

Floriculture

Trade Fair 2006

Souvenir



Floriculture Association Nepal

Co-organized by:

Agro Enterprise Center (FNCCI)

Export Promotion Committee (EPC)

Department of Agriculture / Agribusiness Promotion Program

Floriculture Trade Fair 2006

Souvenir

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THEIR MAJESTIES
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&
QUEEN KOMAL RAJYA LAXMI DEVI SHAH



FNCCI

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शुभकामना



नेपाल उद्योग वाणिज्य महासंघको सक्रिय सदस्य फ्लोरिकल्चर एशोसिएशन नेपालले नेपालको पुष्प व्यवसाय र यस संग सम्बन्धित उद्योग व्यवसायको विकासको लागि विभिन्न स्वदेशी व्यवसायीहरूलाई सहभागी गराई पुष्प व्यापार मेला आयोजना गर्न लागेकोमा नेपाल उद्योग वाणिज्य महासंघ एवं मलाई ब्यक्तिगत रूपमा समेत अत्यन्त खुशी लागेको छ ।

नेपालको भू बर्णोट, हावापानी, आर्थिक र सामाजिक संरचना आदि तथ्यलाई ध्यान दिदा पुष्प व्यवसाय एक अत्यन्त संभाव्य व्यवसाय हो । यस व्यवसायको उपयुक्त किसिमले प्रवर्द्धन गर्न सकेमा स्वदेशी एवं विदेशी बजार प्रवर्द्धनमा समेत यसले सशक्त रूपमा भूमिका निभाउन सक्दछ ।

मेलाको आयोजनाबाट पुष्प व्यवसायको बजारको विकासमा विस्तार एवं प्रवर्द्धनको साथै व्यवसायीहरूलाई आकर्षण गर्न सफलता प्राप्त हुनेछ भन्ने कुरामा म विश्वस्त छु । एशोसिएशनले यस प्रकारको मेलालाई निरन्तरता दिई आएको कार्य अत्यन्त सराहनीय छ ।

यस मेलाको अवसरमा एशोसिएशनले विभिन्न पुष्प व्यवसायी सम्बन्धी उपयोगी सामग्रीहरू सहित प्रकाशित गर्न लागेको पुष्प विशेषांक (Floriculture Souvenir) पुष्प व्यवसायीहरू, नीति निर्माताहरू, अनुसन्धानकर्ताहरूका साथै यस क्षेत्रमा रूची राख्नेहरूका लागि अत्यन्त उपयोगी हुने विश्वास लिएको छु । यस पुष्प विशेषांक प्रकाशनको साथै पुष्प व्यापार मेलाको पूर्ण सफलता एवं एशोसिएशन तथा एशोसिएशनका सम्पूर्ण पदाधिकारी एवं सदस्यहरूको उत्तरोत्तर प्रगतिको लागि हार्दिक शुभकामना ब्यक्त गर्दछु ।

(चण्डिराज ढकाल)
अध्यक्ष

२०६२/११/१८



श्री ५ को सरकार

कृषि तथा सहकारी मन्त्रालय

फोन नं.

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सिंहदरबार, काठमाडौं
नेपाल ।

पत्र संख्या :-

च.नं. :-

शुभ-कामना



नेपालमा पुष्प व्यवसाय प्रवर्द्धनका लागि अनवरतरूपमा कार्यरत फ्लोरिकल्चर एशोसियसन नेपालले विगतमा भैँ यस वर्ष पनि "पुष्प व्यापार मेला" आयोजना गर्न लागेकोमा अत्यन्त खुशी लागेको छ । यस प्रकारका व्यापार मेलावाट देशमा पुष्प व्यवसायको वर्तमान अवस्थाको चित्रण र अन्य व्यवसायीहरूलाई पनि यस व्यवसाय तर्फ आकर्षण गर्न सफलता प्राप्त भैरहेको स्पष्ट देखिएको छ ।

अपार प्राकृतिक स्रोत, साधन तथा भौगोलिक एवं जलवायु बिबिधताले सम्पन्न हाम्रो देशको लागि पुष्प व्यवसाय अत्यन्त उपयोगि हुदैँ गैरहेको देखिएको छ । यस व्यवसायवाट देशमा आय तथा रोजगार प्रवर्द्धनका अतिरिक्त नेपाललाई उत्कृष्ट मनोरम पर्यटकिय थलोकोरूपमा बिकसित गर्न र पुष्प निर्यात प्रवर्द्धन गर्न ठुलो टेवा मिल्ने बिश्वास मैले लिएको छु ।

मेला आयोजना कैँ क्रममा एशोसिएसनले बिगतमा भैँ यस वर्ष पनि पुष्प व्यवसाय सम्बन्धि उपयोगि सामग्रीहरू समेटेर प्रकाशन गर्न लागेको "पुष्प विशेषाङ्क" (Floriculture Souvenir) पुष्प व्यवसाय र यस क्षेत्रमा रुचि राख्नेहरूका लागि अत्यन्त उपयोगी हुने बिश्वास गर्दैँ प्रकाशन र पुष्प व्यापार मेलाको पूर्ण सफलताको लागि हार्दिक शुभ-कामना व्यक्त गर्दछु ।

गणेश कुमार के.सी.

सचिव

मिति: २०६२।११।११



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Ref.



सन्देश

फ्लोरिकल्चर एशोसिएशन नेपालको स्थापना २०४९ साल कार्तिक ३० गते समग्र नेपाली पुष्प व्यवसायको विकास, विस्तार तथा प्रवर्द्धन गर्ने उद्देश्यले १० जना पुष्प व्यवसायीहरूको सहयोगमा स्थापना भएको एउटै मात्र छात्रा संगठन हो। हाल यस संस्थाको २०८ जना सक्रिय सदस्यहरू रहेको छन्। यस संस्थाको स्थापना भएको चौधौं वर्षसम्म आई पुग्दा पुष्प व्यवसायको क्षेत्रमा धेरै विकास गर्न सकेको छ। एक दशक अघाडीसम्म विदेशी फूल बिरुवामा निर्भर रहने गरेकोमा हाल आन्तरिक मागको भन्डै ९० प्रतिशत स्वदेशी उत्पादनले पुरा गर्न सक्षम भएको छ साथै पुष्प जन्य बस्तुहरू केहि बर्ष देखि निरन्तर निर्यात हुदै आएको छ।

FAN ले पुष्प व्यवसायको व्यवसायीक प्रवर्द्धनको लागि वि.स. २०५१ सालबाट निरन्तर रुपमा पुष्प व्यापार मेला/प्रदर्शनीको आयोजना गर्दै आएको छ। नेपालको भौगोलिक बनौट, जैविक विविधता, उपयुक्त प्रकारको हावापानी भएको कारण बाह्रै महिना पुष्प व्यवसायको लागि उपयुक्त मानिएको छ। फलस्वरुप पुष्प व्यवसायले पनि आज एक उद्योगको रुप लिई सकेको छ। आजको अवस्थामा आन्तरिक बजारको माग पूर्ति गर्नुको साथै बाह्य बजारको माग अनुरुप फूलहरू उत्पादन गरि निर्यात गर्नु पर्ने आवश्यकता छ। यस क्रममा नेपालको पुष्प व्यवसाय र यससँग सम्बन्धीत उद्योग व्यवसायको विकासका लागि स्वदेशी नर्सरी व्यवसायीहरूलाई विश्व बजारमा प्रयोग भैरहेको वैज्ञानिक खेती प्रणालीबारे जानकारी, विश्व बजारको माग तथा आपूर्तिबारे सुचनाको आदान प्रदान, आन्तरिक बजारको माग तथा भैरहेको उत्पादन तथा हुन सक्ने थप बिस्तारको बारेमा जन चेतना अभिवृद्धि गराउनका लागि यहि २०६२ चैत्र ११ गते देखि १५ गते सम्म पाँच दिने पुष्प व्यापार मेला आयोजना गरेको छ। मेला आयोजनाकै क्रममा पुष्प व्यवसायी र यस क्षेत्रमा रुची राख्नेहरू सबैको लागि उपयोगी हुने गरि पुष्प विशेषाङ्क प्रकाशन गर्न लागिएको छ। यसले केहिहदसम्म पुष्प उद्यमी, व्यवसायी र यसमा रुची राख्नेहरूको लागि उपयोगी हुने मैले विश्वास लिएको छु।

बिगतका बर्षहरूमा जस्तै यस बर्ष पनि एशोसिएसनद्वारा संचालन गरिएको कृयाकलापहरूमा यहाँहरूबाट प्राप्त सहयोगको लागि हार्दिक कृतज्ञता व्यक्त गर्दछु। आगामी दिनहरूमा पनि अझ थप सहयोगको अपेक्षा राखेको छु।

अन्त्यमा यस मेला आयोजना गर्नमा प्रत्यक्ष तथा अप्रत्यक्ष सघाउ पुऱ्याउनु हुने तथा बहुमूल्य लेख उपलब्ध गराउनु हुने सबै प्रति हार्दिक आभार प्रकट गर्दै नव बर्ष २०६३ को हार्दिक मंगलमय शुभकामना व्यक्त गर्दछु।

धन्यवाद।

श्रीधर कार्की
अध्यक्ष

फ्लोरिकल्चर एशोसिएसन नेपाल



श्री ५ को सरकार

उद्योग, वाणिज्य तथा आपूर्ति मन्त्रालय



सिंहदरबार,
काठमाडौं, नेपाल।

शुभ कामना

फ्लोरिकल्चर एशोसिएशन नेपालले पुष्प विशेषाङ्क प्रकाशन गरी पुष्प व्यवसायको प्रवर्द्धनको लागि पुऱ्याउन लागेको योगदानको म हार्दिक सराहना गर्दछु।

विगत वर्षहरू देखिनै पुष्प व्यापार मेलाको आयोजना गरी यो व्यवसायलाई पेशागत रूपमा प्रवर्द्धन गर्न र यस व्यवसायको महत्वलाई उजागर गराउन एशोसिएशनको तर्फबाट खेल्दै आएको भूमिका प्रसन्ननिय छ। यस व्यवसायको प्रवर्द्धनबाट व्यापार अभिवृद्धि, रोजगारीका अवसरहरूको सृजना हुने र निर्यात प्रवर्द्धनको माध्यमबाट समेत राष्ट्रको विकाशमा महत्वपूर्ण योगदान पुग्न जाने कुरामा हामीलाई पूर्ण विश्वास छ र व्यवसायीहरूको उत्साह उल्लेखनिय छ।

यस विवशेषाङ्कले पुष्प व्यवसाय सम्बन्धी महत्वपूर्ण सूचनाहरूको प्रवाह गराउन सक्षम रहने छ भन्ने आशा समेत राखेको छु।


(भरत बहादुर थापा)
सचिव



Agro Enterprise Centre

Federation of Nepalese Chambers of Commerce and Industry

कृषि उद्यम केन्द्र

नेपाल उद्योग वाणिज्य महासंघ



शुभकामना ।

नेपालमा पुष्प व्यवसायको विकास, विस्तार तथा प्रबर्द्धन कार्यमा फ्लोरिकल्चर एशोसिएसन नेपालले निर्वाह गरेको भूमिका ज्यादै सराहनीय छ । यस एशोसिएसनबाट विगत २०५१ देखि निरन्तर रुपमा आयोजना गर्दै आएको पुष्प व्यापार मेलाले जनमानसमा फूल विरुवा प्रति अभिरुचि बृद्धि गराउन एकातर्फ अति सफल भएका पाएका छौं भने अर्को तर्फ पुष्प व्यवसाय/उद्यमीहरूमा विशेषज्ञता विविधता हासिल गर्न यस व्यवसायलाई देशव्यापि रुपमा विकास र विस्तार गर्नमा निकै सहयोग पुगेको हामीले महसुस गरेका छौं । पुष्प व्यवसाय प्रबर्द्धनमा नेपाल उद्योग वाणिज्य महासंघको कृषि उद्यम केन्द्रले पुऱ्याउदै आएको सहयोग बारे स्मरण पनि गराउन चाहाछौं ।

पुष्प व्यवसायी/उद्योगलाई अझ प्रभावकारी रूपले विकास तथा विस्तार गर्न र नेपालबाट निकासी गर्न सक्षम बनाउने कार्यमा नीतिगत सहयोगहरूको अति जरुरी महशुस गरेका छौं । "पुष्प व्यापार मेला २०६२" को आयोजनाले नीति निर्माता र विकास कार्यमा समर्पित सबै पक्षको ध्यानाकर्षण हुनाको साथै व्यवसायी/उद्यमीहरूलाई सहयोग र सफलता मिल्नेछ भन्ने अटल विश्वास लिएका छौं । यस वर्ष आयोजना हुन गई रहेको मेलामा प्रत्यक्ष रूपले श्री ५ को सरकारको उद्योग, वाणिज्य तथा आपूर्ति मन्त्रालयको नियत प्रबर्द्धन समिति र कृषि तथा सहकारी मन्त्रालयबाट प्राप्त सहयोगले साभेदारी विकास कार्यक्रमको अवधारणा पुष्प व्यवसाय प्रबर्द्धन कार्यमा पनि आगमी दिनहरूमा लागु हुने आशा र विश्वास लिएका छौं ।

अन्तमा, उक्त मेलाको अवसरमा फ्लोरिकल्चर एशोसिएसन नेपालले प्रकाशन गर्न लागेको पुष्प विशेषांक अत्यन्त उपयोगी र रोचक हुने विश्वास व्यक्त गर्दै मेलाको सफलता र एशोसिएसनको उत्तरोत्तर प्रगतिको लागि शुभकामना व्यक्त गर्दछु ।

कृष्ण प्रसाद ताम्राकार
सभापति

कृषि उद्यम केन्द्र/नेउवामहासंघ

Editorial

It gives us immense pleasure in bringing to you the souvenir magazine of Floriculture Association Nepal (FAN) on the occasion of annual Floriculture Trade Fair (Chaitra 11th to Chaitra 15th 2062 BS) organized by FAN.

This magazine is the official bulletin of the FAN and has been playing a critical role in not only disseminating technical information but also has become a forum where one can share his/her experiences and ideas. This is the tenth volume in the series and is getting more informative and beneficial with every passing year.

In this issue, we have brought to you articles in many important issues such as the role of NGOs in floriculture development (this article highlights how a local NGO has changed the lives of some poor and dis-advantaged people), success experience of a local carnation cut flower grower (real success story that other growers and new entrants may like to emulate), importance of native ornamental trees, WTO and floriculture, Cymbidium growing, planning a garden, cultivating bulb flowers etc. Besides, it has also included an article that looks into how flower business has grown in Nepal during the last few decades and where it could be going.

Flower industry of Nepal has grown over the years and is now in a phase from where its product should go beyond the national border. The biggest challenge is here and this is the time where public-private partnership is ever important.

We would like to thank all the contributors of the articles and the advertisers for their support in bringing this issue of FAN souvenir magazine 2006.

Last but not the least, we would like to wish you all happy and pleasant reading. Any comments or suggestion for improvement is welcome.

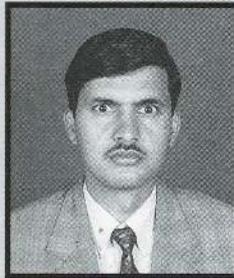
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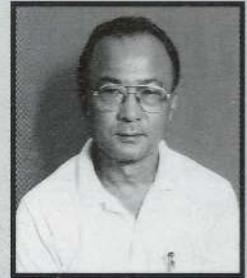
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The Role of Non-Governmental Sector in promotion of floriculture: A case study from Ichangu Narayan VDC, Kathmandu

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Introduction

Agriculture is the principal source of livelihoods for majority of farmers in Ichangu Narayan VDC. The village is located at about 5 km distance in the North-west of Kathmandu metropolitan city and is mostly inhabited by Tamang and lower class Newar i.e., Putuwar communities who are socially and economically highly disadvantaged.

Majority of the people in the area are small farmers with less than 3 Ropanis of their own land holding. Most of them are, therefore involved in off-farm activities such as daily wages, stone crushing, masonry, carpentry etc to sustain their livelihood.

Rice and maize had been the major agronomical crops in these villages until horticultural crops replaced these traditional food crops in the last decade. Among the horticultural crops, seasonal flowers and cut flowers are the major crops.

Floriculture is undoubtedly a new agricultural enterprise in the Nepalese context and meaningful research and development initiatives have still been lacking from government (GO) as well as non-governmental (NGO) agencies for the promotion of this sector. However, due to widespread impact of globalization and increased living status and changing life style of people, demand of floriculture products and services have rapidly been increased. On the other hand, supply of floriculture products and services are still far below the the actual market demand.

It has long been realized and mentioned in several agricultural plans and policies that commercialization of agriculture can be achieved through the promotion of high value horticultural crops and putting emphasis on the crops with comparative advantage. Among other several horticultural commodities, floriculture has been considered as the most profitable businesses with higher profit margins.

In this context, a few NGOs have been involved in the promotion of floriculture business in farming communities as a means of income generation. Among them, Educate the Children (ETC), a Kathmandu based national NGO, has been found to be probably the first single organization working for the promotion of floriculture business in Kathmandu valley i.e., Ichangu Narayan area. ETC initiated the floriculture business 3 years ago when it identified floriculture as the most potential source of income generating activity in this area. Since then, ETC has been involved in the introduction of cut flowers, promotion of seasonal flowers and establishment of marketing systems for floriculture.

This paper is an attempt to present the current status of floriculture business in Ichangu Narayan area, contribution of this sector in income generation and household economy of small holders and the role of ETC in the promotion of this sector.

History and the present status of the floriculture in Ichangu Narayan:

Reliable information regarding the history of floriculture business in Ichangu Narayan area is still lacking. However, a recent study has revealed that flower production was initiated some 20 years back by few gardeners (Joshi. G.R., 2005). At present, flower business has been developed as the major agricultural enterprises in the area that must be the result of the trial and error done by several enthusiastic farmers who gained knowledge and impressions about the flower production through their own works in flower gardens with foreign missionaries and elites of Kathmandu city. Currently, the flower crops have become the most popular horticultural crops among small farmers and now has been developed as the major income generating opportunity in this area.

In the year 2002, ETC started its Floriculture Promotion Project to support the livelihood of poor farmers. The project was initiated with the aim of improving the farming of the existing crops and introduction of new flower species for the maximum profit. Before the initiation of this project, farmers used to grow loose flowers and seasonal flowers in a traditional way. ETC introduced cut flowers such as gladiolus and tuberose and these crops are becoming popular in the area in the last four years. Many farmers have been trained so far in the various aspects of flower production and marketing. Now, ETC is looking for the possibility of introducing new cut flowers such as carnation and gerbera in this area.

Distribution of Various Flower Crops

Huge diversity of flower crop species has been found in the study area. More than 12 different types of flower crop species have been

identified in the area with considerable area of production. Farmers have been raising the traditional-seasonal flower crops as well as the modern cut flower species. Similarly, wild flowers such as Poinsettia etc. were also being cultivated in this area. Traditional seasonal flowers occupied around 92% of the total floriculture land and only around 8% was occupied by gladiolus and tuberose. Out of 8 different commercial flower species, Dahlia and Naurangi each covered around 24% of the total floriculture area. Chrysanthemum shared about 15%, followed by Marigold (13%), Gyanthunge (10%), Gladiolus (5.43%), Gomphrena (5%) and Tuberose (3%).

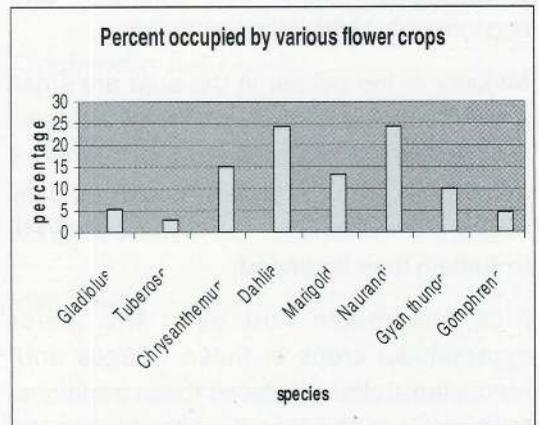


Figure 3. Percent land occupied by various flower crops

Description of Flower Promotion Project:

Flower promotion project was initiated by ETC in the year 2002 with the aim of improving the quality of life through the creation of income generating through floriculture at the local level. The primary objective of the program was to promote the flower production and marketing for the sustained livelihood of farmers.

Project Activities:

- Farmers training:

Farmers' training is the major part of the project and it is mainly focussed on the capacity building of farmers on flower production. Project has been implemented through the women's groups and majority of beneficiaries are therefore women farmers. In the last four years, more than 30 farmers have been trained.

Support of the input:

ETC also provides input support to the concerned farmers in the form of seed material. The seed material is given with subsidy. Mainly corms of gladiolus and tuberose are provided.

Technical support

ETC provides technical support to the farming communities on the production aspect of the flower crops. Technical support is given during training, field visits and follow up visits.

Future plan

The future plan of the project is to strengthen the current status and also improve the marketing system of the flowers. Following three activities have been proposed to meet this goal:

1. Introduction of more competitive flower species
2. Formation of flower producers cooperative
3. Market strengthening

Impact of the project:

Impact in Women empowerment

Educate the children has been working for the empowerment of disadvantaged communities

with special focus in women and children. The floriculture project in Ichangu Narayan area has been designed to cover most, if not all, of the small women farmers from Tamang and Putuwar communities. In the very first three years of the project, it has been noticed that the women farmers were empowered through this business. The role of women farmers has been vital in this business because all the works related to flower production have been done by them. The situation of women farmers have been improved because their role in household decision making has been strengthened and their access to the income and economic resources have been improved. Therefore, the economic status of women in particular and the whole family in general has been found to be increased. Therefore floriculture has been helping in the women's empowerment in this area.

- Impact in the Role of Gender

Growing flower crops need sound technical know how and practical skills. Therefore patience and dedication is required to be skilled in this business. In Ichangu Narayan area, floriculture has been considered as the business of women farmers. Most of the farm works related to flower production, post harvest handlings as well as subsequent marketing is mostly carried out by the women farmers. Women farmers dominated in all the farm activities such as collection of various farm inputs, land preparation, planting, intercultural operations, preparation for the market and marketing. The percentage share of female and male members of the family in floricultural related farm works were found around 71% and 29% respectively.

Table 1. Gender role in various farm activities

S.N. Various Farm activities	Gender Involvement(%)		Type of work(1,2,3*)
	Male	Female	
1. Land preparation	50	50	1
2. Collection of planting material	0	100	2
3. Collection of fertilizers and pesticides	0	100	2
4. Collection of manure	40	60	1
5. Planting	30	70	1
6. Application of fertilizers	40	60	3
7. Use of pesticides	70	30	3
8. Intercultural operations	30	70	2
9. Harvesting	30	70	2
10. Preparation for the market	20	80	3
11. Marketing	10	90	3
Average percent contribution	29.09%	70.91%	

1=Heavy, 2 = Moderate, 3 = Light

-Impact in Women's role in Decision Making

Floriculture has been found to be very much helpful in women empowerment. It has been found out that most of the decision making is carried out by the women farmers and whenever there were collective decisions women's role remains important. Decisions related to the selection of flower species, marketing of the products and finally the use of the income from the sale of floriculture products were mostly taken by the women farmers themselves. Thirty three out of 39 respondents said that they decided freely about the use of the income derived from the sale of flower products. On the other hand the status of women farmers in the family and society has been changed as the entrepreneurs due to their specialization in floriculture production and marketing. The marketing of the products in the core centers of Kathmandu metropolise can justify the empowerment of women through floriculture

business. It has been already proved that women save more of their earnings and also invest the income in more productive sector than men. Therefore overall status of family is ultimately improved by the involvement of women farmers in floriculture.

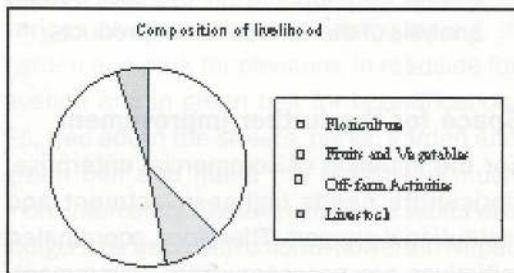
Impact in Livelihood improvement:

In the past, the major portion of the livelihood was composed of non-agricultural component such as stone crushing, daily wages and other risky works. However now that have been replaced by floriculture. Floriculture contributes more than 37% of the total family income.

Composition of Livelihoods

Agriculture including the livestock has been found to be the principal source of livelihood in the area. More than 50% of total family income derived from agriculture sector. Under agriculture, livestock components contributed

around 10% of total family income. Floriculture has been found to be major income generating sector with the average contribution of around 50% of the total family income followed by fruit crops (mainly orange) with the share of around 10%. Livestock share in household income has been around 5% and remaining 48% of the total family income was generated from off-farm activities such as daily wages,



carpentry, masonry, stone crushing etc.

Figure 1. Composition of Livelihood

Major Problems Identified

Farmers have been facing various problems related to production as well as the marketing. Production related problems were lack of irrigation facilities, unavailability of quality planting material and problem of disease and pests. Similarly, lack of sufficient skill and knowledge in selection and the maintenance of species have been identified as one of the limiting factors. Technical expertise needed for the quality production was also very limited among most of the growers. On the other hand, marketing related problems were lack of proper marketing system and established channel, lack of collective marketing system and lack of infrastructures etc.

There has been lack of institutional development and group approach in production and marketing of flower crops. Lack of support for institutional development has

also been identified as one of the limiting factors in development of commercial floriculture.

Similarly, there has been a lack of infrastructure facility for the protected cultivation of exotic cut flower crops. Organizational support in this sector has also found to be lacking.

In addition to above problems, record keeping by the farmers has been found very limited. Therefore, farmers have been found unable to find out the real profitability of various species.

Conclusion

Floriculture has been the major income generating activities in Ichangu Narayan area which shares more than 37% of total family income. Out of the total cropped area more than 42% has been found under floriculture and most of the small farmers have already adopted this business as a means of their livelihood.

A large number of flower species have been grown by the farming communities among which Gladiolus and Dahlia have been found most profitable; these are the flower species introduced and promoted by the ETC.

ETC has been involved in the promotion of the traditional flower species, introduction of cut flowers and promotion of the marketing networks in the area. Role of women farmers have been found dominated over their male counterparts in various works related to floriculture. Hence, it has been regarded as the women's enterprises in this area.

Mostly, flower products are sold in major city centres and religious places around the Kathmandu metropolitan city. The individual marketing of the products have been found profitable by most of the farmers however the sustainability of the same approach in the

future is questionable because of increased competition among flower growers in the future.

Various problems associated with the production and marketing have been identified during the survey. Of them lack of irrigation facility, unavailability of the quality planting material, lack of infrastructures for controlled growing of flowers and lack of institutionalized marketing system have been the topmost problems.

Floriculture has not only improved the income of the growers but it has also played important role in women empowerment and increased living standard of people. Interestingly, the income from floriculture has been mostly utilized by the women farmers and most of the decisions have been taken by these women members thereby increasing their status in the family and society. Hence, role of floriculture business has been very important from the social development and women empowerment point of view.

Recommendations

Following are some of the suggestions and recommendations for the sustainability of the enterprise and successful implementation of programs in future:

- Suitable infrastructures should be developed in the village for the protected cultivation of the exotic and profitable flower species.
- Seasonal flowers such as marigold and Naurangi should be promoted in addition to the gladiolus and tuberose.
- There should be strong organizational support for the development of irrigation facilities.
- Farmers involved in the floriculture business should be institutionalized with the formation of functional working groups.
- Marketing system should be organized and collective marketing should be initiated for the sustainability of the business.

- Research should be focused on the specific problems as identified in the survey.
- The resources available with various organizations should be jointly invested for the better outputs from this sector.
- Short term and long term trainings should be organized for the farmers regarding the production and marketing of the produce.
- Farmers skill in record keeping practices should be improved for the cost benefit analysis of the various flower products.

Space for the further improvement

For the initiation of commercial enterprise, floriculture needs higher investment and institutional support. Therefore, coordinated initiatives are necessary from government, nongovernmental and private sectors. The collective effort from all these stake holders will help promote the floriculture status and also to improve the livelihood of farming communities. These model could be replicated in other parts of the country particularly near by Kathmandu and other urban areas.

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Some indigenous Nepalese tree species for urban beautification

-Lajmina Joshi
NHPL, Godawary

Introduction

Trees cover about one quarter of earth's surface. Tree plays a vital role in urban beautification. Without trees, the urban areas are just like a dead city. Trees are planted in various places with various purposes e.g. in garden and park for pleasure, in roadside for avenue and in green belt for beautification. So, tree adorn the streets, parks, garden and green belt and make the landscape much more interesting. There are many beautiful wild indigenous trees with colorful flowers in Nepal, which can be used in urban beautification. The most cherished tree for beautification of urban areas is flowering and shade providing. Generally, tree is planted in urban area with a view for aesthetic value. However, trees besides aesthetic value also provide fresh air to the human beings, control air pollution and maintain the local climate. Therefore, avenue and shade trees along the roadside and inside the parks and garden in the urban areas are of great multipurpose value to the urban inhabitants in particular. Thus, there is urgent need for urban planning with proper provision for urban tree planting.

Though we have so many extremely beautiful indigenous ornamental trees, we give priority to the exotic trees for plantation to beautify the cities. Introduction of most of the exotic trees had been recorded since the time of Rana reign. At that time, various trees were imported from different countries to plant in the palace compound, along the roadside in Tundikhel, Pulchok and on the way to the royal palace. We see many exotic tree species such as *Gravillea robusta*, *Eucalyptus citriodora*, *E. cameldulensis*, *Callistemon lanceolatus*,

Populus etc. planted on the roadside. So now, we have to give emphasize to plant indigenous tree instead of exotic plant to beautify our cities and perhaps the tradition of planting exotic plant should be given low priority.

How can trees help in urban beautification?

Trees has an important role in urban beautification. A tree not only beautifies the urban but also improves the polluted urban environment. Beautification of urban areas can be done by various ways such as by planting tree in private garden, resident area, parks, shrines, green belts, along roadside, traffic island, office compounds, courtyards etc. Full bloom tree avenue helps to bring changes in the appearances of the landscape creating pleasant urban environment and one can enjoy this delightful sight even from a distance or from a raised front. So roadside tree gives a beautiful, charming and safe enchanting outlook of modern roads. However, urban beautification cannot be done by planting trees only and rather depends on what type of trees are planted. Therefore, selection of trees is very important. While selecting trees, one should bear in mind, where we are going to plant for example along road side as avenue, shrines or in resident and for what purpose e.g. shades, beautiful flower, architectural design etc.?

Selection of Trees

Trees can be chosen for planting based on its flowering characteristic, coloring, crown forming, foliage color and nature. All these

characteristics are of equal importance in urban beautification. So one should not ignore or deny these characteristics while choosing a tree for plantation.

Not all the trees can bloom in one time. Some bloom in one season and some throughout the year. Mostly tree come into bloom during the spring, summer and rainy season. Trees like *Alstonia scholaris*, *Thespesia populnea* bloom all round the year. Similarly, trees like *Bauhinia variegata*, *Magnolia campbelli*, *Mesua ferrea*, flowers during spring with brilliant color. A large number of indigenous trees bloom into various colors of brilliant attractive flowers in summer season. They are *Cassia fistula*, *Michelia champaca*, *Saraca indica*, *Azadirachta indica*, *Bauhinia variegata*, *Erythrina stricta*, *Firmiana colorata* etc. Some of the graceful indigenous trees that flowers in rainy season are *Michelia champaca*, *Lagerstroemia indica*, *L. parviflora*, *Anthocephalus chinensis*, *Dillenia indica*.

Different kind of flower color combination can be found among the indigenous trees. For example, *Butea monosperma*, *Rhododendron arboreum*, *R. barbatum* and *Salmalia malabaricum* imparts a very attractive display of gorgeous red colour. Similarly, graceful white flowers are bloomed from the indigenous tree like *Alstonia scolaris*, *Bauhinia variegata*, *Dillenia indica*, *Syzygium cumini* *Azadirachta indica* etc. *Cassia fistula* tree blooms yellow flower.

Indigenous trees of different crown such as spreading, pyramidal, rounded, weeping and drooping branches are of equal importance in urban beautification. For example, trees of *Albizzia lebbeck*, *Anthocephalus cadamba*, *Salmalaria malabaricum*, *Michelia champaca* and *Toona ciliata* have spreading crown, *Cupressus torulosa* has pyramidal, *Dillenia indica* has rounded, *Salix babylonica* has

weeping and *Ficus benjamina* and *Saraca indica* have drooping branches.

Colorful trees play a vital role in making the environment beautiful and refreshes the mind of inhabitants. Leaves of many tree species in subtropical and temperate regions have spectacular colour which add beauty to the landscape. Some trees e.g. *Acer oblongum*, *A. truncatum*, *Syzygium operculatum*, *Carpinus viminea*, *Rhus succedanea* are used as attractive spring and autumn colored trees because of their colored new leaves. In tropical trees, the colour of old leaves in *Careya arborea* gradually changes to deep purple before they fall. *Mesua ferrea* is covered with purple red leaves in spring and early summer. Similarly, we can choose tree species for various edaphic sites, foliage color, and tree height and deciduous vs. evergreen so the flowering trees acts as a stimulant/tonic through season after season and helps in extending the short life of humankind.

A brief list of indigenous trees used for urban beautification is given in table I.

Conclusion

Until now, not much work has been done in exploration of importance of indigenous tree species in urban beautification. A very negligible research work is going on in some indigenous herbaceous plants. Now, there are many nurseries but researches on floriculture is negligible and priority is given to the plantation of exotic hybrid plants. We have also in nature different trees having beautiful attractive flowers. These indigenous trees can meet all the requirements need for urban beautification. Therefore, the time has come to do research in indigenous trees by utilizing their various attractions and useful traits. We have to involve in propagation of attractive indigenous tree to produce in large scale so

that we can use them for beautifying and eco-friendly plantation. Generally, landscaper use exotic plants in this aspect. Why not we use our own indigenous trees in urban beautification instead of relying on exotic

plants? Why not we do research in production of hybrid trees of attractive flower by incorporating useful traits in indigenous trees? Indeed time, it will take time to achieve these but we must try to work in this area.

Table I: Indigenous Nepalese Trees for Urban beautification

Scientific Name	Common Name	Local Name	Flower color	Family	Flowering Time	Type
<i>Acer oblongum</i>	Maple	Firfire	Greenish white	Aceraceae	Mar.-Apr.	Deciduous
<i>A. truncatum</i>			greenish	"	Mar.-Apr	"
<i>Actinodaphne reticulata</i>		Mashino khapte	White	Lauraceae	November	Evergreen
<i>Aesculus indica</i>	Buck eye, Horse chestnut	Lekh pangre, naru	Greenish white	Hippocastanaceae	April	"
<i>Alangium chinensis</i>		Bamanpatti	White	Alangiaceae	May-July	"
<i>Albizia lebeck</i>	Silk tree	Kalo Siris	Greenish white	Leguminoseae	April-Aug.	"
<i>A. lucidor</i>	Burmese Siris	Tapria siris		"	Apr.-May	"
<i>A. procera</i>	White Siris	Seto siris	Yellowish white	"	Aug.-Sept.	"
<i>A. mollis</i>	Pink Siris	Rato siris	Pink	"	April	"
<i>Alstonia scholaris</i>	Devil's tree	Chativan	Greenish white	Apocyanaceae	Dec.-Mar.	Evergreen
<i>Anthocephalus chinensis</i>	Kadam	Kadamba	Yellowish	Rubiaceae	June-Aug.	Deciduous
<i>Azadirachta indica</i>	Neem	Neem	White	Meliaceae	Mar.-May.	Evergreen
<i>Bauhinia variegata</i>	Purpleorchid tree	Koiralo	White or purplish	Leguminoseae	Mar.-Apr.	Deciduous
<i>B. purpurea</i>	Camel,soot tree	Tanki	Purple, Rose	Leguminoseae	September	"
<i>Bombax ceiba</i>	Red silk cotton tree	Simal	Crimson red	Bombacaceae	February	"
<i>Butea monosperma</i>	Flame of the forest	Hasta karnipalans	Orange red	Leguminoseae	Feb.-March	"
<i>Calliandra nematocephala</i>				Leguminoseae	Apr.-May	"
<i>Careya arborea</i>	Wild guava	Kumbhi	White, pink	Lecythidaceae	Mar.-Apr.	Deciduous
<i>Carpinus viminea</i>		Khadik		Corylaceae	Mar.-Apr.	"
<i>Cassia fistula</i>	Golden shower	Rajbrikshya	Yellow	Leguminoseae	Mar.-Apr.	"
<i>Celtis australis</i>	European Nettle wood	Khari	Greenish yellow	Ulmaceae	Mar.-Apr.	"
<i>Crateva religiosa</i>	Bengal quince	Siplican	Yellow	Capparaceae	Apr. Nov.Dec	Deciduous
<i>Dalbergia sisoo</i>	Sisoo	Sisau	Yellow	Leguminoseae	Mar.& June	"
<i>Dillenia indica</i>	Elephant apple	Ramphal	White	Dilleniaceae	Jun-july	Evergreen
<i>Erythrina arboriscens</i>	Himalayan coral bean	Theki kath	Vivid scarlet	Leguminoseae	September	Deciduous
<i>E. stricta</i>	Coral tree	Phaledo	Scarlet	"	Mar.-Apr.	"
<i>Ficus benghalensis</i>	Banyan Tree	Bahar		Moraceae	Feb.-March	Evergreen
<i>F. religiosa</i>	Pipal tree	Pipal		Moraceae	Feb.-March	"
<i>Firmiana colorata</i>	Bonfire tree		Orange scarlet	Sterculiaceae	Mar.-Apr.	"
<i>Fraxinus floribunda</i>	Ash tree	Lankuri	White	Oleaceae	Apr.-May	Deciduous
<i>Holarrhena antidysenterica</i>	Easter tree	Indrajau	White, Creamy	Apocyanaceae	Mar.-Apr.	Deciduous
<i>Kydia calycina</i>	Roxburg,s Kyde	Kubhinde	Greenish white	Malvaceae	July-Oct..	"
<i>Lagerstroemia indica</i>	Crape Myrtle	Ashare phool	Pink	Lythraceae	Jun-July	"
<i>L. parviflora</i>	Lendia	But dhayar	White	Lythraceae	Jun-July	"
<i>Magnolia grandiflora</i>	Bull bay	Rukh kamal	Pink	Magnoliaceae	Apr.-May	Evergreen
<i>Mesua ferrea</i>	Assam Ironwood	Nagesori	White	Guttiferaceae	April	"
<i>Michelia champaca</i>	Golden champa	Sun champ	Yellow	Magnoliaceae	Apr.-May	"
<i>M. kisopa</i>		Seto champ	Pale yellow	"	Oct.-Nov.	"
<i>Mitragyna parviflora</i>		Phalde	White, Yellow	Rubiaceae	May-June	"
<i>Nyctanthes arbor-tristis</i>	Coral jasmina	Budilo, Parijat	Orange red	Oleaceae	Autumn	"
<i>Pinus roxburghii</i>	Pine	Khote sallo		Pinaceae	Nov.-Dec.	"
<i>Plumeria rubra</i>	Temple tree	Choya phool	White	Apocyanaceae	Apr.-June	Deciduous
<i>Prunus cerasoides</i>	Himalayan cherry	Painyu	Pink	Rosaceae	Feb.-Apr.	"
<i>P. nepalensis</i>	Nepalese cherry	Jangli painy	White	"	Nov.-Dec.	"
<i>Prunus persica</i>	Flowering peach	Aaruphool	White	"	Feb.-Mar.	"
<i>Pyrus pasia</i>	Wild pear	Mayal	White	Rosaceae	Feb.-Mar.	"
<i>Rhus succedanea</i>	Wax tre	Rani Bhalayo	Yellowish green	Anacardiaceae	Apr.-June	"
<i>Saraca indica</i>	Sita Ashoka	Ashok	Orange red	Leguminoseae	Mar.-May	Evergreen
<i>Schima wallichii</i>	Needle wood	Chilaune	White-Creamy	Theaceae	March	"
<i>Sterculia villosa</i>	Sterculia	Odal	Yellow	Sterculiaceae		"
<i>Stranvaesia glaucescens</i>		Jure mayal	White	Rosaceae	Mar.-June	"
<i>Symplocos crataegoides</i>		Lodh	White	Symlocaceae	"	"
<i>Syzygium cumini</i>	Black plum	Jamun	White	Myrtaceae	Oct.-Nov.	"
<i>S. operculatum</i>		Kyaman	Greenish	"	Apr.-May	"
<i>S. jambos</i>		Rose apple	Yellowish white	"	March	"
<i>Thespesia lampus</i>		Van kapas		Malvaceae		"
<i>T. populnea</i>	Bhendi tree		Yellow	"	Year round	"
<i>Toona ciliata</i>	Red cedar, Tooni	Toona	White	Meliaceae	Feb.-Mar.	Evergreen
<i>Wrightia tomentosa</i>	Pala indigo plant	Karingi, Kirra	Vermillion	Apocyanaceae	Apr.-July	Deciduous

Bird of Paradise : Planting and Caring

Asha Karki
DPR, Thapathali

Introduction

Bird of Paradise (*Strelitzia reginae*) is a native of South Africa and one of the most unusual and attractive members of banana family (Musaceae). This popular plants bears a unique flower that resembles a bright colored bird in flight, giving it common name Bird-of-Paradise.

In contrast to the banana, the bird-of-paradise is trunkless. The foliage resembles small banana leaves but has long petioles. Leaves are thick, waxy and glossy green making it a very alternative ornamental. The leaf blades are 6 inches wide and 18 inches long. The plant usually reaches a height of 4 feet. The flower is the most unusual part. A series of highly colored bracts, or modified leaves are formed into green, red and purplish canoe like structures. Brach vary between 4 and 8 inches of depending upon the age and size of the plants. Each bract contains two or more protruding florists of bright blue tongue. The female part of the flower is the long extension of the blue tongue which is extended well away the stamens.

Blooming season lasts from September through May. Healthy, mature plants can produce as many as three dozen flower spikes, which will last up to two weeks when use as cut flowers.

Other species of *Strelitzia* are *Strelitzia alba*; it is a tree that grows to a height of 18 feet. Its distinct trunk and leaves can grow to 4 feet long and 2 feet wide. Its flowers are white and extend from a purplish bract.

Propagation

Bird-of-Paradise can be propagated by 3 different methods.

Seeds

Bird-of-Paradise can be grown from seed. Obtaining a mature flowering Bird of Paradise plant from seed requires three to five years. The black seed have orange fuzz on one end and are the size of sweet pea seeds because they have hard seed coats, seed must be scarified (nicked or scratched) before they germinate. To scarify, soak in lukewarm water for several hours and nick with knife or small file, lightly press the seeds into moistened seed starting mix, cover with plastic to maintain high level of humidity and place in indirect light.

Seeds germinate in about two or three months. Transplant seedling individually into pots when they have two true leaves.

Rhizome

The easiest way to propagate Bird of paradise is to divide the underground stems, known as rhizomes. This method requires only one to two years before the plants reach maturity and flower. For best results, divide clumps during late spring or early summer. Dig up and separate old clumps, dividing those with four to five shoots into single stem divisions.

Divisions usually require at least three months to generate new roots. Flowering should occur in two to three years.

Tissue Culture

Live and Halevy (1983) used terminal and axillary meristems of *Strelitzia reginae* for in vitro culture. The use of tissue culture techniques failed due to oxidative browning of explants (Capellades et al. 1991). Many papers reports difficulty to establish cultures from apical and axillary buds excised from field grown adult plants. However, in this work apical buds showed better growth than axillary buds. Explants were established into a Murashige Skoog medium with activated charcoal and auxin (Naphthaleneacetic acid) and a cytokinin (Benzylaminopurine) by Ziv and Halevy (1983).

The rate of proliferation was 2-5 shoots/explants. The rooting of shoots was achieved in the same medium without cytokinin.

Tissue culture of Bird of Paradise is not done in Nepal. The Bird of Paradise is grown commercially for garden plant and tropical cut flower. Due to importance of the valuable cut flower it is high time for Nepalese floriculturists to produce plants through tissue culture technique.

Planting and Caring

Bird of Paradise prefers full sun but will tolerate lower light levels, such as that received from South facing window. They prefer 60 to 70° F during the day and 50 to 55° F at night. They prefer moderate relative humidity around 60 % which may require daily misting during the winter months. It is placed outside in the summer and we should bring it inside when temperature begins to fall to 60° F.

The planting hole should be dug 2 to 3 times the diameter of the root ball and as deep as the root ball's height. The planting hole should be dug 2 to 3 times the diameter of the root ball. One should make it as deep as the root

ball is tall, unless the soil is hard or compacted, in which case, consider digging a planting hole half as deep. A plant installed in this manner might require more frequent irrigation during dry periods.

While planting, carefully remove the plant from the containers. Gently place the plant straight in the hole. Planting too deeply may cause a delay in flowering. Fill around the root ball with soil and gently firm the soil.

The success or failures of a planting often depends on whether the plants receive adequate moisture. Watering during the growing season will encourage plants to grow more profusely and ensure a large crop flowers during the blooming season.

To aid in proper watering, construct a saucer like basin around the plant from the extra backfill soil. This will hold water until it drains down to the plant's roots. The insufficient watering will cause leaves to yellow and eventually die. During the winter months, plants should be watered only when the soil to the plants is fairly dry.

Pest and Disease Problems

The Bird of Paradise is relatively pest free. Occasionally need to spray plants for aphids or caterpillars which damage foliage. A leaf borer will sometimes attack bracts during August and September but can be controlled by weekly sprays. Scale insects and snails occasionally may pose a problem.

The Cultivation of Bulb Flowers:

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Bulb Flowers:

Bulb flowers refer to the perennial herbaceous flowers whose subterranean stem or root have developed by modification. Bulb flowers are attractive flowers especially in spring, winter, and easy to cultivation. In cut flower market, more than fifty percent of cut flower includes bulbous plants. Nowadays we can grow the bulb flowers throughout the year by using the modern technology. Diversification of these plants make them well flourished in hills as well as in plains. According to the morphological structure of its subterranean stem or root, bulb flowers can be divided into five categories:

1. The bulbous plants whose subterranean stem takes on scale form such as tulip, lily, and daffodil etc.
2. Corms whose subterranean stem takes on the form of a ball covered with a coriaceous outer bark such as gladiolus and common freesia etc.
3. Rhizomes whose subterranean stem are plump and look like root, with apparent joint such as canna.
4. Stem tuber whose subterranean stem takes on the form of irregular form of block of strip such as calla lily, cyclamen, tuberose etc.
5. Root tuber whose subterranean stem takes the form of subterranean stem and is plump as block, such as common dahlia.

According to the phonological periods, bulb flowers can be divided into two categories:

- The aestivation category (such as tulip, common hyacinth, red spider lily, daffodil, cyclamen, saffron etc.

- The winter dormancy category (such as lily, gladiolus, calla lily, common dahlia and tuberose.

There are so many cultivated bulbs flowers in the world such as tulip, gladiolus, daffodils lily, iris and common hyacinth.

Soil:

The soil of bulb flowers must possess the following characteristics:

- Loose with good drainage and thick soil layer.
- Rich in organic matter.
- Soil PH should be slightly acidic (some lily grow well in slightly alkaline soil).
- Avoid continuous cropping (apply crop rotation with legumes).

Climate:

Generally, the bulb flowers like cold and cool climate. The suitable temperature for different bulb flowers are given below:

1. Gladiolus: Suitable temperature for growth and development it needs 18-25 °C, and it cannot tolerate low temperature and it will be damaged by freezing under 2 °C, while above 25 °C the flower bud cannot differentiate well.
2. Lily: In the earlier period of cultivation, low temperature is suitable (0-13 °C); after the stem and root have grown 20-25 °C in daytime; 10-15 °C at night for Asian lily and 15-20 °C for oriental lily.
3. Tulip: Suitable temperature for rooting is 9-13 °C, for blossoming 15-18 °C, for

flower bud differentiation 17-23 °C and for the maturation of fruit seeds 30-32 °C.

4. Calla lily: It needs 18-20 °C in daytime and 10 °C at night during the growth period; 20 °C during blooming period, and above 20 °C the flower bud can not differentiate normally.
5. Cyclamen: Generally 20 °C in daytime and 10 °C at night is suitable, but it can be slightly low during the seedling stage, while during the standard seedling stage it can be as high as 20-22 °C.
6. Common Freesia: The suitable temperature 15-20 °C in daytime and 13-16 °C at night; it can be slightly low during the blooming stage.

Seed bulb:

The seed bulb should be strictly selected before cultivation. The size of the seed bulb

should be homogeneous, full and without lesion, the eye should be active and strong.

Treatment of seed bulb:

The seed bulb of gladiolus, lily, and tulip should be clean by removing the membranous pseudo scales on the surface of the bulb. The bulb can be treated by soaking with the mixture of Topsin-M at 1:800 dilution and carbendazin or 40% chlorothalonil at 800 times for 30 minutes.

Treatment of soil:

The soil can be treated with 70-80 °C water vapor for more than 30 minutes. It can also be irrigated with the Topsin solution of 1:1000 dilution and then closed with plastic film for 7-10 days. Other disinfectants commonly used for soil treatment are benzimidazole, benlate and formaldehyde etc.

Planting Depth:

S. N.	Name of the bulb flowers	Planting depth	Soil PH	Requirement of illumination
1.	Gladiolus	5-15cm / (2-3 times of bulb height)	Slightly acidic or neutral soil	No need for shading
2.	Lily (rooting with stem)	10-15cm / (3 times of the bulb height)	Slightly acidic	Shading in summer
3.	Lily (rooting without stem)	Just buried under the earth surface	Slightly acidic	Shading in summer
4.	Tuberose	The top of the bulb slightly showed on the earth surface		No need for shading
5.	Tulip	8-10cm of earthing /5-6cm of earthing	6-7	No need for shading
6.	Puto daffodil	5cm of earthing		No need for shading
7.	White calla lily	5-8cm of earthing	Slightly acidic/ 5.5-7	Highly shading
8.	Cyclamen	The upper part showed on the earth surface	5.8-6.5	Shading in summer
9.	Common freesia	1-2cm of earthing		

Planting Distance:

The planting distance of bulb flowers differ in their species, size of the seed bulb, season, type of soil and purpose of the cultivation. For example when planting cut flower lily, it can be considerably closely planted under the condition of high temperature and illumination. The density of planting in peat medium can be considerably increased.

The seed bulb density of Gladiolus (individual/m²)

Species	Size of the seed bulb (girth cm)			
	7.5-10	10-12	12-16	>16
	23	18	15	12

The seed bulb density of different varieties of Lily (individual/m²)

Species	Size of the seed bulb (girth cm)			
	12-14	14-16	16-18	18-20
Asian Line	55-65	50-60	40-50	-
Oriental Line	40-55	35-50	30-50	25-35

Seed dormancy breaking:

The seed bulb of the lily should be treated under 0°C - 4°C for 30-35 days or 40-50 days under 7°C -8°C, so as to break the dormancy. If we have available of unfrozen commercial variety, they must be planted the same day or the next day. Before planting, the seed bulb should be pre-soaked, it will be helpful for good germination. Select big and strong seed bulb, remove the outer aging scales that have developed diseases, soak for 30 minutes solution of Carbendazin and Topsin-M of 1:800 dilution, plant them after they have germinated or white roots have come out.

Good seed bulbs of tulip that can promote planting whose girth should be above 12cm, free from disease and insect pest and well cold treated bulbs.

The storage of the bulb flowers:

After the bulb flowers have got into dormancy, its bulb should be dug out and stored under appropriate conditions. The quality of storage can have great influence on the normal growth and blooming of the individual plant after they have planted. They cannot be mixed together with others seeds. Similarly we should protect the bulbs from the rat and storage insects.

Before storage, the bulbs should be classified according to their size and shape. Bulbs that are damaged or diseased have to be removed. The bulbs, storage room and utensils must be disinfected.

The storage of over-wintering bulbs:

Generally bulb planted in the spring bloom in the summer and get into dormancy in the winter. So

- Store the bulb flowers in condition of moist and low temperature during the period of storage. Bulbs that require moist medium and low temperature for example common hyacinth and canna. After the bulbs of canna have been lifted, dry the rhizomes appropriately, then bury under the moist medium (mixed with sand, saw dust, vermiculite) under 5°C -7°C and pay attention to ventilation. Another example, Lily requires low temperature and slightly moist condition. Although lily is suitable for autumn planting, its blooming period is rather short, and the time of dormancy also rather short. The bulbs have to be stored in low temperature so as to relieve

dormancy; otherwise the individual plant will grow inconsistently after it is planted. The cold storage temperature can be slightly different according to the variety of the bulb flowers.

- Bulbs that can be stored in condition of dry and low temperature are those of gladiolus and tuberose. Be sure to keep the environment dry and clean with good ventilation and at the same time maintain considerable low temperature. When the bulbs of the gladiolus have been lifted and they are disinfected, they should be placed in well ventilated room for a week, then stored on shelves in condition of 2°C to 4°C.

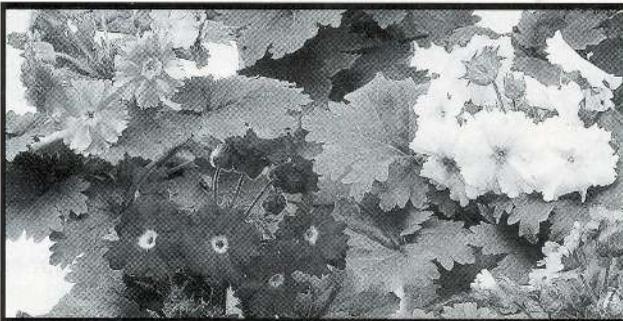
The storage of over summering bulbs:

The storage of over summering bulbs mainly refers to the storage of bulbs that are planted in autumn. The most critical is to keep the storage environment dry and cool, prevent from the high temperature and humidity, the temperature should be appropriate for flower bud differentiations. When the bulbs are

harvesting, first fully dry the bulbs, and better build shelves for storage. Frequently turn them over to check during the time of storage. Be sure to keep good ventilation. For example tulip, after the bulbs are lifted, prevent them from damage and exposure to the sun, grade and store them in dark, ventilated and cool environment. Similarly, in case of Daffodil, cut off the fibrous root before storage and close the base that connect the bulb with the foot bud with mud so as to prevent the foot bud from exfoliation, and then dry them in the sunlight. Store them in the condition of low temperature after the bulb has become dry. In case of iris bulb, when storing do not separate the bulblet from the root system so as to prevent the wound from rotting.

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MY EXPERIENCE ON CARNATION CUTFLOWER PRODUCTION



Prabindra Maharjan
Executive Member (FAN)

I was only 14 years old when I stepped into floriculture business with my father (Indra Maharjan). During that time, I enjoyed a lot at my father's Nursery (Kumari Nursery) on seasonal flower management. Later, when cut flower was in demand, I diverted my nursery profession to cut flower management in 2003. In cutflower production, my first choice were Carnation & Gerbera. It's been two years since I am engaged in cut flower business and I've achieved a good success in Gerbera & Carnation cut flower production. Now, I'm 23 years old and I still have to learn and am learning more about cut flower business. Really, cutflower business is much relaxing and enjoyable job. The detail information of carnation cutflower production that I successfully followed in my farm is discussed below.

1. Introduction:

In Nepal, carnation was recently introduced but in short time, it has become one of the most popular cut flower in Kathmandu valley. Carnation belongs to the family Caryophyllaceae, the genus Dianthus and Species caryophyllus. It is one of the most popular and important cutflower in the world. Carnation can be successfully grown in mild (day temperature not more than 30°C) climate and Nepal has wonderful climate to grow quality cut flower. Many floriculture experts have visited Nepal and they also have found that our climate is very good to grow international quality cut flower to export globally.

Carnation cutflower are divided into two groups:

- A. Standard variety: It has single large flower and long stem. It is currently grown in large-scale productions units in Nepal. Standard carnation is the popular type of the carnation cut flower in Nepal.
- B. Spray variety: It has several shorter branches with smaller flower on each branch with short stem. These varieties are less used in Nepal.

2. Shade-House Preparation:

In Nepal, we have no high technology greenhouse used for cutflower production because of high cost of greenhouse material to import. Many or say every cutflower growers are using bamboo poles and Silpaulin plastic that are economic and suitable to grow quality flowers. The height of bamboo pole that is needed to make normal shade house is;

Height: 11 ft. for the middle side (2 ft. for underground level & 9 ft. for upper level)

9 ft. for left and right side (2 ft. for underground level & 7 ft. for upper level)

Length: It depends upon quantity of carnation plants and land available. However, I recommend 80 - 100 ft. length for normal shade house.

For making shade house for carnation cutflower, we generally use Silpaulin plastic,

which is strong and cheap. Making 20 ft. wide by 100 ft. length of shade house required almost 2400 sq. ft. Silpaulin plastic.

3. Soil Preparation:

For quality carnation, I prefer the sandy loam soil. However, carnation can adjust in any type of soil but the soil should be well drained. It needs a neutral to slightly acidic soil around pH 6.5. If it's too basic, we use acid fertilizer of Nitrates or Phosphates and if it's too acidic, we can use Krishi Chun or Limestone. For 1 sq. meter bed, almost 20 kg of cow's dung/compost fertilizer is needed to be mixed with soil and that should be very well decomposed.

To make soil free from pests such as Nematodes and disease like Fusarium we should sterilize the soil by using chemical sterilizer. Without it, there will be risk of infections. If carnations are planted in soil, where carnations are never grown before, sterilization is not so necessary. However we should sterilize the soil. In developed country, soil sterilization is done by two methods either by steaming or by using chemical sterilizer. We do not have steaming technology, so we use chemical sterilizers i.e. Formalin, which is available commercially. The method for sterilizing soil by Formalin is as follows:

Dilute 5 liters of Formalin into 400 liters of water and sprinkle the water by water-jar. After that cover the soil by plastic sheet for 2 weeks to improve the sterilization. After that remove the plastic and the next day the soil is ready for planting carnation.

Note: Soil sterilizer is to be used after preparation of bed lines for carnation planting.

4. Bedding:

For normal bedding, the bed should be 1 meter wide. In order to prevent the crop from being washed away, the carnations are cultivated on raised beds up to 25 cm height. In 20 ft. wide by 100 ft. length shade house, we can prepare 4 beds leaving 1.5 ft for walking path in each side of the beds.

5. Planting:

For qualitative and continuous production, approximately 20 plants should be planted on 1 square meter bed. Do not plant the cutting too deep, just place them in a small hole and put some soil around them. The main thing to remember is that never bury the first nodes in order to avoid rot disease.

After planting, sprinkle the plants with small amount of water as often as possible, trying to damp the plants/leaves, but not the soil.

6. Water irrigation:

Water should be clean to grow healthy plant. Generally, we use well or underground water, if the water is yellowish, we should avoid that water because it can cause disease and pest problems. After planting, only overhead spraylines for first six to eight week is required because it helps the plant establishment. After that we can use dripping system manually. The main thing to be considered is that never spray the plants that are already wet. Try to avoid spraying when the temperature is high. We should carefully give the water according to weather and soil condition.

7. Pinching off:

Pinching is necessary for only 2 times. Pinching off is necessary to develop good production of carnation cutflower.

First pinching is made 25 - 30 days after planting at the 8th pair of leaves. It helps to develop side shoots and we will get 4 to 5 shoots after 1st pinching.

Second pinching is done on new side shoots, at the 5th node. We should remember that pinching whole plant in same day is not suitable. Pinching should be done subsequently keeping one week in between because it enables the productivity to be better spaced out. Second pinching is done in 60 - 70 days after planting and then pinching is completed.

8. Netting:

Netting is very important because quality of carnation depends on it. Carnation loss occurs because of poor support. If the netting is loose, carnation stems start to bend leading to slow production, shorter height and disease occurrence. In developed countries, netting is made before the planting because their nettings are readymade and made of wire. We prepare nets ourselves and it is suitable & easy to put after finishing first/second pinching. We use nets made up of nylon thread (that is also used by fisherman for fishing) and to support the treads, a steel wire is kept around the pole. It is cheaper and better. Netting should be tightly woven.

We should use at least 5 steps of nets on the pole. The first one is named as "Planting Net" because it sets for planting. The net square hole for first step should be 7x7 cm and that should be placed on the height of 12 cm from the soil level.

Above first netting, second and third nets are to be kept in the height of 15 cm in the square hole of 12-15 cm.

Fourth and fifth nets are kept on the height of 18 cm in the square hole of 15 cm.

9. Disbudding:

It is the practice of removing secondary buds or undesirable immature flower buds, which should be removed regularly to ensure a better quality of the main flower. Identifying buds to be removed is often confusing for the beginners. We must be careful to avoid any injury to the main stem/bud. Removing unwanted flower buds and vegetative shoots is known as disbudding.

10. Fertilization:

For qualitative production, fertilizers are to be used 2 - 3 times/week. All the fertilizers must be soluble in water. The four important fertilizers for carnation are: -

- a. D.A.P (Di Ammonium Phosphate): Generally, D.A.P helps to make carnation stick strong and fat. It also helps to increase the size of buds and makes plants healthy.
- b. UREA: it encourages growing new shoots and making stem longer. We should be careful in adding Urea because too much urea can damage the plants.
- c. Oil Cake (PINA): It makes color of flower dark and encourages growth of healthy plants. It also plays a role of Urea. For preparing qualitative Pina fertilizer for carnation, add about half Pina in bucket and add full water, stir it and keep it for 3 weeks. After 3 weeks, smell of Pina will be strong and seems coffee color, and it is ready to use.
- d. Potash: Usually potash is required to control the carnation plants that are weak and thin. When the potash is lacking, carnation's lower foliage burns and necrotic spots appear in the middle-age leaves.

Other useful fertilizers are:

- e. Calcium Nitrate: Calcium Nitrate is required to make carnation plant strong. Appropriate use of Ca has strong flower, leaf and stem. We should always use Ca fertilizer without mixing with other fertilizers such as N.P.K, Mg, Boron, Iron) because the ability of absorbing Calcium Nitrate is much less than for the other nutrient. If we fertilize with all the nutrients at the same time the plants will take very little Calcium Nitrate.
- f. Magnesium & Iron: This fertilizer is specially needed for leaf green. Shortage of Mg & Iron makes leaf yellow and sometimes white. High using of Potash leads a shortage of Magnesium.
- g. Boron: Boron is needed to control symptoms of Brittle stems, cracking off near leaf point, Excessive Calyx splitting and failure of flower buds to develop. It is important to know that high potash levels can induce boron deficiency.

Basic Fertilizer required for carnation plants per week are as follows;

Weekly requirement for 1 Square Meter = 20 – 22 Plants (soluble into 10 liters water)

Nutrients	Planting to Pinching	Pinching to Blooming	During Blooming
D.A.P	6.66 gm	6.10 gm	6.60 gm
Urea Or Pina (Oil Cake)	2 gm	2.20 gm	2.5 gm
Potash	2 gm	3.10 gm	3.40 gm
Borax		1 gm	1 gm
Magnesium Sulphate	2.5 gm	2.5 gm	2.5 gm
*Calcium Nitrate separately	5 gm	8.0 gm	10 gm

*Attention: Calcium Nitrate is to be applied separately.

11. Pest and Diseases:

Most of the pests are observed in summer time due to moisture and high humidity. We should realize that pest & disease start in a very small way. So we should take care of carnation plants before pest & disease occurs. Some pest and disease that occurs in carnation plants are as follows;

Diseases:

a. Fusarium Wilt:

Symptoms: - plants foliage looks wilting that a few branches followed by death. The stem is rotting from below ground level with internal brown streaking. If the plant is pulled by our hand, it breaks off easily where the roots remain in the soil. One infected plants leads to infection of other plants rapidly and all plants will wilt and die soon.

Reason: Fusarium Wilt occurs due to not applying the soil sterilization or chemical treatment of the soil after getting carnation production in the field. Till now, the Fusarium wilt is not found in Carnation in Nepal but could be in future if we don't take preventive measure.

Treatment: - affected plants should be destroyed to reduce the source of infection. Apply Safal / Benomyl / Rhidomil (2 – 3 gram/lit.) with water by dripping system. For best control measure, we should sterilize the soil or by using chemical fumigation of the soil.

b. Botrytis (Grey Mould):

Symptoms: - the affected flower petal tips turns brown in color and spreads rapidly through the petals to develop fully grey mould.

Reason: Botrytis occurs due to high humidity.

Treatment: -First we should maintain humidity level by providing good ventilation. Avoid injuring flowers and provide fungicide of Safal/bavistin/benlate 2.5 gram/lit.

c. Basal Rot/Stem & Root Rot (Phytophthora):

Symptoms: - cutting plants turns brown with death leaf, yellowing foliage, external browning of stems and internal browning at nodes.

Reasons: One of the major reasons is over watering to the soil and using poor drained soils. The basal point of the cuttings or young plants turn brown and the plant will die slowly because water transport stops.

Treatment: Stopping over watering and avoiding poor drained soils can control Rot disease. Apply Safal/ Rovral/ Benlate/ Bavistin/ Benomyl – 2.5 gm/ lit.

d. Spot:

Symptoms: - it is seen as small purple spots with yellow margins that develop black powdery spores. The spots spread and join together to become large areas affecting whole leaves that eventually drop off.

Reason: it occurs due to the poor environment of the greenhouse.

Treatment: drenching with Safal/ Bavistin/ Diathin 2.5 gm/ lit. will control most of the spots.

e. Rust:

Symptoms: - Affected parts appear as

small blisters containing powdery dark brown spores on the lower or upper sides of leaves, stems and flower buds. The affected leaves turn yellow and die.

Reason: Using over watering to the foliage.

Treatment: Drenching with Safal/ Bavistin/ Diathin/ Rovral 2.5gm/ lit.

Pests:

a. Red Spider Mite:

Symptoms: - Red spider mites are one of the common and serious pests on carnation. These mites are very small red insects, which feed on the undersides of leaves, suck the sap and eventually the leaves turn pale, bronze and show severe webbing. This pest leads to decrease the crop quality, production and vase life.

Reason: it occurs due to high humidity and the lack of good environment near by the shade house.

Treatment: Spray Endosulfan (Sulfur) 2 ml/ lit. To the carnation plants and apply proper ventilation. Sprinkle the water properly to prevent the pest attack. Elimination of weeds also reduced most of pest attacks.

b. Thrips:

Symptoms: - Affected flower buds don't open easily. When the buds open, the leave tips are brown. Thrips also suck the sap from the leaves, causing them to turn patchy with slight wrinkling. In flower buds, the white wrinkle is marked in flower's original color.

Reason: it is due to the poor environment of greenhouse.

Treatment: Spray Nuvan/ Dichlorovos/ Endosulfan/ Titan 2 ml/ lit. And cover the greenhouse with insect proof to reduce Thrips infections.

c. Aphids:

Symptoms: - Red, Green or Black insects about 3 mm that live in colonies. It sucks the sap from the leaves & disfigures the young growth. Aphids can be responsible for the transmission of viruses.

Reason: It is due to the poor environment of greenhouse.

Treatment: spray Nuvan/ Dichlorovos/ Endosulfan/ Titan 2 ml/ lit. And regularly inspect plants for aphids.

d. Caterpillars/ Bud borer:

Symptoms: - the buds look weak than healthy one and when we open the bud, caterpillars are found inside it, which is

Daily treatment schedule for carnation crop.

Day	First
Sunday	Sprinkle clear water and Spray fungicide (2-3 grams/ liter)
Monday	Prepare fertilizer with water and apply it by dripping system
Tuesday	Apply clear water By dripping system
Wednesday	Sprinkle clear water and then spray Pesticides (1-2 ml/ liter)
Thursday	Prepare fertilizer with water and apply it by dripping system.
Friday	Sprinkle clear water and then Spray fungicide / pesticide according to the condition of carnation plants.
Saturday	Apply simple clear water by dripping/sprinkle system.

green in color. They usually damage the plant by eating parts of leaves and flowers.

Reason: It's also occurs due to the poor environment of greenhouse. Actually, when the butterfly roaming around the flower buds, they laid eggs in the buds and the larvae eat into the bud that is completely damaged

Treatment: Spray Endosulfan or Rogar 2 ml/ lit. And destroy the caterpillars with flower buds manually. Cover the greenhouse properly to protect from insect entrance.

Important list / crop protection / conclusion

To give carnation plants good protection, we should follow the following points:

- Do not spray on the plants that are already wet.
- Apply water once a day (morning or evening)
- After using Pina (Oil Cake), always spray fungicide 2.5 gm/ lit. To protect from fungus.
- Safal Fungicide and Endosulfan pesticide is one of the best products that found commercially to protect from most disease, fungus and Pests.
- Check the carnation cuttings from bottom to top level (short survey) Daily to know the condition of plants.
- Remove the weeds near by greenhouse to make the greenhouse's environment clean and free from pest.
- We should check the condition of netting from bottom to top once a month.
- Try to avoid spraying when the temperature is high.
- After spraying stop sprinkling flowers for 48 hours.

Total Production static Of Carnation Cutflower From 6000 Plants in year 2060/61

Month - Nepali	Month - English	Avg. Max Temp.	Avg. Min Temp.	Avg. Rain(day)/ Month	CARNATION - 6000 plants
Shrawan	July - August	28	20	14	1193
Bhadra	August - September	27.5	19	10	5006
Ashoj	September - October	26.5	15.5	5	9397
Kartik	October - November	24.5	10.5	1	8401
Mangsir)	November - December	21.5	5.5	0	6961
Poush	December - January	19	2.5	1	5787
Magh	January - February	19.5	3	1	4405
Falgun	February - March	23	6	1	8338
Chaitra	March - April	26.5	9.5	2	9292
Baishakh	April - May	28.5	13.5	5	14939
Jestha	May - June	28.5	17.5	8	6295
Asar	June - July	28	19.5	12	10986
Total					91000
Avg. sticks per day					249
Total production per plant/year.					15.2

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Fancy Names of Orchids

Radha Niroula

Department of Plant Resources

Thapathali

The orchid family is the largest family of flowering plants constituting about 30000 species and 700 genera. The orchids are considered as one of the most beautiful flowers of the nature and thing of beauty and joy. If some one tells you that one family of plants could bear flowers resembling moths, butterflies, nuns, doves, pansies, scorpion, tigers, leopard, dancing ladies, lady's slipper you might find it difficult to believe. Interestingly, this is found in orchid and besides their scientific names, the orchids are also named on the basis of their appearance. Some names are associated with their fanciful appearances and in many species the names are based on the resemblance of their flowers.

Some genera and species carrying such names are listed below:-

- *Arundina graminifolia* - Bamboo orchids - plants resembles reeds / bamboos in appearance and thus named as bamboo orchids.
- *Phaius* - Nun's orchid - due to the resemblance of their flowers to a bee.
- *Pterostyles barbata*- bird orchid - because of bird like appearance of its flowers.
- *Neittia* - birds nest orchid - they derive their names from the nest like appearance of their tangled roots.
- *Oncidium* - dancing lady or butterflies orchids - long spray of flowers resembles group of ballet dancers or assumes the appearance of playful dolls and the species are commonly called as dancing lady orchids.
- *Dendrobium pulchellum* - dog orchid - the flowers resemble the head of a dog, the orchid is thus named as dog orchid.
- *Aerides*, *Rhyncostylis* - fox tail orchid - represents due to the resemblance of their long cylindrical and fluffy inflorescence to the tail of a fox.
- *Peristeria elata* - dove orchids - derives its name dove orchid from dove like central part of its flowers.
- *Odontoglossum matangiense* - human orchids - commonly referred to as human orchids derive their names due to appearance of their flowers to a human being.
- *Godeyera biflora* - jewel orchids - due to their variegated and valvety foliage.
- *Cypripedium* and *Paphiopedilum* - lady's slipper - or venus shoe - are named after the resemblance of their floral lips to the slipper of a lady; a myth prevails that goddess venus lost a slipper in the woods during storm and when a mortal tried to touch the slipper it was changed into the flower known as venus shoe or lady's slipper.
- *Spiranthes* species - lady's tresses orchids - referred to as lady tresses due to resemblance of their inflorescence to the tresses of a lady.
- *Orchis simia* - monkey orchid - has a lip which captures the postures of playful monkey.
- *Phalaenopsis* - moth orchid - the long sprays of white to pink flowers of *phalaenopsis* arching from the trees

resembles flights of tropical moths and hence commonly called as moth orchid.

- *Dendrobium densiflorum* – pine apple orchid – due to shape of inflorescence to the tail of the rat.
- *Pholidota* and *Otochilus* – rattle snake orchid – are referred rattle snakes orchid because the bracts of their unopened floral spike resemble the rattles of rattle snake.
- *Arachnis* – scorpion orchid – the curved lateral sepals represent the claws and the upper sepal the tail of scorpion.

□ *Esmeralda clarkei* – spider orchid – the large creamy white flower resemble a spider.

□ *Odontoglossum grande* – tiger orchid – derive their name from the resemblance of the color pattern of its flower to that of tiger.

□ *Bulbophyllum leopardinum* – leopard orchid – the patches on flower resemble the skin of leopard .

As the flower of orchids are of different shape and size, let us expect more fancy names to come in the future.

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Planning a Home Garden

- Mrs. Indira Thapa
Planning Officer

Department of Plant Resources

PLANNING a garden is as essential as planning a menu for a party. In a garden developed without planning, the plants may grow well and become healthy but it may not give the desired effect. The effect proposed to be created should, therefore, be clear in one's mind like a painting. It is a useful exercise to draw the plan on a graph paper with proposed positions, the heights of the plants and even their shapes, wherever possible. It is stimulating to draw and redraw, fix and refix the positions, until a plan to your satisfaction emerges and it is exciting to see the garden shaping itself according to the picture visualise earlier.



FORMAL OR INFORMAL doesn't matter; a garden should have chief features like naturalness and beauty. For this, colour, harmony and balance is important.

LAWN like a canvas for the painting is a must for a garden. It has an eye soothing effect.

HEDGES suitably encircling the garden or rounding off different portions, provide an attractive framework, break its monotony and lend it a personal touch.

ORIGINALITY IN PLANNING of the gardener bestows originality to his/her garden. A graceful bend somewhere dotted with a beautiful flowering shrub a green sloping corner for ferns or hanging plants (Orchids, Geraniums, Sedums

etc.), would add to the charm of the garden. A tree may be so placed as to relieve a wall of its monotony. In an informal garden, a few simple bold & graceful curves are to be preferred to many undulating sharp curves.

VIEW FROM THE HOUSE is an important consideration and, therefore, the garden should be planned in such a manner that the

house merges with the garden and also commands a beautiful view from its main living rooms. Some prefer a fountain with statue, group of artistic clay pots, sitting arrangements etc. for a focal point.

VARIETY AND SURPRISE in the garden have natural features such as slopes, watercourse, boulders etc. South and west side are assigned to an attractive rockery while north and east side for evergreen shrubs, fernery, orchids etc.

COLOUR SCHEME includes three primary colours: red, blue and yellow and in between are three secondary colours: violet green and orange, red, orange and yellow are warm colours and violet, blue and green are cool colours. The colours opposite to each other make a bright pleasing contrast. The contrast may be between opposite main colours like yellow and violet, or red and green of bright scarlet flowers. The contrast may also be between blue violet and orange red as in delphinium and Eschscholzia or in Canterbury bells and Myosotis (Forget-me-not) and Polianthes,

orange and orange-yellow as in the shades of Nasturtium and Dimorphotheca.

FRAGRANCE in the garden is as essential as colour. In selecting shrub, flower and climbers, preference may be given to growing for scent like Gardenia, Jasmine, lavender, Lonicera, Plumeria, Sweet peas, Tuberose, Night queen, Chapma, Magnolia etc.

SPACING should be done in such a way that the leaves and branches of one do not shade those of the others on maturity. So do not overcrowd.

WATER SUPPLY AND GARDEN ACCESSORIES it is important to be sure about the source of water supply. A well or pump or any other water source should be planned. Garden accessories, such as compost pit, and a garden store for tools, seeds, bulbs etc. deserve height priority in planning but most neglected.

CHOICE OF PLANTS depends on locality, altitude, location and position of the land whether sunny or shading. These factors determine the type of flowers, fruits or vegetables that can be suitably grown.

ARCHES AND PERGOLAS look natural in combination with certain other features such as hedges, screens, walls etc. An arch by itself in the middle of a lawn would look isolated and unnatural but in continuity of a hedge, dividing the lawn into two sections or separating the lawn from the kitchen garden it would be natural.

KITCHEN GARDEN is a must though a small space, in the home garden. 300m² is considered sufficient for providing a family of four with vegetables for about nine months. One-tenth of an acre is reported to be sufficient to provide fruits at the rate of 1kg/day for a family of 4-5 members.

GARDEN FEATURES include

- fencing
- lawn and hedges
- garden paths
- flowering shrubs evergreens and small trees
- house plants and pot plants
- rock garden
- kitchen garden
- small green house and shade house and garden accessories

LANDSCAPING needs an expert but once an eye for colour, harmony and balance has been developed, a successful home gardener can attempt landscaping also.

The garden is yours and plant it as you would like it, after hearing all the advice offered to you.



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The Lawn

Madhu Ghimire

National Herbarium and Plant Laboratories
Godawari

"Nothing is more pleasing to the eye than green grass kept finely shorn." By Francis Bacon

Lawn is the heart of a garden. It is the centerpiece around which all other garden elements are placed in a subordinate order like the royal court where the king occupies the central position surrounded by his courtiers. The lawn makes its own special contribution to the visual impact of a garden, an impact which can be sustained the whole year round.

Lawn can be defined as a piece of land thickly covered with uniform green, soft grass. A good lawn can literally be compared with a cushion like velvety carpet, giving pleasure both to our sight and feeling. It requires good grass and proper care. To develop a good lawn, therefore one should take precaution right from the start. The ideal lawn should meet the following basic characteristics:

A uniform green color and even texture throughout the year.

- Freedom from weeds.
- A lawn that is capable of use through out the year
- Freedom from brown patches.
- Freedom from pests & disease.
- A reasonable ability to rejuvenate.
- An absence of humps and hollow.
- Easy mowing.
- Freedom from moss.

Selection of grass

A good lawn grass is one that put up fair growth of uniform texture, has greater tolerance to drought, disease resistance, hardwearing

qualities and the ability to blend with other grasses.

i) *Cynodon* spp.

Cyanodon dactylon is also known as Calcutta Dubo, commonly used for making a lawn which has thin blade, short internodes producing thick mat.

Beside, *Cyanodon dactylon* there are other 3 species like *C. transvalensis*, *C. bradlevi* & *C. magennisii* used in turf culture. They require feeding at least three times a year and a good sharp mower to cut to above 40mm (1/1/2in).

ii) *Zoysia* spp.

Zoysia japonica is commonly known as blue green grass or Korean grass. *Zoysia japonica*, *Z. matrella* & *Z. tenuifolia* are three closely related species suitable for turf production. They produce a dense, uniform, high quality sward. They are propagated vegetatively and show a mark resistance to drought while other tolerate heavy shade. They also require feedings at least three times a year and a good sharp mower to cut to above 40mm(1/1/2in).

"Dubo" as well as "Korean grass" are lawn grasses suitable for sunny places.

iii) *Auxonopus* spp.

Auxonopus compressus is commonly known as "Ghode Dubo" or Carpet grass. It is mostly used in shady place. There are two species of the genus *Auxonopus* i.e., *Auxonopus compressus* & *A. affinis*. *A. affinis* is more widespread and established best by seed. Tropical carpet grass *A. compressus* comes better by vegetative means. They are both shade loving lawn grass.

Soil and Site

The best soil for a lawn is loamy soil rich in organic matter. Clay soil can be reclaimed with lime and then with liberal application of organic manure. In addition, mixing of coarse sand may be necessary on obstinate clay. Sandy or gravelly soils need plenty of heavy organic matter to make it amenable to growing lawn grasses. The site should receive full sun light throughout the day. The land should be high with moderate slope to ensure through drainage. In a home garden, lawn should be easily accessible from the front varanda or portico.

Preparation of Soil

A lawn, once prepared, stays for many years. Thorough preparation of soil is needed to ensure a good growth of grass during this long period. Land preparation should start soon after the winter months. The soil should be opened at least up to 25 cm. Open soil with its big clots should be exposed to strong sunshine of the summer for more than a month for weathering. This will kill the surface vegetation as well as the eggs, larvae and adults of many insects taking refuge into the soil. Many harmful microorganisms including fungi and bacteria will also get killed. Besides, long exposure to hot sun will make available many plant nutrients hitherto bound with soil particles. The clots should be broken by hitting hard with the head of a spade.

Now the land should be heavily irrigated to get the soil settle down. A second watering is necessary after a fortnight to demarcate the low & high and final leveling needs the help of a dummy level, if the area is large.

About 3cm layer of screened compost or farmyard manure or cow dung manure should be evenly spread on the surface along with

1kg coarse bone meal per 10m² and mixed 10-15cm deep into the soil. The land should then be liberally sprinkled with water to encourage germination of seed but not rhizome etc, brought with the manure. When out, the young vegetation should be hand weeded followed by fine leveling with the help of 2m long angle iron piece. Now the land is ready for planting.

Planting of lawn

Land should be planted during the early rains/ March-April by adopting one of the following methods.

- 1) Sowing of seed.
- 2) Spreading or Pasting planting material
- 3) Dibbling and
- 4) Turfing

Of the above 4 methods of planting of lawn, dibbling is the best method for small garden. Lawn can be prepared by the following way. In this method, Dubo is collected either from a lawn or from the side of a road or from a patch where it grows by itself. A bunch of 5-6 stems is taken & planted in the opening made in the soil by a "Khurpi". The soil is pressed hard after panting each bunch. The land should be irrigated after planting, if rain is not expected. Planting distance is 1.5X1.5cm. Planting of *Zoysia japonica* (Korean grass) by this method results in bulging out of grass here and there in the lawn unless mowing is done regularly. For this, planting method should be modified. The thick mat of rhizome of this grass should be lifted & separated into individual strands. Three or four strands should be taken at a time and planted continuously in a linear trench 4-5cm deep and covered with soil, keeping the aerial growth outside.

Maintenance & care

A Table of year Rounded Maintenance for Lawns

Month	Work necessary
January	Very little work is necessary. Lawns are usually semi-dormant or dormant & conditions are not conducive to work. Mowers may be serviced. The construction work can be done during mild periods.
February	A light brushing during dry weather will be beneficial. If worms are active, they can be controlled by chemicals. When weather permits, preparation of seed beds for spring sowing can take place.
March	A light mowing can be given in mild areas when growth has occurred. During a dry period rolling can be carried out to firm the soil after winter frosts. The roller should not weight more than 2 cwt. Never use a roller when the grass is wet or thin. Carry out worm control. Apply top dressing of fertilizers. Trim edges.
April	Control soil inhabiting insects if they pose a danger. Give a high top dressing of nitrogen. Gradually reduce height of mowing. Prepare damaged areas.
May	Seed or lay new areas carry out mowing if necessary give an occasional brushing control weeds.
June	Carry out mowing, irrigate if necessary. Fallow land for autumn sowing
July	Carry out mowing & occasional brushing, irrigate if necessary. Give a light top dressing of nitrogen.
August	Continue mowing, brushing & irrigation when necessary. Prepare seed-beds at the ends of month, sowing can commence in cooler areas.
September	Seed sowing may be continued. Commence aeration. Reduce frequency of mowing. Control weeds where necessary. Apply autumn top dressing; low in nitrogen high in phosphorus and potassium. Control moss if necessary. Scarification can be commenced.
October	Give the last mowing. Remove leaves. Apply top dressing with fertilizers. Control moss
November	Control worms. Continue construction work
December	No work necessary. Good month to plan any new features.

Manuring & fertilization

For every m² 2kg screened cow dung manure & 100gm powered neem cake should be raked in followed by irrigation. Periodical manuring of lawn is necessary to maintain its bright green color. Nitrogen in the form of 2% Urea solution is sprayed for this purposed at 5 liter per 10m² through the fine rose of a watering cane.

Use of Sand

When the lawn is made on clay or loam it is likely to get soggy and thus unfit for use soon after a shower. To avoid this difficulty, a layer of course sand may be sprinkled over the grass.

Disease & Pests

Earthworm can create difficulty in the lawn by depositing the filthy excreta. This pest could be checked by the application of granular insecticides like furadon, foret, thimet etc. In view of the frequent use of lawn, this poisonous chemicals should not be recommended. Instead, oil cakes of neem (*Azadirachta indica*) Mahua (*Bassia latifolia*) or Karanj (*Pongamia glabra*) should be spread at 500g/10m² just before the rainy season. This will take care of both earthworm & termite and trouble creating insects in the lawn.

A lawn with its surrounding garden is considered an 'outdoor living room'. The living room should therefore, be kept neat & nice.



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Agro Enterprise Center कृषि उद्यम केन्द्र

Introduction

Agro Enterprise Center (AEC), an agricultural wing of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) was established in September 1991 under the cooperative agreement between FNCCI—the FNCCI is an umbrella organization of the Nepalese private sector established in 1965 with the aim of promoting business and industry while protecting the rights and interests of business and industrial commodities and USAID/Nepal. In the growth of past twelve years, AEC has made valuable contributions in Agro Business Development and Promotion.

Since 01 October 2002, AEC has been re-shaped with more focused Mission and Vision

The Mission

“To expand and strengthen market oriented private sector driven agro enterprises in order to increase the value and volume of high-value products sold domestically and internationally.”

The Vision

“The vision of AEC in the national context is to be a strong, vibrant and sustainable private sector led agro-enterprise sector capable of contributing high and broad based economic growth, which in a precondition proposed strategy”.

Activities Focused Onwards are

- Policy Advocacy and Policy Advices/Studies.
- Market and Demand Analysis of High Value Agriculture Crops
- Trade and development focusing on Trade Fair/Exhibitions and new business development
- Strengthening Agro-Commodity Associations and supports for their development/promotional programmes.
- Agro Business information Service including Market Information Services.

For details, Please contact us at

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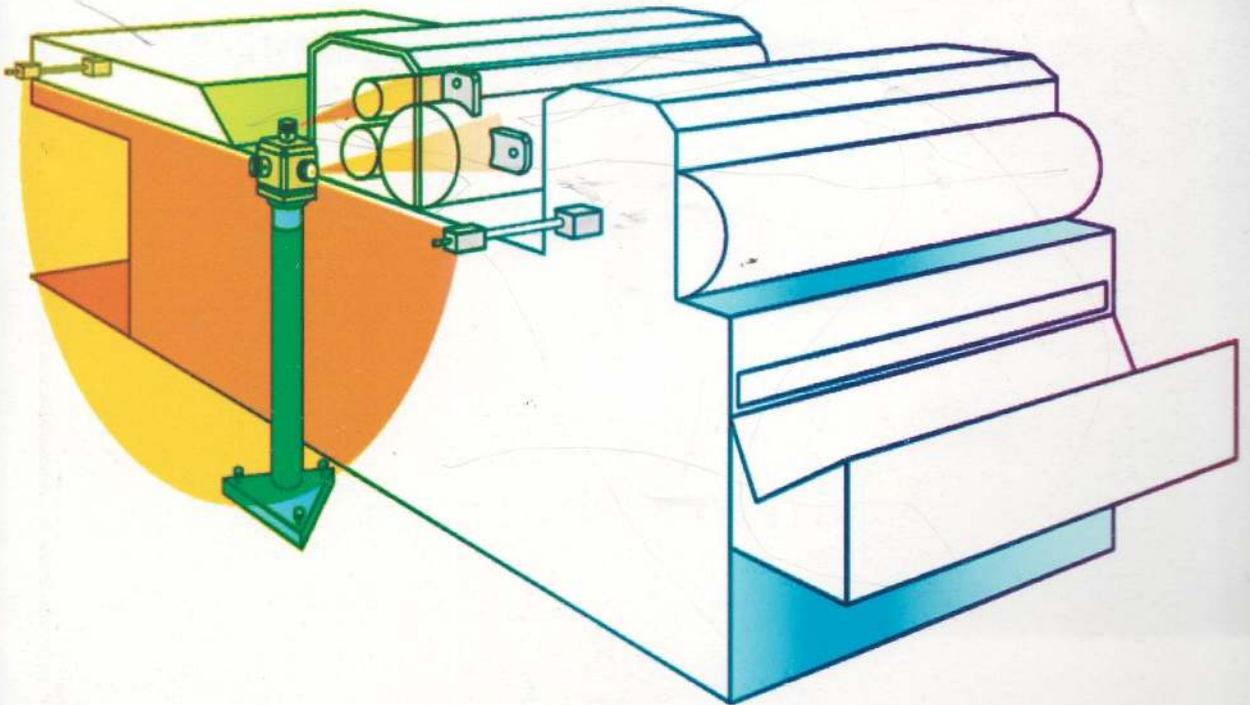


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Floriculture Business in Nepal: Retrospect and Prospect

Janga Bdr. Tamang
Program Coordinator (FAN)

Background:

Floriculture is the cultivation, processing and marketing of ornamental flowering plants for aesthetic purpose whether grown in window boxes, greenhouse, or gardens. In floriculture, plants are grown for individual effect or for total effect. Although, flowers have been cultivated since the beginning of civilizations. Commercial cultivation in greenhouses of plants and flowers native to other countries was not established until the 19th century. In, particular milieu of Nepal, the cultivation of cut flowers in greenhouse is at an initial stage.

Depicting Nepalese Culture

Flowers and gardens have always been part of Nepalese culture, primarily for offering at religious ceremonies and for festivals. Almost every home and business in Kathmandu has numerous flowering and foliage-potted plants in its garden. These plants are potted in locally made, decorative clay pots that are also used by many of the commercial producers. Traditionally, these home grown plants have been the source of flowers for religious and aesthetic purposes. However, until recently, this was not a commercial industry, but was a hobby of the upper classes. The Nepalese floriculture industry has emerged in the last fifteen years and now consists of about more than 60 hectares of land in production.

Role of FAN

With the inception of the Floriculture Association of Nepal (FAN) in 1992 by ten founder members, the industry has started to

grow in part because of educational programs, promotional efforts, and feasibility study. The Agro Enterprise Centre (AEC) of the Federation of Nepalese Chamber of Commerce and Industry (FNCCI) provided funds for the different activities of FAN for little over a decade.

FAN works for the benefit of this industry's members. It performed various activities that helped to establish floriculture as an industry in the Nepal and it will perform various activities continuously to flourish the floriculture industry throughout the world.

Flower/Plants are symbol of beauty. Besides their aesthetic value they are also important for their economic uses such as cut flowers, dried flowers, extracting perfumes and other products. Besides, ornamental/aesthetic importance these plants have an important place in Nepalese society from the religious points of view. One cannot think of any religious/traditional ritual or ceremony being performed without flowers. Commercial floriculture has been widely practiced in Kathmandu as a part time business and hobby. Recently, Some entrepreneurs have initiated the expansion of this business in a large scale production of cut flowers, foliage plants and dry flowers. There are more than 400 nurseries successfully operating in 34 districts of Nepal, out of which more than half are located in Kathmandu Valley.

Floriculture Association Nepal (FAN) has been continuously providing different types of training to its members each year. Training were conducted on areas such as Nursery management, Garden management, Cut

flower production and management, Flower arrangement, Pest and Disease control and others.

Development of floriculture business

Floriculture is an important agro based, labour intensive and business-oriented industry for Nepal. Floriculture business remained very traditional before 1990. Many types of flower used to be imported from other countries during some special occasions by Hotels and Nurseries. There were no flower showrooms in Kathmandu Valley. However, today a large number of peoples are involved in the business and is increasing day by day. There are large number of nurserymen seriously involved in this business today, especially in the Kathmandu Valley. The profitability of this sector has attracted more and more people. There are many climatic zones in Nepal where different floriculture products could thrive commercially. Nepal's climate and abundant sunlight, cheap labour, appropriate soil and adequate quantities of water are seen as major advantage to flourish this business. Advantage also lies for export because of the waiver of tariff on the export duty. Nepal has more than 30 different types of rhododendrons found naturally (which is the national flower of Nepal). Likewise, different orchids are also native to Nepal. Nepal being the home of some 363 species of Orchids, which belong to 97 genera, there may be possibility to export some beautiful and unique native orchids. The land is suitable for the cultivation of the different types of cut flowers and ornamental plants i.e., Gladiolus, Carnation, Rose, Gerbera, Lily, Anthurium, Orchids, Birds of paradise, Azealias, etc. in open or semi open field.

In Nepal today, the domestic production is in an increasing trend and is substituting imports.

Main constraints in Floriculture

- Government has no policy on floriculture
- Non-availability of good quality planting materials of Cut flower species in the country.
- Growers are unable to afford importation of good cultivars.
- Lack of scientific information (agro-technique, soil types, efficient use of fertilizer, irrigation, pesticides, post-harvest care etc.) on the specific flower crop due to lack of research.
- No facility for diagnosis and recommendation of control measures against diseases and pest problems.
- Lack of extension service on production technology of flower crops
- Lack of refrigerated facilities.
- Lack of encouraging financial support

Potentiality

Nepal is a land of extreme with a lot of variation in altitude, temperature and humidity. Within a small geographical area wide range of flowers and ornamental plants can be grown. Domestic market for floriculture is flourishing year by year due to increasing awareness and life style changes among the affordable class of people in Nepal.

Nepal has hundreds of micro-climates, a huge bio diversity and large number of native plants, many of which have been collected on expeditions and bred for commercial purposes in other countries. The wide range of microclimates makes Nepal ideal for the production of large number of ornamental plants. The cost of labor is low in Nepal as compare to other countries. Some Nepalese

cut flower growers are interested in developing an export market, but currently, most growers are focusing on the domestic market. It is estimated that in Nepal today domestic production supplies up to 85 to 90 percent of the domestic market demand. The remainder is being supplied from other countries, mostly India. The major domestic market is in Kathmandu Valley and Pokhara. However, potential markets are Lumbini, Nepalgunj, Butwal, Bharatpur Biratnagar, Dharan, and other tourism sectors. In 2004, the total sales of floricultural products (cut-flowers, potted plants, foliage plants and bedding plants) were about 20 million rupees. Cut flowers accounted for about 2.5 million rupees.

The floristic diversity of plants, including cut flowers, Ornamental plants and foliage, native as well as cultivated is considerably wide in Nepal. Production of floriculture products for

the local market is being carried out in Chitwan, Dhading, Janakpur Jhapa as well. In the Nepalese climate, European summer flowers can be grown successfully, which would be profitable also. Many of the flowering plant species are grown in the gardens in Nepal.

Nepal having suitable warm climate during the winter in the Tarai region can therefore enter into export trade of floriculture products to European countries; Japan USA, Australia are the major markets for floriculture products. This is possible only if the Government establishes basic infrastructure required, formulate appropriate policies relating production, processing, marketing, import & export of floriculture products and provides incentives to private sector in order to attract investment from them for the growth of floriculture sub-sector.



We wish success of
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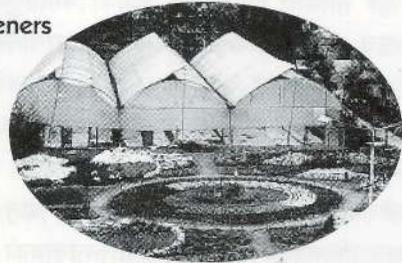
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अरुण क्षेत्री
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हामीले खाने सम्पूर्ण खाने कुरा कृषि बाट नै प्राप्त हुने भएकोले विश्वमा नै कृषिको महत्वपूर्ण स्थान छ । आज कृषि प्रतिको परम्परागत अवधारणाको अन्त्य भई विश्वले कृषिलाई व्यवसायको प्रमुख मागको रूपमा स्विकार गरिसकेको छ । त्यस्तै पुष्प व्यवसायलाई पनि विश्वको धेरै मुलुकहरूले कृषिजन्य उद्योगको रूपमा स्थापना गरिसकेको छ भने केहि राष्ट्रका मुख्य आय स्रोत नै पुष्प व्यवसाय रहिआएको छ । त्यस्तै यस व्यवसायको माग र खपत विश्व बजारमानै बढदै गईरहेको छ । हामी कहाँ २०५०को दशकमा पुष्प व्यवसायले ऐतिहासिक फड्को मारेको छ । कुनै समयमा सम्पूर्ण फूलहरू (Cut flower) तेस्रो मुलुकहरूबाट आयात गरि विक्री वितरण गरिन्थ्यो भने आज आएर कुनै मौसम वा विशेष चाड-पर्व र उत्सवमा गरी लगभग १८-२०% फूलहरू आयात गरिन्छ । त्यस्तै हाम्रो फूलहरू नमुना परिक्षणका लागि केहि मुलुकहरूमा गईसकेका छन् । साथै ती मुलुकहरूले हाम्रो फूलको गुणस्तर लाई मान्यता दिईसकेका छन् । समग्रमा भन्नु पर्दा हामी निर्यातका लागि पूर्व तयारीमा छौं र केहि वर्षमा नै हाम्रा सामग्रीहरू निर्यात हुन सक्ने प्रबल सम्भावना रहेको छ । तर आज आएर हामी पनि विश्व व्यापार संगठनको सदस्य भईसकेको अवस्थामा विश्व व्यापार संगठनको कृषि सम्झौताले गरेको व्यवस्था र त्यसका असरबारे यस लेखमा सामान्य छलफल गर्न खोजिएको छ ।

विश्व व्यापार संगठन एउटा विश्व व्यापारलाई व्यवस्थित गर्न बनेको व्यापार सम्झौता सम्पन्न गर्ने अन्तराष्ट्रिय मञ्च हो । यसको जन्म ग्याट सम्झौताबाट भएको हो । यस संगठनले विभिन्न विषयहरूमा सम्झौता गरेको छ । त्यस मध्ये कृषि सम्झौता एउटा हो । कृषि सम्झौतालाई सरसरति हेर्दा ग्याटको अवधीमा कतिपय देशले कृषि उत्पादनको आयातमा कोटा तथा परिमाणात्मक बन्देजहरू जस्ता गैरशुल्क सम्बन्धि प्रतिबन्ध लगाउनको

अतिरिक्त निर्यातमा समेत अनुदान दिने व्यवस्था गरिएको थियो । यी सबै विकृतिलाई हटाउन कृषि सम्बन्धमा बहुपक्षिय व्यापार सम्झौता भयो । यस सम्झौताको सम्बन्धमा दोहा सम्मेलनमा व्यापक छलफल गरी मुख्यतया व्यापार शुल्क र कोटा व्यवस्थापन, राष्ट्रिय सहयोग सम्बन्धि प्रतिबद्धता, अनुदान कटौती, बजार पहुँच आदि कुराहरूलाई समेटेको छ । यो सम्झौता सन् १९९५ पछि लागु हुने गरी विकसित देशले ६ वर्ष भित्र र विकासोन्मुख र अल्पविकसित देशको लागि १० वर्ष भित्र लागु गर्नु पर्ने व्यवस्था गरियो । यसरी हेर्दा यस सम्झौताको उद्देश्य कृषि उत्पादनको व्यापार प्रणाली सुधार गर्नु र नितीलाई बजार मुखी बनाई निकासी पैठारी व्यवस्थालाई सुरक्षित र पूर्वअनुमान लगाउन सकिने रहेको देखिन्छ । त्यस्तै यसले गरिब देशहरूले ग्रामीण क्षेत्रको विकासका लागि दिइने सुविधालाई प्रतिबन्ध लगाएको छैन । विकासोन्मुख र अल्प विकसित देशहरूले सरह अनुदान तथा शुल्क कटौती गर्न बढी समय दिईएको छ ।

उक्त व्यवस्थालाई हेर्दा हाम्रो जस्तो अल्पविकसित मुलुकको लागि सकारात्मक भन्न सकिन्छ । तर ग्रामीण क्षेत्रको लागि दिईने सुविधाहरूको पर्याप्त बजेट नहुनाको कारणले हामी कहाँ ग्रामीण क्षेत्रका विकासमा गति आउन सकेको छैन ।

उरुग्वे बैठकमा सरकारले दिने कृषि सहयोगको कुल प्रभावको गणना गरियो । यसरी कुल सहयोगको गणना गर्दा सन् १९८६/८८ आधार वर्षको अंकबाट प्रत्यक्ष सहयोगलाई सन् १९९५ देखि ६ वर्ष सम्ममा विकसित देशहरूले २०% कटौती गर्न सहमत भए । त्यस्तै विकासोन्मुख देशहरूले १० वर्षमा १३% ले प्रत्यक्ष सहयोगमा कटौती गर्न पर्ने कुनै बाध्यात्मक व्यवस्था गरिएन । यसरी गर्ने कटौतीलाई ट्राफिक लाइट व्यवस्था अनुरूप Amber - Box व्यवस्थाको नाम दिइयो ।

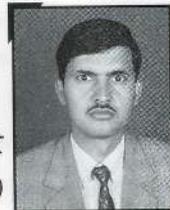
त्यस्तै कुनै पैठारी गरिएको वस्तुको भन्दा धरेलु वस्तुको मुल्य ५० प्रतिशत सम्म भएमा पैठारी शुल्क पनि वस्तुको मुल्यमा ५० प्रतिशत भन्दा बढी नहुने गरी लगाउन पाईन्छ । तर खास वस्तुमा खास परिणाम सम्म कम शुल्क लगाउन पाउने गरी शुल्कको कोटाको व्यवस्था पनि गरेको छ । यसरी शुल्क तथा कोटा सम्बन्धी सन् १९९५ देखि लागु हुने व्यवस्था गरियो । उरुग्वे राउण्डका सहभागिहरुले यस सम्बन्धमा बिकासित देशहरुले ६ वर्षमा लगाईने शुल्कमा ३६% ले र बिकासोन्मुख देशहरुले १० वर्षमा २४% ले शुल्क घटाउने कुरामा पनि सहमत भए । शुल्क कटौतीको आधारमा भने उरुग्वे राउण्डको दरलाई लिईयो ।

सदस्य राष्ट्रहरुले पेश गरेको प्रतिबद्धता सम्बन्धि सुचिमा तोकिएको अवस्थामा बाहेक यस सम्झौताले निर्यात अनुदान निषेध गरेको छ । सङ्कल्प सुचिमा राखिएको भए पनि निर्यातमा दिईने अनुदानको रकममा सन् १९९५ पछि बिकासित देशले ६ वर्षमा ३६ प्रतिशतले र बिकासोन्मुख देशहरुले १० वर्षमा २४ प्रतिशतले कटौती गर्ने सहमती भएको छन् । त्यस्तै गरि निकासी अनुदानमा दिईने वस्तुको संख्यामा पनि बिकासित देशहरुले ६ वर्षमा २१ प्रतिशतले कटौती गर्नु पर्ने र बिकासोन्मुख देशहरुले १० वर्षमा १४ प्रतिशतले कटौती गर्नु पर्ने व्यवस्था गरेको छ । अल्प बिकासित देशहरुले हाललाई यस्तो कुनै कटौती गर्नु पर्दैन ।

कृषि अनुदानको सम्बन्धमा सन १९४७ ग्याटको धारा ३ र ४ ले विशेष व्यवस्थाद्वारा अनुदानको सिमा निर्धारण गरि धरेलु तथा राष्ट्रिय उद्योगलाई प्रतिकुल प्रभाव पार्ने वा नोक्सानी पुऱ्याउने गरि अनुदान दिन नपाउने व्यवस्था गऱ्यो । यसले ट्राफिक बत्ति सिद्धान्त अन्तर्गत अनुदानलाई ३ बर्गमा विभाजित गरेको पाईन्छ । जस मध्ये हरित अनुदान (Green Subsidies) एउटा हो । यसमा अनुसन्धान र क्षेत्रीय बिकास सम्बन्धि अनुदान तथा यथास्थितीमा रहेको सुविधालाई बदलिदो वातावरणमा भुक्तानी गर्नु पर्ने अनुदानहरु औधोगिक अनुसन्धानको कुल अंकको ७५ प्रतिशत वा प्रारम्भिक वस्तु बिकासको ५० प्रतिशत भन्दा बढि हुनुहुदैन ।

यसरी माथि उल्लेख भएका अल्पबिकासित राष्ट्रहरुको लागि भएको व्यवस्थालाई हेर्दा हरित अनुदान बाहेक अन्य विषयलाई नियाल्दा हाम्रो जस्तो मुलुकले फाईदा लिन सक्ने धेरै अवसरहरु नभएको होईनन् । तर अवसरहरुका फाईदा लिन नसक्नु भन्ने कुरा भने आफ्नै स्थानमा छ । हामी आज पनि ग्रामिण बिकासका नाममा कृषकलाई प्रत्यक्ष सहयोग गर्न सक्छौ । बेला बखत हाम्रो धरेलु उत्पादनको मुल्य भन्दा कम मुल्यमा भारतबाट आउने नगरेको पनि होईनन् । जसले गर्दा हाम्रो कृषकहरुलाई मारमा पर्ने गरेको छन् । यस्तो परिस्थितीमा कृषि शुल्कमा बृद्धि गर्न सकेमा हाम्रा किसानहरुलाई मारमा पर्नबाट बच्ने थिए । भारतका बजारमा हाम्रो उत्पादन जान नसक्ने पनि होईनन् । तर त्यहाँका कृषकहरुले विभिन्न अनुदान सहयोग पाउने गरेकोले हाम्रो उत्पादन मुल्य तहाँको उत्पादन मुल्य भन्दा बढि हुन आउँछ । त्यसो भएतापनि त्यहाँ केहि मौसममा राम्रो फूल उत्पादन नहुनाको कारणले बजारको मागलाई पुरा गर्न अन्य मुलुकसंग निर्भर पर्नु पर्ने हुन्छ । तर त्यस बेला पनि हाम्रो हवाई ढुवानी महंगो पर्ने हुनाले हामीले भारतमा हाम्रो उत्पादन पठाउन सकिरहेको छैनौ । यदि निर्यातमा अनुदान सहयोग पाउने हो भने हाम्रो उत्पादन भारतमा पनि खपत हुन सक्ने स्थिती छ । जहाँसम्म हरित अनुदानको कुरो छ, त्यसमा बिकासित मुलुकहरुले पनि अनुसन्धान, क्षेत्रीय बिकास, बदलिदो वातावरणको नाममा ७५ प्रतिशत र प्रारम्भिक वस्तुको बिकासमा ५० प्रतिशत जहिले पनि दिई रहन पाउने व्यवस्था छ । एकातिर हाम्रो जस्तो अल्पबिकासित देशलाई अनुदान दिन छुट भैरहेको विषयमा सम्म अनुदान दिने बजेट हुदैन भने बिकासित देश र बिकासोन्मुख देशहरुले हरित अनुदानको नाममा सधै अनुदान दिईरहेको अवस्थामा हाम्रो जस्तो अल्पबिकासित देशले विश्व व्यापार संगठनको व्यवस्था अनुरूप विश्व बजारमा प्रतिस्पर्धा गर्न सक्छौ भन्ने प्रश्न अनुत्तरित रहिरहने छ ।

पुष्प व्यवसाय - वर्तमानको दायित्व



- लोकनाथ गैरे
उपाध्यक्ष (FAN)

नेपालमा व्यवसायीक पुष्प खेतीको इतिहास धेरै लामो छैन। फूलको परम्परागत उत्पादन र प्रयोग आदिम पूर्वीय सभ्यताबाटै सुरु भएता पनि व्यवसायीक उत्पादनमा हामी निकै पछिमात्र आइपुग्यौं। विगत १५ वर्षयता पुष्प व्यवसायको दायरा निकै फराकिलो भएको महसुस भएको छ। तथापि यस क्षेत्रले समुन्नत विकाशको लागि धेरै गृहकार्यहरु गर्नुपर्ने जरुरी भएको छ।

हामी प्राकृतिक स्रोत र साधनमा धनी छौं। हाम्रो उन्नती हाम्रा प्रकृती प्रदत्त सम्पदाको अधिकतम उपयोग गरी उत्पादन बढाउनु र ती उत्पादनलाई राष्ट्रिय एवं अन्तर्राष्ट्रिय क्षेत्रमा विस्तार गर्नुमा मात्र छ। श्रोत र सम्पदाको अत्यधिक उपयोग गर्न सक्ने उद्योगको रूपमा "पुष्प उद्योग" एक शसक्त उद्योग हो। तसर्थ यसको अभिवृद्धिका लागि प्राप्त उपलब्धीलाई स्वागत गर्न, र वर्तमानका एवं भावी चुनौतीहरुलाई सामना गर्न संलग्न व्यवसायीहरु, श्री ५ को सरकार, वित्तिय एवं लगानीकर्ता, विज्ञहरु एवं अनुसन्धानकर्ताहरु आ-आफ्नो क्षेत्रबाट लागिपर्नु आवश्यक छ। जसको परिणाम पुष्प व्यवसाय पनि जनसाधारणको पहुँचभित्र र जिविकोपार्जनको सहयोगी बन्न सकोस्।

भर्खर विकासको क्रममा रहेको यस उद्योगलाई शसक्त रूपमा दरो गराउन नसकेमा भावी प्रतिस्पर्धामा यसले थेग्न सक्दैन। किनकि अहिलेसम्म यस उद्योगले त्यति ठूला प्रतिस्पर्धाहरु खप्नु परेको छैन। अर्थशास्त्र एवं बजारशास्त्रको सिद्धान्त अनुसार प्रायशः नयाँ उद्योगहरुको बिकास कम पूर्वधार र कम प्रतिस्पर्धामा हुन्छ। तर जब पूर्ण प्रतिस्पर्धाको अवस्थामा आउदछ सामान्य प्रकृतीबाट अगाडी बढेका उद्योग वा फर्महरुले विना पूर्वधारको प्रतिस्पर्धा खप्न सक्दैनन्। परिणाम यात बन्द हुन्छन् वा न्यून दरमा अगाडी बढ्छन्। हाम्रो पुष्प व्यवसाय यस्तो

अवस्थामा आउनु अघि नै व्यवस्थित र मर्यादित हुन सकोस, पूर्ण प्रतिस्पर्धि बन्न सकोस जसको कारण संलग्न व्यवसायीहरुलाई विस्थापित हुनबाट रोक्न सकियोस भन्नका लागि केहि महत्वपूर्ण विषयहरुमा सबैको ध्यान आकर्षण गराउने यस लेखको अभिप्राय हो।

१) उत्पादन लागत घटाउनु (Reduce cost of production)

पुष्प व्यवसायको उन्नतीका लागि वास्तविक कृषक (Grass root level farmer)सम्म पुऱ्याउनु पर्ने हुन्छ। किनकी फूल अधिकतम श्रमप्रधान खेती हो। तर यो स्तरका किसानले हालको अवस्थामा फूल उत्पादन गर्नसक्ने अवस्थामा छैनन्। तसर्थ यस व्यवसायमा लागत न्यूनीकरण र स्थानीय श्रोत (जुन निःशुल्क रूपमा प्राप्त गर्न सकिन्छ) को अवस्था अत्यधिक उपयोग गर्नु जरुरी छ। लागत न्यून गर्नका लागि सर्वप्रथम कूल लागतलाई विन्यास (Break down) गर्नु पर्दछ र स-सानो रूपबाट लागतलाई कसरी घटाउन सकिन्छ भन्ने पर्याप्त गृहकार्य गर्नुपर्दछ। जस्तो कि माटो, मलखाद, सिंचाई, रोग, औषधी आदि स-साना विषयहरुमा लागत विश्लेषण गर्न सकेमा कुन अवस्थामा कम लागतमा बढी उत्पादन लिन सकिन्छ भन्ने पत्ता लगाउन सकिन्छ। अर्को तर्फ फूलहरु हरीतगृह (Green house) मा उत्पादन गर्नुपर्ने हुन्छ। स्टीलबाट निर्मित हरीत गृहको सट्टामा स्थानिय श्रोतबाट यस्ता संरचना बनाउने प्रविधिको विकास र विस्तार गर्न सकेमा लागत कटौती हुन सक्दछ। खर्चको प्रत्येक बिन्दुमा निःशुल्क प्रकृती प्रदत्त वा कम लागतमा प्राप्त हुनसक्ने बैकल्पीक श्रोतको पहिचान गर्नसकेमा पुष्प उत्पादनलाई सर्वसाधारण कृषकको पहुँच पुग्न सक्दछ। यसका लागि गंभिर भएर सोच्नुपर्ने अवस्था आइसकेको छ।

२) उच्च उत्पादन दिन सक्ने जात/प्रजात
उचीत मूल्यमा (High yielding
varieties at reliable cost)

सर्वप्रथमतः बजारयोग्य जातहरूमा कुनमा बढी आमदानी छ कुनमा कमी भन्ने विषयमा पहिचान भएको छैन । सामान्य भन्दा सामान्य गोदावरी, सयपत्री जस्ता फूलहरूमा समेत हामी यस्तो पहिचान गर्न सकेका छैनौं । बराबर लागतमा राम्रो जाती/प्रजातीले निकै बढी आमदानी दिन सक्छ । प्रति एकाई लागतमा बढी उत्पादन लिन सकेमामात्र हाम्रा फूलहरू प्रतिस्पर्धी बन्न सक्दछन् । संलग्न व्यवसायीहरूले प्रयोग गरिरहेकाबाट वा त्यस भन्दा बाहिर बाट उच्च उत्पादकत्व भएका जात जातीलाई छनौट गर्नु प्रथम जरुरी विषय हो । त्यस्तै पहिचान भएका प्रजातीलाई स्थानीय स्तरमानै विस्तार (propagation/tissue culture)गराउन सकियो भने बोट विरुवाको लागत न्यून बन्न सक्दछ र हामी प्रतिस्पर्धी बन्न सक्दछौं ।

यसका लागि श्री ५ को सरकार, सम्बन्धित निकायहरू, अनुसन्धान संस्थानहरू, विश्व विद्यालय एवं सम्बन्धित विज्ञहरूले नेतृत्व लिनु आवश्यक छ । उच्च उत्पादकत्व (High productivity), रोग निरोधक क्षमता (Disease resistant capacity), वातावरणीय विश्लेषण (Climatical analysis) जस्ता विषयहरूको अध्ययन, अनुसन्धान र विश्लेषण पुष्प उत्पादन गर्ने व्यवसायी वा कृषकको क्षेत्रबाट संभव छैन । साथै नयाँ उपलब्धी र प्रयोगको खोज र तिनीहरूको उपलब्धतालाई पनि विज्ञहरूले प्रचार प्रसार र समन्वय गर्न आवश्यक छ ।

३) पूर्वाधार विकास
(Infrastructure development)

उत्पादनको क्षेत्रमा सिचाई, विद्युत जस्ता अत्यावश्यक संरचनाहरू र उत्पादन पश्चात् हार्भेस्टिङ, पोष्ट हार्भेस्टिङ, भण्डारण, हुवानी जस्ता फूलका लागि अत्यावश्यक प्रक्रियाको यहाँ व्यवस्थापन छैन । वर्तमानमा आन्तरीक बजारका अन्तिम उपभोक्ताहरू फूलप्रति त्यति सजक छैनन् । तर यो स्थिती लामो समय सम्म रहने छैन । प्रथमतः उत्पादनका क्षेत्रहरूमा विद्युतिकरण र सिचाईको

लागी सरल उपलब्धतालाई सम्बन्धित निकायहरू तैयार रहनुपर्दछ भने उत्पादन पश्चात्का प्रक्रियामा आन्तरीक र बाह्य बजार (निर्यात) मा निरन्तरताका लागि कोल्ड स्टोरेज र रेफ्रिजरेटर भ्यान तत्कालका लागि आवश्यक साधन हो । बल्बसमा आधारित फूलका लागि उत्पादन गर्न उत्पादन पकेट एरिया वा पायक पर्ने स्थानमा मिनी कोल्ड स्टोरेज स्थापनाका लागि अग्रसरता लिनु जरुरी छ । उच्च उत्पादन तथा न्यून उत्पादनको अवस्थामा बजारलाई निरन्तरता दिन शित भण्डार उच्च प्राथमिकताको विषय हो ।

४) बजार व्यवस्थापन
(Marketing management)

हालको अवस्थामा बजारको व्यवस्थापन छैन । उत्पादकहरू स्वयं बजार पुग्ने र बजारीकरण गर्ने गरिरहेका छन् । वर्तमान युगको बजारीकरणको नारा "Producer is not a marketer" यहाँ लागू भएको छैन । कतिपय उत्पादकहरू स्वयं बजारतर्फ बढी केन्द्रित हुँदा उत्पादन एरियाहरू विप्रेको उदाहरणहरू समेत यहाँ छन् । मार्केटर नहुनाले नै आज तत्काल निर्यात प्रवेशमा समस्या देखिएको छ । आन्तरीक बजारमा भएको मागलाई पनि अहिलेको बजार संरचनाले मिलाउन सकेको छैन । बजार संरचनाले उपभोक्ताका यथार्थ चाहना मात्र र भावि संभावनाको खोजी गरी उत्पादकलाई उचीत राय, सल्लाह र सुझाव दिने र उत्पादकले माग अनुसार उत्पादन कार्यक्रम संचालन गर्न नसकेमा पुष्प व्यवसाय फक्रन सक्दैन । व्यवसायीक सौच (Professional approach) सहितको बजारीकरण संगठन (Marketing organization) ले उचीत सर्भे, विश्लेषण, सुझाव (Recommendation) दिन सकेमा मात्र पुष्प व्यवसाय प्रतिस्पर्धी बन्न सक्दछ ।

बजार सुचनाको पनि यहाँ प्रशस्त अभाव छ । जसको परिणाम कहिले अति उत्पादन (जसको कारण न्यून दरमा बिक्रि वा बिक्रि नहुनु) त कहिले न्यून उत्पादन (जसको कारण तत्काल भारतबाट आयात गरी प्रतिस्थापन) हुने गरेको छ । सुचनाको अभावले नै यहाँ हुनसक्ने पुष्प उत्पादन तथा बोट विरुवा र बिउ लगातार भारत र अन्य

मुलुकबाट आइरहेका छन्। उदाहरणको रूपमा गोदावरी कटिडलाई लिन सकिन्छ। समुचित बजार व्यवस्थापन गर्न सकेमा मात्र यहाँको श्रोतको व्यवस्थापन, आयात प्रतिस्थापन तथा निर्यात प्रवेश सहज छ।

५) प्रचुर प्रचार प्रसार र प्रदर्शनी (Enough publicity and demonstration)

फूललाई हेरिसकेपछि र यसको महत्व जानी सकेपछि मात्र यसको माग श्रृजना हुन्छ। पुष्प उद्योग भित्रै उत्पादित उत्पादनहरू पर्याप्त रूपमा प्रदर्शनी एवं तिनीहरूको विषय वस्तु र यथेष्ट जानकारीका लागी उपभोक्तालाई जागरुक बनाउन सकिएको छैन। आन्तरिक रूपमा FAN एकलैले विगतका वर्षहरूदेखि गर्दै आइरहेको प्रदर्शनीले मात्र भावि पुष्प उद्योगले थप गति लिन सक्दैन। सरकारी निकायहरू अब बाह्य बजारको स्थिती र संभावनाको तथ्य पहिल्याइ प्रचार प्रसार र प्रदर्शनीमा लाग्नु पर्ने देखिएको छ। यहाँ प्राप्त उपलब्धिहरू र संभावित मागलाई समायोजन गर्ने तर्फ पहल गर्नु आवश्यक छ।

६) संलग्न विज्ञहरू बिच अन्तरक्रिया

यस क्षेत्रमा पर्याप्त विज्ञहरूको अभाव छ। उपलब्ध विज्ञहरू र व्यवसायीक किसानहरू बिच पनि अन्तर क्रियाहरू भएका छैनन्। लामो अनुभवबाट प्राप्त ज्ञानलाई पनि संलग्न व्यवसायीहरूले एक आपसमा बाड्न सकेका छैनन्। जसको असर प्रत्येक नयाँ व्यवसायीले उपलब्ध प्रविधिबाट शुरु गर्नुको बदलामा विल्कुलै परम्परागत प्रविधिबाट शुरु गरी विस्तारै सुधार गर्दै लैजानु पर्दछ। सिप दिने र सिप लिने बिच निकै ठूलो खाडल (Gap) छ। तसर्थ सर्वप्रथमतः अनुसन्धान केन्द्र, विश्व विद्यालयहरूले आफूले हासिल गरेका तकनिकीलाई सर्वसुलभ रूपमा किसानको पहुँचमा पुऱ्याउने माध्यम रोज्नु पर्दछ भने किसानहरूले पनि परम्परागत आफ्नो प्रविधिलाई भावि संभावनासँग मिलाउन नयाँ सोध र प्रविधिलाई समेट्दै जानुपर्ने हुन्छ।

विगत र वर्तमानका मापडण्डलाई हेर्दा भइसकेका उपलब्धीलाई सम्मान गर्नुपर्दछ। किनकी वर्तमानको माग अनुसार यहाँ उत्पादन नभएको भए आजको बजार पूर्णतया भारतमा निर्भर हुने थियो। तर भैरहेको विकासको दरलाई कायम राख्न थप कार्यक्रमहरू नआउने हो भने भावि पुष्प व्यवसायले असहज बाटो पनि तय गर्नुपर्ने हुन्छ। तैयार भइसकेका पूर्वाधार उपलब्धी र तकनिकीलाई संरक्षण गर्न सकिएन भने पुनः नयाँ बनाउन र अहिलेको अवस्थामा आईपुग्न धेरै लगानीको आवश्यक पर्दछ।

तसर्थ निजी क्षेत्रबाट गरिएको यस उपलब्धीको संरक्षण सबै पक्षले आ-आफ्नो दायित्व सभिक अगाडी बढ्न र बढाउन सकेमा ठूलो उपलब्धी बन्न सक्नेछ।

दाहाल ट्रेडिङ कन्सर्न

त्रिपुरेश्वर, काठमाडौं, नेपाल

हामी सेवामा तैयार छौं ।

१. विरुवा उमाने, ट्रे, पट, विशेष खालको पोलीब्याग
२. ग्रीन हाउस, नेट हाउसको सामान, एग्रोनेट
३. स्प्रिकल, ड्रिप, फोगर आदि
४. पिएच, म्याइस्चर दुबै रु. २५००/- मा
५. सबै प्रकारको औजारहरू
६. लन, मुभर, मेनुअट, इन्धन तथा इलेक्ट्रीक
७. गार्डेन सोलार ल्याम्पहरू
८. अडर अनुसार अरकिड तथा अन्य विरुवाहरू मगाइदिइन्छ।
९. सबै प्रकारका तरकारी तथा फूलको बिऊहरू।
१०. सबै समस्या समाधान गर्न एक मात्र थलो।

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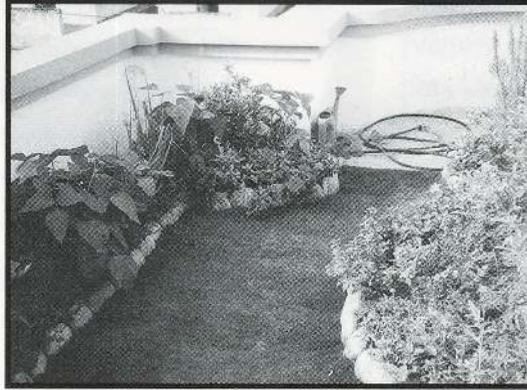
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आधारभूत ल्याण्डस्केपिङ्ग प्रविधि तथा कौशिल बगैचा प्रविधि एक परिचय

(Introduction of Basic Land Scaping Method and Roof Top Gardening Method)

- शेष नारायण महर्जन
कुमारी नर्सरी

ल्याण्डस्केपिङ्ग अथवा भू-धरातल समायोजन प्रविधि एक बृहत कार्य क्षेत्र ओगटेको प्रविधि हो। तर पनि यसलाई संक्षिप्त रूपमा बुझ्न पर्दा कुनै पनि जमिन (भू-धरातल) वा माटोलाई आफ्नो चाहना अनुसार त्यस ठाउँको समुचित प्रयोग हुने गरी जमिन वा माटोलाई एक निश्चितरूपमा तह लगाउने कामलाई जनाउँदछ (जस्तै: रोप्ने स्थानको रूपमा, चउरको रूपमा, हिँड्ने बाटोको रूपमा अथवा अन्य स्थानको रूपमा)।



अत्यन्त आवश्यक हुन्छ। जस्तै: त्यस स्थान वरिपरि भएका रुख विरुवा, ढुङ्गा, खोला नाला, निकास आदिको दूरगामी प्रभाव तथा त्यस स्थानको अवस्था भन्नाले कुन मोहडा फर्किएको (पूर्व, पश्चिम, उत्तर, दक्षिण) घाम आउने ठाउँ या सेपिलो ठाउँ इत्यादि कुराको अध्ययन हुनु आवश्यक हुन्छ किनभने त्यस्तै वस्तु स्थितिको प्रकृति अनुसार ल्याण्डस्केपिङ्ग कार्य गर्नु पर्ने हुन्छ।

ल्याण्डस्केपिङ्ग गर्नु अगाडि मुख्यतया तीन कुरामा ध्यान दिनु पर्दछ।

- क) स्थानको संभाव्यता तथा दिशा बोध (Physibility and direction)
- ख) स्थानको क्षेत्र निर्धारण (Site area and Specification)
- ग) स्थानमा लगाइने विरुवाको प्राथमिकता (Plantation Priority Specification)

ल्याण्डस्केपिङ्गको कार्य क्षेत्र असिमित छ, किनभने हामीले ल्याण्डस्केपिङ्ग घरको कोठादेखि लिएर घरको छाना, आँगन, करेसाबारी तथा ठूला ठूला सार्वजनिक पार्क, ट्राफिक आइल्याण्ड र विभिन्न पर्वतीय स्थान आदिहरूमा समेत यस प्रविधिलाई प्रयोग गरेको पाइन्छ।

त्यसैले कुनै पनि ठाउँको ल्याण्डस्केपिङ्ग गर्नुभन्दा पहिले त्यस स्थान संभाव्यता अध्ययन तथा दिशाबोध हुनु

स्थानको क्षेत्र निर्धारण (Site Area Specification) भन्नाले कुन कति एरियामा विरुवा रोप्ने (Plantation Area), कुन स्थानमा कुन आकारको बनाउने अथवा बाटो, पोखरी पार्किङ्ग एरिया अथवा कुनै विशेष भवन, मूर्ति आदिको स्थान निर्धारण पनि पहिल्यै गर्नुपर्दछ।

त्यस्तै स्थानमा लगाइने बोट विरुवाको प्राथमिकता अनुसार पनि ल्याण्डस्केपिङ्गमा असर पर्दछ। जस्तै: मौसमि बोट विरुवाको प्राथमिकता, सदाबहार बोट विरुवाको प्राथमिकता अथवा सिउडी (क्याक्टस) विरुवाको प्राथमिकता वा उन्न्यु वर्ग विरुवाको प्राथमिकता आदि। ल्याण्डस्केपिङ्ग प्रविधि मुख्यतया: दुई किसिमका हुन्छन् -

- १) सुनियोजित नापनक्साको समायोजन (Formal Type Landscaping)
- २) अनिश्चित नापनक्साको समायोजन (Informal Type Landscaping)

फर्मल ल्याण्डस्केपिङ्ग भन्नाले विभिन्न ज्यामितिय आकारमा एक निश्चित आकार प्रकारमा नाप नक्सा बनाउने प्रविधिलाई जनाउँछ । जस्तै: वर्गाकार, गोलाकार, आयताकार, त्रिभुजकार आदि जुन एक निश्चित नापनक्सा अनुसार बराबर दुरीका फूल रोप्ने क्यारी, पोखरी आदिको समायोजन व्यवस्था गरिएको हुन्छ ।



इनफर्मल टाइप ल्याण्डस्केपिङ्ग अथवा मोर्डन ल्याण्डस्केपिङ्ग पनि भनिन्छ । यस प्रकारको ल्याण्डस्केपिङ्ग प्रविधिमा प्रायः धेरै जसो जमीन अथवा भू-धरातलको बनौटहरु फरक ढाँचाहरु (Patterns) को रूपमा विकास गरिन्छ, जसको एक छेउको आकार र अर्को छेउको आकार तथा नापनक्सा भिन्न भिन्न हुन्छन् र जमिनलाई पनि मैदान समथर भन्दा अग्लो होचो चिहान प्रकृतिको (Cimentryshape) मा यसो हेर्दा सकभर प्राकृतिक देखाउन खोजेको हुन्छ । यस्ता बगैँचामा विरुवा रोप्ने कार्य पनि मिश्रित खालको र समूह समूहमा (Patch Plantation) अथवा अन्तररोपन (Interplantation) का रूपमा रोपेका हुन्छन् ।

यस प्रकारको ल्याण्डस्केपिङ्गमा बोट विरुवाको अतिरिक्त ढुङ्गा, मुढा, मुर्तिहरु, आब्टाक्सहरु, मार्बल चिप्स, रोडा, गेगर तथा काठका बोक्रा आदि वस्तुको पनि समुचित प्रयोगको स्थान हुन्छ ।

आज भोलि आएर नेपालमा पनि यस आधुनिक ल्याण्डस्केपिङ्ग गाडेनिङ्ग प्रविधि धेरैले मन पराउन थालेका छन् । किनभने यस प्रकारको बगैँचा घरको एउटा कोठा देखि लिएर बरण्डा, छाना (कौसी बगैँचा) को रूपमा समेत अति आकर्षक र सरल रूपमा तयार गर्न सकिन्छ । अझ अलि खुल्ला कम्पाउण्ड हुनेको लागी त यो सौन्दर्य बढाउनको साथै र आयस्रोत वृद्धिको रूपमा विकास गर्न पनि सकिन्छ । जापान तथा पश्चिमा युरोपेली देशहरुले सीमित ठाउँ र त्यसको अधिकतम उपयोग गर्ने पद्धतिको

रूपमा विकास गरेका छन्, त्यही कुरालाई यस आधुनिक ल्याण्डस्केपिङ्ग गाडेनिङ्गले अलिकति मनन गरेर छ । यसको उचित व्यवस्थापन गर्न सकेमा हाम्रा समाजमा एक परिवारले आफूलाई उपयोग गर्न सक्ने हरिय सागसब्जी र फूलको शौखलाई पुरा गर्न सक्दछ । यसका अतिरिक्त आजभोलि शहरमा भएको वातावरणीय प्रदूषण तथा न्यून

हरियाली प्रवर्धनमा भएको कमीलाई समेत धेरै हदसम्म टेवा दिन सक्दछ । किनभने यस आधुनिक ल्याण्डस्केपिङ्ग गाडेनिङ्ग पद्धतिमा फलफूल बोट देखि लिएर विभिन्न सागसब्जी र मसमसालाका बोटलाई समेत मिश्रित खेतीको रूपमा रोप्न सकिने भएकोले त्यसबाट फलफूल, सागपात देखि मरमसलासम्म उत्पादनका साथै विविध फूलका बोट तथा सदाबहार (इन्डोर/आउटडोर) विरुवाको शौख पनि उपभोग गर्न सकिन्छ । त्यस्तै घरेलु जैविक फोहरलाई कम्पोष्ट मल बनाई त्यसको पनि सदुपयोग गर्न सकिन्छ, जसले गर्दा एक परिवारलाई चाहिने न्यूनतम विविध आवश्यकता मध्ये केही हदसम्म परिपूर्ति गर्नुका साथै वातावरणीय प्रभावलाई समेत सकारात्मक प्रभाव पार्न धेरै मद्दत पुग्नेछ ।

मोर्डन ल्याण्डस्केपिङ्ग गाडेनिङ्ग गर्दा ध्यान दिनु पर्ने केही कुराहरु:

१. Accent Project स्थानको पूर्वाधार परियोजना
२. Propotion समायोजन गर्ने वा मिलाउने
३. Focalization दृष्टिगत आकर्षक बनाउने
४. Form and Style scale सुनियोजित ढाँचाको विकास गर्ने
५. Balance of plants texture / height / colour contrast विरुवाको बनौट, अग्लो र रंगको संयोजन मिलाउने

आधुनिक ल्याण्डस्केपिङ्ग गर्ने पद्धतिलाई अवलम्बन गर्दा सर्वप्रथम ल्याण्डस्केपिङ्ग गर्दा उच्चा ब्याड (Rise bed method) देखि तल्लो खोल्यो बगैँचा (Circle garden method) सम्मलाई मध्यनजर राखी माटोलाई आवश्यकतानुसार ६ ईन्च देखि ६ फिटसम्म अग्लो या होचो गरेर माटोका भू-धरातल (Labelling) गर्न सकिन्छ । तर लेभिलिङ्ग गर्दा त्यसको मुख्य निकास कता हो, सो अनुसार भिरालो (Slope) बनाउनु पर्दछ । ल्याण्डस्केप गर्दा त्यसको मोहडा (Face Landscaping) चाँहि दक्षिण/पूर्व वा पश्चिम गर्दा उपयुक्त हुन्छ ।

ल्याण्डस्केपिङ्ग गाउँन बनाउँदा साधारणतया प्राकृतिक प्रदत्त वस्तुहरूलाई प्राथमिकता दिई बनाउने गरिन्छ जसले गर्दा झट्ट हेर्दा कुनै प्राकृतिक मनोरम दृश्यको एक टुक्रा जस्तै भल्कने हुन्छ । त्यसैले यसमा प्रयोग हुने वस्तुहरू पनि सबै प्राकृतिक ढुङ्गा, मुढा, बगर र बोट विरुवाहरू आदिलाई एक आपसमा समायोजन गरी आकर्षक बनाइन्छ ।

दुरदर्शिता अथवा बगैँचा तयारी भएर फुले फुले अवस्थामा यसको स्वरूप कस्तो देखिन्छ अथवा त्यसको दृष्टिगत आकर्षण गर्न तथा रोपन कार्य कतिको मिलेको छ । त्यसै गरी विरुवाहरूको बनौट, अग्लो र रंगको प्रकृति आदिको समष्टिगत समायोजनद्वारा मात्र एउटा सम्पूर्ण ल्याण्डस्केप गाउँन परिकल्पना दुरुस्त हुन्छ । त्यसैले नेपालमा बढ्दो आवादिलाई ध्यानमा राखेर त्यसमा पनि काठमाण्डौ जस्तो घरैघर मात्र बन्दै गईरहेको परिप्रेक्षमा यस किसिमको ल्याण्डस्केपिङ्ग गाउँन एउटा वरदान साबित हुन सक्दछ । किनभने यस प्रकारको बगैँचाको लागि कुनै पनि ठाउँ उपयुक्त स्थानका रूपमा ल्याण्डस्केप कार्यबाट उपयुक्त बनाउन सकिन्छ । जस्तै घरको कोठा, बरण्डा, कौसी, छत, करेसाबारी, कम्पाउण्ड, खेत देखि पहाडी भिरालो र टंगिन कान्ता गच्चा (Terrace) आदि समेतलाई प्रयोग गर्न सकिन्छ ।

प्राय सबै खालको जमिनको ल्याण्डस्केपिङ्ग कार्यमा आधारभूत प्रकृयाहरू समान हुन्छन् तापनि अति विशेषरूपमा तयारी गर्नुपर्ने खालको बगैँचा - कौसी बगैँचा ल्याण्डस्केपिङ्ग प्रविधि (Roof Top Garden Landscaping) हो ।

कौसी बगैँचा ल्याण्डस्केपिङ्ग गर्दा निम्न केहि आधाभुत विषयमा ध्यान दिई सामाग्रीको व्यवस्थापन गर्नुपर्दछ ।

- क) ढलान पानी अवरोधक व्यवस्था (Waterproofing Cement Coating)
- ख) चुहावट/निकास व्यवस्थापन (Leaching Down Drainage System)
- ग) प्लाष्टिक/अवरोध व्यवस्था (Shilpholine Plastic Flooring System)
- घ) अग्लो ब्याड व्यवस्थापन (Rise bed Management) आदि
- ङ) विविध भाँडाहरू तथा गमला प्रविधि (Variety of Containers and Flower pots Method)

अन्य आवश्यक सामाग्रीहरू:-

- क) माटो (३ भाग)
- ख) कम्पोष्ट (२ भाग)
- ग) खरानी (१ भाग)
- घ) बालुवा (१ भाग)
- ङ) विभिन्न बोट विरुवाहरू तथा आकर्षण ढुङ्गा, मुढा आदि ।

माथि उल्लेखित सबै सामाग्रीहरूको व्यवस्था गरी सकेपछि ल्याण्डस्केपको अवधारणा अनुसार विभिन्न बोट विरुवाहरूको रोपे कार्य गर्न सकिन्छ । थप आकर्षणको लागि बिच बिचमा विभिन्न कलात्मक वस्तुहरू राखेर सुन्दर बनाउन सकिन्छ । जुन प्रविधिलाई एक सुन्दर सृजनात्मक हरित कलाको रूपमा लिन सकिन्छ ।

बिरुवाहरू रोप्दा ध्यान दिनुपर्ने कुराहरू:-

- १) विरुवा रोप्दा लाइनलाइनको सट्टा समूह समूहमा रोप्ने । (सघन कृषि प्रणाली अन्तर्गत - Bio-Insentive Mini Farming)
- २) विरुवाहरू रोप्दा सकभर एकआपसमा सेप नपर्ने गरी बिजोडी संख्यामा रोप्ने । (जस्तै १ बोट, ३ बोट, ५ बोट, ७ बोट आदि)

- ३) विरुवा रोपदा संधै पात/फूलको बनौट, अग्लो/होचो या रङ्गमा ध्यान दिने ।
- ४) विरुवाहरु सकभर पूर्व दिशा अर्थात दक्षिणी दिशामा अग्लो भई घाम छेक्नेलाई कम रोप्ने अथवा त्यस्ता विरुवालाई उत्तर या पश्चिम मोहोडामा प्राथमिकता दिने ।
- ५) विरुवा छनौट गर्दा सकभर पुङ्को जात, उन्नत जातलाई प्राथमिकता दिने ।
- ६) विरुवाहरुलाई रोपदा सकभर ब्याड भन्दा अथवा रोप्ने ठाउँको चौडाइ बराबर वा सो भन्दा सानोमा फल्ने फूलने विरुवाको छनौट गर्ने।
- ७) विरुवाहरु रोपदा सकिन्छ भन्ने कुनै एउटा ढाँचा वा आकारको रूपमा रोप्ने ।

८) विरुवाहरु रोपेको देखि हुर्कदासम्म अगाडिकोले पछाडि नछेक्ने हुनु पर्दछ ।

यस बाहेक अन्य यस्ता विविध कुराहरु गर्दैजाँदा परिवर्तन गर्नुपर्ने पनि हुनसक्दछ । त्यसैले आफ्नो स्थान, मौसम अनुकूलता, आफ्नो रुची तथा अन्य यस्ता विभिन्न कुराहरुको समायोजन पश्चात मात्र एक सफल ल्याण्डस्केप गार्डेनको परिकल्पना साकार हुन आउँदछ । तर यी सबै कुरा सैद्धान्तिक विषयवस्तुका मात्र केन्द्रित नरही व्यवहारीकरूपमा प्रयोग भैसकेको पद्दतीको अनुसरण गर्दै लैजानु पर्दछ । यसका लागि दक्ष एवं अनुभवी विशेषज्ञको सल्लाह एवं परामर्शको आवश्यक परेमा सल्लाह लिनु राम्रो हुन्छ ।

*We are there
to share your
every moment and
colour of life
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सुनाखरी फूलहरूको राजा सिम्बिडियम सुनाखरी (CYMBIDIUM ORCHID)



- कवि राज राई
कार्यकारीणी सदस्य (FAN)

अर्किड नेपालीमा सुनाखरी फूलहरूलाई बुभ्रदछौं - चिन्दछौं । सुनाखरी फूलको इतिहास हेर्दा अर्किड (ORCHID) फूलको नाम ग्रीक शब्द "ORCHIS" बाट लिईएको हो । सुनाखरी फूलको इतिहासमा हामी १८ शताब्दी देखि नै प्रख्यात र यसको संग्रह पनि हुन थालेको पाउँछौं । करिब २५०० वर्ष अगाडि देखि नै चीनमा यसको खेती शुरु भएको हो ।

कन्फ्यूकसले (CONFUCIUS ५५१ देखि ४७९ बी.सी.) आफ्नो किताबमा सुनाखरी फूलवारे उल्लेख गरिएको पाइन्छ । उनले सुनाखरी फूललाई "The Plant Of King's Fragrance" को संज्ञा दिएका छन् । यसरी नै करिब २५० वर्ष अगाडि युरोपको ग्रेट ब्रिटेनमा यसको खेती शुरुवात भएको पाउँछौं ।

सुनाखरी फूल लगभग २५०० जातका पाइन्छ । सुनाखरीको फूल तथा सुवासका साथ साथै यसका अन्य गुणहरू छन् । यसलाई धेरै किसिमका रोगहरू निवारण गर्ने औषधिहरूमा प्रयोग गर्नुका साथै भेनिला प्लेनिफोलिया (Vanilla Planifolia) जातको सुनाखरीको कोसाबाट भेनिला एसेन्स (Vanilla Essence) बनाइन्छ ।



“सुनाखरीहरूको राजा” सिम्बिडियम सुनाखरी (Cymbidium Orchid) वर्णशंखर (Hybrid) हो । यसको फूल अरु सुनाखरी मध्ये प्रख्यात छन् । प्रख्यात हुनको कारण बलियो र यसका ठूला ठूला फूलहरू तथा सुगन्धित हुनुहो । यसको कटफ्लावर (cut flower) बुके र बटम फ्लावर बनाउन धेरै राम्रो हुन्छ । यसको फूल काटी फूलदानीमा दिन दिनै ताजा पानी फेर्दै सजाउने हो भने यो फूल ४० देखि ४५ दिन सम्म र फूलेको फूललाई गमलामा

नै रहन दिने हो भने करिब ६० दिन सम्म यसको आनन्द लिन सकिन्छ । यसलाई फूलेको समय घरको बैठक कोठा, खाना खाने कोठा र अफिस आदिमा गमला सँगै सजाउंदा खुबै राम्रो देखिनुका साथ आनन्द अनुभव हुन्छ । यो फूल फूलेको समयमा गमला सहित उपहार पनि दिन सकिन्छ । विदेशमा यो फूलको उपहार दिने चलन निकै प्रचलित छ । यो सिम्बिडियम सुनाखरी फूल व्यवसायिक खेतीको निम्ति धेरै लाभदायक छ । साथै सुनाखरी प्रेमी - सौखिनहरूको निम्ति पनि धेरै फाइदा छ । सुनाखरीको बोट सदा हरियो रहन्छ कहिल्यै सुक्दैन र हरियोको कारणले गर्दा घरको बगैचा साथै ग्रीन हाउसमा सधैँभरी हरियाली नै रहन्छ । यसै हरियालीको कारणले गर्दा वातावरण पनि सफा-स्वच्छ भएको अनुभूति हुन्छ । २०/२५

वर्ष अघि सुनाखरीको पारखी तथा प्रेमीहरूले सिक्किम दार्जीलिङ र बाहिर विदेश भ्रमण गरी फर्कदा आफूलाई मन परेको सुनाखरी फूल जति मूल्य पर्ने भए पनि मूल्यको परवाह नगरी किनेर ल्याउथे । तर आज भोलि नेपालमा नै सुनाखरी फूलको नर्सरीहरूको विकास भएकाले यस्ता सुनाखरी फूलका पारखी र

सौखिनहरूले फ्लोरिकल्चर एसोसियसन नेपालले आयोजन गर्ने पुष्प प्रदर्शनी र सुनाखरीको नर्सरीहरूमा आफूलाई मन परेको फूल किन्न सक्छन् । अहिले काठमाण्डौंको आसपास र गोदावरी क्षेत्रमा करिब एक दर्जन सिम्बिडियम सुनाखरी फूलको नर्सरीहरू यस व्यवसायमा संलग्न छन् भने भविष्यमा अझ यस प्रकारका नर्सरी बढ्ने सम्भावना छ । सुनाखरी फूलको व्यवसायमा केहि कठिनाइहरू पनि

अवश्य छ, ती समस्याहरु भनेका मुख्यतया यो फूल अरु फूलहरुको तुलनामा निकै महंगो पर्ने भएकोले लगानी धेरै गर्नु पर्ने हुन्छ र यसको प्रतिफल अथवा उत्पादनका फाइदा लिन लामो समयको प्रतिक्षा गर्नु पर्ने हुन्छ। फूलको खेती गरिसके पछि, कम्तीमा ३ वर्षदेखि ५ वर्षसम्म पर्खनु पर्दछ र अर्को मुख्य कुरा चाहिँ प्राविधिक ज्ञानको सहयोग पाउन गाह्रो छ । यस सुनाखरी फूलको व्यवसाय धेरैले अपनाउन चाहेर पनि उपरोक्त समस्याको कारणले गर्दा सफलता पाउन सकिँ रहेका छैनन् । यस सुनाखरी व्यवसाय गर्न चाहने व्यवसायीहरुलाई यदि सम्बन्धित निकायहरुबाट आर्थिक तथा प्राविधिक ज्ञानहरुको सहयोग मिलेको खण्डमा यो व्यवसाय फस्टाउन र यस व्यवसाय अपनाउन इच्छुक व्यक्तिहरुलाई पनि प्रोत्साहन मिल्नेछ । यो सिम्ब्रिडियम सुनाखरी फूलको महत्व अरु फूलको भन्दा बढि भएकोले यसको निकै ठूलो माग पनि छ र यसको निर्यात विदेशमा (जस्तै खाडि मूलुक र छिमेकी मूलुकहरु जस्तै भारत, पाकिस्तान, बंगलादेश र श्रीलंका) गर्न सकिन्छ । यदि प्रशस्त संख्यामा उत्पादन गर्न सके विदेशी मुद्रा आर्जन गरी राष्ट्रको आर्थिक विकासमा सघाउ पुऱ्याउने उद्योगको रूपमा लिन सकिन्छ ।

सिम्ब्रिडियम सुनाखरीको खेती कसरी गर्ने ?

यो फूललाई माटोमा रोप्नु हुँदैन र यसलाई धेरै स्याहारको पनि आवश्यक पर्दैन । यसलाई रोप्नुको निम्ति मलखादमा गाईको पाकेको गोबर मल, सुकेको पातहरु जस्तै उत्तिस, कटुस र लाली गुराँस आदि सुकेको वा सडेको रुखको बोकाको मसिना टुक्रा, काठ/कोइलाका टुक्रा, ईट्टा वा ढुङ्गाका चिप्स र केहि बालुवाको मात्रा मिलाई यसको मल तयार पारि ८ ईन्च उचाइ भएको माटोको गमलामा रोप्न राम्रो हुन्छ । सुनाखरी रोप्दा यसको बोटलाई ठाडो पारि गाना (bulb) गमलाको घेरा बराबर पारि रोप्नु पर्दछ, गानालाई मललाई छोप्न हुन्न, गानाको भाग बाहिर देखिनु पर्दछ ।

तापक्रम तथा सापेक्षिक आद्रता:-

सिम्ब्रिडियम सुनाखरीलाई चाहिने उपयुक्त तापक्रम न्यूनतममा ९डि.से. र अधिकतममा २९ डि.से. हो । काठमाण्डौंको जलवायु अनुरूप यो सुनाखरीको उत्पादन

सजिलैसंग गर्न सकिन्छ र धेरै काठमाडौंका सुनाखरी सौखिन तथा प्रेमीहरुले सजिलै हुर्काएका पनि छन् । यसलाई सापेक्षिक आद्रता RH ५०% देखि ७०% चाहिन्छ । सुनाखरी फूलको कोपिला लागेको समयमा र फूल फुलेको समय शीत, तुषारो तथा सुर्यको सोभै प्रकाश वाट जोगाई राख्नु पर्दछ ।

प्रकाश:-

सिम्ब्रिडियम सुनाखरीले विहानी र दिउँसोको सुर्यको उज्यालो मनपराउंछ, भने मध्य दिनको सोभै सुर्यको प्रकाशले असर पाछ । यसलाई प्रकाश ठिक सँग पुगिराखेको छ या छैन भन्ने कुरा पत्तालगाउनु पर्दा पातको रंगबाट सजिलै पत्ता लाग्छ । पातको रङ धेरै गाडा हरियो हुनु प्रकाशको कमी वा नपुग हुनु र यदी हल्का हरियो छ भने प्रकाश ठीक सँग पुगीरहेको बुझ्नु पर्दछ । यो सुनाखरी फूलको निम्ति सेड हाउसको पनि आवश्यकता पर्दछ । बाहिर खुल्ला ठाउँमा यो फस्टाउँदैन ।

पोषण:-

सिम्ब्रिडियम सुनाखरी धेरै मल रुचाउने खन्चुवा फूल पनि भन्ने गरिन्छ र यसलाई वर्षमा २ पटक नयाँ ताजा मलको आवश्यक पर्दछ । यो फूल रोपेको ६ महिना पछि यसको मल घटेर जान्छ त्यससमय गमलामा भएको पुरानो मलको माथिल्लो भाग अलि अलि हटाई नयाँ मल थप्नु पर्दछ र मल थप्दा धेरै खाँदी खाँदी कोचु हुँदैन । जेठ महिना देखि श्रावण महिनासम्म गाईको गौतसँग गोबर केहीमात्रामा घोल बनाई १ लि. गौतलाई ५ देखि ७ लिटर पानीमा मिसाई प्रत्येक १५ दिनको फरकमा सुनाखरीलाई अतिरिक्त पोषण दिनु सकिन्छ, जसले गर्दा फूलको उत्पादनमा पनि मद्दत पुग्दछ ।

पानी:-

यसलाई पानीको धेरै आवश्यक पर्दैन गर्मीको मौसममा हप्ताको ३ पटक सम्म र चिसो मौसममा २ पटक पानी दिए पुग्छ । पानी हाल्दा मुख्य कुरामा ध्यान पुऱ्याउन पर्ने चाहिँ पानीले गमलामा भएको मलको पोषण तत्वहरु पखालिने गरि पानी हाल्नु हुँदैन केवल गमलामा भएको मल चिसो मात्र रहने गरि पानी हाल्दा उत्तम हुन्छ ।

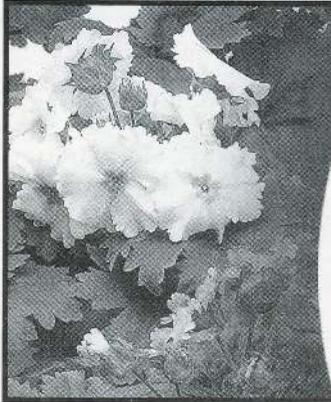
सिम्बिडियम सुनाखरीको बोटलाई छुट्याउने र रोप्ने उत्तम समयः-

यसलाई रोप्ने समय जनवरी देखि फरवरी महिनामा नयाँ बोटहरू रोप्नु राम्रो हुन्छ। फूलिरहेको बोटलाई भने फूलेको फूल टिपे पछि अथवा फूल हुर्किसकेपछि मात्र यसलाई नयाँ गमलामा सार्नु वा बोट छुटाउनु सकिन्छ तर यो कार्य २-३ वर्षमा मात्र गर्नु पर्दछ। यदि बोट ज्यादै भ्याङ्गिएको छ भने बोटलाई छुट्याउनु पर्दछ। यस्तो भखैरे अथवा ताजा रोपेको बोटलाई तुरुन्तै पानी हाल्नु हुदैन। यस्तो बोटमा स्प्रे (spray) को माध्यमबाट पात, गाना (bulbs) र मल चिसो बनाई राख्नु पर्दछ। अर्को ध्यान राख्नु पर्ने कुरा सुनाखरी बोटलाई छुट्याउँदा प्रत्येक बोटसँग एउटा पुरानो गाना एउटा पात सँगै भएको



गाना र एउटा नयाँ टुसा हुन आवश्यक छ र यसरी छुट्याइएको बोट रोप्नु पर्दा ८ इन्चको माटोको गमला छनौट गरि गमलाको फेदमा करिब १ इन्चको प्वाल बनाई ईडाको टुक्राहरु राखि सुनाखरीको बोट सिधा राखि मल भर्नु पर्दछ र मलले सुनाखरीको गानालाई पुर्न हुन्न गानाको भाग देखिनु पर्दछ यसो गर्नाले फूलको बोट फर्प्छ।

सुनाखरी फूल खेती दिर्घकालिन उद्योग हो। यो फूलको बजार विश्वमा विशाल हुनाका साथै यसको माग बढ्दो छ। सोहि कुरा ध्यानमा राखि सुनाखरी फूलको व्यवसायलाई बढवा दिई यसको बजार व्यवस्थाको उत्कृष्ट प्रबन्ध मिलाई राष्ट्रलाई विदेशी मुद्रा आर्जन गर्न सहयोग पुऱ्याओ।



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फोन: ४२४६२२० (नर्सरी), ४२७४९५२ (घर)

मोबाइल: ९८४९२३३४३०

विभिन्न प्रकारका फूल तथा विछवाहलु
चाहिएमा हामीलाई सम्पर्क राख्नुहोला ।

प्रकृति र परिश्रम



- कुमार कसजु श्रेष्ठ
कार्यकारीणी सदस्य (FAN)

प्राकृतिक हरियाली त्यसमा फुल्ने सुन्दर फूल सुनमा सुगन्ध भन्ने उखान गरेको पाइन्छ। त्यसमा पनि सजावटमा प्रयोग हुने विभिन्न जातका फूलहरु ढकमक्क फूलेको कसलाई मन नपर्ला। आजभोली फूललाई आफ्नो पेशा बनाउन तल्लीन पुष्प व्यवसायीहरु संगठित रुपमा खुलेर लागीपरेको छ। बेरोजगार युवा पुस्तालाई रोजगारी दिन समर्थ भएको छ। यो साह्रै गौरवको विषय बनेको छ। काठमाण्डौमा मात्र एक सय भन्दा माथी नर्सरीहरु खुलेको छ। ती नर्सरीहरुमा हजारौं कामदारहरुले रोजगारी पाइरहेको छ। बोट विरुवा उत्पादन एवं विक्रि वितरण गर्ने नर्सरी व्यवसायी र सभा समारोहमा प्रयोग हुने कट-फ्लावर उत्पादन गर्ने उत्पादक व्यवसायीहरुको साझा संस्था फ्लोरिकल्चर एशोसिएसन नेपाल व्यवसायीहरुको हकहित र अधिकारको रक्षा एवं पुष्प व्यवसायलाई मर्यादित व्यवसाय तथा राष्ट्रिय उद्योगको रुपमा विकाश गर्न प्रयासरत छ। यो व्यवसाय गर्न लगानीकर्तालाई उत्साहित गर्न बजारको खोजी एवं सर कारका सम्बन्धित निकायसँग वार्ता एवं सहकार्य गरिरहेको छ। यसको उदाहरण सरकारको तर्फबाट पुष्प व्यवसाय सम्बन्धि राष्ट्रिय कार्यक्रममा समावेश नै हो।

देशमा चलिरहेको आन्तरिक द्वन्दको चपेटामा परेका व्यवसायीहरु मिहिनेत र लगानी अनुसार फाइदा नहुँदा र एक आपसमा भएका अस्वस्थ प्रतिस्पर्धाले सिथिल र दिक्दार भएका छन्। केही वर्ष यता उपभोग्य वस्तुहरुको बजार मुल्य आकासीनु सोही अनुरूप कामदारको पारिश्रमिक बढ्नु, जमिन भाडा बढ्नु, विउ विजनको साथै अन्य सामग्रीहरुको मूल्य बृद्धि भएको तर सोहि अनुरूप उत्पादित बोट विरुवाको बजार मुल्य कायम हुनु पनेमा एका एक ५० देखि ६० प्रतिशत मूल्य घट्नुमा आफैमा दुर्भाग्य भएको छ। त्यसले गर्दा व्यवसायीहरुमा निराशा छाएको छ। यो व्यवसायीलाई मर्यादितका साथै व्यवस्थित बनाउने हो भने सानै लगानीमा दरिलो आयका साथै राष्ट्रिय विकाशमा समेत टेवा पुग्नेमा दुई मत छैन।

जागौ हे किसान

जागौ हे किसान अब जागौ
आफ्नो व्यवसायलाई उद्योग बनाउन
जागौ अब एक भई भविश्य उज्वल बनाउन
जागौ हे किसान अब जागौ।

फुटेर हैन जुटेर मर्यादित भई जागौ
अब आजै साना तिना मनमुटाव छाडौं
सुधारौ व्यवसायको भविश्य सर्किणता छाडौं
जागौ हे किसान जागौ।

उद्धोष गरौं आजैबाट एकताको हात बढाऔं
पुष्प व्यवसायलाई उद्योगको रुप दिऔं
मर्यादित व्यवसायी बनौं हातमा हात मिलाऔं
जागौ हे किसान अब जागौ।

लडाई भगडा एक आपसमा फाइदा अरुलाई
अस्वस्थ प्रतिस्पर्धा आजै मेरो विन्ती सबैलाई
व्यवसाय घरायसी हुँदैछ सुधान तर्फ लागौं
जागौ हे किसानहरु अब जागौ।





नेपाल उद्योग वाणिज्य महासंघ

स्थापित: वि.सं. २०२२

सदस्यता विवरण	सदस्य संख्या	
	वि.सं. २०२३	वि.सं. २०६२ (चेत्र)
क) साधारण सदस्यः		
- जिल्ला तथा नगरस्तरीय उद्योग वाणिज्य संघहरू	२१	८८ (अधिराज्यका ७१ जिल्लास्थित)
- बस्तूगत संघहरू	२	५८
ख) एशोसिएट (प्रतिष्ठान, कम्पनी, कर्पोरेशन, बैंक उद्योग)	२१	३६०
ग) द्विराष्ट्रिय उद्योग वाणिज्य संघहरू	-	९
जम्मा सदस्य संख्या	४४	५१५



नेपाल उद्योग वाणिज्य महासंघ

पोष्ट बक्स नं.: २६९

पचली शहीद शूक्र एफएनसिसिआई मिलन मार्ग, टेकु, काठमाडौं

फोन नं.: २६२२१८, २६२०६१, २६६८८९

फ्याक्स नं.: २६१०२२, २६२००७

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