing the Inaugural issue of Society Newsletter 'Floriconnect' on 9 November, 2006 at a function in IARI, New Delhi. Others in the picture are Dr. S. Nagarajan, Chairperson, PPV&FR Authority; Dr.S.A. Pail, Director, IARI; Dr. A.P. Singh, Head, Floriculture, IARI and Dr N.K. Dadlani, Secretary, ISOH

Dr. B.P. Pal Birth Centenary Year Celebrations

Proceedings and Recommendations of Brainstorming Session, IARI, New Delhi

The Division of Floriculture and Landscaping, at IARI organized a Brainstorming Session on **Protection of Plant Varieties and Farmer's Rights: Issues and Priorities in Ornamental Crops** on 9-10th November 2006. The meeting was sponsored by the **Protection of Plant Varieties and Farmer's Rights Authority, Government of India**. The event marked as one of the commemorative events of **Dr. B.P. Pal** centenary celebrations.

The two day event was inaugurated by Prof. V.L. Chopra, Member Planning Commission, Government of India in the benign presence of Dr.S.Nagarajan, Chairperson, PPV&FRA, GOI, Dr. S.A. Patil, Director, IARI. The two day event was attended by about eighty (80) technocrats, scientists, entrepreneurs, students and growers.

The Technical Session-I was Chaired by Dr. K.L. Chadha who was assisted by Dr. S.K. Datta. There were five presentations in the session. Dr. M.L. Choudhary, Horticulture Commissioner, GOI deliberated on *Protection of Ornamental Crops: Global Status*. He lucidly explained the developments that are taking place in protection of plant varieties of ornamental crops under UPOV, CPVO, CIOPORA and USA Patents.

Dr. (Mrs) Malavika Dadlani delved on *PPV & FR Act and Floriculture Sector: An Insight*. Dr. S.P. Sharma, Former Head, Division of Seed Science and Technology, IARI brought to the notice of the audience on *Protection of Ornamental Crops: The UK Model*. Mr. Ashish Hansoti, MD, Tropica Nursery, Mumbai highlighted the *Breeder's Perspectives for Plant Variety Protection of Ornamental Plants* which brought to the fore their experience of



Dr. A.P. Singh, Head, Division of Floriculture, IARI, New Delhi welcoming the participants at the Brainstorming Session. others seated on the dais are (R-L) Dr. H.S. Gaur, Dean and Jt. Director (Education), Dr. S.A. Patil, Director, IARI, Chief Guest Prof. V.L. Chopra and Dr. S. Nagarajan, Chairperson, PPV&FR authority.

breeding and patenting some of the important succulents. His presentation was focused on selection of desirable traits in the new varieties evolved at their facility in Mumbai. The Tropica Nursery is in advanced stage of patenting their varieties in different crops like *Adenium*, *Euphobia*, *Ananus*, *Agave*, *Scindaprus*, *Tradescantia*, *Chlorophytum* etc. Dr. Malathi Lakshi Kumaran, legal expert delt on *Legal Implications of PPVFR Act* and cleared the intricacies of the act with appropriate examples.

The Technical Session II was chaired by Dr. S.P. Sharma, former Head, Division of Seed Science and Technology, who was assisted by Dr. S.B. Gurav, Associate Professor, MPKV,Pune. In this session, five presentations were made. **Dr. N.K. Dadlani** spoke on: **"Perspective of Plant Variety Protection for Ornamental Plants."** He gave an overview of floriculture development and it's potential. He also reviewed plant variety protection and highlighted its importance in the floriculture development in the country. **Dr. A.K. Singh**, Head, Germplasm and Conservation, NBPGR presented the paper on **"Germplasm registration of ornamental crops: Status and Guidelines."** **Dr. B.M. Prasana**, National Fellow highlighted the

importance of essentially derived varieties (EDVs) in ornamental plants and use of molecular markers for establishment of distinctness of EDVs.

Dr. S.K. Dutta presented the procedure of obtaining patents in ornamental varieties in U.S the way that they follow in NBRI while patenting. **Dr. S.K. Chakraborty** presented the procedure for Development of DUS Guidelines.

On day two (10.11.2006), to elicit a collective response from the participants a special session on DUS test guidelines was scheduled to discuss threadbare the National Test Guidelines of rose and chrysanthemum developed thorough ICAR and SAU system. The Session was Chaired by Dr. G.L. Kaul, Chairman, Task Force 3, PPV&FRA and was assisted by Dr.T.Janankiram, Senior Scientist, IIHR, Bangalore. The plenary session was chaired by Dr. Vishnu Swarup who was assisted by Dr.N.K.Dadlani, M.D,Daksh Hortitech, New Delhi.

The salient recommendations that emerged from the two day deliberations are summarized hereunder.

1. In the absence of PBR in the country introduction of new varieties by foreign private breeders is very much limited in the country. In order to ensure

Loose flowers	Fillers for loose flowers	Cut Flowers	Pot Plants	Fillers
Lotus Jasmine Crossandra Marigold	Artemisia Sweet Marjoram Pandanus	Gladiolus Tuberose Anthurium Lily Gerbera	Agloenema Bougainvillea Dieffenbachia Caladium and Colocasia Ficus	Gypsophila Callistemon Asparagus Philodendron Ferns and Thuja

- continuous supply of new varieties for the expanding floriculture industry, there is a need to bring in new varieties as per the demands of the global markets. Similarly the R&D establishment in India under ICAR, CSIR, SAU's have evolved a number of varieties in roses, chrysanthemum, marigold, bougainvillea, jasmine, crossandra, gladiolus, tuberose etc., which need to be protected on priority. Keeping this in view the following groups and crops have been identified to take up future DUS characterization for offering varietal protection. **Since rose and chrysanthemum are already taken up the list excludes those two crops.** The rationale behind the selection is summarized in Annexure II. To felicitate prioritization and identification it is proposed to constitute a 3 member study group to suggest the list of crops, possible centers, facilities to be created for developing a network project to be submitted to the authority.
- There is a need to establish a state of the art digital herbarium of identified crops at the identified centers with photometry integrated. Over and above the existing method of morphological evaluation there is a need to diversify in to biometrical separation of varieties.
 - We need to identify native flowers with internal variation for protecting the indigenous flower crops. There is a need to constitute a technical expert group for selection of native

- plants of high value. There is a need to identify GI in ornamental crops (Gundumalli, Boddumalli, Madurai Mallige, Mysore Mallige, Haldighati rose, Kannauj rose, lotus of Kashmir, Godatia of Sourashtra etc.,) and A.O. (Appellation of origin).
- A reference collection of the identified crops should be established at identified places. The collections should be purified and practice maintenance breeding in order to maintain the purity of the reference collection. In order to felicitate the task there is a need to develop plant reference labs with a central hub and local centers for different crops.
 - There is a need to evaluate the risk involved in opening up of registration in terms of its impact on the Indian varieties (Dumping). There is need to balance the list based on our strengths and weakness.
 - It is urgently required to include the floriculture component in the proposed training of the Qualified Person (QP) to be taken up at the Seed Science and Technology at IARI.
 - Globally there are classical examples that some of the minor flower crops like Gypsophila, rice flower, corn flower etc., assumed the significance of a major cut flower. Therefore it is essential to identify such native flowers and initiate the work on species variability to offer protection in future. In case of a number of

native Ferns possessing enormous ornamental value there is a need to seek legal opinion as biologically fern is a pteridophyte that propagates through sporophyte.

- There is a need to invite Economists and those concerned with Biodiversity for future discussions to prioritize the crops based on economy and the natural biodiversity. There is need to network breeders and lawyers for offering better protection of the new varieties.
- Policing by the National Institutes, should be taken up to prevent unauthorized usage of the varieties evolved by the institutions and to safeguard the interests. Crop/ Varietal intelligence is therefore very essential.
- The success of law for protection depends upon adequate test system, knowledgeable examiners, good infrastructure facilities, efficient monitoring and auditing system to prevent infringement of PVP through cosmetic breeding.
- There is an urgent need to train the nodal officers working on DUS testing of Rose and Chrysanthemum at NIAB, U.K on all aspects of DUS testing as hands on training is very crucial for developing the required competence for taking up the DUS evaluation as per the PPV&FR act requirement. Organise training for the Floriculture Scientists /Technical Officers in Rose Chrysanthemum and other

- identified flower/ ornamental plants on DUS testing and other aspects of administration of PBR. The training may be conducted by In-charge of DUS Floriculture Section of NIAB, who may be invited as consultant for a period of 7-10 days to offer intensive training to a group of Scientists and Technical Officers to develop adequate Human Resources.
14. Immediate steps should be taken up for creating awareness among all stakeholders of Floriculture Industry about the Plant Variety Protection system, which is going to be operated in this country through suitable workshop/ Training programmes.
 15. In order to identify EDVs from initial varieties, SSR molecular markers alone or along with AFLP markers can be used. However there is need of in depth deliberation on the acceptability of these markers by the plant breeders and determination of genetic distance, which is used for establishment of distinctness of the EDVs from initial varieties.
 16. The National test Guidelines on Rose and Chrysanthemum are primarily based on the DUS guidelines developed by UPOV during 1990 and 1978 respectively. In view of the recent revision of the DUS test guidelines by UPOV during April 2006 and their subsequent availability the group felt that we need to bring in a harmony between the two and adopt the best possible guidelines.
 17. A comparison of the previous and the revised guidelines indicated that the revised guidelines are more comprehensive and there is a need to incorporate the revised characters after examining the same in respect of the reference collection available in the test centers. The Nodal officers at IARI and IIHR shall workout the detailed guidelines for both the crops in view of the revisions made in the UPOV guidelines.
 18. Categorization of the reference varieties into different groups like hybrid teas, floribundas, miniatures, climbers in roses and anemone, pompon, spider, spoon, incurving, reflexing etc in chrysanthemum should be taken up, so that the candidate variety is tested in accordance with the appropriate group.
 19. There is an urgent need to authenticate the varieties by arranging the visit of some of the experienced rosarians, breeders, rose enthusiasts to the test centers to ensure pure reference collection.
 20. IARI is the *International Registration Center for Bougainvillea* and the *National Registration Center for Roses*. These centers need to be strengthened and linked to PPV & FR Authority for harmonization of the activities which are supplementary in nature. It is proposed to submit a proposal to the authority for funding to streamline the functioning of these centers.
 21. There is a need to develop FAQ's on PVP for the understanding of the general public/growers/ farmers.

Indian floriculture firm to take over world's top rose grower

We have heard of Mittal's, Tata's, Birla's, Ambani's ambitious take over bids globally to imprint Indian corporate presence in the global markets. A silent but a concrete take over move on the cards form one of the floriculture companies operating from Bangalore in recent times.

A day after Valentine's Day there is news of a deal that will make the global Indian takeover come out smelling of roses. Next Valentine's Day, when lovers and spouses gift roses across the world, chances are most of the flowers will have an Indian imprint.

Karuturi Networks, a little known Bangalore company is close to acquiring the Netherlands based *Sher*, the world's largest producer and supplier of roses, for about \$50 million (Rs. 220 crore) to emerge as the global leader

in roses. *Sher's* greenhouses in the Netherlands, Kenya and Ethiopia produce 600 million roses annually. The acquisition will be funded through internal accrual and the proceeds of a \$ 25 million foreign currency convertible bond issue. UTI Bank and the London based Silverdale Services are involved in the deal.

It all began on a Valentine's Day 12 years ago when Karuturi, mechanical engineer was scouting around Bangalore for roses to gift his wife. Finding none, he decided to step out of the cable business he was running and plant high-value stem roses for a living. He set up Karuturi Networks, which now produces 12 million rose annually. Karuturi Networks has 60 hectares of greenhouses in India and Ethiopia for rose cultivation. Apart from the European company's facilities, Karuturi will get a strong brand of *Sher*.

A New Cut Flower in the Horizon



The first shipments of a new pink, gentian **Showtime Spotlight**, a New Zealand cut-flower cultivar, have been made to the United States, Japan and Europe by the New Zealand floriculture exporter, Flowerzone. Showtime Spotlight has been developed by Rhindo New

Zealand and its partners, Southland Flowers and Crop & Food Research. Flowerzone's Trading Manager

Louise Sheehan says, "About 90% of gentians are blue with a smattering of whites and pale pinks, but the development of the hot-pink flower is proving a winner."

Flowerzone is unable to meet the demand for the new gentians as those being exported are from a small commercial trial being run by scientists at New Zealand's Crop & Food Research group. Ornamental scientist Ed Morgan says a gentian grower of 20 years, John Moffat of Southland Flowers, saw the potential for extending the gentian colour range and discussed it with him. "The hot pink Showtime Spotlight cultivar is the first of several new gentian colours we have developed in our breeding program," Morgan says. "It's pleasing to see the new gentians beginning to realize their commercial potential; we have red- and purple-flowered gentians to follow."

Trends from the Flower Council of Holland

What is a trend? The dictionary gives two definitions. It is the direction in which something is developing (tendency, inclination, line of development) and it is the latest fashion. This explains why, in recent years, the Flower Council of Holland has invested a great deal of work into mapping out the latest trends as they become noticeable.

Fashions and fashion developments are by no means restricted to clothes. They move into every area of the consumer's life, affecting behaviour, design, use of colour and much more. The way we furnish and decorate our homes has everything to do with developments in fashion industry. Brown, cosy and intimate at one time; white, spacious and distanced at another. Flowers and plants need to fit into these moods and in this sense, are very susceptible to trends. Varieties and colours both need to slot into the latest fashion image.

Who are the trend-setters who define

fashion? First and foremost, the designers of course. However, the media make sure that the designer's work is brought to the attention of the consumer. Fashion glossies, interior design and house and garden magazines as well as plenty of TV programmes all ensure that the newest trends are presented to the consumer in a big way.

Several years ago the Flower Council of Holland saw the important part played by magazines and TV programmes in promoting fashions and this prompted them to promote its own Trends. It started with a PR-campaign aimed at the most important journalists in the sector. They received a continuous stream of information, tips and photographs of the latest appearances on the fashion scene, translated in terms of flowers and plants. The result has been thousands of publications both at home and abroad covering the flower and plant trends.

There is a further subdivision of trends into style groups. Here consumers are assigned to specific groups on the basis of a large volume of data: education, address and income as well as the magazines they read and the shops where they buy their home accessories to name a few. The greatest flower users are found in the groups 'Modern' and 'Trendy-Ambience'. The Flower Council targets these groups with a large proportion of its activities.

Nowadays trend information is not only aimed at inspiring journalists, the material has also been 'translated' for other target groups. Consequently wholesalers and florists can now benefit. Information about flowers and plants is extremely detailed. This site includes seasonal themes where visitors can find all they need to know about colours, materials, patterns, shapes, arrangements, vases and products - all arranged under the individual season.

Executive Council, 2006-2007

1. **Dr. A.P.S. Gill**
President
HJ-213, BRS. Nagar, Ferozepur Road,
Ludhiana - 141 004
Phone : 0161-2457784
Mobile : 09872857784
2. **Dr. P.K. Rajeevan**
Vice-President
Department of Floriculture & Pomology
Kerala Agri. University
Vellamikkara - 680 654, Kerala
Phone : O: (0487) 2370652;
R: 2336344
Mobile : 09846032123
E-mail : rajeevanpk@yahoo.com
3. **Dr. Ramesh C. Upadhyaya**
Vice-President
Principal Scientist
Division of Horticulture,
ICAR KAB II, Pusa Campus,
New Delhi - 110 012
Phone : 011-25842992
Mobile : 09810033450
E-mail : urc@nic.in
4. **Dr. Narendra K. Dadlani**
Secretary
EC 60, Maya Enclave
New Delhi - 110 064
Phone : O: (011) 25820387, 25820388
R: (011) 25120432, 25120318
Mobile : 09899366552
E-mail: narendra@dadlani.in;
nkdadlani@rediffmail.com
5. **Dr. Krishna P. Singh**
Editor
Division of Floriculture & Landscaping
Indian Agricultural Research Institute
New Delhi - 110 012
Phone : O: (011) 25841929
R: (011) 25842708
Mobile : 09810700845
6. **Dr. Mam C. Singh**
Treasurer
Indo Israel Centre
Indian Agricultural Research Institute
New Delhi - 110 012
Phone : O: (011) 25841063;
R: (011) 26677546
Mobile : 09899066228
E-mail : mcsingh@iari.res.in
7. **Dr. K.V. Prasad**
Joint Secretary
Division of Floriculture & Landscaping
Indian Agricultural Research Institute
New Delhi - 110 012
Phone : (011) 25841929 (O)
(011) 25504145 (R)
Mobile : 09868149259
E-mail : kvprasad66@gmail.com
8. **Dr. Madhumita C. Talukdar**
Executive Councillor
Department of Horticulture
Assam Agriculture University
Jorhat 785 013, Assam
9. **Dr. B.K. Dhaduk**
Executive Councillor
Deptt. of Horticulture
College of Horticulture & Forestry
Navasari Univ. of Agriculture
Navasari - 396 450, Gujarat
10. **Dr. Arvind Sheshrao Sable**
Executive Councillor
Flat No. A 11/3, Sarkari Karamchari Grah
Nirman Sahkari Sanstha, Ravi Nagar
Nagpur - 440 001
Mobile : 09371490530
E-mail : arvsable@rediffmail.com
11. **Dr. Yudh C. Gupta**
Executive Councillor
Department of Floriculture
Dr. Y.S. Parmar University of
Horticulture & Forestry
Nauni, Solan - 173 230
Phone : (01792) 252276 (O),
(01792) 224597 (R)
Mobile : 09418108902
E-mail : ycgupta2006@yahoo.co.in
12. **Dr. Sanjai K. Dwivedi**
Executive Councillor
Horticulture Division
Field Research Laboratory
DRDO, Leh Ladakh - 194 101 (J&K)
13. **Dr. M. Pratap**
Executive Councillor
Floriculturist
Agriculture Research Station
Acharya N.G. Ranga
Agricultural University
Rajendra Nagar, Hyderabad
Phone : O: (040) 24051791;
R: (040) 24011649
14. **Dr. C. Aswath**
Executive Councillor
Senior Scientist,
Div. of Ornamental Crops
Indian Institute of Horticultural Research,
Hessaraghatta, Lake Post
Bangalore - 560 089
Phone : (080) 28466420, Extn. 240
Mobile : 09449036253
E-mail : aswath@ihr.ernet.in
15. **Dr. Ramesh B. Solanki**
Executive Councillor
Department of Horticulture
Amar Singh PG College
Lakhaoti - 252 393
Distt. Bulandshahar, U.P.
16. **Dr. S.K. Datta**
Executive Councillor
National Botanical Research Institute,
Rana Pratap Marg,
Lucknow - 226 002
Mobile : 09839227490
17. **Dr. Ramesh Kumar**
Executive Councillor
Department of Floriculture &
Landscaping
Punjab Agriculture University
Ludhiana - 141 004
Phone : O: (0161)2401960, Extn. 440;
R: (0161) 2413271(R)
Mobile : 09814802495
18. **Dr. Ajai P. Singh**
Executive Councillor
Division of Floriculture & Landscaping
Indian Agricultural Research Institute
New Delhi - 110 012
Phone : (011) 25841929 (O)
Mobile : 09818381416
19. **Dr. N. Ramachandran**
Member, Editorial Board
Division of Plant Pathology
Indian Institute of Horticulture Research
Hessaraghatta, Bangalore - 560 089
Phone : O: (080) 28466420
20. **Dr. Sita R. Dhiman**
Member, Editorial Board
Department of Floriculture
Dr. Y.S. Parmar University of
Horticulture and Forestry
Nauni, Solan - 173 230
Mobile : 09418214160
21. **Dr. M. Jawaharal**
Member, Editorial Board
Professor and Head
Department of Floriculture
Tamilnadu Agricultural University
Coimbatore
Mobile : 09443434310
E-mail : jawaharflori@yahoo.com
22. **Dr. O.P. Sehgal**
Member, Editorial Board
563, Sector 13, Rohini
New Delhi-110 085
Phone : (011) 27565971