



Promotion of Agricultural Research and
Development in South Asia

January - March, 2013
Vol. 7, Issue 1

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Floriculture as a thriving business

Success story



Growing plants using tissue culture

Growing flowers is not just a hobby anymore. The effect of flowers based on various cultures of the world has turned into a lucrative business. Cut flowers, cut foliage as well as live plants comprise a significant percentage of the world market. Above all, today the word is not 'growing flowers' but it is floriculture.

Sri Lanka, being a tropical paradise with a high density of plant species stands a better chance in this trade with a little support of modern technology. Floriculture, as a business, has been in existence in Sri Lanka and other SAARC member countries for a considerable period of time. Yet being more exposed to the world market were the chances that flew into this country providing space for floriculture to expand. Today it stands as one of the most popular self employment ventures - both among the rural and urban communities.

Though all the growers are private individuals in this business is under close supervision of the Department of National Botanic Gardens which comes under the Ministry of Economic Development. The Department of National Botanic Gardens helps those involved in the floriculture sector realise their true potential and achieve greater economic profits with sustainable development of their cultivations, their surrounding environment, villages, towns, cities and the country as a whole. The floriculture sector in Sri Lanka emerged as a lucrative foreign exchange earning venture in the recent past and with the inception of 'Divi Neguma' Program under the guidance of Economic Development

The special efforts to make this sector further developed to generate income and provide more employment became a high priority, in order to economically strengthen a family unit. Thus started the 'Suwahas Mal' program to promote floriculture and enhance the business potential of existing growers.



Growing foliage in new techniques

Although the floriculture industry in South Asia has an enormous potential for expansion, there are several constraints hindering its growth. Lack of modern and improved cultivars and shortage of good quality planting material is one. Popularising micropropagation is one of the best attempts. Micropropagation is growing plants using tissue culture technology. The advantage is that this method provides similar plants with identical characteristics which is a key factor in exporting flowers and foliage.

Breeding of cut flowers and ornamentals suitable for the floriculture industry commenced in the 1970s and is being continued to date. The facility for micropropagation was initiated in the early 1970s and has since developed into a research and production laboratory of micropropagated Orchids, Anthuriums, Ferns and native plants of Sri Lanka.

Lack of access to modern knowledge and technology in cultivation, lack of financial incentives to modernise cultivation facilities, lack of appropriate transportation and storage facilities, absence of quality standards for planting materials and cut-flowers are some of the other problems that tends to inhibit the growth of the industry.

'Suwasas Mal' program is started in order to create a conducive environment for this lucrative industry. The Economic Development Ministry, through the network of Botanic Gardens of the country conducts flower exhibitions and create a market place for the flower growers of the locality.

New varieties

Using native plants, botanists are now trying to develop new varieties of ornamental plants to suit the world market. Although Sri Lanka lost ownership of few yet highly valuable plants as a result of gene piracy, still have more in store of bio diversity treasures. The Department of Botanic Gardens continues to research on this. Select and introduce indigenous species as new



Training program on Anthurium at the Peradeniya Botanic Garden

floriculture crops, produce good quality planting material through large scale tissue culture facilities and distribute among growers are among the main priorities to upgrade this industry.

The Department of Botanic Gardens continuously conducts in-house training programs for those who are actively involved in this industry on modern cultural practices, post harvest handling and marketing. Utilisation of unproductive lands or abandoned cultivation sites to grow high value crops for higher income generation is another aspect need to look into.

The Department has launched and implemented two development programs at field level; the "Suwasas Mal" program to assist middle and small scale growers as well as the "Divi Naguma" programme to assist large scale and middle level growers. Technical know-how and assistance in infrastructure development is provided by this department under the above programs while marketing assistance is provided to small and medium growers by organising exhibitions cum plant sales in urban areas.

Planting material is also imported and distributed to these growers. However, technical assistance in post-harvest management as well as other research areas are required for better potential.

The industry can grow much further as the Government under the 'Mahinda Chinthana' is aiming at enhancing the economic stability of the rural masses with skilled labour force in this industry and the only issue is that need more growers. As more people can be employed per hectare, this industry indirectly provides job opportunities to many people. Sri Lanka has a diverse climate suitable for numerous crops, and as even the marginal lands can be used to grow export quality flowers and foliage to have a better future in floriculture industry.

Source: The Sunday Observer, Sri Lanka

SAARC-Australia Project



The project on “Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia” was completed very successful by SAARC Agriculture Centre (SAC) based on the outcome achieved. Mid-term review meeting in Kandy, Sri Lanka on 1 June 2012 and final review meeting & awareness seminar on the project during 13-14 March 2013 at SAC, Dhaka, Bangladesh were held with satisfaction by the reviewers.

- The reviewers of project have suggested to extend it for the next three years for good performance.
- The reviewers are convinced that the process of producing self-sustainability was not yet complete for the modeller network. Many aspects were in place, but further investment was needed to produce a number of additional essential components. These include transitioning the first cohort of trainees from ‘assistant’ trainers in the next project to ‘master’ trainers by the end; establishing modeller coursework in SAARC country universities; establishing an annual conference for APSIM users in SAARC countries. When these additional aspects are in place, then the young and growing network of modellers is likely to be more sustainable.
- SAC Governing Board Members and SAARC-Australia Project advisory panel participated in the Review Meetings and were in agreement with an extension of the project.
- A follow on project was conceptualized by Commonwealth Scientific and Industrial Research Organization (CSIRO) and submitted a proposal to the AusAid for an extension of the project.
- AusAid approved a budget under its “Sustainable Development Investment Strategy”. CSIRO is going

to operationalize the funding for the extension of the SAARC-Australia Project hopefully in August/September 2013.

- SAC requires an authorization to initiate the extension of the project (SAARC-Australia Project Phase-II).

Achievement of the project

- Database on APSIM-ORYZA has been done in cooperation with CSIRO, Australia. The database was linked with SAC website so that the modellers in the SAARC countries can utilize these data.
- Twenty persons from NARS institutes, universities in SAARC countries and SAC are trained as cropping system modeller (APSIM-ORYZA) who would train and develop other modellers to contribute in increasing water productivity for the rice based farming systems.
- With the knowledge developed, the trainees are able to increase water productivity, identify best agronomic practices along with cropping systems in their national programmes.
- SAC Monograph of scientific papers are being published in which research findings on cropping systems modelling works of the trainees carried out during the project period have been included.
- Google-Earth-based database developed. Updated data from the trainees in appropriate format for cropping systems modelling are collected and included in the database. The database is linked with SAC website so that the modellers in the SAARC countries can use these data as reference.
- SAARC countries can be benefitted through institutionalizing the modelling group.



Awarness Seminar

CPF-248: Fresh and medium maturing sugarcane variety releasing for sustainable production



Cane breeding program based purely on noble canes that give rise to varieties with many good qualities, however, an organized breeding program is the basic tool to enhance the yield of both cane and sugar production in the country. Cane production provides not only raw material to the sugar industries in the homeland but it also help to fortify the economic status of the farmers. From production point of view, it is a vigorous precursor that progressive farmers are taking ardent interest to get new and fresh varieties from the breeding institute.

Sugarcane Research Institute, Faisalabad has evolved 22 sugarcane varieties possessing different qualitative and quantitative traits since her inception in Pakistan.

Although these are very much trendy among the farmers but a newly and emerging sugarcane variety CPF-248 is introducing the farming community being medium maturing variety. Vast expansion of sugar industries necessitates prolonging the crushing season of sugar mills. Due to medium maturing variety, CPF-248 would contribute a lot within the stakeholders because this budding variety is very much legendary for its sustainable production in the trials conducted throughout the province.

The parentage of the variety is CP 89-879 × CP 90-956. The fuzz of the variety was imported to Faisalabad during 2002 from Sugarcane Breeding Research Station, Canal Point, USA. The seedling number was assigned in 2003 as S2003-US-114 and was put in the preliminary varietal trial for comparison with other sugarcane colossal varieties.

The candidate variety showed good performance in the preliminary varietal trial, so it was promoted and tested

under semi-final and final varietal trials. The variety was also tested in different zones at farmers' fields and National Uniform Variety Yield Trial (NUVYT) throughout the Pakistan.

The test variety is good in germination and tillering. It may lodge under poor management, whereas tiller mortality is less. The said variety is medium in maturity and maintains its quality through out the season. The ratoonability of the variety is good. In the mentioned table CPF 248 has more number of tillers per plant, more cane production and more cane weight was observed by test variety than SPF 245 and HSF 240.

Main characteristics of CPF 248 in comparison with SPF 245 and HSF 240

Variety	Germination (%)	Tillers/plant	Canes (000/ha)	Per cane weight (kg)
CPF 248	45.10	1.71	119.81	0.99
SPF 245	48.55	1.23	103.49	0.93
HSF 240	43.40	1.38	94.79	0.87

The performance of CPF 248 was evaluated at Sugarcane Research Institute, Faisalabad with standard cane varieties SPF 245 & HSF 240. Similarly, the variety was also tested at Sugarcane Research Station, Khanpur with standard variety HSF 240. Moreover, the variety was also tested at farmers' fields throughout the Punjab Province and for NUVYT studies throughout the country.

The experiments were laid out according to RCBD with 3 repeats at Sugarcane Research Institute, Faisalabad and Sugarcane Research Station, Khanpur. The recommended seed rate, fertilizer and irrigations were applied. The data on germination, tillering, cane stalk density and cane yield were recorded. For quality evaluation, the fortnight periodic juice analysis for Brix, Pol, purity, commercial cane sugar (CCS %) and sugarcane recovery % were done at Sugarcane Research Institute, Faisalabad.

Disease reaction of CPF 248 was also studied under natural and artificial inoculation against red rot. The observations on Red Rot, Whip Smut, Pokkah Boeng, Mosaic Virus, rust and Red Stripe were recorded; the data on borers, sucking insects etc. were also noted during different selection stages. For identification, morphological characteristics were recorded at the end of November.

Sugar recovery comparison of CPF 248 with SPF 245 and HSF 240 at Sugarcane Research Institute, Faisalabad.

Year	Sugar recovery (%)			Difference with SPF245/HSF 240	Percent variation over SPF 245/HSF 240
	CPF 248	SPF 245	HSF 240		
2008-09	12.54	11.87	-	0.67	5.64
2009-10	13.16	11.83	-	1.33	11.24
2010-11	12.77	11.05	-	1.72	15.57
2011-12	13.17	-	12.60	0.57	4.52
Average	12.91	11.58	12.60	1.07	9.24

The cane quality was studied in different trials at fortnight intervals. The data regarding sugar recovery are presented here. The data revealed that CPF 248 showed 12.91% sugar recovery against standard varieties SPF 245 and HSF 240 with 11.58% and 12.60% sugar recovery, respectively. Thus gave 9.24% increased sugar recovery over standard varieties.

Ratooningability of candidate variety CPF 248 was studied at Sugarcane Research Institute, Faisalabad. The data showed that CPF 248 on an average gave 70.93 t ha⁻¹ stripped cane yield against cane yield of 55.63 t ha⁻¹ recorded for standard variety HSF 240. Thus the candidate variety gave 27.50% more cane yield than the standard variety.

Ratoonability of CPF 248 at Sugarcane Research Institute, Faisalabad

Cane yield (t/ha)		Difference (t/ha) with HSF 240	Percent variation over HSF 240
CPF-248	HSF 240		
70.93	55.63	15.30	27.50

The candidate variety was also tested in medium and late final varietal trial for 4 years from 2008-09 to 2011-12. It is a medium maturing variety with high tonnage and more recovery as compared with medium maturing varieties SPF-245 and HSF 240. Due to disease and insect tolerance, this will prove to be a good substitute of SPF 245, SPF 234 and HSF 240 through out the Punjab. It gave additional benefit of Rs.160000 and 158000/-ha⁻¹ over standard varieties SPF 245 and HSF 240, respectively.

The new variety CPF 248 is higher cane yielder than SPF 245 and HSF 240. It is a medium maturing variety and maintains good recovery throughout the crushing season. Although this strain attains very good height, yet it lodge slightly on heavy soils. Most of the tillers produced are

matured into millable canes. It does not produce off-shoots and sprouts during the season that is why it attains more height and consumes inputs more efficiently.

CPF 248 will replace the old medium maturing commercial varieties, like SPF 234, HSF 240 and SPF 245. The variety is adaptable under average input conditions through out the Punjab Province.

Source: Dr Muhammad Ijaz Tabassum, Rana Zulfiqar Ali and Dr Muhammad Afzal, Sugarcane Research Institute, Faisalabad, Pakistan

Contribute to SAARC AgriNews

SAARC AgriNews is a widely circulated Newsletter devoted for disseminating agricultural research and development findings as well as information on applied technology for the farmers of South Asian region.

SAARC Agriculture Centre (SAC) has been publishing this Newsletter (formerly SAIC Newsletter) since 1991 and distributing it to about 6,500 readers in SAARC member countries.

The Centre has been distributing SAARC AgriNews to the relevant agricultural institutions, scientists and extension service providers of SAARC member countries for better livelihood of the farmers free of cost. Please send your articles, success stories and news on applied research, extension activities, proceedings and/or recommendations of seminars, symposium, consultations and workshops in the field of agriculture with relevant photographs either by post or through e-mail; please note that unaccepted articles are not returned to the authors.

Video Film on Successful Agricultural Technologies

The Centre has recently collected 72 new Video Films on successful agricultural technologies from different agricultural institutes of SAARC member countries. The detail of video films are given below:

Title of the Videos	Country
Little Fishes and Tiny Nets	India
The Greedy Fish Farmer	India
Greening the Sea: The Story of Green Mussel Cultivation in India	India
Yellow fin Tuna Fishing: Some Glimpses	India
Monsoon Season Post Harvest Losses Traditional Fish Processing in India	India
New Horizons in Mariculture: Culture of Seabass in open Sea Cage	India
CMFRI: The Saga Continues	India
Farming Jewels from the Sea	India
CIFT-The Wave Riders	India
HACCP in food processing plants	India
The pre-requisite programmes-GMP & SSOP	India
Wealth from waste-livestock feed from cephalopod processing waste	India
Convenience food from fish	India
Fabrication and maintenance of fishing nets	India
Magur farming	India
Freshwater prawn hatchery for boosting prawn production	India
CIFA: gateway of aquaculture	India
Poultry Passion in India	India
CPRI in Tune with the Time	India
Potato Seed Production in India	India
ICRISAT helping and provery through Inclusive Market Oriented Development	India
ICRISAT pigeon pea genome sequence	India
ICRISAT – NASFAM partnership	India
Preparation of Vermi Cmpost ; ICRISAT	India
Integrated water management- A successful story, Kothapally : ICRISAT	India
Watershed Project Kothapally- Success story : ICRISAT	India

Title of the Videos	Country
National Research Centre for Agro forestry in service of nation	India
Documentary on National Resource Conservation through Watershed Development	
DWR profile	India
RCT for increased wheat production in India	India
Honey Bee	Pakistan
Warning Signals from the Apple Valleys	India
Area Specific Mineral Mixture of improving productivity in animals	India
Improving quality and utilization of poor quality roughages	India
Azolla cultivation for livestock feeding	India
Complete feed block	India
NIANP-Looks Ahead	India
Exploing Mithun: Journey Ahead	India
Importance of Weed Management	India
Parthenium Management	India
Threat of Invasive Weeds in India	India
Institute Profile (DWR)	India
Enlivening the Thar Desert	India
Jute Reinvented	India
The Jute Nonwoven in agriculture	India
CPCRI: For Farmers Prosperity (English, Hindi, Tamil)	India
Polythene Film Technology Part-A, Part – B : ICIMOD	Nepal
In the grip of drought : ICIMOD	Nepal
Living with floods: ICIMOD	Nepal
Promoting Herbal Gardens in Schools: ICIMOD	Nepal
ICIMOD Demonstration and Training : Godavari	
Sloping Agricultural Land Technology : ICIMOD	Nepal
Too much water too little water : ICIMOD	Nepal
Mud crab farming and fattening by women	India

Title of the Videos	Country
Fish Food products development and marketing by women self help groups	India
Aqua feed development by women self help groups	India
Diversification of livelihoods among the coastal women self help group	India
Sri Lankan Spices for Better Quality	Sri Lanka
Pepper Industry in Sri Lanka	Sri Lanka
Cultivation of Rabi Medicinal Plants	India
Herbal wealth of India	India
Good Agricultural and Collection practices of Medicinal Plants	India

Title of the Videos	Country
Documentary on G.B. Pant University	India
Technique of Artificial Insemination in Cattle	India
Breeder Seed Production Centre	India
Gladiolus Cultivation	India
Propagation of Horticulture	India
Scientific Rose Cultivation	India
Shrim culture"	India
Indian Fisheries : A Success Story	India
CIBA Profile and Programmes	India
A Tale of CTRI	India

If you are interested to collect above video films, please contact to the Director, SAARC Agriculture Centre, BARC Complex, Farmgate, Dhaka-1215, Phone: 0088-2-8115353, E-mail: sac@saarcagri.org

New SAC Professional Staff



Ms. Nasrin Akter from Bangladesh joined as Senior Programme Specialist (Horticulture) at SAARC Agriculture Centre (SAC) on 14 January 2013. Prior to joining SAC, she has been working at SAC since 1994 in different capacities with specialization in

crops production, improvement and management. Her significant contribution includes identifying, planning, coordinating, developing, implementing and management of short and medium term programmes/projects in thrust areas of research & development of agriculture and professional career spans over 20 years.

In addition Ms. Nasrin successfully coordinated and organized a large number of International / Regional Workshops / Consultations / Trainings / Seminars independently related to the emerging areas in crop sciences and also maintaining linkages with international institutions for effective planning and implementation of the Centre's activities and working with close collaboration with number of professionals in various capacities.

She also worked as an editor of the SAARC AgriNews and SAARC Journal of Agriculture (SJA) of the Centre.

Ms. Nasrin was also associated in editing and compiling sixty technical publications related to crop science.

She received his M.Sc. Agri in Agronomy from Bangladesh Agricultural University. Ms. Nasrin attended many workshops and published scientific papers in the journal as well as life members of the professional societies.



Dr. Muhammad Musa from Pakistan joined SAARC Agriculture Centre (SAC) in Dhaka, Bangladesh on 17th February 2013 as Senior Program Specialist (Crops) on deputation for a period of three years. Prior to joining SAC, he has been working as Agronomist at Barani

Agricultural Research Institute, Chakwal, Pakistan.

He received his M.Sc. Hons. (Agronomy) degree from University of Agriculture, Faisalabad, Pakistan and Ph.D from University of Wales, Aberystwyth, United Kingdom.

Dr. Musa's professional career spans over 24 years of experience in different aspects of research and development of agriculture. He has to his credit 26 research articles in journal, 8 papers presented in seminars and conference. Dr. Musa is the members of the different professional societies.

Programming Committee Meeting

The Forty-third Session of the Programming Committee concluded at the SAARC Secretariat, Kathmandu on 5 January 2013. The meeting which was participated in by all the Member States was chaired by H. E. Mr. Hassan Shifau, Permanent Secretary of the Republic of Maldives.

Convening after a gap of over a year, the three-day session of the Committee had before it several important issues having a bearing on regional cooperation. Among other things, the Committee considered a number of Reports of the Governing Boards of SAARC Regional Centres and Expert Groups meetings that were held after the Seventeenth Summit. The Committee also finalized the Calendar of Activities for the year 2013.

H. E. Mr. Ahmed Saleem, Secretary-General of SAARC, also addressed the opening session of the Programming Committee. Highlighting the significant achievements of SAARC since the last Summit, the Secretary-General

said, “Since the Seventeenth Summit held in Addu City, Maldives, in November 2011, SAARC has shown clear signs of closer cooperation in many fronts. Trade under the South Asian Free Trade Area (SAFTA) has already crossed the US\$ 2 billion mark; the South Asian University has produced the first batch of graduates last August; the SAARC Visa Exemption Scheme now covers 24 categories of persons who are entitled to visa free travel within the region.”

The Programming Committee comprises the Heads of SAARC Divisions of the Ministries of Foreign/External Affairs of the Member States of SAARC. It is a subsidiary body that reports to the Standing Committee of Foreign Secretaries.

In addition to the Directors from the SAARC Secretariat, the Directors of all the Regional Centres also attended the Committee's Session that was held at the Secretariat from 3 to 5 January 2013.

Early Breeding of Indian Major Carps

Indian Major Carps (IMC) are bred during June-August in farmers' ponds under CIFABROOD Demonstration Trial in Odisha. Mainly due to late maturation of broods and traditionally believed that survival of early bred spawn is very poor. Mr. Batakrishna Sahoo (Batababu) of Sarkana village, Baliana Block under Khordha district, Odisha is a progressive fish farmer in the region and had produced about 20 crores carp spawn during June-August 2012 by traditional breeding management plan. Despite the fact that Batababu was producing seed for the last 20 years or so he had never thought of any possibility of early breeding of IMCs.

Shri Sahoo was advised to test CIFABROODTM for early maturation of carps in his pond. After a brief and routine preparation with lime and mahua oil cake, two ponds (0.3 ha. each) located side by side were stocked on 2nd February, 2013 with the spent 250 numbers of catla, rohu and mrigal (bred in 2012) at a density of 1000 kg/ha. The feeding trial started on 18th February, 2013 and fishes were fed at 3% of body weight with CIFABROODTM in experimental pond while farm made feed was provided in the control pond.

Shri Sahu noticed that within 30 days of rearing, catla broods appeared healthier with more luster and glazy shining in experimental pond than control counterpart. Almost all the males as well as the females of rohu and mrigal and a few catla showed symptoms of phenotypic maturation within 30 days of feeding. Fishes were matured by the 1st week of April, 2013 (in 48 days), although no water exchange or other management practices could be possible.



The farmers were initially reluctant to take up any breeding program of the fishes in April due to hot summer (42-45°C), acute shortage of water, no surety about spawn buyers, non readiness of the own nursery ponds and lack of confidence in the early bred spawn survival. The brood stock had to be shifted from experimental pond to another due to acute shortage of water.

(Continued on page 10)

New Product to Control Diseases in Dragon Fruit Cultivation



A research group headed by the Atomic Energy Authority (AEA) has developed a natural eco-friendly product (fungicide and plant growth promoter - a chitosan derivative), from shrimp waste which could be used for agricultural applications.

Among other applications this newly developed fungicide can also be used to control diseases in Dragon Fruit.

Dragon fruit is commercially cultivated in Sri Lanka and is popular now in SAARC member countries. A Dragon fruit Association has also been established and there are more than 100 farmers in this Association.

The Dragon fruit cultivators are contributing to GDP and earn foreign remittance to Sri Lanka through selling Dragon fruit to Maldives, countries in the Middle East and Germany etc.

The Association has reported to the AEA that they have found several Dragon Fruit diseases created by some fungi and bacteria and they are rapidly spreading in the Dragon Fruit cultivation and these fungi and bacteria are unable to be controlled by using any licensed fungicide in the world.

They have requested the Radiation Processing Section of the AEA, to assist them in controlling this disease using the natural, eco-friendly Chitosan thus produced (with the skeleton of shrimp shells), by the above research group which consisted of members of the AEA

(under the Ministry of Power and Energy) in collaboration with the Department of Agriculture Horticultural Research and Development Institute - HORDI, Gannoruwa, Rice Research and Development Institute-RRDI, Bathalagoda and Regional Rice Research and Development Centre-RRRDC, Bombuwala of the Agriculture Department) with the technical assistance of the International Atomic Energy Agency (IAEA).

The AEA has developed the chitosan derivative using gamma radiation and apart from using it for Dragon Fruit its efficacy was also tested for rice, rambutan, okra, capsicum and tomato through field and laboratory trials.

While achieving the successful results from above studies, the AEA signed a MoU (Memorandum of Understanding) with the Dragon Fruit Wagakaruwange Sangamaya recently to carry out pilot scale studies to evaluate the efficacy of the chitosan derivative in controlling the fungal diseases that affect many dragon fruit farms/ cultivations now.

According to the members of this Sangamaya these diseases are very common to many dragon fruit cultivations and many fungicides which have been tested were not successful in controlling this disease.

As such it is expected that the chitosan derivative which has been developed by the AEA, would protect this valuable plant in Sri Lanka and establish sustainability in growing it for future needs, at domestic and international levels while minimizing the use of chemicals in agriculture.

Source: The Daily News, Sri Lanka

SAARC Agriculture Archive

SAC maintains archive of documents published by the centre which can be easily accessed via SAC website (www.saarcagri.org). During 2013 the following documents and materials have been archived - Annual Report - 17, Catalogue - 1, Directory - 3, News Views Idea - 6, Statistical Data Book - 4, Technical Publication - 18, Workshop Proceedings - 6, SAARC Journal of Agriculture - 16, Newsletter - 76, Documentary Film - 150

Welcome to the Governing Board Member of SAC



Mr. Ishwar Prasad Rijal
Chief
Agricultural Information and
Communication Centre
Ministry of Agriculture
Development
Harihar Bhawan, Lalitpur, Nepal

Visit

Dr. Cecep Effendi, Director General and Mr. Hossein Shahbaz, Director (Pilot Projects) from Centre for Integrated Rural Development for Asia and the Pacific (CIRDAP), Dhaka, Bangladesh visited SAARC Agriculture Centre (SAC) on 15th January 2013.

During their visit, a meeting was arranged for introducing with the SAC personnels at SAC conference room and exchanged organizational views. It was hoped that SAC & CIRDAP would develop closer cooperation in future on agriculture and rural development.



SPINet

SPINet is a web-based network on pesticide information sharing being developed by AEU, DoA through a MoU signed between SAC and University of Peradeniya, Sri Lanka. The MoU was signed in March 2013 and currently the network is being developed in Sri Lanka and it is planned to complete in October 2013 after which it will be tested. After successful testing and debugging, it will be launched by the end of the year, 2013.

Indian Major Carps (from page 8)



First induced breeding program was conducted on 22nd April, 2013 with mrigal broods using OVA-FH as inducing agent. Another breeding program was conducted on catla on 13th and 28th May, 2013 and rohu was bred on 31st May, 2013. There was 100% breeding response in all the three species tested with complete release of eggs (fecundity at par with normal breeding season) with fertilization rate and spawn recovery more than 90%. On contrary, not a single brood was found ready for breeding operation in the control pond.

At the end of May, 2013, he bred 45 broods and produced 83 lakhs spawn and by 15th June, 2013 he could produce and sell 2 crores of quality spawn and majority of the broods are still left to be bred. He is now expecting to cross the production of 30 crores spawn (50% increase) by the end of August, 2013 from both CIFABROODTM fed fish as well as other brood stock fed with his own feed.

The initial problem of selling the spawn in April notwithstanding, almost all the spawn were sold on the respective spawn lifting days and were purchased by the regular buyers. The maiden success was realized by the farmer in early breeding of IMCs during hot summer instilled lot of confidence in him. Further, co-operation from his fellow spawn buyers has motivated him for taking up and scale up early breeding program in February-March in the coming years. Early bred (April) spawn has already grown up to fingerling size by June 15th, 2013 which is fetching Rs.1 per piece to the nursery growers.

According to the spawn buyers survival rate of fingerling is in between 40-70% as compared to 30% normally observed during spawning season in previous years. Fingerlings are ready for stocking for grow out culture from June middle to October allowing an extra period of near about 3 months for growth purpose. Shri Sahu feels that success in early breeding with the help of CIFABROODTM will lead to a surge in the number of spawn buyers even in peak summer of coming years, and is most likely to have positive impact in freshwater aquaculture sector.

Source: CIFA, Bhubaneswar, Odisha.

SAARC Vegetable Adaptive Trial Network

The SAARC member countries named Bangladesh, India, Nepal, Pakistan and Sri Lanka contributed a total of 24 varieties/lines of vegetable and 4 from AVRDC to develop a SAARC Vegetable Adaptive Trial Network (SVATNet) for vegetable adaptive trial. There were 8 eggplants, 10 tomatoes, 3 cucumbers, pumpkins 4, and 3 okras varieties.

The seeds of the vegetables were sent to the participating member countries during April 2012 after coding by SAC. Accordingly trials were conducted in research institutions of Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.

Annual review meeting of the trial was organized at Indian Vegetable Research Institute, Varanasi, India in December 2012. In view of the seasonal variation in the member countries, only Bhutan, Pakistan and Sri Lanka established trials of all five crops. On the other hand, Bangladesh established trials on Okra and Cucumber during April-May 2012 and on Pumpkin, Brinjal and Tomato during November 2012. India established trials on Okra, Pumpkin and Cucumber during July 2012 and Brinjal and Tomato during September and October 2012.

Nepal established trials on Tomato and Brinjal during August 2012 and Okra, Cucumber and pumpkin trials will be established during February-March 2013.

As per decision of the 1st Annual Review Meeting, India provided the data collection sheet which circulated to the member countries. Next annual review meeting is planning to organize during the last week of October 2013 in Bhutan.

Achievement of BARI

Since inception, Bangladesh Agricultural Research Institute (BARI) has been successfully contributing agricultural production by evolving technologies that are suitable for the country's climate and appropriate for the farmer's condition. BARI has so far developed a total of 817 technologies of which 395 are improved crop varieties (commodity) and 422 technologies on different non-commodity areas.

A. Commodity :

Named of crops	No. of released varieties
Cereal crops	64
Oilseed Crops	42
Pulse Crops	30
Tuber Crops	70
Vegetable Crops	85
Fruit Crops	62
Flower Crops	16
Spices Crops	19
Fibre Crops	06
Narcotic Crops	01
Sub-Total	395

B. Non-Commodity :

Research Fields	No. of technologies
Crop, Soil, Water & Pest Management	183
Farm Machinery	22
Irrigation and Water Management	42
Post-harvest Technology	27
Farming Systems Research	132
Biotechnology	16
Sub-Total	422

Total number of technologies (Commodity + Non-commodity) : 395 + 422 = 817

BARI has also developed a self contained gene bank where more than 10000 germplasm accessions of pulses, oilseed, vegetables have been preserved.

Source: BARI website.

SAARC Seed Outlook

Considering quality seed is one of the key issues for attaining food security, SAC published SAARC Seed Outlook with the objective of fostering seed sector in SAARC member countries. The outlook presents an analytical view of quality seed production, processing, legal, quality control and marketing systems in the region.

It also provides necessary steps to be carried out in seed quality assurance. The outlook proposes a way forward for the promotion of seed systems in the region. The major areas it covers are as follows:

- Engagement of private sector must be promoted to compliment the seed supply to meet the national demand.
- Capacity development in seed sector
- Initiate custom production of seed in SAARC member countries
- SAC to serve a coordinating agency for SSF and SAARC Seed Bank
- Develop supply chain for seed sector

SAC provides ABIS through E-mail

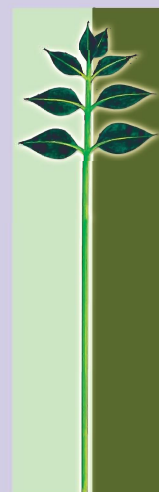
SAARC Agriculture Centre (SAC) has been providing Agricultural Bibliographic Information Service (ABIS) on databases are available with SAC: CROP CD (2007/07), HORT CD (2008/08), SOIL CD (2007/04), PARASITE CD (2005/07), FSTA (2007/10), CAB ABSTRACT (2005/11), TREE CD (2004/10), FOREST SCIENCE CD (2008/11), ANIMAL PROD, CD (2008/11), VETEARINARY CD (2008/8), AGRICOLA CD (2007/6) is also subscribed for renewal. If you wish to avail ABIS, please send your request to abis@saarcagri.net addressing the Director, SAC. Please mention the keywords, title of CD-ROM database and the range of years for which you need the references.

Forth-coming events of SAC

- Adaptation of climate change impact on production in SAARC member countries-consultation meeting to be held in Dhaka, Bangladesh during October 2013.
- 7th GB meeting 2013 to be held in Dhaka, Bangladesh during September 2013.
- Popularizing multiple cropping innovations as a means to raise productivity and farm income-consultation meeting to be held in Kandy, Sri Lanka during October 2013.
- Consultation workshop on National Agricultural Education Systems in SAARC countries to be held in Bangladesh during November 2013.
- Consultation on use of Geo-information Technology for Mapping of Land Degradation in SAARC Countries to be held in Nepal 2013.
- Review Meeting on Improvement of vegetable and adaptive trial in SAC member countries to be held in Bhutan in November 2013.
- Inception meeting on Best practices and procedures of saline soil reclamation systems in SAARC region.
- Inception meeting on High yielding buffalo breed development in SAARC countries.

Submit research or review article for SJA

SAARC Journal of Agriculture (SJA), a half yearly publication from the SAARC Agriculture Centre (SAC) is envisaged to serve as platform for exchange of latest knowledge on breakthrough topics that are of current concern for researchers, extensionists, policy makers and students. It aims to capture the first-hand knowledge on research achievements in the field of agriculture, fisheries, livestock, forestry and allied subjects from the SAARC member countries.



Agricultural scientists and policy makers publish their research or review article in this esteemed journal without any page charges or other processing cost. For author's guide lines, please visit our website: www.ssarcagri.org. Submit your manuscript in electronic form via e-mail: sja@saarcagri.org or via post addressing to Editor, SAARC Journal of Agriculture (SJA), SAARC Agriculture Centre, BARC Complex, Farmgate, Dhaka-1215, Bangladesh.

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