



ILRI Newsletter

Vol. 2 (2)

JUL-DEC 1998



From the Director's Desk

Research efforts do not bear fruits unless they reach the target group. In the absence of organised farming in lac cultivation, the task of creating awareness among lac growers becomes even more difficult. The institute took it as a challenge and strengthened its Transfer of Technology programmes particularly during the past few years by unleashing publicity campaigns through mass media and organising on-farm training covering the states of Bihar, West Bengal, Madhya Pradesh and Orissa where lac is cultivated. These concerted efforts have now begun to yield results which is reflected in the increased number of

persons enrolled on different training programmes and the queries received by the institute on different aspects of lac culture as well as its processing and utilisation. The heartening response received will continue to motivate us to step up our efforts and we would strive even harder to reach to the needy.

S.C. Agarwal
(S.C. Agarwal)

RESEARCH HIGHLIGHTS

Lac based wood varnish and metal lacquer

A composition based on dewaxed lac in a non-conventional solvent with an accelerator has been developed. The performance of the varnish is at par with melfolac and its cost is comparatively much lower. Similarly a new composition of metal lacquer for food canning has been developed. The composition has passed the tests i.e. gloss, flexibility, impact resistance, scratch hardness, acid and sulphur resistance etc. as per IS:5818 (1988).

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New record of fungi associated with lac insect

Lac insect culture, particularly in rainy season is prone to fungal attack. Three species of fungi belonging to the family Eurotiaceae / Aspergillaceae viz., *Aspergillus awamori* Nakazawa, *A. terricola* Marchal and *Penicillium citrinum* Thom (Syn. *P. aurifluum* Biourge) have been found associated with lac insects collected from *kusum* (*Schleichera oleosa*) and *bhalia* (*Flemingia macrophylla*).

A new tri-voltine lac insect from Orissa

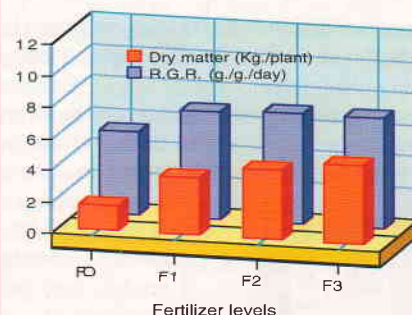
A tri-voltine lac insect has been collected from Sarat, Mayurbhanj (Orissa) which thrives well on *kusum*, *Schleichera oleosa*. The insect completed three generations in about 350 days at its native locality (93-98 days during summer and rainy season and 165-175 days during winter).

Response of *Acacia auriculaeformis* (*Akashmani*) to fertilizers

Fertilizer application to the *akashmani* plants have shown successive increase in relative growth rate (RGR) and dry matter accumulation

as compared to control. The RGR increased from 5.28 g / g/ day to 6.87-7.07 g / g/ day while dry matter accumulation increased from 1.545 kg/plant to 3.607-4.978 kg / plant.

Total dry matter and R.G.R. of *Akashmani* (two years after planting), as affected by fertilizer levels



F₀ = Control, F₁ = 30+40+20, F₂ = 60+80+40, F₃ = 120+160+80g of N+P₂O₅+K₂O/plant

Insect sex pheromone from lac

Insect sex pheromone component, (Z)-7-hexadecen-1-yl acetate (Hexalure) of *Heliothis subflexa* was synthesised from aleuritic acid, a major lac constituent adopting simple reaction sequences.

TRANSFER OF TECHNOLOGY

Out-Reach Programmes

Experts of the institute imparted on-farm training to the farmers sponsored by SAGEN, Baripada (an NGO) in collaboration with Integrated Tribal Development Agency, Govt. of Orissa at Natapada village, Balasore District in Orissa. The institute has provided 100 kg of *kusmi* broodlac from revolving fund scheme to start lac cultivation in the area.

Exhibition on lac at RFRS, Balarampur

An exhibition on lac including technologies and training facilities available at the institute was organised at Regional Field Research Station, Balarampur, Purulia (WB). The exhibition, inaugurated by Sri Proloy Talukdar, Hon'ble Minister of Cottage and Small Scale Industries, Govt. of West Bengal drew a large number of the visitors. Among the distinguished visitors were : Sri Basudev Acharya, MP and Chairman, District Lac Advisory Committee. Sri Bandhu Mahato, MLA Balarampur; Sri NK Mahato, MLA Arsa and Sri AK Guha, Director of Cottage and Small Scale Industries, Govt. of West Bengal besides several others.



Publicity

International Bio-diversity Day was celebrated by Taman Nature Club on 29th December 1998 at Swamy Vivekanand Nagar, C.B.D. Belapur (Mumbai) to sensitise, involve and motivate school students to conserve biological wealth. About 1000 students participated in various projects, exhibition of posters, herbarium sheets, models and live specimens of local flora and fauna wherein exhibit of poster on lac prepared from the material sent by ILRI received great attention. About 2000 parents visited the exhibition.



Training

The various training programmes conducted during the period are as follows :

Course	Period	Sponsored by	No. trained
Certificate course			
Modern methods of lac cultivation	Three months	Institute of Forest Productivity	5
		Private	3
Short term courses			
Improved Methods of Lac production and utilization	One-week	AGRAGAMI, Orissa	2
		Support for Sustainable Society, Bano, Gumla (Bihar)	12
		KALYAN, Purulia (West Bengal)	2
		HINDALCO, Lohardaga (Bihar)	7
Orientation Programme on lac	One -day	RK Mission, Ranchi	120
		Nav Bharat Jagriti Kendra, Murhu, Ranchi	79
		Agricultural Training Centre, Ranchi	52
Lac exposure training	One-day	R.K. Mission, Ranchi	878
On-farm training	One/two-day	Janjatiya Seva Vihar, Gumla	1500
		Support for Sustainable Society, Bano, Gumla (Bihar)	150
Product demonstration			
Aleuritic acid	Two-weeks	Bardhan Brothers Pvt. Ltd.	1
Dewaxed bleached lac	-do-	-do-	1

Literature Published

- Safari of ILRI through Seven Decades, a book, 84pp.
- Press Clippings on ILRI Activities, a book, 66pp.
- Lac dye, a folder, 8pp.
- *Lakha Chaser Paddhoti* (in Bangla), a booklet, 8pp.
- *Muhar Lagane ki Lakh*, a leaflet, 1p.
- Lac - from antiquity to eternity, a booklet, 8pp.
- A pictorial introduction to lac, a leaflet, 2pp.

- Sushil SN, Bhattacharya A, Sharma KK, Jaiswal AK, Mishra YD 1995. *Pest Management and Economic Zoology*, 3(1) :51-53.
- Bhattacharya A, Sushil SN, Mishra YD, Jaiswal AK, Sharma KK 1998. *Insect Environment*, 4(1): 15-16.
- Bhattacharya A, Naqvi AH, Sen AK and Mishra YD 1998. *J. Ent. Res.*, 22(1): 83-87.

Papers published (Papers, Talks, Lectures etc.)

- Bhattacharya A, Mishra YD, Jaiswal AK, Sharma KK, Malhotra CP and Sushil SN 1995. *Pest Management and Economic Zoology*, 3(1): 29-31.



Participation in kisan melas and exhibitions

The institute put up stalls depicting various aspects of lac, the technologies available and TOT activities at the following *kisan melas* / exhibitions.

Date (s)	Venue	Organised by
Aug. 3-16	Indian Science Vision Exhibition, AGRASAR at India Gate Lawns New Delhi.	Govt. of India
Sept. 18-19	St. Ignatious School, Gumla	Janjatiya Seva Vihar, Gumla
Oct. 9-13	Jharkhand Udyog Mela, Ranchi	Chhotanagpur Small Scale Industries Association, Ranchi
Oct. 14-27	India International Trade Fair New Delhi	Trade Fair Authority of India, New Delhi
Nov. 15-16	Ukauli, Bano, Gumla	Support for Sustainable Society, Bano, Gumla
Dec. 17	Berhampur, WB	NHDC, Govt. of India
Dec. 22	Bagma, Murhu	Nav Bharat Jagriti Kendra, Murhu

- Jaiswal AK, Sharma KK and Agarwal SC 1998. *Tropical Science* (UK), 38:81-86.
- Jaiswal AK, Sharma KK, Sushil SN, Bhattacharya A and Mishra YD 1998. *Shashpa*, 5(2): 133-136.
- Jaipurkar SK, Kumar P and Ramani R 1998. An air-dry method for cytological preparation of lac insect (Coccoidea: Homoptera) *Insect Environment*, 4(2) : 46.
- Saha SK, Jaiswal AK and Singh BH 1998. *J. Ent. Res.*, 22(3) : 273-282.
- Srivastava SC, Kumar P, Mishra YD and Jaiswal AK 1998. *Indian J. Forestry*, 21(1) : 9-12.
- Mishra YD, Bhattacharya A, Sushil SN and Agarwal SC 1998. *Insect Environment*, 4(2): 49.

Popular articles

Agarwal SC, Singh BP and Jaiswal AK 1998. *Lakh Keet Ke Audyogik Mahatva, Mati Mudir*, 1(5): 2-9.

Seminar paper

Ramani R and Agarwal SC 1998. Pharmaceutical potential of shellac and other lac-derived products. In Souvenir on National Seminar on Pharmacy, Education and Research (Nov. 8-10), BIT, Mesra, Ranchi.

Radio/TV talks delivered

- "Lah Keet Palan Sambandhi Prashikshan Karyakaram" by Dr KK Sharma was telecast on 23.07.98.
- "Lakh Keet ki Surksha avam Samuchit Dekh-rekh" by Dr. AK Jaiswal was broadcast on 30.08.98
- "Lakh Keet Palan ki Vaigyanik Vidhi" by Dr KK Sharma was telecast on 22.10.98.
- "Lakh Keet Palan main Vipanan Vyavastha ki Samasyayagen avum Nidan" by Mr. R. Ramani was broadcast on 24.10.98.
- "Particharcha - Lakh Keet Palan ke Vaigyanik avam Adhunik Tareeke" by Dr SC Agarwal and Dr AK Jaiswal was broadcast on 14.11.98.

Visits / lectures delivered

Dr. P Kumar, Head, Lac Production Division and Dr. A Bhattacharya, Sr. Sc. visited the Defence Research Laboratory, Tezpur for exploring the possibility of extending lac cultivation in the North Eastern region. Dr. Bhattacharya delivered a talk on, "An introduction to lac cultivation" to the scientists of the DRL, Tezpur on 20.11.98.

Dr. A Bhattacharya Sr. Sc. and Mr. R. Ramani Sr. Sc. delivered lectures on, "Lac entomology and culture" on 1.12.98 and on, "Lac marketing, processing, utilization, research and extension" on 5.12.98 respectively to the participants of the UGC Sponsored refresher

course organised by Academic Staff College, Ranchi University.

Quality Control

Ninety-six samples of lac and lac products were received from Govt. Organisations / Private industries / other Divisions of ILRI. 166 tests were carried out and a sum of Rs. 11000/- was earned as testing charges.

INFRASTRUCTURE DEVELOPMENT

Internet connectivity

Internet connectivity has been installed at the institute by National Informatics Centre, New Delhi on 2nd November 1998 through VSAT. The browsing facility has been configured and the facility is now available on all the terminals of LAN at the institute.

Information and Documentation

Information and Documentation Centre of ILRI library has started feeding articles relating to lac and lac-culture and forestry articles which will be transmitted to FAO, Rome through ICAR feeding Database at ARIC, New Delhi to be included in AGRIS / AGRICOLA CD-ROMs.

Fourteen new books / magazines / periodicals on different subjects have been acquired during the period.

EVENTS

Research Advisory Committee (RAC) Reconstituted

The Council, vide its letter no. 8(14)94-i.A. II(AE) dated 24th July, 1998 has constituted the 2nd RAC for the institute. The committee is chaired by Dr. BL Amla and members of the committee are Dr. SC Agarwal, Director, ILRI; Dr. RP Kachru, ADG (PE), ICAR; Dr. N Krishnamurthy, Head, Surface Coating & Polymer Division; Dr. M Yaseen, Dy. Director & Head (Ret.) IICT, Hyderabad; Prof. DRC Bakheta, Head, Deptt. of Entomology, PAU Ludhiana; Mr. Madhu Sudan Agarwal, Secretary, Maharashtra Rajya Lah Utpadak & Chapra Nirmata Sangh, Gondia; Mr. RL Sharma, Managing Director, Tajna Shellac (P) Ltd., Khunti, Ranchi and Mr. R Ramani Sr. Sc., TOT Division ILRI, Ranchi as Member- Secretary.

Institute Management Committee (IMC) meeting

26th meeting of the IMC was held on 2nd November 1998 at the Institute. The meeting was chaired by Dr. SC Agarwal Director, ILRI and attended by Dr. RP Kachru, ADG (PE), ICAR; Dr. JB Tomar, Incharge, NBPGR

Regional Station, Ranchi; Dr. KK Kumar, Head TOT Division, Dr. PC Gupta, Pr. Sc., LPPD Division; Mr. G Singh, Sr. Sc. and Mr. S Veeraswami, A.O. (Member-Secretary). IMC reviewed the progress of research projects, Ad-hoc projects and Revolving Fund Scheme besides recommending purchase of equipment as proposed in EFC memo and several other items required for smooth functioning of the institute.

Staff Research Council (SRC) meeting

A meeting of SRC was held on 3-5 December 1998 to review the progress of research made during the year which was attended by all the scientists of the Institute.

Meeting of Steering Committee on Lac (SCL)

The first meeting of SCL was held on 16.12.98 under the chairmanship of Dr SC Agarwal, Director who welcomed the members and apprised them of the achievements of the



Institute. Representatives from RIADA, BISCOLAMF, IFP, TRIFED, NABARD, BAU, Tajna Shellac Pvt. Ltd., XISS, BOI, BIKASAN attended the meeting.

The Committee opined that publicity campaign about lac based products developed by ILRI should be intensified; Shellac Export Promotion Council may be entrusted with bufferstocking of all the seedlac produced in the country to promote lac not only abroad but also within the country; lac hosts should be raised in large numbers and action should be taken for ensuring certain minimum lac consumption in selected industries. Two special ad-hoc committees were also constituted for broodlac distribution and lac production, and entrepreneurship development

Participation in ICAR Zonal Sports meet

The ILRI sports team participated in ICAR Zonal Sports Meet held at IVRI, Izatnagar from 3.11.98 to 6.11.98. Sri RC Mandap, SSG-I secured 3rd position in the 400 meters race for men.

HRD

Name	Training	By	Duration
Dr. Niranjana Prasad, Sc. TOT Division	Design, testing the production technology of harvesting & threshing equipments	CIAE, Bhopal	14.12.98 to 24.12.98
Mr. S. K. Pandey, Sc. (Mech. Engg.), LPPD Division	64th Foundation Course for Agricultural Research Services (FOCARS)	NAARM, Hyderabad	21.7.98 to 13.11.98
Mr. R. Prasad, T-6 Mr. A. K. Sahay, T-5	Sun SS-20 UNIX Server and SOLARIS OS	M/s FUGITSUI/ICIM	14.9.98 to 17.9.98
Mr. D. Ganguly, T-5 Mr. A. Pandey, Sr. Clerk	Management of Informatics Centres	NAARM, Hyderabad	7.9.98 to 18.9.98
Dr. V. K. Rao, Sc. LPPD Division, Mr. A. K. Sahay, T-5 Mr. P. Kumar, LDC	Use of Computer in Agricultural Research & Administration	IASRI, New Delhi	16.11.98 to 28.11.98
Mr. D. Ganguly, T-5	Basic and prospective applications of ARIS Hardware and LINUX Network OS	GAU, Anand	23.11.98 to 27.11.98

हिन्दी दिवस

संस्थान द्वारा 19 सितम्बर 1998 को हिन्दी दिवस एवं हिन्दी सांस्कृतिक पखवाड़ा समापन समारोह का आयोजन किया गया।

इस अवसर पर मुख्य अतिथि डॉ. लालिमा वर्मा, प्राचार्या, केन्द्रीय विद्यालय दीपाटोली ने कहा कि हिन्दी के माध्यम से सम्पूर्ण भारत में सम्पर्क स्थापित किया जा सकता है। अन्य भाषाओं तथा क्षेत्रीय बोलियों के शब्दों को भी अपना कर हिन्दी साहित्य को समृद्ध करना चाहिए।

संस्थान के निदेशक डा. सतीश चन्द्र अग्रवाल ने अपने अध्यक्षीय भाषण में कहा कि अनुसंधान की उपलब्धियाँ किसानों तक जन-जन की भाषा हिन्दी से पहुँचाई जाये। कम्प्यूटर के महत्व को देखते हुये उन्होंने संस्थान के सदस्यों को कम्प्यूटर प्रशिक्षण दिलवाने एवं कम्प्यूटरों में हिन्दी सॉफ्टवेयर लगवाने की इच्छा व्यक्त की। सहायक निदेशक (रा.भा.) श्री लक्ष्मी कान्त ने सूचित किया कि वैज्ञानिक कार्यों में हिन्दी का प्रयोग बढ़ रहा है। अभी तकनीकी कार्यशाला आयोजित की गई है एवं हिन्दी में वैज्ञानिक गोष्ठियाँ नियमित रूप से आयोजित की जा रही हैं।

हिन्दी पखवाड़े की अवधि में आयोजित विभिन्न हिन्दी प्रतियोगिता के विजेताओं को पुरस्कृत किया गया एवं हिन्दी प्रकाशनों की एक मनोरम प्रदर्शनी भी लगाई गई।



- 24.7.98 को संस्थान के बतीस प्रशासनिक कर्मचारियों के लिये एक कार्यशाला का आयोजन किया गया जिसमें श्री एस. वीरास्वामी, प्रशासनिक अधिकारी ने मुख्य भाषण दिया।
- 20.8.98 को संस्थान के पैंतीस तकनीकी अधिकारियों/कर्मचारियों के लिये एक कार्यशाला आयोजित की गई जिसमें श्री राम प्रताप तिवारी, तकनीकी अधिकारी ने "तकनीकी कार्यों में हिन्दी" विषय पर व्याख्यान दिया।
- 30.8.98 को संस्थान द्वारा न.रा.का.स. के तत्वावधान में अन्ताक्षरी प्रतियोगिता का आयोजन किया गया जिसमें राँची स्थित केन्द्र सरकार के कार्यालयों के पैंतीस प्रतिभागियों ने भाग लिया। संस्थान के वरीय लिपिक श्री प्रहलाद सिंह को द्वितीय पुरस्कार मिला।

Honours / Awards

Mr. V. K. Rao, Sc. (Org. Chem.) of LPPD Division has been awarded the degree of Ph.D. by Kakitaya University, Warangal (AP) on 1.8.98. for his thesis on " Photochemistry of some isoxazoles and synthesis of fused isoxazoles".

Appointments

Mr. S. K. Yadav, Sc. (Agronomy) w.e.f. 19.09.98
Mr. Bandhan Oraon, SSG-I (Lab. Attd.) w.e.f. 7.12.98 transferred from IVRI, Izzatnagar.

Retirements

Mr. SG Chaudhary Sc. (SG) w.e.f. 31.10.98
Mr. RK Banerjee Sc. (SS) w.e.f. 30.11.98
Mr. SK Chatterje T-II-3 w.e.f. 30.11.98

Upgraded

w.e.f. 6.11.98

Name	Post	Promoted to
Mr. Md. Samiullah	Supdt.	Asst. Admin. Officer
Mr. R. Rabidas	Sr. Steno	Sr. P.A.
Mr. R. K. Upadhayay	Sr. Clerk	Assistant
Mr. N. Topno	Sr. Clerk	Assistant
Mr. Md. Mobarak	Sr. Clerk	Assistant
Mr. Narayan Gope	Jr. Clerk	Sr. Clerk
Mr. S. C. Lal	Jr. Clerk	Sr. Clerk
Mr. Raghunath Mahto	Jr. Clerk	Sr. Clerk
Mr. Bihari Sahu	Jr. Clerk	Sr. Clerk
Mr. Wilson Guria	Jr. Clerk	Sr. Clerk

Promoted

Name	Promoted to	w.e.f.
Smt. Jhalwa Khalkho	SG II	1.10.97
Sri Gahna Oraon	SG III	1.11.97
Smt. Balo Devi	SG III	1.11.97
Sri Bandhu Mahto	SG II	1.11.97
Sri B. K. Rajak	Assistant	28.11.98
Sri Vijay Ram	Assistant	28.11.98
Sri Kameshwar Oraon	Sr. Clerk	28.11.98
Sri Pranay Kumar	Sr. Clerk	28.11.97

Services of nine casual labourers were regularised to SSG-I w.e.f. 6.11.98

Obituary

The Director and the staff members of the institute deeply condole the demise of Sri Marcus Kujur SSG III on 18.07.98 and Sri RS Maliya T-4 on 19.08.98. May the departed souls rest in peace.