



SAARC AGRINEWS

Promotion of Agricultural Research and Development in South Asia

July-September, 2011

Vol. 5, Issue 3

Highlights

The Fifth Governing Board Meeting of SAC	1
Her Excellency Secretary General of SAARC Visited SAARC Agriculture Centre (SAC)	3
Regional Workshop on Enhancing Oilseed Production through Improved Technology in SAARC Countries	4
Integrated approach for producing food quality	8
Annual Audit for the Financial Year 2010 of SAC	8
Integrated Management of Rice Leaf Folder	9
Mixed Cropping of Pepper in Coconut Gardens	10
Wheat Production in Bangladesh	11
SAARC-Australia Project : Developing capacity in cropping systems modelling for sustainable use of water resources to promote food security in South Asia	12

Editor

Nasrin Akter, SPO (Crop Management)

Editorial Board

Dr. A.K. Azad, Director
Dr. S. K. Pal, Deputy Director (Agriculture)
Dr. Md. Nurul Alam, SPS (PSPD)
Dr. H. Hemal Fonseka, SPS (Crops)

Graphics: Mafruha Begum, CMO (D&A)
Photo Credit: SM Chowdhury, VPO
Compilation & Page Layout:
Raihana Kabir, Graphic Designer
Md. Mizanur Rahman, IT Manager

ISSN 1607 - 8317

www.saarcagri.net

The Fifth Governing Board Meeting of SAC

The Fifth Governing Board (GB) Meeting of SAARC Agriculture Centre (SAC) was held in Dhaka during 23-25 September 2011. The inaugural session of the GB was presided over by Mr. K. N. Mankotte, SAC GB Member from Sri Lanka and Chairman of the GB Meeting and Director General, Extension and Training Division, Department of Agriculture, Sri Lanka. Dr. Wais Kabir, Executive Chairman, Bangladesh Agricultural Research Council (BARC) graced the occasion as Chief Guest; Mr. Syed Masud Mahmood Khundoker, Director General (SAARC, BIMSTEC & ACD), Ministry of Foreign Affairs (MoFA), Bangladesh was the Guest of Honour on this occasion and Mr. Tareque Muhammad, Director, SAARC Secretariat represented the Secretary General of SAARC. The Diplomats of the Foreign Missions of SAARC member countries at Dhaka also attended the inaugural function as special invitees. Honourable GB Members from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka participated in the meeting. High officials, NARS scientists, extension service providers from Bangladesh and SAC personnel were also present in the Meeting.

Dr. Abul Kalam Azad, Director, SAC welcomed the Honourable GB Members; Executive Chairman, BARC; Director-General (SAARC, BIMSTEC & ACD), Ministry of Foreign Affairs, Bangladesh; Director, SAARC Secretariat and other distinguished guests present in the inaugural session of the meeting. He emphasized the significance of the Fifth GB Meeting in formulating programs for 2012 addressing emerging challenges in the Agriculture and allied disciplines in South Asia. Dr. Azad thanked the Government of Bangladesh, all GB Members as well as Director, SAARC Secretariat for their continued support in implementing SAC programmes. He highlighted a number of activities of the Centre which have been found to be useful e.g. seed development, climate change, soil degradation, farm machineries, NARS system diversity, dairy production, zoonotic diseases of livestock, brood stock management

(detailed on page 2)



The Fifth Governing Board Meeting

(From page 1)

of fisheries and adaptive trials of vegetables varieties in the SAARC countries. He briefed the GB members on the collaborative initiatives with Australian Government. Dr. Azad stressed on the need of signing the MoU with IRRI. He requested the GB Members for further guidance and support for successful implementation of the regional programmes of the Centre in future.

Mr. Tareque Muhammad, Director, SAARC Secretariat conveyed the greetings of the SAARC Secretary General Her Excellency Uz. Fathimath Dhiyana Saeed to the Governing Board. He noted that SAARC since its inception has identified Agriculture as one of the major areas of cooperation among the Member States. He suggested that SAC should increasingly come out from the mould of SAIC and assume greater responsibilities as a leading Regional Centre of SAARC. He hoped that SAC under the leadership of the new Director would aggressively pursue the objectives and goals of the centre and the Secretariat would provide full support for achieving its goals.

Mr. Syed Masud Mahmood Khundoker, Director General (SAARC, BIMSTEC & ACD), MOFA, emphasised that development of Agriculture sector is essential to ensure wider objectives of ensuring food

security, nutritional security, eradication of poverty, efficient and wise use of water. He underscored the need for formulating programs to address emerging challenges posed by climate change, land degradation, natural resource degradation and so on.

Dr. Wais Kabir, Executive Chairman, BARC and Chief Guest of the Inaugural Session viewed that SAC has the ability to accept any responsibility to meet the challenges in the region. He noted that given the nature of the challenges in the agriculture sector, private sector efforts should be harnessed along with the public sector interventions. He mentioned that international organizations like CSIRO, IRRI, ADB etc. are showing keenness to work with SAC, which he noted with appreciation. Dr. Kabir also highlighted the importance of continuous monitoring of the programmes at the different stages of implementation by wisdom, skill and spirit of team work. He also mentioned that Bangladesh Government, particularly Bangladesh Agricultural Research Council, is committed to extend all types of support to SAC.

Mr. K. N. Mankotte, Chairperson of the GB, thanked the SAARC Secretariat and the Government of Bangladesh for continuous support and proper guidance towards development of SAC. He invited attention for enhanced cooperation among the Member States for bringing about welfare of the people living in the region. He hoped that this Meeting would guide SAC in formulating programs as

(Continued on page 5)





Her Excellency Secretary General of SAARC Visited SAARC Agriculture Centre (SAC)

Her Excellency Secretary General of SAARC, Uz. Fathimath Dhiyana Saeed visited SAARC Agriculture Centre (SAC) on 8 August 2011, on the occasion of launching of the SAARC-Australia Project on "Developing capacity in cropping systems modelling for sustainable use of water resources to promote food security in South Asia". The project was launched with the inauguration of the exposure training workshop. Her Excellency arrived at Dhaka on 7 August 2011 and in her honour, Director, SAC, Dr Abul Kalam Azad arranged a dinner on the same day. H. E. Mr. Justin Lee, Australian High Commissioner to Bangladesh, along with other dignitaries from Embassies/High Commissions of SAARC Member States; Chairman, Parliamentary Standing Committee on Agriculture,

Ministry of Agriculture (MOA), Secretary, MOA, Foreign Ministry and other organizations of Bangladesh were present in the dinner.

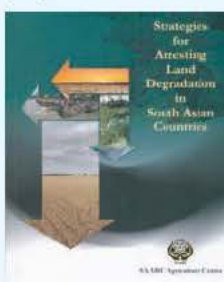
Her Excellency attended an introductory meeting at SAC Conference Room prior to launching of SAARC-Australia Project, where Director, SAC presented the Centre activities as well as past, present and future programs. Her Excellency appreciated the activities of the centre and provided some guidance to SAC personnel to improve the centre with enhanced capacity as well as with better performance. Later Her Excellency visited the existing facilities of the centre including the library. Mr. M. Riaz Hamidullah, Director, Ministry of Foreign Affairs, Government of Bangladesh also present during her visit at SAC.

Center's New Publication

Strategies for Arresting Land Degradation in South Asian Countries

The Centre has published a book entitled "**Strategies for Arresting Land Degradation in South Asian Countries**". The book consists of keynote paper, country papers from Bangladesh, Bhutan, India, Nepal and Sri Lanka as well as three special papers from India.

Considering the importance and urgency related to land degradation the present publication would help to (a) formulate policy issue (b) draw strategies (c) undertake joint project and also national programmes to address the issue of major concerns collectively (d) find out the measures to millions of affected people in the SAARC regions. strategies for arresting land degradation, reversing productivity without risk of further degradation. Governments of SAARC countries, agriculture NGO, donor agencies and ultimately the



minimize the impact of land degradation on the. The publication also helps in developing the adverse effects of land degradation on land. The beneficiaries will be policy makers in the and social scientists, environmentalists farmers.

Regional Workshop on Enhancing Oilseed Production Through Improved Technology in SAARC Countries

SAARC Agriculture Centre (SAC) is going to organize a regional workshop on **"Enhancing Oilseed Production through Improved Technology in SAARC Countries"** in collaboration with Directorate of Oilseeds Research, Rajendranagar, Hyderabad, Ranga Reddy, Andhra Pradesh, India scheduled to be held during 20-21 December 2011 in India.

The objectives of the regional workshop

The aim of the program is to collect and compile available information and data derived from research and practical experiences in the region regarding the above subject with ultimate goal of formulating improved technological strategies and government policy support for boosting up further oilseed production in the SAARC region.

The oilseed complex in SAARC region is undergoing visible changes in the new environment of liberalized trade. Consumption patterns are changing, as consumers are beginning to accept oils other than those consumed traditionally. Changes in cropping patterns have also taken place with the help of technology missions and price support.. The low and fluctuating yields are primarily due to a large part of the cultivation being on marginal lands lacking irrigation and with low levels of input usage. The comparatively lower yields are mainly due to the fact that the quality of the seed varieties is generally poor and oilseeds crops in this region are mostly cultivated under un-irrigated areas. Less than 25% of cropped area is under irrigation. For the same reason yields are more variable due to weather fluctuations. Other reasons include disease and pest damage, vulnerability to drought, poor dry farming practices, low access to inputs and poor soils. A large number of oilseed crops are grown in different regions under different agro climatic conditions. These crops are among the most widespread in small farm systems throughout India. Groundnut, rapeseed-mustard, sesame and safflower are the traditionally cultivated oilseeds. In the recent years however soybean and sunflower have gained importance.

Horizontal expansion of area under oilseeds is limited due to the declining per capita arable land and competing crops. Many efficient cropping systems involving oilseeds have been identified for different agro-ecological regions of the country. Many newer and non-traditional

areas, such as paddy-fallows offer great potential for extending profitable cultivation of oilseeds. The requirement of production factors for cropping systems differs from that of managing the sole crops. Concerted research efforts in working with many aspects of oilseeds including cropping systems have resulted in identification of location-specific technologies. Adopting recommended oilseeds production technologies in cropping system would result in efficient resource utilization and crop production with economic gain and sustainability. One of the major factors for the poor spread of high yielding varieties and hybrids for yield enhancement is non-availability of quality seed. Further, hybrid seed production is highly skilled and crop and location-specific.

The edible oils/ oilseeds sector currently faces several challenges. Oilseed cultivation is becoming increasingly unattractive due to low and unstable yields. The technology mission on oilseeds had only limited success. Decreasing price of edible oils due to trade liberalization may result in low prices for oilseeds resulting in poor supply response. High import tariffs and non-tariff barriers such as sanitary and phyto-sanitary (SPS) restrictions have made oilseed imports unattractive. Low domestic output of raw material combined with restricted import of oilseeds can lead to a high degree of under utilization of processing capacity.

The government's help to oilseed growers has been in the form of providing Minimum Support Prices (MSP)) through its stocking policy and by imposing customs duties on imports of edible oils and oilseeds. MSP policy does not appear to have worked as well in the case of oilseeds as it has been in the case of wheat and rice. Import tariffs on edible oils tend to impose a large burden on consumers and help processors more than oilseed farmers.

Government intervention needs to balance the interests of different stakeholders in the oilseed complex. Protecting the oilseed growers could make oil and meal products internationally uncompetitive. Low priced imported oils benefit the consumers but tend to reduce the margins on domestic oils affecting processors and oilseed farmers adversely. Thus, with trade liberalization several issues arise, including the choice between protecting the

(Continued on page 6)

The Fifth Governing Board Meeting

(from page 2)

per the mandate of the Centre, to ensure food security as well as nutritional security and reduce poverty and hunger in the region. He appreciated the work done by SAC and expressed the hope that it would continue to do such good work in future as well.

Director's Analytical Report

Director, SAC presented the Annual Report of the Centre comprising review of the activities of 2010 and progress in implementation during 2011. In that regard, the Board recalled the mandate of the SAARC Agriculture Centre to implement objectives with broader challenges.

The Governing Board recalled on the status of implementation on the decisions taken at its forth Meeting, and made general observations. The Board also recommended a good number of proposals for improving the Centre's activities. The GB considered each programme in details. The GB also approved the proposed priority programmes with observations as stated below:

New Programmes/Projects of 2012

- In building the SAC digital archive, all materials developed till date in old analogue/VHS format would be digitized using in-house facilities/resources;
- SAARC Agriculture Outlook: in keeping with the directives of 2010, SAC may follow the similar structure/work done by other institutions/organisations while publishing the outlook;
- In Capacity Building for Technical Staff, such new and emerging areas/issues may be considered where Member States are yet to focus e.g. IPR, Bio-technology. Such training should be availed, preferably from within the Region. In case of availing of training from outside the Region, such may only be availed with support from other Organisations;
- 'Vegetable and Fruit Marketing Systems through Value Chain Development with Special Emphasis on Livelihood of Small Farmers in SAARC Countries' should be re-formulated and its approach needed to be clarified, including involvement of the Private sector;
- 'Risk assessment of agriculture-related genetically modified organisms in SAARC countries' would be titled as 'Prospects, needs, benefits and risk assessment of GM products in South Asia';
- In case of 'Innovative Use of ICT for agricultural development in South Asia', the outcome of previous related training/Workshops may also be factored in, and the program may be undertaken in collaboration with APAARI. In this context, similar undertakings in the Region e.g. e-SAGU, e-Chaupal, may also be considered. Involvement of telecom operators, ICT related organizations, NGOs, Media may be considered.
- In undertaking 'Climate Change Impact on Coastal Fisheries and Aquaculture in the SAARC Region', SAC should initiate networking with international organisations e.g. IUCN, NACA, WFC, BOBLME as well as some of the relevant Universities;
- 'Regional Workshop on Coastal and Marine Fisheries Management (SAC/SCZMC)' would be titled as "Regional study on Coastal and Marine Fisheries Management";

(Continued on page 6)



Regional Workshop on Enhancing Oilseed Production

(from page 5)

seed sector as opposed to the processing sector. Both consumption patterns and cropping patterns are likely to be influenced by the choice of customs duties and the price differences maintained among various oils. Imported oils account for close to fifty percent of the total edible oil consumption. For example, soy oil is competitive due to its low price and the low duty it faces.

Besides cereals oil seed is one of the valuable and desired crops in the SAARC region for achieving food and nutritional security. For the development of this oil seed sector, the country status in terms of area, production, demand, R&D is needed. This project will document the country status of the member countries and accordingly a number of region specific recommendations will be taken through organizing a regional consultation meeting for future programs.

Country status reports were prepared with the following headings and sub headings for the purpose of uniformity in the documentation

- Introduction
- Current Status of Oilseed Production (crop wise): Area, Production, Productivity, Varietal development, Production technology, Nutrient management, Water management, Crop protection
- Trends in oilseed Supply and Demand: Trends in oilseed Production, Trends in oilseed Consumption, Requirement of oilseed, Surplus/Deficite
- Programmes and Activities for promotion of Pulse production: Lessons Learnt from Past Initiatives, Ongoing Programmes and Activities
- Constraints and Challenges for enhancing oilseed production
- Future Vision, Major Policies, Strategies and Programmes for enhancing oilseed production
- South Asian prospective for enhancing oilseed production

The Fifth Governing Board Meeting

(from page 5)

- 'Status and prospects of fish feed for aquaculture development in SAARC Nations' may be initiated in 2013;
- 'National Agricultural Education Systems in SAARC Countries' would be structured as "Comparative analysis/study of Agriculture Education in SAARC countries";
- In case of 'Assessment of Veterinary Services (public and private sector) and Practitioners in SAARC Member States', taking into account the accepted GF-TAD/OIE frameworks.
- In case of 'Development and Implementation of the SAARC Pesticide Information Network (SPINet) (*Follow up activities of SPINet consultative workshop*)', as needed, the focal point(s) from Member States may also be trained for information update in the web-based SPINet system;
- GB suggested that SAC may undertake initiative of compilation of policies, rules, regulations, acts related to national crop varieties in SAARC countries, as an in-house activity;
- 'Directory of Medicinal and Aromatic Plants in SAARC Countries', may be re-printed with CDs as well and also post it in the website;
- 'Application of Bio-pesticides for Crop Protection in SAARC Countries' would be titled as "Extent and potential use of bio-pesticides for crop protection in SAARC countries";
- In case of 'Use of Geo-information Technology for Mapping of Land Degradation in SAARC Countries', covering desertification, soil erosion, salinization, vegetation degradation, glacier melting, modalities should first be developed in consultation with *inter alia* FAO, ICIMOD and also the other Regional Centres, within their respective mandates. Common agreed methodologies should be followed;
- In case of 'Impact of Climate change on Livestock Productivity in SAARC countries', modalities would be developed in consultation with FAO, International Livestock Research Institute (ILRI).

SAARC-Australia Project

(from page 12)

systems for increasing water productivity and to deepen experts' skills and knowledge in data acquisition and participatory on-farm techniques.

This is a unique Project for promoting agricultural productivity - not only per unit of area, but also per unit of water and time. It is undertaken by SAARC, supported by the Aid Program of the Australian Government (AusAID and Australian Centre for International Agricultural Research, ACIAR). The Project brings along Australia's premier scientific knowledge in systems analysis and modelling and to build capacity within the National Agricultural Research Organisations in SAARC

Ultimately, the Project will contribute to improvement in water productivity in rain-fed and irrigated smallholder rice-based farming systems in South Asia to enhance agricultural production. The Project aims to accomplish its goals through the following activities:

- To establish a network of agricultural research scientists in SAARC Member States collaborating on cropping systems analysis and modelling.
- To apply APSIM-ORYZA model to identify a suite of improved crop and water management practices that increase water productivity (WP) of representative rainfed and irrigated rice-based cropping systems.
- To strengthen institutional support in SAARC Agriculture Centre and in SAARC Member States for systems analysis and farming systems modelling as a means of enhancing research impact



Member States – so that the trained experts can undertake more effective research using cropping systems modeling-supported systems approaches.

One of the major emerging threats to Food Security in South Asia is the decrease in or, lack of water available for Agriculture and the need for improved water productivity in both rainfed as well as irrigated agriculture. The use of a crop simulation model is a key tool to help identify improved crop and water management practices that increase water productivity of representative rain-fed and irrigated rice-based cropping systems. The Agricultural Production System Simulator (APSIM), developed by CSIRO, Australia and its coupling to a rice model (ORYZA), developed by the IRRI, is planned to be introduced to a generation of experts in South Asia.

in addressing water scarcity and other future cross-sectoral issues.

The expected outcomes of the project are:

- Twenty scientists from SAARC Member States trained in the use of cropping systems modelling using APSIM-ORYZA.
- Improved crop and water management techniques identified to improve water productivity in selected rice-based cropping systems of South Asia.
- A modelling database established and capacity built in SAC to provide ongoing modelling support to SAARC Member State scientists.
- Strengthened institutional support for modelling within SAARC Member State National Agricultural Research organisations (NARS).

Integrated Approach for Producing Food Quality

SAARC Agriculture Centre (SAC) organized a seminar on **"Integrated approach for producing food quality"** was held on 20 September, 2011 at SAC Conference Room. Mr. Max Reynes, Director, CIRAD delivered his presentation during seminar. He delivered on the produce healthy and marketable goods, increase the added value of agri food products, contribute to the increase in producer's incomes, exploit varietal diversity, decrease postharvest losses, limit the use of chemical products. Mr. Max also presented on improved food security, improved health and meet consumer expectations for taste, flavour and quality. Dr. Sk. Ghulam Hussain, Member, SAC GB and Member-Director (Planning & Evaluation), Bangladesh Agricultural Research Council was presided over the seminar. Scientists from Bangladesh Agricultural Research Council, Dr. Abul Kalam Azad,



Director, SAC; Professional and Technical Staff of SAC attended in the meeting.

Annual Audit for the Financial Year 2010 of SAC



The annual audit for the financial year 2010 of the SAARC Agriculture Centre (SAC) was conducted by a Joint Audit Team (JAT) 2010 during 25-26 July 2011. The JAT 2010 audited the annual accounts and related statements of receipts and payments of the Centre.

The JAT 2010 found out that necessary accounts were appropriately maintained by the Centre. The two members audit team, Mr. Mohamed Zaeem, Assistant Director General, Auditor General's Office, Male, Maldives and Mr. Yeshe Jamtsho, Assistant Auditor General, Royal Audit Authority, Royal Government of Bhutan.

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 has been publishing this Newsletter (formerly SAIC Newsletter) since 1991 and distributing it to about 7,000 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.

Integrated Management of Rice Leaf Folder

The adult rice leaffolder (*Cnaphalocrocis medinalis*) is a yellow-brown moth. Leaffolder caterpillars fold a rice leaf around themselves and attach the leaf margins together with silk strands. Each female lays about 300 eggs at night during its lifetime of 3-10 days.

Rice leaf folders are widespread and often cause significant yield loss. Outbreaks occur after prolonged drought or heavy use of insecticides. There are four species of leaf folders occurring in Asia which are closely related to moths and can be distinguished by wing markings. To form a protective feeding chamber, the larva folds a leaf blade together by attaching the leaf margins by silk strands that shrink upon drying. The adult moth is yellow brown in colour. When resting, it is in the shape of an equal sided triangle.

Factors favoring Insect Pest Development

- ◆ Heavily fertilized fields
- ◆ High humidity and shady areas
- ◆ Presence of grassy weeds from rice fields and surrounding borders
- ◆ Expanded rice areas with irrigation systems and multiple rice cropping
- ◆ All rice environments

By themselves, leaffolders rarely cause much-if any-yield loss. Folded leaves, restrict photosynthesis and while inside the folded leaf, the caterpillar feeds by scraping off the leaf surface tissue. The damage looks bad, but rarely reduces yields. For example, before panicle initiation (PI), 50% of the leaves can be damaged without reducing yield. Rice plants are susceptible to leaf folders from seedling to flowering. If the leaffolder damages the, flag leaf (i.e., the last leaf to emerge from the plant), yield could be reduced.

How do I control rice leaffolder?



Bigger females

As in most species, the male is slightly smaller than the female. Moths may migrate upto several kilometres after reaching adulthood. Female attracts its mate by secreting a chemical called pheromone. Mating and egg laying occurs during night.

Adults hide among paddy and grass weeds during the day to escape predation by birds and only take short flights when disturbed. Adults are attracted to light at night but are seldom caught in light traps. Heavily damaged leaves become dry and exhibit scorched appearance and the grain yield and quality deteriorates.

Damage to Plants

- ◆ Larva removes the leaf tissues
- ◆ Folds a leaf blade together and glues it with silk strands
- ◆ Feeds inside the folded leaf creating longitudinal white and transparent streaks on the blade

Prevention

Let natural enemies help you. Biological control agents of leaffolders include parasitic wasps, predatory beetles, spiders, and predatory crickets (*Anaxipha* sp.). Killing biological control agents with pesticides could lead to pest outbreaks. Therefore, do not use insecticides indiscriminately. Sometimes you'll find dead larvae turning black and hanging from leaves. These caterpillars are infected with a virus. Such dead caterpillars can be collected, crushed in a small amount of water, and sprayed on the crop to spread the virus to other caterpillars.

Cultural practices that prevent leaffolder outbreaks:

- ◆ Follow rice with a different crop, or fallow period.
- ◆ Avoid ratooning.
- ◆ Flood and plow field after harvesting if possible.

(Continued on page 10)

Mixed Cropping of Pepper in Coconut Gardens

Research on mixed cropping of pepper in coconut garden is being carried out at Central Plantation Crops Research Institute, Kasaragod, Kerala, India. The following technologies have been evolved for successful cultivation of the crop.

Method of planting

The rooted cuttings need to be planted one m away from the bole of coconut in North-East direction. Before planting, one 50x50x50 cm dimension pit has to be taken in the above mentioned place and should be kept open for 15 days and available organic manure has to be applied and planting of rooted cuttings can be taken up. During first year, proper care should be given for staking the vines to coconut bole.

Management practices

Application of recommended dose of fertilizers and organic manures: N:P:K: at 50:50:150 g/vine and application of 2 to 3 kg of organic manure (vermicompost or FYM or compost). Care should be taken not to disturb the root system of the plant and apply the manure on the outer side of the root system and cover with soil. Irrigating during summer months is required and can be given in the form of drip irrigation or sprinkler Irrigation.

Integrated disease management approach needs to be adopted involving application of fungicide and bioagents (*Trichoderma viride*) blended with neem cake or vermicompost to manage wilt disease.

Successful cultivation of black pepper depends upon, how the vines are taken care with respect to nutrient management and disease management with organic manure blended with bioagents.

Easy harvesting

Vines should be allowed to trail up to 20 to 25 feet height and further growth should be restricted for easy harvesting of berries and to allow the climber to climb the coconut palms for harvest of nuts.

Suitable Varieties: Panniyur 1, 4 and 5, Thevam, Sreekara, Panchami and Karimunda.

Studies conducted at CPCRI, Kasaragod have revealed that Panniyur 1 variety has performed better with an yield potential of 2.5 to 4 kg dry pepper per vine per year under coconut based high density multispecies cropping system.

Other varieties like Panniyur 4 and 5, Sreekara, Panchami also gave better yield ranging from 1.5 to 2.5 kg dry pepper per vine per year. 15 years of result has indicated that, by growing the pepper as mixedcrop in coconut, there was no reduction in the yield of coconut rather there was increase in the yield.

Source: Dr. H.P. Maheswarappa
Principal Scientist (Agronomy)
Central Plantation Crops Research Institute
Kasaragod, Kerala, India

Integrated Management of Rice Leaf Folder

From page 9

- ◆ Remove grassy weeds from fields and borders.
- ◆ Reduce density of planting.
- ◆ Use balanced fertilizer rates

Control

Look for leaffolders from tillering to flowering. Carefully break the silk strands that hold the edges of folded leaves and remove the caterpillars inside. Do not drop the live caterpillars into the paddy water; they may find their way back onto rice plants. Caterpillars can be fed to chickens or ducks, or made into compost. Dry and crush the caterpillars to make fish food.

a) Leaffolder adult, b) Leaffolder caterpillar form, and c) rolled leaves caused by leaffolder. Integrated management

- ◆ Use resistant varieties such as TNAU LFR 831311, Cauveri and Akashi.
- ◆ Keep the bunds clean by trimming them and remove the grassy weeds.
- ◆ Avoid use of excessive nitrogenous fertilizers. Set up light traps to attract and kill the moths.
- ◆ Release *Trichogramma chilonis* on 37, 44 and 51 days after transplanting (DAT) thrice followed by three sprays of monocrotophos. 1000 ml / ha on 58, 65 and 72 DAT.
- ◆ Spray Neem seed kernel extract 5 per cent @ 25 Kg/ha or fenitrothion 50EC 1.0 L/ha or Phasolone 35 EC 1.5 L/ha or Chlorpyrifos 20 EC 1.25 L/ha.

Source: S. Pasupathy, G. Gajendran & G. Kathiresar
Anbil Dharmalingam Agricultural College and Research Institute
Navalur kuttappattu, Tiruchy, Tamil Nadu, India
www.knowledgebank.irri.org/ipm/index.php/.../rice-leaffolder

Wheat Production in Bangladesh

Wheat, after rice, is the second most important cereal crop in Bangladesh. Its consumption rate as domestic use is continuously increasing. On the other hand, both area and production of wheat in the country reduced to almost half compared to the period of 1998-99, when the highest production of 1.9 m ton was achieved from 0.85 million hectares. This happened due to competition of wheat with other rabi crops especially HYV boro rice, potato and maize. Reasons imparting to reduce wheat production other than the above are late planting, poor management practices of farmers and pushing wheat area towards marginal land. However, this year (2010) successful wheat production has been achieved due to replacement of Kanchan variety to a significant portion by HYVs (Shatabdi, Prodip, Bijoy and Sourav) along with timely planting and better management practice. There was almost no rain in wheat season; however, due to relatively cooler weather compared to last year wheat production per unit area has been increased. Wheat area this year (2010) remains the same but the national average yield was the ever highest.

Wheat Research Centre of Bangladesh Agricultural Research Institute released the following two wheat varieties.

BARI Gom25

Released as registered variety in 2010 by National Seed Board for general cultivation under different growing environments throughout the country including saline areas with salinity level less than 8-10 dS/m (deciSiemens per meter).

This is a high yielding spring type bread wheat developed by Wheat Research Center, BARI and is characterized by its superior grains yielding ability with good agronomic performance.

It is a semi-dwarf bread wheat variety. The plant height is medium (95-100 cm) with erect stem and leaves. The variety is early in heading (57-61 days) and maturity (102-110 days). The grains are amber colour and large size with 1000-grain weight of 54-58g. The variety is resistant to leaf rust and tolerant to Bipolaris leaf blight. Under optimum growing condition, this wheat variety yields 3800-4650 kg/ha.

BARI Gom26

Released as registered variety in 2010 by NSB for general cultivation under different growing environments throughout the country including saline areas with salinity level less than 8 dS/m.

This is a high yielding spring type bread wheat developed by Wheat Research Center, BARI and is characterized by its superior grains yielding ability with good agronomic performance.

It is a semi-dwarf bread wheat variety. The plant height is medium (92-96 cm) with erect stem and leaves. The variety is very early in heading (60-63 days) and maturity (104-110 days). The grains are amber colour and large size with 1000-grain weight of 48-52g. The variety is resistant to leaf rust and tolerant to Bipolaris leaf blight. Under normal condition, this wheat variety yields 3900-4650 kg/ha.

National Agricultural Extension System (NAES) in SAARC Countries - An Analysis of the System Diversity

SAARC Agriculture Centre (SAC) is organizing a Regional Consultative Workshop on National Agricultural Extension System (NAES) in SAARC Countries - An analysis of the System Diversity" to be scheduled during 23-24 November 2011 in Thimphu, Bhutan in collaboration with Information and Communication Service and Council of RNR Research of Bhutan, Ministry of Agriculture and Forests, Bhutan.

The major objective of the program is to study the agricultural extension systems in place in the member states and compare the diversity of the system. Also, the study will document the dynamics of the system in terms of organizational management, governance structure, planning and evaluation process, etc. The intention of the program is to learn strength and weakness of extension system in the region and improve the system from the workshop findings.

SAARC-Australia Project : Developing Capacity in Cropping Systems Modelling for Sustainable use of Water Resources to Promote Food Security in South Asia

Her Excellency Secretary General of SAARC, Uz. Fathimath Dhiyana Saeed formally launched the SAARC-Australia Project on "Developing capacity in cropping systems modelling for sustainable use of water resources to promote food security in South Asia", with the inauguration of the exposure training workshop on 8 August 2011 at the SAARC Agriculture Centre, Dhaka. H. E. Mr. Justin Lee, Australian High Commissioner to

Principal Research Scientist, Commonwealth Scientific and Industrial Research Organisation (CSIRO) introduced about the SAARC-Australia project. The ceremony was chaired by Dr. Wais Kabir, Executive Chairman, Bangladesh Agricultural Research Council (BARC).

The three-day Training Workshop was held during 8-10 August 2011 at the SAARC Agriculture Centre. There were altogether 31 trainees from Bangladesh (7), Bhutan



Bangladesh, grace the launching ceremony as guest of honour. Mr. Syed Masud Mahmood Khundoker, Director General (SAARC & BIMSTEC), Ministry of Foreign Affairs, Government of the People's Republic of Bangladesh, grace the ceremony as special guest. Dignitaries from Embassies/High Commissions of SAARC Member States, Foreign Ministry and other organizations were present in the ceremony. At the beginning of the ceremony Dr. Abul Kalam Azad, Director, SAARC Agriculture Centre welcomed all the dignitaries and participants. Dr. Christian Roth, Project Team Leader, SAARC-Australia Project and Senior

(3), India (9), Nepal (3), Pakistan (4) and Sri Lanka (5). The trainees were selected out of 52 nominees based on experiences in cropping systems modelling. There were five resource persons from Commonwealth Scientific and Industrial Research Organization (CSIRO) and International Rice Research Institute (IRRI) in the training workshop. This exposure training workshop is the beginning of the two-year Project which will provide a series of training workshops to researchers, underpinned by a program of associated experimental activities designed to obtain quality datasets for modelling farming

(Continued on page 7)