



In this issue:

RESEARCH & INNOVATIONS
 PRINT & MEDIA
 NEWS & EVENTS
 MEETINGS
 CELEBRATIONS
 WEBINAR & WORKSHOP
 SCIENTISTS & FARMERS
 LINKAGES
 RESEARCH PUBLICATIONS
 AWARDS & RECOGNITIONS
 PERSONNEL

Editorial Board

Advisor : Dr. Gouranga Kar, Director
 Editors : Dr. A.K. Singh, Pr. Scientist
 Dr. N.M. Alam, Sr. Scientist
 Dr. S. Satpathy, HOD & P.S

Photographs:
 Scientists of CRIJAF and Library Unit

Published by

Dr Gouranga Kar, Director

**ICAR-CENTRAL RESEARCH INSTITUTE
 FOR JUTE & ALLIED FIBRES**

Barrackpore, Kolkata-700121
 (An ISO 9001:2015 certified Institute)
 Website: crijaf.icar.gov.in

DIRECTOR'S MESSAGE

.....towards green and clean India

Natural fibres particularly jute will see its golden days again as the most ideal fibre to replace plastics and save the environment. There is great potential of natural fibres towards the ecosystem services also. The cultivation process and the products developed from natural fibres are environment friendly and there are huge possibilities and scope to convert by-products and other agricultural waste of jute and allied fibre crops to wealth like, bio-char, compost, fuel blocks, manures and other industrial products. This is the right time to think about replacement of plastics with jute as it will help Indian farmers and industries as well the country to be *Atma Nirbhar* in the form of jute products. There will be additional requirement of more than 8 lakh bales per year due to the renewed demand of jute shopping bags anticipated in the country and abroad. ICAR-CRIJAF has adequate technologies and road map to generate the required growth in jute productivity in coming decades so that the jute diversified products can completely substitute the plastics. The importance of advance biotechnological tools in improvement of bast fibre crops particularly in breaking the yield barrier is the need of the hour. Available agricultural technologies of ICAR-CRIJAF must take in to account the economic and ecological benefits so that such technologies will be more sustainable in maintaining the productivity, quality, soil health and the environment in totality.



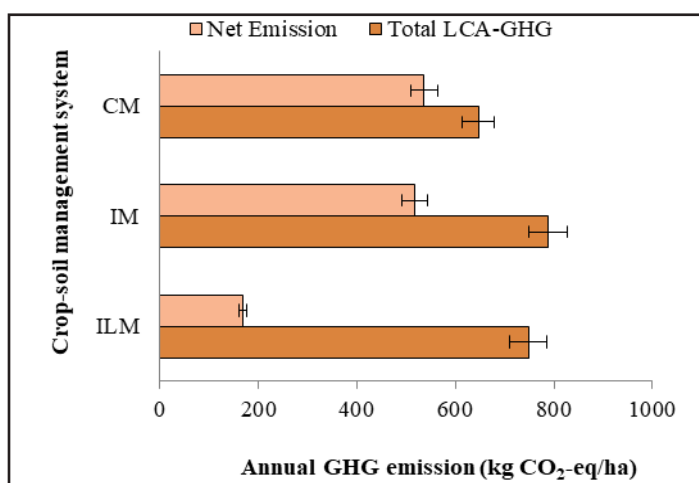
During May-June 2021, the peak jute growing season again coincided with second wave of COVID-19 pandemic and YAAS cyclone across the jute growing states. The Institute issued special agro-advisory at right time to take measures to reduce the impact of cyclone and to revive the crop through several agro-techniques using information technology and institute's website. The institute continues working for social and technological empowerment of farmers and stakeholders by advising and boosting their confidence through demonstration of developed technology in farmers' field and timely agro-advisory. With the technological support of ICAR-CRIJAF, bumper jute crop is expected in current year also.

---- Wish You All Happy, Healthy and Safe Stay ----

RESEARCH & INNOVATIONS

Integrated Soil-Crop System Management for GHGs Mitigation and Higher Productivity

A suitable crop and land management practice along with inter or mixed crops through two management systems i.e., integrated soil-crop management (ILM_{soil}) along with improved management (IM_{soil}) and conventional practice (CM_{soil}) was studied to increase the amount of organic matter in the soil and thereby improve soil carbon sequestration, and mitigate greenhouse gas (GHG) emissions to the atmosphere. The life cycle assessment (LCA) approach was used to estimate carbon footprint from successive crops of rice, mustard and jute with or without intercrops while accounting for changes in SOC. The adoption of ILM_{soil} reduced the carbon footprint (78%) and increased overall economic yield by 25% over those obtained under recommended improved method of cultivation (IM_{soil}). Net CO₂-eq emission was 68% less under ILM_{soil} as compared to other systems. The reduction in net LCA-GHG emission was mainly due to high SOC sequestration by jute crop and leguminous intercrops. Thus, improving crop diversification and agronomic productivity as used in ILM_{soil} system may decrease the inputs of non-renewable energy and consequently reduce the emission of GHGs from agroecosystems.

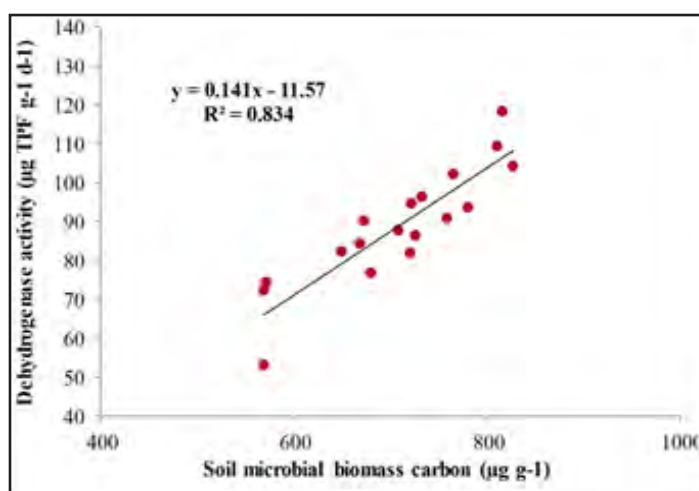


LCA-GHG emitted for the production of per hectare area in the rice-mustard-jute crop rotations with and without intercrops as influenced by crop-plant management practices ($p < 0.05$).

A.K. Singh and G. Kar
ICAR-CRIJAF, Barrackpore

Improvement in Soil Microbial Biomass Carbon and DHA through Crop Residues Retention and Tillage Reduction

Soil microbial biomass carbon (SMBC), representing microbial loading and dehydrogenase activity (DHA), predominantly an intracellular oxidoreductase group of enzyme, both were used as primary indices for soil metabolic activity of microbial community in soil. The changes in SMBC and DHA were evaluated in jute based cropping systems subjected to tillage systems i.e. conventional tillage (CT), no tillage (NT), and no tillage with additional crop residue retention (NT+R). SMBC and DHA, both under NT and NT+R was significantly higher (SMBC: 44 and 68 %, DHA: 59 and 86 %, respectively) than under conventional tillage. The inter-relationship between SMBC and DHA under tillage systems revealed increased enzymatic activities with corresponding increase in SMBC under NT and NT+R as compared that under CT, where it is having the declining trend. An abundant supply of carbon substrate with specific groups of microorganisms under NT and NT+R leads to an enhancement in DHA, whereas inadequate availability of carbon substrate to the native microflora in soils under CT may be responsible for decline in DHA with increase in SMBC. Thus, the practices of crop residue retention and tillage reduction provided an increased supply of C and N which was reflected in terms of increased levels of SMBC and DHA, resulting better biological activity in soil.

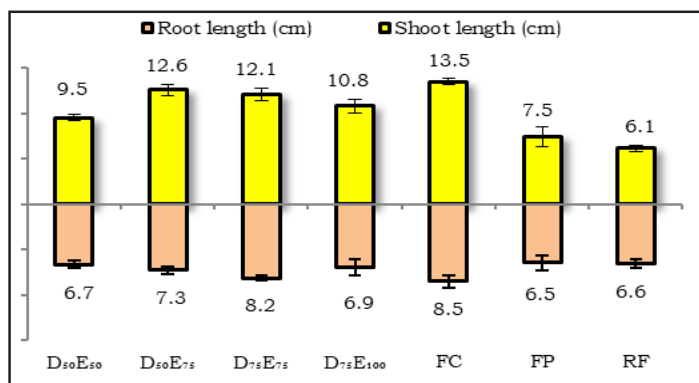


Relationship between SMBC and DHA under No tillage + Residue

R. Saha, B. Majumdar, S.P. Mazumdar, D. Barman,
M.S. Behera R.K. Naik, L. Sharma and A.R. Saha
ICAR-CRIJAF, Barrackpore

Quantifying the Influence of Water Deficit on Root and Shoot Growth in Jute

The increased frequency of drought associated with climate change represents a significant obstacle to plant growth due to its impact on crop development and ultimately yield. Impact of water stress on crop growth in terms of plant aerial tissues is much more advanced than knowledge of the below-ground impacts. We undertook an experiment that aimed to support measurements of jute plant growth at early growth stage (45 DAS) under different irrigation scheduling (IS) based on available soil moisture depletion (DASM) and crop evapotranspiration (ETc). Superior crop growth was obtained under IS at 75%DASM; 75%ETc and 50%DASM; 75% ETc which was comparable at field capacity. The root length was found higher under control/rainfed situation than shoot length, suggesting beneficial role of higher soil moisture content in surface soil layers during initial plant growth.



D₅₀E₅₀: 50% DASM, 50% ETc; D₅₀E₇₅: 50% DASM, 75% ETc; D₇₅E₇₅: 75% DASM, 75% ETc; D₇₅E₁₀₀: 75% DASM, 100% ETc; FC: Field Capacity; FP: Farmer's Practice; RF: Rainfed (Control)

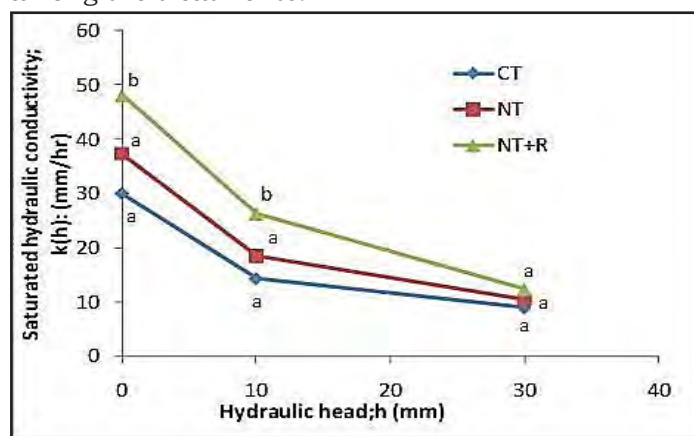
Root and shoot length of jute at 45 DAS as influenced by irrigation schedule

Debarati Datta, A.K. Singh, D. Barman, N.M. Alam, R.K. Naik and Gouranga Kar
ICAR-CRIJAF, Barrackpore

Soil Water Dynamics under Various Tillage Practices in Jute Based Cropping Systems

The changes in soil water dynamics were evaluated in jute based cropping systems under different tillage systems i.e. conventional tillage (CT), no tillage (NT), and no tillage with additional crop residue retention (NT+R). The profile moisture storage was above 50% available water holding capacity (WHC) up to 45 DAS during crop growth in Rabi season irrespective of the tillage treatments. Thereafter, profile moisture storage remain above 50% available WHC up to 60 and 75 DAS under NT and NT+R treatments, respectively.

The application of additional crop residue under NT+R increases the moisture availability throughout the soil profile by reducing evaporation loss, increases infiltration and soil moisture retention. The saturated hydraulic conductivity; k(h) values at various pressure heads (h) are significantly higher in NT+R (12.4 to 48.1 mm/hr) followed by NT (10.5 to 37.3 mm/hr) and CT (range: 9.0 to 30.1 mm/hr). These trends signify the differences in soil structural changes induced by the different tillage practices in near-saturated conditions. However, k(h) at 30 mm hydraulic head were not statistically different (p < 0.05) for all the tillage practices. Thus, the soil moisture availability is significantly influenced by tillage and residue incorporation and NT+R treatment performed best among the treatments.



* letters are significantly different at p ≤ 0.05

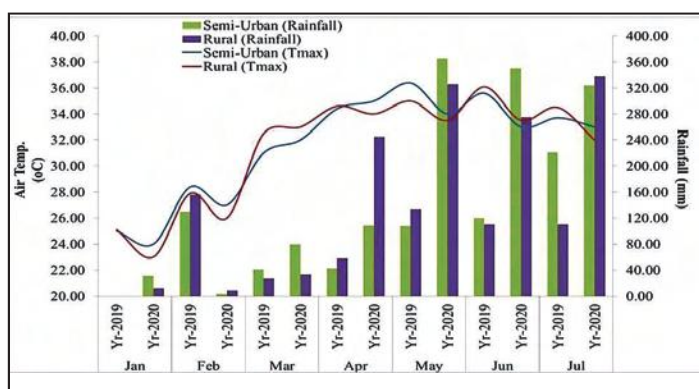
Saturated hydraulic conductivity; k(h) vs. hydraulic head; (h) curve under various tillage practices

R. Saha, D. Barman, R.K. Naik, M.S. Behera, B. Majumdar, S.P. Mazumdar, L. Sharma and A.R. Saha
ICAR-CRIJAF, Barrackpore

Impact of Tropospheric Ozone on Crop Production under Jute-Rice Cropping System

A research project on "Impact of tropospheric ozone on crop production under jute-rice cropping system", supported by National Innovations on Climate Resilient Agriculture (NICRA) was undertaken during the year 2018-21 to investigate ozone-induced risk using ethylenediurea (EDU) treatment in two important crops of eastern India i.e. boro rice and jute under two field conditions (semi-urban and rural area). As per the result of the study, strong seasonal variation of ground level O₃ concentrations were observed with weather variables, maximum occurred during summer crop season (February to May) and minimum during monsoon crop season (June and July). During boro rice season, daytime ozone levels often exceeded 40

ppb (critical level) and increased further throughout the experiment, attaining maximum levels at the peak vegetative phase (>50 ppb). IR 36, GB 3, IET 4786 and Ganga Kaveri cultivars of rice screened under this study were found sensitive to ambient ozone concentrations. There was no significant yield difference in MTU 1010 and Kshitish cultivars for EDU and Control treatment, as evidenced by increased yield and antioxidative defense. Hence, MTU 1010 and Kshitish may be considered as well adapted cultivar to ozone exposure.



Seasonal variation of O₃ concentration during January-July

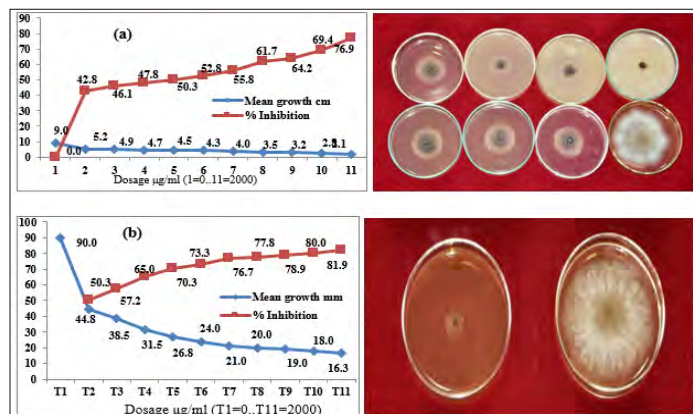
During jute crop experiment, O₃ concentrations were low during the maturity phase (June-July). However, the hourly O₃ concentrations increased above 'the critical level', in main vegetative stage. There was no significant yield difference in JRO 204 and NJ 7010 cultivar, which may be considered as well adapted to ozone exposure. Other cultivars of jute (JRO 524, JRO 632, IRA, and S 19) screened under the experiment found sensitive to ambient ozone concentrations. Prevailing O₃ concentrations in Indo-Gangetic Plains of West Bengal (India) may have negative impact on growth and yield of rice and jute crop.

A.K. Singh and G.Kar
ICAR-CRIJAF, Barrackpore

Fungicidal Effects of Novel Fungicides on Jute Stem Rot Pathogens

Experiments were carried out with two strobilurin fungicides, namely, (1) Kresoxim-methyl 50%SC and (2) Azoxystrobin 23%SC using standard food poisoned technique *in vitro* against most virulent Barrackpore isolates of *Macrophomina phaseolina* from jute on potato dextrose agar medium on active ingredient basis. It was observed that Kresoxim-methyl was effective against *M. phaseolina in vitro*. Radial growth was reduced to 21 mm at highest dose of 2000 µg/ml compared to 90 mm in check in 48 hrs at 28±1° C. Growth inhibition was 77% at highest dose of 2000

µg/ml. Azoxystrobin also successfully inhibited the growth of *M. phaseolina in vitro*. Radial growth was declined to 16.3 mm at maximum dosage of 2000 µg/ml compared to 90 mm in untreated check. Percent growth inhibition was 82 at 2000 µg/ml. These strobilurin fungicides, kresoxim-methyl and azoxystrobin, may offer a viable option for replacing the old generation fungicides with better management of jute stem rot and may bring a new era efficient crop disease management.



Effect of Kresoxim-methyl (a) and azoxystrobin 23% SC (b) on *Macrophomina phaseolina*

Rajib Kumar De, V. Ramesh Babu,
S. Satpathy and Shamna A.
ICAR-CRIJAF, Barrackpore

Functional Performance Evaluation of Jute Seeder

Sowing of small seeds like jute in rows is very much desirable to save seed, to reduce the cost of cultivation in weeding and thinning. Considering the socio-economic condition, nature of land holding of farmers, a low cost and light weight manually operated seeder has been designed and developed. The seeder has four rows and suitable for sowing of jute and other small seeded upland crops. The functional performance evaluation of the seeder was carried out in the farmers' field under Jute-ICARE Programme. The seed rate was found to be 3.5-4.0 kg/ha. The depth of seed placement varied from 10 mm to 15 mm. The operational speed of implement in the field varied from 2.0-2.5 km/h. Effective field capacity (EFC) of seeder was 0.25 to 0.28 ha/ha with field efficiency of 90-95 per cent. After operation of the seeder, the farmers also expressed their feedback as:

- Easy in filling of seeds in seed box.
- Visibility of seed quantity inside the box during operation

- Easy in operation and reduction in drudgery while operating the seeder.



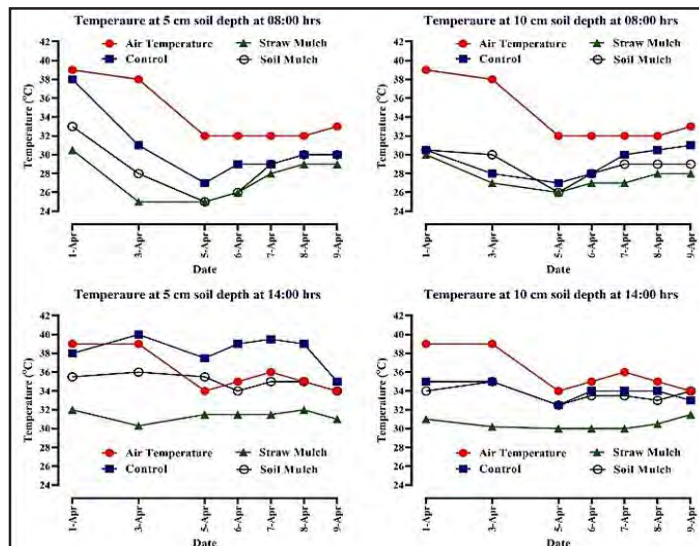
Use of jute seeder under field condition

R.K. Naik, A.K. Ghorai, S. Sarkar and S.K. Jha
ICAR-CRIJAF, Barrackpore

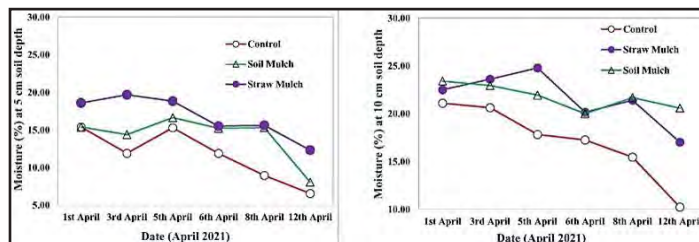
Improvement in Hydrothermal Regime and Soil Aeration in Jute Field under Temporary Drought Condition

An experiment was conducted employing weed control techniques combining small mechanical tool and cultural weed management of straw mulch and mung bean (cv. Virat) as live mulch to compete with and smother weeds in jute (line JRO BA3). The experiment had 3 weed control measures and three jute spacing under 3×3 factorial RBD setup. Field was irrigated after sowing of jute seed. With the exception of straw mulched plots, CRIJAF Nail Weeder was employed on all others plots after 6 DAS to build soil mulch. The results show that second manual weeding was redundant in jute-mung bean intercropping as canopy of mung smothered weeds. Straw mulch @ 5.0 t/ha was inadequate to effectively control weed emergence. CRIJAF Nail Weeder significantly preserved soil moisture and lowered soil temperature at 5 cm soil depth during the early establishment stage of jute crop (17 DAE) under prolonged drought condition and high ambient temperature in comparison to the control. Straw mulch performed best in retaining soil moisture and in reducing soil temperature at 5 cm soil depth in comparison to soil mulching by Nail Weeder operation. These sustained plant growth. During the study period, one rainfall of 4.6 mm was recorded on 4th of April (11 DAS). ODR meter recorded the oxygen diffusion rate of 303, 262 and 140 $\mu\text{g O}_2 \text{ m}^{-2} \text{ sec}^{-1}$ for the plots with Nail Weeder operated, straw mulched and control treatments, respectively. Lower ODR in straw mulch may be due to slight compaction of in the absence of Nail Weeder operation. Effectiveness of Nail Weeder employment in conservation of moisture, lowering temperature and increasing aeration of soil

were studied and compared with the control and straw mulch.



Effect of soil mulching in lowering the soil temperature (°C)



Effect of soil mulching in preservation of soil moisture (%)

A.K. Chakraborty, D. Datta, S.P. Mazumdar,
A.K. Ghorai, N.M. Alam and R.K. De
ICAR-CRIJAF, Barrackpore

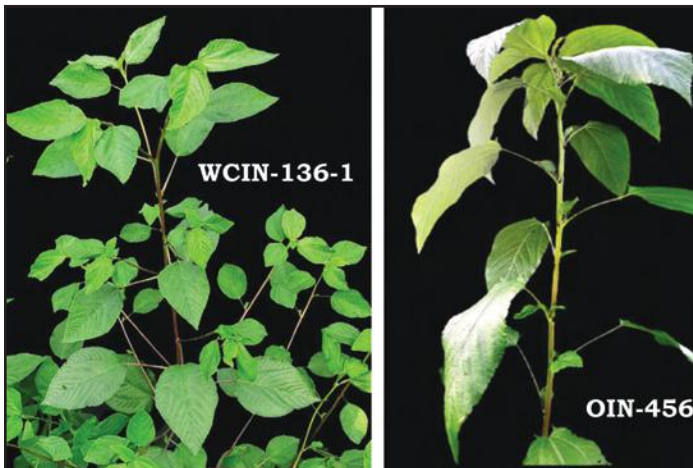
Ramie-Based Farming System in NEH Region with Improved Genotypes and Technology

Trainings and demonstrations were conducted on ramie-based farming system with improved genotypes and technology for area expansion. Two genotypes cv. R-1411 (Hazarika) and R-67-34 (Kana) were recommended for area expansion programme in NEH region. Some of the successful ramie based multi-tier cropping systems like, ramie + pineapple, ramie + arecanut, ramie + coconut, ramie + coconut + black pepper, ramie + rubber, ramie + cinnamon, ramie + mango or ramie + mango + black pepper may be followed by the farmers for improving socio-economic status and doubling farmer's income. In Assam the most successful ramie based system is ramie + arecanut. Institute is supplying the quality planting materials every year to the farmers for the expansion.

Kajal Das, C.S. Kar, M.S. Behera, S. Sarkar, S. Mitra,
R.K. De and R.K. Naik
RRS (ICAR-CRIJAF), Sorbhog

Registrations of Jute Germplasm Lines Having Contrasting Stem Rot Response

Identification of stable biotic stress response sources has paramount importance in resistance breeding. Stem rot caused by *Macrophomina phaseolina* is the major disease of jute and only few lines having stable response towards this disease are reported. Few highly resistant and susceptible lines were identified by evaluating these for several years under the sick plot conditions at ICAR-CRIJAF, Barrackpore. Two of these lines were submitted to ICAR-NBPGR, New Delhi for registration.



Registered jute germplasm lines by ICAR-CRIJAF

Corchorus aestuans L. line WCIN-136-1 (INGR21036) and *C. olitorius* line OIN-456 (INGR21035) were recommended by 43rd Plant Germplasm Registration Committee (PGRC) on 18 March, 2021 and registered with ICAR-NBPGR. The former one is highly resistant while the later is susceptible towards stem rot disease. WCIN-136-1 is also cross compatible with tossa jute and is already included in resistant breeding programmes to develop stem rot resistant lines coupled with high fiber yield.

A. Anil Kumar, Maruthi, R.T., B.S. Gotyal, Kunal Mandal
ICAR-CRIJAF, Barrackpore

Fibre Productivity of Ramie under Different Weed Management Strategies

Fibre productivity of Ramie (cv. R-1411 or Hazarika and R-67-34 or Kanai) significantly differs among the treatments. The treatment T₇, which includes application of Oxyfluorfen 23.5% EC (PE) @1.0 lit/ha + Quizalofop-ethyl 10% EC (PoE) @38 g/ha (at 20 days after first spray) + 1HW recorded highest fibre yield.



Weed management in ramie fibre crop

Kajal Das, S. Sarkar, B. Majumdar and R.K. De
RRS (ICAR-CRIJAF), Sorbhog

Leaf Litter Management: Decomposition and Nutrient Dynamics of Leaf Litter Composts

Leaf litter acts as a nutrient source and is of great importance in the fertility of the soils. Recycling of such waste materials as compost started in the ICAR-CRIJAF Research Farm. Compost of mixed leaf litter (*Saraca asoca*, *Mangifera indica*, *Cedrus deodara*, *Litchi chinensis*, *Mimusops elengi*, etc and grass clipping) under two system (Bench Scale Composting-BSC, and Brown-green scale composting-BGSC) were prepared during 2020-21. The C:N ratio of the harvested compost was found within 25:1. Cellulose and lignin content was decreased by 98% and 74%, respectively from its initial content which denotes the maturity of the compost. The pH of compost was found alkaline (8.48-9.43) with 0.78-0.88 % nitrogen, 0.82-0.95 % phosphorus, 2.54-4.16% potassium. The carbon content was 18.4 to 19.1% with 290-335 CFU x 10⁻⁵ bacterial population. Compost prepared from leaf litter will be used as source of nutrient for JAF crops like jute, ramie and flax. Utilization and management of leaf litter as source of organic plant nutrients in JAF crops may provide an alternative approach to waste management for clean environment.

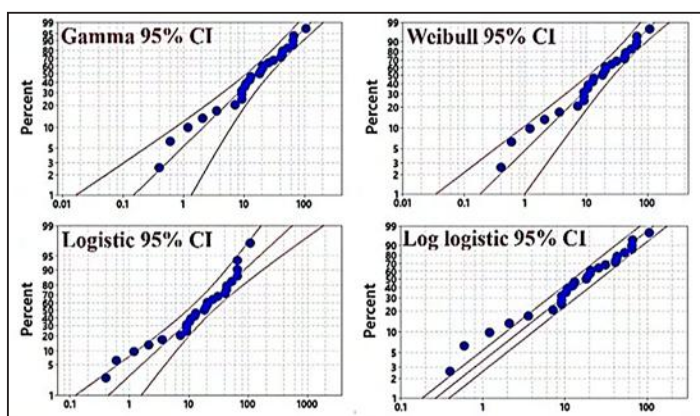


Leaf litter compost production at ICAR-CRIJAF Farm

A.K. Singh, B. Majumdar, S. Mitra, S.K. Sarkar,
S. Satpathy and M.L. Roy
ICAR-CRIJAF, Barrackpore

Probabilistic Approach for Jute Crop Planning in West Bengal

Application of most appropriate probability distribution describing the weekly rainfall data during jute cropping season was analyzed. Two and three-parameter probability distributions were compared and evaluated using weekly rainfall data of last 35 years (1980-2020) of North 24 Parganas. The Anderson-Darling test statistic as well as p-value was used to determine which probability distribution fits the data well. Weibull was most appropriate for most of the SMWs followed by Gamma and log logistic distribution. Minimum assured rainfall of about 20 mm is expected from SMW13 to SMW20 at 70% probability. MC analysis revealed that, chances of occurrence of a dry spell week is high during early part of the season. As per the variability in weekly rainfall, sowing of jute crop should be done during mid-April instead of early sowing (15-30 March).



Probability distribution of rainfall data during jute growing season

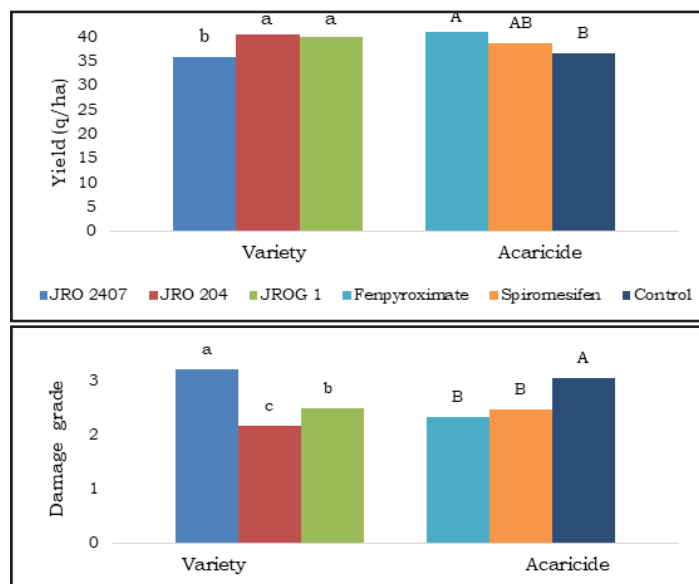
SMW	Minimum assured rainfall (mm)				
	0.5	0.6	0.7	0.8	0.9
13	7.0	4.6	2.9	1.7	0.8
14	11.0	7.6	5.1	3.2	1.7
15	20.5	15.3	11.1	7.7	4.6
16	9.8	7.2	5.1	3.4	2.0

N.M. Alam, S. Mitra, A.K. Singh, D. Barman and G. Kar
ICAR-CRIJAF, Barrackpore

Integration of Varieties and Acaricides for Yellow Mite Management in Jute

Superior jute varieties and acaricides in terms of resistance and toxicity against yellow mite were integrated together for management of this pest under field condition. Foliar application of fenpyroximate 5EC@1.5 ml/lit was most effective in reducing the mite infestation and damage grade. The varietal effect was prominent on mite damage grade. The damage grade was significantly high (3.22) in JRO 2407 and low (2.17) in JRO 204. Due to acaricide treatment the

damage grade was significantly reduced (2.34 to 2.48) compared to control (3.06). JRO 204 jute variety was most superior with least mite damage and highest yield followed by JROG 1. Irrespective of varieties the acaricide application could improve the yield significantly being highest in fenpyroximate treatment by reducing the mite infestation and damage.



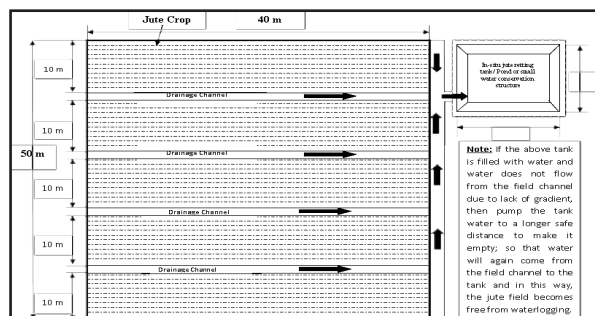
Mite damage grade and yield in different variety and acaricides treatments

S. Satpathy, B.S. Gotyal and V. Ramaesh Babu
ICAR-CRIJAF, Barrackpore

Agro-advisory for Jute Farmers to Mitigate Effects of Cyclone 'YAAS'

Heavy rainfall due to Cyclone YAAS created waterlogging condition in jute field and caused lodging of jute crop (>4 ft tall). A special agro-advisory was released in advance with following advices.

- Preparation of field ditches (20 cm wide and 20 cm depth) along the gradient at 10 m intervals.
- The peripheral jute plants (>4 ft tall) need to be tied together by taking 4-5 jute plants in a consecutive manner to protect the plant inside the field from the impact of high wind speed.



PRINT & MEDIA COVERAGE

The Statesman

KOLKATA 10 February, 2021

Foundation Day: ICAR-Central Research Institute for Jute and Allied Fibres on Tuesday observed 68th foundation day at Barrackpore. Senior Scientist and director of ICAR-CRIJAF Dr Gouranga Kar said women from several rural areas' self-help groups made several eco-friendly products from fibre

the pioneer

NEW DELHI 10 JUNE 2021

Towards clean and green India

In accordance with Bharat Ka Amrit Mahotsav, ICAR-Central Research Institute for Jute and Allied Fibres (ICAR-CRIJAF), Barrackpore, organised lectures during the week coinciding with World Environment Day.

The commencement of the celebration of 75 years of India's independence, and women will celebrate their long and successful journey. ICAR-CRIJAF celebrated its 68th foundation day on Tuesday, 9th June 2021. The Central Government ministers have scheduled programmes to focus on the high points of social, cultural, scientific, and technological aspects to the country's post-independence journey. Along these lines, ICAR-Central Research Institute for Jute and Allied Fibres alternatives hydrophilic and eco-friendly fibres, especially jute fibres, can be a great alternative to plastic. In his special remarks, Dr Kar expressed concerns over plastic pollution and emphasized that the technologies used to produce jute have been deemed to be one of the most advanced in the world. There will be an additional focus on the use of single-use plastics. There will be an additional focus on the use of single-use plastics. There will be an additional focus on the use of single-use plastics.

তাজকাল

10 JUNE 2021

পাটজাত পণ্য ব্যবহারে জোর

আজকের একমাত্র বিকল্প পাই। 'করকাল' আনুষ্ঠানিকভাবে 'এক বিঘা পরিবেশ' কর্মসূচির আয়োজন করেছে।

dailyhunt

KOLKATA 2 January 2021

क्राइजैफ ने सिखाया किसानों की आय बढ़ाने के नुए

ICAR-CRIJAF has organized an online training program for farmers to increase their income. The program focuses on the use of jute and allied fibers in various products, which can help farmers diversify their income and improve their livelihoods.

সবুজ সোনা

RANAGHAT, 1st March, 2021

সংশ্লিষ্ট পাট বীজ বিতরণ শিবির

ICAR-CRIJAF has organized a seed distribution camp for jute and allied fibers. The camp provides farmers with high-quality seeds and technical assistance to ensure a successful harvest. The event was held in Ranaghat, West Bengal, and was attended by several officials and farmers.

KJ KRISHI JAGRAN

24 May 2021

ICAR-CRIJAF - পৃথিবীর সবচেয়ে 'সবুজ' ইশার - এর স্মৃতিতে প্রকৃতির দান করা জটিলভাবে জটিলভাবে জটিলভাবে

ICAR-CRIJAF has organized a 'Krishi Jagran' event to celebrate the 68th foundation day. The event features a variety of activities, including exhibitions, seminars, and demonstrations, aimed at promoting the use of jute and allied fibers in various industries.

the pioneer

KOLKATA 11 February 2021

ICAR-CRIJAF celebrates 68th foundation day

ICAR-CRIJAF has celebrated its 68th foundation day with a series of events. The events include a seminar, a book launch, and a exhibition, all aimed at promoting the use of jute and allied fibers in various industries.

আনন্দবাজার পত্রিকা

24 May 2021

সেতের পাট বাঁচাতে পরামর্শ গবেষণা সংস্থার

ICAR-CRIJAF has provided valuable advice to farmers on how to protect their jute crops from pests and diseases. The advice is based on the latest research conducted by the institute, and is aimed at helping farmers increase their yields and reduce their losses.

কালোত্তর

KOLKATA 5 March 2021

ক্রাইজাফে উচ্চ ফলনশীল পাট বীজ বিতরণ কৃষকদের

ICAR-CRIJAF has organized a seed distribution camp for high-yielding jute seeds. The camp provides farmers with high-quality seeds and technical assistance to ensure a successful harvest. The event was held in Kolkata, West Bengal, and was attended by several officials and farmers.

সবুজ সোনা

SABUJ SONA 1 June 2021

অতিমাত্রায় সোনার পাট চাষীদের কৃষি পরামর্শ

ICAR-CRIJAF has provided valuable advice to farmers on how to increase their yields and reduce their losses. The advice is based on the latest research conducted by the institute, and is aimed at helping farmers increase their yields and reduce their losses.

the pioneer

NEW DELHI 7 January 2021

Clean and green India

ICAR-CRIJAF has provided valuable advice to farmers on how to protect their jute crops from pests and diseases. The advice is based on the latest research conducted by the institute, and is aimed at helping farmers increase their yields and reduce their losses.

সুখের হাট

SUKHER HAT BARASAT 16 February 2021

উচ্চ ফলনশীল পাটের বিকল্প

ICAR-CRIJAF has organized a 'Sukher Hat' event to promote the use of high-yielding jute seeds. The event features a variety of activities, including exhibitions, seminars, and demonstrations, aimed at promoting the use of jute and allied fibers in various industries.

সবুজ সোনা

SABUJ SONA 16 February 2021

ক্রাইজাফ-এর ৬৮তম প্রতিষ্ঠা দিবস

ICAR-CRIJAF has celebrated its 68th foundation day with a series of events. The events include a seminar, a book launch, and a exhibition, all aimed at promoting the use of jute and allied fibers in various industries.

KJ KRISHI JAGRAN

8 June 2021

ICAR-CRIJAF বিশ্ব পরিবেশ দিবস উপলক্ষে জটিলভাবে-সবুজ ইশার-এর স্মৃতিতে প্রকৃতির দান করা জটিলভাবে জটিলভাবে জটিলভাবে

ICAR-CRIJAF has organized a 'Krishi Jagran' event to celebrate the 68th foundation day. The event features a variety of activities, including exhibitions, seminars, and demonstrations, aimed at promoting the use of jute and allied fibers in various industries.

NEWS & EVENTS

MEETINGS

Interaction with Hon'ble Members of PAC

Hon'ble Chairperson of Public Accounts Committee (PAC) and leader of Opposition in Lok Sabha, Shri Adhir Ranjan Chowdhury along with other Senior Members of Parliament and Members of PAC, Shri Jagadambika Pal, Dr. Satya Pal Singh, Shri Ram Kripal Yadav, and Smt. Darshana Vikram Jardosh visited ICAR-CRIJAF exhibition stall of jute and allied fibre production technologies and interacted with Director and scientists of the Institute on 11th January, 2021 at Behrampur, West Bengal. Dr. Gouranga Kar, Director, ICAR-CRIJAF briefed about the Institute's activities to the committee.



Hon'ble members of PAC interact with Director and Scientists of ICAR-CRIJAF

Research Advisory Committee Meeting

The Research Advisory Committee (RAC) Meeting-2021 of the Institute was organized on during 23-24 March, 2021 at ICAR-CRIJAF, Barrackpore. The meeting was graced by RAC Chairman Prof. Swapan K Datta, Vice Chancellor of Biswa Bangla University, Former VC, Visva Bharti & former DDG (Corp Science), ICAR. Other member were Dr. P.K. Mahapatra, Ex- Dean OUAT; Dr. Debashis Nag, Ex- Director, ICAR-NINFET; Dr. P.G. Karmakar, Ex-Director, ICAR-CRIJAF; Dr. L.K. Hazarika, Professor and Head, Entomology, AAU; Dr. S.S. Singh, Director (Extention), RLBCAU;

Dr. R.K. Singh, ADG (Commercial Crops), ICAR and Dr. Gouranga Kar, Director, ICAR-CRIJAF. The committee has reviewed research achievements of the scientists under the broad mandate of the Institute. The RAC made nine specific recommendations for further strengthening of the research activities of the Institute. The RAC team also visited recently developed exhibition hall-cum-museum and appreciated for showcasing the CRIJAF technology. They also visited research farms of the institute and interacted with Scientists. A Farmer- Scientist interaction was organized on 24th March 2021, to know the views regarding CRIJAF technology used in farmer's field.



Chairman and members of RAC interact with Director and Scientists of ICAR-CRIJAF



RAC team visiting newly developed Museum



RAC team visiting LTFE Research Farms of the Institute

Institute Research Council Meeting

The first Institute Research Council (IRC) Meeting (No. 2021-1) was conducted on 13 April 2021 at the Committee Room, ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore under the chairmanship of Dr. Gouranga Kar, Director, ICAR-CRIJAF following COVID-19 guidelines. In the first phase of the meeting, 4 new project proposals were discussed and approved with few modification.



Director and Principal Scientists of ICAR-CRIJAF during presentation of new projects in first IRC meeting

During the meeting HODs, In-charges and other scientists provided valuable suggestions for improving each project. At the end, the Chairman suggested to make quality publication in high impact factor journal for better visibility of research of scientists.

All the Heads/In-charges of the Divisions/Sections and the Principal Scientists joined the meeting physically and all the other scientists, including in-charges of the stations joined virtually.

Scientific Advisory Committee meeting of KVK, North 24 Prgs (Additional)

Scientific Advisory Committee meeting was organized by KVK, North 24 Prgs (Additional) at ICAR-CRIJAF on 3rd March 2021. Dr. Gouranga Kar, Director, ICAR-CRIJAF chaired the meeting and Dr. S. K. Roy, Director, ICAR-ATARI, Zone-V, Kolkata graced the occasion online. The Annual progress of the KVK for the year 2020 was reviewed by the committee and various suggestions were given for enrichment of the Action Plan-2021. Director of ICAR-CRIJAF suggested focusing on efficient use of natural as well as human resources specially the water resources. He also emphasized on the need based demand driven transfer of technologies. The Director of Extension Education, BCKV, In-charge, NDRI, ERS, Assistant Director (Research), WBUAFSc, officers from the State Line departments, all the Head /Incharges of the Divisions/Sections and Nodal Officer, KVKs of

ICAR-CRIJAF, representatives from AIR along with the farmer members attended the meeting.



Director and members during Scientific Advisory Committee meeting of KVK (N24 Prg-Addl) at ICAR-CRIJAF

CELEBRATIONS

New Year-2021

New Year 2021 was celebrated in the lawn of ICAR-CRIJAF on 1st January, 2021 on behalf of Staff Recreation club, ICAR-CRIJAF. All the staff of the institute participated in the event following COVID-19 guidelines.



Cake cutting by the Director of ICAR-CRIJAF on the occasion of New Year 2021

Republic Day

ICAR-CRIJAF, Barrackpore celebrated 72nd Republic Day of the country. Dr. Gouranga Kar, Director, ICAR-CRIJAF hoisted National Flag on the occasion and inspired the scientists and other staff of the Institute to work hard to make India "Atmanirbhar" through research and development. This day reminds us of our freedom struggle and how the great freedom fighters of our country sacrificed their lives to get us the *Purn Swaraj*. It's because of their struggle that today we are living in a democratic country where each citizen has right to equality. Progressive farmers, farm women and the agricultural workers were also facilitated on this occasion.



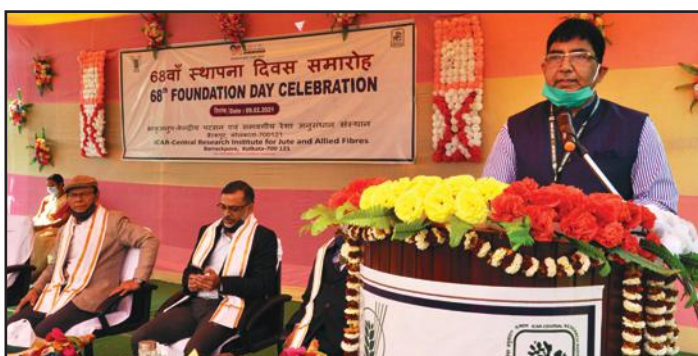
Director hoisted National Flag on the occasion of 72nd Republic Day



Scientist and staffs of ICAR-CRIJAF celebrating 72nd Republic Day

68th Foundation Day of ICAR-CRIJAF

ICAR-CRIJAF celebrated its 68th Foundation Day on 9th February, 2021. Prof. Swapan Kumar Datta, VC of Biswa Bangla University graced the occasion as the Chief Guest and inaugurated the celebration by lighting the lamp. Dr. B.K. Das, Director, ICAR-CIFRI, Mr. A.K. Jolly, MD, Jute Corporation of India and Dr. D.B. Shakywar, Director, ICAR-NINFET marked their presence as Guest of Honour on the occasion. At the outset, Dr. Gouranga Kar, Director, ICAR-CRIJAF, presented about major achievements, crop varieties and technologies developed by the institute to resolve the bottlenecks and problems faced by the farmers in the cultivation of jute and allied fibre crops.



Director addressing scientists, staffs and farmers of West Bengal during 68th Foundation day of ICAR-CRIJAF

The staffs of the institute in different categories were awarded for commendable achievements and best performance in accomplishing institute activities. Two progressive farmers, one Self Help Group and one entrepreneur were awarded for doing exemplary work in technology adoption. Three ICAR-CRIJAF publications were also released.



Release of ICAR-CRIJAF publications by invited guests during 68th Foundation day of ICAR-CRIJAF

World Water Day 2021

World Water Day-2021 was celebrated on 22nd March, 2021. On this occasion, a seminar was conducted at BC Kundu Auditorium of the Institute in which Dr. Srikanta Samanata, Head, Division of Riverine and Estuarine, ICAR-CIFRI, Barrackpore delivered a lecture on the theme 'Valuing Water'. A drawing competition on 'Valuing Water' was also organized in which staff of ICAR-CRIJAF and their family members and Research Fellows participated. Dr. Gouranga Kar, Director, ICAR-CRIJAF described the importance of water in life and agriculture.



Dr. Srikanta Samanata of ICAR-CIFRI presenting seminar on 'Valuing Water' on World Water Day 2021

Observance of "National Science Day" "Anti-terrorism day" and "No Tobacco Day"

National Science Day 2021 was observed on 28th February 2021 to remember historic invention by C.V. Raman. The theme for National Science Day was "Future of STI: Impacts on Education, Skills, and

Work”. ICAR-CRIJAF also observed “Anti-terrorism day” on 21st May, 2021 and “No Tobacco Day” on 31st May, 2021 in virtual mode. On this occasion, Director of ICAR-CRIJAF administered the pledge to all staff.



Director addressing scientists of the Institute during National Science Day 2021

International Women’s Day

Women’s Cell of ICAR-CRIJAF and KVK celebrated International Women’s Day on 8th March 2021. The program was observed under the theme “Women in Leadership: Achieving an equal future in a COVID-19 world”. Farm women from four villages of North 24 Parganas District (W.B.) participated in the program. Training on ‘Women friendly farm implements for drudgery reduction in agriculture’ along with Drawing Competition on the theme “Choose to Challenge” was also organized as a part of Women’s Day Celebration. Dr. S. P. Mazumdar and her team in collaboration with KVK, North 24 Parganas organized the program.



Farm women and members of SHG during International Woman's Day 2021.

Bharat Ka Amrut Mahotsav & World Environment Day

On the occasion of *Bharat Ka Amrut Mahotsav* in commemoration of completion of 75 years of India’s Independence, ICAR-CRIJAF celebrated by conducting series of webinar, painting and poem competition during 4-7th June, 2021. Three webinars in the theme “*Making of Clean and Green India*” were organised to highlight the importance of natural fibre in the environment. Twenty seven participants including children took part in drawing and poem competition on “earth and environment”.

International Day of Yoga-2021

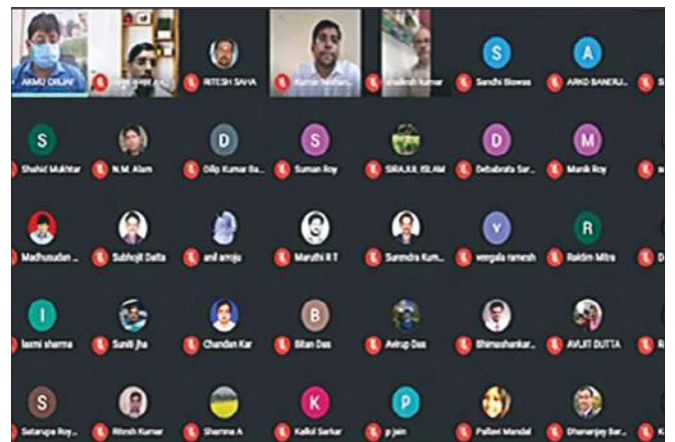
On 21st June 2020, International Day of Yoga was performed by the scientists and staff members of ICAR-CRIJAF. On this occasion, Dr. Gourang Kar, Director told that Yoga plays a crucial role in promoting health in a holistic manner by improving physical, mental and spiritual health which ultimately helps in fighting stresses and also alleviate other ailments including depression and anxiety.



Director addressing staffs of the Institute in virtual mode during International Day of Yoga 2021

हिन्दी कार्यशाला का आयोजन

भाकृअनुप-केन्द्रीय पटसन एवं समवर्गीय रेशा अनुसंधान संस्थान, बैरकपुर, कोलकाता में दिनांक 26 मार्च, 2021 एवं 17 जून, 2021 को राजभाषा हिंदी के प्रगामी प्रयोग को बढ़ावा देने तथा राजभाषा संबंधी अधिनियमों, नियमों एवं आदेशों के अनुपालन हेतु हिंदी कार्यशाला का आयोजन ऑनलाइन माध्यम से किया गया। हिन्दी कार्यशाला की अध्यक्षता संस्थान के निदेशक, डॉ. गौरांग कर जी ने की। इस कार्यशाला में व्याख्यान (ऑनलाइन माध्यम) हेतु श्री राजेश चतुर्वेदी, मुख्य प्रबंधक (राजभाषा), स्थानीय प्रधान कार्यालय, भारतीय स्टेट बैंक, कोलकाता एवं श्री अनुप कुमार, सहायक निदेशक (टंकण एवं आशुलिपि), हिन्दी शिक्षण योजना, राजभाषा विभाग, भारत सरकार, कोलकाता को आमंत्रित किया गया था। मुख्य वक्ता हिन्दी कार्यशाला में ऑनलाइन माध्यम से जुड़ते हुये राजभाषा अधिनियम, नीति, नियम व प्रमुख बिन्दुओं पर विस्तारपूर्वक उदाहरण के साथ तथा मशीनी अनुवाद व टंकण को पावर प्वाइंट के माध्यम से प्रस्तुत किया तथा इस पर खुली चर्चा भी की तथा उनका कुशल पूर्वक समाधान भी किया। कार्यशाला बहुत ही उपयोगी एवं उद्देश्यपूर्ण रही। संस्थान में राजभाषा कार्यान्वयन समिति की बैठक का आयोजन 15 मार्च एवं 18जून, 2021 को माननीय निदेशक, डॉ. गौरांग कर जी की अध्यक्षता में आयोजित की गई।



ऑनलाइन माध्यम से एक दिवसीय हिन्दी कार्यशाला का आयोजन

WEBINAR & WORKSHOP

Webinar series on “Making clean and Green India”

On occasion of *Bharat Ka Amrut Mahotsav*, ICAR-CRIJAF conducted series of 3 Webinars on “Making clean and Green India” during 4-7 June 2021. On 4th June a webinar on “Natural fibre as an alternative to plastic” was presented by Dr S.K. Jha, Principal Scientist (Agril. Ext.). On 5th June 2021, webinar presentation was on “Wealth from waste and sustainable eco-farming” delivered by Dr A.K. Singh, Principal Scientist (Soil Sci.). On 7th June, Dr Subhajit Datta, Principal Scientist (Bio Tech.) made presentation on “Genome editing in bast fibres”. The webinar were chaired by Dr D.B. Shakyawar, Director, ICAR-NINFET, Dr. B.K. Das, Director, ICAR-CIFRI, and Dr. Gouranga Kar, Director, ICAR-CRIJAF, respectively.



Speaker and Chairman of 3-days Webinar during *Bharat Ka Amrut Mahotsav* 2021

In the concluding session of the 3-days programme, all the senior officials of the Institute expressed their views on *Bharat Ka Amrut Mahotsav* and the outcome of the webinars. Dr. Gouranga Kar, Director, ICAR-CRIJAF in his remark told that this is high time to prepare a concrete, time bound roadmap to utilize this technology in JAF crops. He also emphasized to be realistic in framing research programme considering the expertise available and through possible collaborations so that the target can be achieved in a specific time frame. All the employees of ICAR-CRIJAF, its regional stations, KVKs and also from ICAR-NINFET, Kolkata participated in this webinar.

The 32nd Annual Workshop of AINPJAF

The 32nd Annual Workshop of All India Network Project on Jute and Allied Fibres was organized virtually during 8-9 March 2021. The meeting was chaired by Dr. Tilak Raj Sharma, Deputy Director General (Crop Science) and Co-chaired by Dr. R. K. Singh, ADG (CC), ICAR, New Delhi. Other dignitaries participated in the meeting were Dr. A. Pattanayak, Director, ICAR-IIAB, Ranchi, Dr. A.K. Sharma, Director of Research, RLBCAU, Jhansi and Dr. S.C. Dubey, ADG (Plant Protection). Dr. G. Kar, Director, ICAR-CRIJAF welcomed all the dignitaries and participating scientists from different AINPJAF centres as well as scientists of the Institute.



Director, AINP Incharge and Scientists during Annual Workshop of AINPJAF 2020-21

The presentation of action taken report on recommendations was made by Dr. S. Mitra, Principal Scientist and In-charge, AINPJAF. The salient research achievements and other activities of individual centre were presented by the respective In-charges of AINPJAF centres. During two days deliberations, the detailed technical program for year 2021-22 pertaining to Crop Improvement, Crop Production and Crop Protection discipline was formulated. A total of 74 scientists from 8 SAUs and 4 ICAR based centres of AINPJAF participated in the workshop.

Monthly Seminar

IPR issues in agriculture research, by Dr. Ritesh Saha, Principal Scientist, Crop Production Division (2 Jan 2021)



Virtual water and water footprints in agriculture, by Dr. Gouranga Kar, Director, ICAR-CRIJAF (30 Jan 2021)



Exploring possible collaboration with different stakeholders and organizations for R&D in jute and allied fibres, by Dr. Jiban Mitra, Principal Scientist, Crop Improvement Division (22 Mar 2021)



SCIENTISTS & FARMERS LINKAGES

Climate Resilient Jute based Farming System

A farmer's training-cum-Scientist interaction was organised during 10-11 March 2021 at ICAR-CRIJAF, Barrackpore to disseminate the problem solving knowledge and reducing vulnerability of weather aberrations and climate change shocks through adoption of the available technology of ICAR-CRIJAF for jute and allied fibres. Interaction based training session was organised covering climate resilient agriculture technology topics like- climate smart soil-water, weeds, pests and disease management; recycling of farm wastes for compost production; eco-farming system, etc. Altogether 40 Scheduled Caste farmers of West Bengal interacted with Scientists of ICAR-CRIJAF. The programme was conducted under SCSP component of NICRA project. Seeds and other farm inputs given to all farmers for field demonstration. Dr. A.K. Singh, Pr. Scientist & PI of NICRA project conducted the training.



Farmers visiting demonstration site of *In situ* jute retting tank based self-reliant eco-farming system

Agro-advisory Services for Improving Jute and Allied Fibres cultivation

One-day training on “Agro-advisory services for improved farming of jute and allied fiber” was organized under SCSP program on 3rd March 2021 at ICAR-CRIJAF, Barrackpore. Dissemination of weather forecast and agro-advisories for improved jute and allied fibres farming and importance of weather and climate monitoring in jute and allied fibres production was discussed. Farmers also visited Agrometeorological Observatory of Research Farm. Altogether 15 farmers from North 24-Parganas district of West Bengal attended the training. Dr. D. Barman, Sr. Scientist and his team organized the training.



Director of ICAR-CRIJAF giving certificate to farmer

Improved Jute Production Technology and *In-Situ* Retting Tank Based Farming System

Three days training program was organized for SC farmers on “Improved jute production technology and *in-situ* retting tank based farming system” under SCSP scheme during 5-7 January, 2021. In the inaugural session, Dr. Gouranga Kar, Director, ICAR-CRIJAF interacted with the farmers and highlighted the significance of *in-situ* retting tank based farming system for fetching higher income and profits to improve their livelihood. A field visit was also organized to demonstrate the ‘*In-situ* jute retting pond based farming system model’ at ICAR-CRIJAF Farm. During the valedictory session, jute bag and farm implement along with participation certificate were given to all farmers. The program was organized by Dr. Debarati Datta, Scientist and her team.



Director of ICAR-CRIJAF giving certificate to farm women

Farm Mechanization and CHC for Enhancing Farm Income in Jute based Cropping System

A three day's training program for the SC farmers was organized (10-12 February and 4-6 March 2021) to provide first-hand information on operation, maintenance of oil engines and other farm equipment.

Importance of farm mechanization in jute based farming, role of custom hiring centre (CHC), operation and maintenance of oil engine, use of tractor/power tiller in agriculture, safe use of plant protection equipment etc. were discussed. In practical session, the identification of engine parts, dismantling and re-assembling of parts of diesel engine were demonstrated. Farm tools and inputs like multi-row seed drill, single wheel jute weeder and hand compression sprayer along with participation certificates were given to farmers. Dr. R.K. Naik, Sr. Scientist and his team organized the training by following COVID-19 protocol.



Hands on training on oil engine repairing and maintenance by rural youth farmer

Improved Production Technology of Jute and Allied Fibres for Enhancing Productivity and Quality

National Training Programme on “Improved Production Technology of Jute and Allied Fibres” under NFSM (CC-Jute) was organized during 17-19th March, 2021. Technical Personnel, Agricultural Extension Officer and Scientist employed in the state of Andhra Pradesh, Bihar, Odisha and West Bengal attended the programme. Improved production technologies of jute and allied fibres, IPM, INM and ITC based agro advisory service were discussed.

A trainer’s training program was also conducted for enhancing productivity and quality of jute during 11-12 March 2021.



Participants and resource person of Trainer’s training programme (11-12 March 2021)

Resource Conservation and Crop Diversification in Jute based Agriculture

One day training program was organized on 1st March 2021 for SC farmers of Taraberia and Rautara village of North 24 Parganas district, West Bengal. Importance of integrated farming system (IFS) for resource conservation and improving farm income in today’s agriculture situation was discussed. In the concluding session, Dr. Gouranga Kar, Director of ICAR-CRIJAF in his address emphasized on benefits of IFS and its role in eco-farming system. Farmer’s training was organized by Dr. Ritesh Saha, Principal Scientist & his team under SCSP scheme.



Participating farm women of the training with resource person

Integrated Insect Pest Management in Jute based Cropping System

Training program entitled ‘Integrated insect pest management in jute based cropping system’ was conducted on 24th Feb 2021 for SC farmers of Beraberia village of North 24 Parganas district, West Bengal. Integrated insect pest management in vegetable crops and jute based cropping system; and IPM of major diseases of jute and allied fibre crops were discussed during the training session. A field visit was also organized to show the model of integrated farming system (IFS). Farm inputs were given to all farmers. Dr. B.S. Gotyal, Sr. Scientist and his team organized the training under SCSP scheme.

Agro-Technique in Sunnhemp and Flax for Yield and Fibre Quality Enhancement

One day training program on ‘Agro-technique in sunnhemp and flax for yield enhancement and quality fibre production’ was organized on 5th March, 2021 at Sunnhemp Research Station, Pratapgarh, Uttar Pradesh. Different seed treatment procedures and management of pests and diseases at early stages of crop growth was demonstrated to the trainees. In field visit, various sunnhemp and flax trials were shown to farmers to understand the impact of technology. Seeds, fertilizers, bioagents, pesticides,

insect traps etc. distributed to 40 participating farmers of various villages of Pratapgarh district participated in the program.



Participating farmer interacting with Scientist of ICAR-CRIJAF during training at SRS, Pratapgarh

Flax Cultivation using Improved Variety

One day training-cum-awareness programme on “Flax Cultivation (JRF-2)” was organized at Sunnhemp Research Station, Pratapgarh, Uttar Pradesh on 6th March, 2021 under AINPJAF programme. The farmers were demonstrated the cultivation of flax (JRF-2) and its mechanical extraction of fibre. About 35 farmers from various villages of Pratapgarh district participated in the program. The participants expressed high level of satisfaction and appreciated the efforts for organizing such a useful training-cum-awareness programme.



Farmers during flax cultivation training at SRS, Pratapgarh

Field Day on Quality Seed Production Technology of Sunnhemp

Field Day on “Quality Seed Production Technology of Sunnhemp” was organized at Sunnhemp Research Station, Pratapgarh, Uttar Pradesh on 10th March, 2021 under ICAR-Seed Project. The farmers were demonstrated different improved sunnhemp varieties including newly released variety SUIN-3. The variety

is early maturing strain ready for harvest within 90-100 days for fibre and 135-145 days for seed.



Field day at Research Farm of SRS, Pratapgarh

Ramie Production and Extraction Technology under NFSM-CC

A series of four farmers’ trainings on ‘Ramie production and extraction technology’ were organized during 5 to 15 March, 2021 at Ramie Research Station, Sorbhog, Assam. Altogether 200 farmers from Rampur, Duramari, Noontola, Puthimari, Ahom pathar, Bairapur, Dakhin Buri Khamar, Mathurapur, Belsar, Sorbhog and Kamargaon villages of Assam participated in training. All training program were organized by Sri Kajal Das, Scientist under NFSM-CC.



Farmers during ramie production training at RRS, Sorbhog, Assam

Balanced Application of Fertilizer in Ramie

Farmers’ training on ‘Balanced fertilization and fertilizer dose calculation’ was organized on 11th March, 2021 at Ramie Research Station, Sorbhog, Assam. Total 50 farmers from Rampur, Duramari, Noontola, Puthimari, Ahom pathar, Bairapur, Dakhin Buri Khamar, Mathurapur, Belsar, Sorbhog village of Assam participated in program. In concluding session, farm inputs (fertilizers and jute seed JRO-204) were given to all participating trainees.



Participating farmers of training at RRS, Sorbhog, Assam

Integrated Farming Systems for Enhancing Farm Productivity and Income in NEH Region

Farmers' trainings on 'Integrated farming systems for enhancing farm productivity and income in NEH region' was organized during 18 - 20 March, 2021 by Ramie Research Station, Sorbhog, Assam in collaboration with College of Agriculture, Kyrdemkulai, Meghalaya. Total 150 farmers from different villages of Rhi-Bhoi district were participated in the program. Sh. Kajal Das, Scientist conducted the training under NEH Scheme 2020-21.

Farmers' Awareness Campaign on Balanced use of Fertilizers

Awareness campaign on balanced use of fertilizers in agricultural crops was organized on 18th June 2021 to make aware the farmer on importance of soil testing and balanced used of fertilizers; use of organic manures and biofertilizer for sustainable crop production; and resource conservation agriculture. Farmers, extension functionaries and representatives from the FPO of North 24 Parganas, Nadia and Hooghly districts participated via virtual mode and interacted with Scientists of the institute. Dr. G. Kar, Director of the Institute shared his view on green and clean farming by reducing the uses of chemical fertilizer in agriculture. Dr. A.R. Saha, B. Majumdar and R. Saha shared their expertise on the topic of awareness program with farmers.



Scientists-Farmers interaction through virtual meeting

Launching of Certified Jute Seed Distribution under JUTE-ICARE

Launching of Phase VII of JUTE-ICARE project was organised at ICAR-CRIJAF on 15 February 2021 jointly by ICAR-CRIJAF, NJB and JCI. Union Minister for Textiles, and Women and Child Development, Smt. Smriti Zubin Irani virtually inaugurated the Certified Jute Seeds Distribution Plan and Jute Farmers Awareness Workshop, organised at ICAR-CRIJAF at Barrackpore, West Bengal. Hon'ble Union Minister has called upon the farmers to use certified jute seeds to increase their income and productivity and contribute to the country in jute diversified and technical textile products.



Hon'ble Minister of Textiles, and Women and Child Development, Smt. Smriti Zubin Irani ji virtually addressing the jute farmers of West Bengal

Government of India had taken a resolution to exponentially spread the distribution of certified jute seeds through commercial seed programme for the benefit of a much larger number of jute farmers wherein JCI would be distributing 10,000 quintals of certified jute seeds. She stated that the move would benefit about 5 lakh jute farmers. On this occasion, certified high yielding varieties of jute seed (variety JRO-204) developed by ICAR-CRIJAF was distributed to farmers of different districts of West Bengal.



Director, ICAR-CRIJAF, Chairman, NJB, and MD, JCI during the virtual programme of Jute Seed Distribution Plan

RESEARCH PUBLICATIONS

Original Research

Journal website: www.jeb.co.in * E-mail: editor@jeb.co.in

Journal of Environmental Biology

JEB p-ISSN: 0254-8704
e-ISSN: 2394-0379
CODEN: JEEDIP

DOI: <http://doi.org/10.22438/jeb/42/3/MRN-1604>

An insight into the sequential changes in enzymatic activities during retting of jute (*Corchorus spp. L.*)

B. Majumdar*, A.R. Saha, S. Sarkar, S.K. Sarkar, S.P. Mazumdar, L. Chattopadhyay and S. Barai
Division of Crop Production, ICAR-Central Research Institute for Jute & Allied Fibres, Kolkata-700 120, India
*Corresponding Author Email: bmajumdar65@gmail.com

Received: 16.07.2020 Revised: 10.12.2020 Accepted: 05.03.2021

Journal of Agricultural Physics

Vol. 20, No. 2, pp. 0-0 (2020)
ISSN 0973-032X
<http://www.agrophysics.in>

Research Article

Spatial and Temporal Variability of Extreme Rainfall and Air Temperature related to Jute Production in West Bengal

D. BARMAN*, R. SAHA, S. ROY, N.M. ALAM, T. BHOWMICK, S. DAS AND G. KAR
ICAR-Central Research Institute for Jute & Allied Fibres, Barrackpore, Kolkata-700120, West Bengal

Original Research

Journal website: www.jeb.co.in * E-mail: editor@jeb.co.in

Journal of Environmental Biology

JEB p-ISSN: 0254-8704
e-ISSN: 2394-0379
CODEN: JEEDIP

DOI: <http://doi.org/10.22438/jeb/42/3/MRN-1580>

Host suitability and differential performance parameters of cotton mealybug, *Phenacoccus solenopsis* for resistance in fibre crop, kenaf genotypes

S. Satpathy¹, B.S. Gotyal², N. M. Alem³ and V. Ramesh Babu⁴
¹Division of Crop Protection, ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore-700 121, India
²A/NPFI Section, ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore-700 121, India
*Corresponding Author Email: satp1@rediffmail.com

Received: 30.06.2020 Revised: 28.10.2020 Accepted: 12.12.2020

Indian Journal of Entomology 83(2021) Online published Ref. No. e20131 DoI No.: 10.5958/0974-8172.2021.00003.1

EFFECT OF BAST FIBRE CROPS AND THEIR BIOCHEMICALS ON NUTRITIONAL INDICES OF *SPILOSOMA OBLIQUA* (WALKER)

SELVARAJ K¹, GOTYAL B S², BHATTACHARYA N, SATPATHY S AND RAMESH BABU V

Division of Crop Protection,
ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore, Kolkata 700120
¹Division of Germplasm Conservation and Utilization,
ICAR-National Bureau of Agricultural Insects Resources, Bengaluru 560024
*Email: gotyalento@gmail.com (corresponding author)

DISTINGUISHED VISITORS

Prof. Swapan Kumar Datta, VC, Biswa Bangla University, West Bengal	09.02.2021
Dr. B.K. Das, Director, ICAR-CIFRI, Barrackpore	09.02.2021
Dr. D.B. Shakyawar, Director, ICAR-NINFET, Kolkata	09.02.2021
Sri M. C. Chakraborty, Jute Commissioner, Kolkata	15.02.2021
Sri Ajay Kumar Jolly, MD, JCI, Kolkata	16.12.2020
Swami Vishwamayananda, Secretary, Rama Krishna Mission Ashrama, Sargachi, Murshidabad	18.03.2021

AWARDS & RECOGNITIONS

- ICAR-CRIJAF की हिंदी पत्रिका "रेशा किरण" का भाकृअनुप के गणेश शंकर विद्यार्थी पुरस्कार (वर्ष २०२०, द्वितीय, 'ग' क्षेत्र) के लिए चयनित।
- Dr Gouranga Kar, Director was bestowed with Fellow of Indian Society of Coastal Agricultural Research.
- Dr. B S. Gotyal, Sr. Scientist received international "Early Career Entomologist Award" from the Royal Entomological Society (RES), London, UK.
- Dr Dhananjay Barman, Sr. Scientist received Best Young Scientist Award-2021 conferred by ICAR-CRIJAF on 9th February, 2021.
- Dr. S.K. Sarkar, Principal Scientist, ICAR-CRIJAF nominated as Member Secretary of Peer Review Team of NAEAB (ICAR) for evaluating ADT's College of Agricultural Sciences, Baramati, Maharashtra for Accreditation.
- Dr. Subhojit Datta et al. received Best Poster Presentation Award of the International Symposium on Coastal Agriculture: Transforming Coastal Zone for Sustainable Food and Income Security (March 16-19, 2021).

REGISTRATION

Design application for Jute Ribboner, has been registered under Design No. 320657-00 in class 15-03 for ten years w.e.f. 13.08.2019. Certificate was received for authorized IPR firm on 16.01.2021.



COMMERCIALIZATION

Manufacturing and selling agreement of CRIJAF SONA (MoU signed dated 12.04.2019 signed between ICAR-CRIJAF and M/s Bengal Biotech and Research) extended for next 6 months (w.e.f. 13th April, 2021 to 12th October 2021).

PERSONNEL

Promotion

Name	Designation	Promoted to	Date of promotion
Sri Dilip Kr. Barua	Assistant	A.A.O.	22 June 2021

Transfer

Name	Designation	Transferred to
Sri Vikas Mangal	Scientist (Genetics & Plant Breeding)	ICAR-CPRI, Shimla
Sri R.R. Debnath	J.A.O.	ICAR Res. Complex for NEH Region, Umiam

New Joining

Name	Designation	Date of Joining
Dr. Thribhuvan, R.	Scientist (Genetics & Plant Breeding)	7 Jan 2021
Ms. Lavanya, A.K.	Scientist (Agril. Microbiology)	12 Jan 2021
Ms. Neethu Mohan	Scientist (Genetics & Plant Breeding)	13 Jan 2021
Dr. Kumar Nishant Chourasia	Scientist (Genetics & Plant Breeding)	27 Jan 2021

Exhibition Hall-Cum-Museum for Showcasing the CRIJAF Technology



Prof. S.K. Datta, Chairman RAC & VC Biswa Bangla University



Swami Vishwamayananda, Secretary, Rama Krishna Mission



Sri M.C. Chakraborty, Jute Commissioner, and Sri Ajay Kumar Jolly, MD, JCI, Kolkata



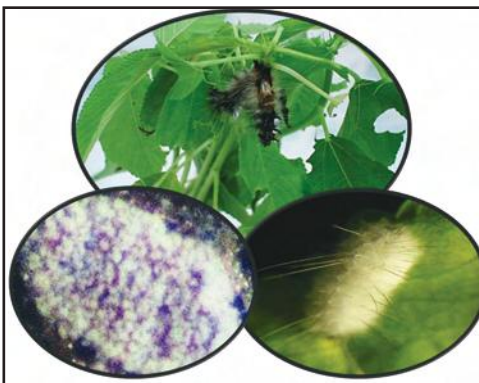
Members of Scientific Advisory Committee of KVK, North 24 Prg

EDITORIAL

Entomopathogens in Biological Control

Biological control is the augmentation and application of living organisms for management of crop pests. Biocontrol agents include predatory insects and mites, parasitoids, parasites and microbial entomopathogens which cause lethal infections on insects. The ways in which biological control agents are used vary according to the type of pest, the biological characteristics of the control agent, as well as the agro-ecosystem. Stable agro-ecosystems like orchards, perennial and long duration crops are more suitable for use of predators and parasitoids as biocontrol agents. Entomopathogens are important group of biocontrol agents which are pathogenic to insect pest. Several species of naturally occurring fungi, bacteria, viruses and nematodes infect a variety of insect pests and play an important role in insect pest management. These biocontrol agents have many advantages and alternative to chemical insecticides, highly specific, safe, and environmentally sustainable and the most ideal tool for Integrated Pest Management.

During the field surveys for insect pests of jute, the infection of entomopathogenic fungus (EPFs) and nuclear polyhedrosis virus (NPVs) have been isolated from the naturally infected insect samples of mealy bug and hairy caterpillar. The isolated *Beauveria bassiana* showed very good pathogenicity to mealy bug by causing mycosis and mortality on treated insects. Besides, the larvae of hairy caterpillar manifested infection and mycosis caused by *B. bassiana* isolates. NPV occurred naturally and produces about 93% of disease in the hairy caterpillar larvae. The virus was isolated from the NPV infected larvae of hairy caterpillar and semilooper which caused epizootic in the field population of jute hairy caterpillar. NPV of hairy caterpillar holds true potential as an effective entomopathogen for management of this pest. Holistic research with respect to mass production of effective entomopathogens, dosages, formulation and effective delivery mechanism will pave the way for effective use of these biocontrol agents in jute. EPF are the known biocontrol agents proved to be potential for application under diverse agro-ecosystem against insect pests of range of crops.



Although under favourable climatic condition EPF may cause epizootics on insect pests in large crop areas, the expected outcome of many formulated products could not be obtained due to the extreme abiotic stresses and loss of virulence. Virulence and environmental adaptation largely regulate the biocontrol potential of EPF. In this direction, knowledge of genomics and molecular biology of EPF will provide new dimension. The functions of specific genes evolved in EPFs would make more contributions to the understanding of fungus-insect interactions.

Another most important aspect of enhancing the biocontrol potential and versatility of EPF is the use of these biocontrol agents as endophytes. The EPF can colonize a wide variety of plant species in different families as endophyte both naturally and artificially following inoculation, and confer protection against insect pests. Inoculation through seed treatment and foliar spray most often resulted in negative effects on herbivores. Since endophytes spend most of their life cycle inside plant tissues they are less exposed to the external environmental factors. Besides, they occupy similar niche as the pests and are thus in close contact with the pests which is an advantage over other biological control agents.

Endophytic strains of *B. bassiana* and *Lecanicillium* spp. inhibits insects, mostly by production of secondary metabolite, mycoparasitization and produce inhibitory metabolites. Few strains of *B. bassiana* were identified to be endophytic in jute (*Corchorus spp*) through seed treatment. Colonization of root, leaf, stem, capsule and seed were confirmed through multiple means. Reduction in stem weevil infestation due to endophytic colonization of *B. bassiana* was evidenced in jute. Endophytes are emerging as their diversity, importance for plant growth and survival and interactions with other organisms are revealed. Greater understanding of ecology and molecular biology of entomopathogenic fungus and virus can fix the limitations of their use in successful biological control and broaden the biocontrol potential of these microbes.

Disclaimer: All efforts have been made to ensure accuracy of the content in this JAF News; the same should not be construed as a statement of law or used for any legal purposes. Editors accepts no responsibility in relation to the accuracy, completeness, usefulness or otherwise, of the contents. Users are advised to verify/check any information with the concerned scientists, relevant division(s) and/or section(s) of the institute, and to obtain any appropriate professional advice before acting on the information provided in the JAF News.