



#### From President's Desk.....

#### A very happy and prosperous New Year to all the member.

Natural Resins and Gums (NRGs) considered as low volume – high value commodities, are used in a broad spectrum of areas particularly in food, cosmetic and pharmaceutical industries. India is traditionally the largest producer of guar and *karaya* gums as well as lac. Besides these, a large number of other minor gums are also produced in India. One of the important facets of NRGs in the economic context is their role in livelihood of the farmers. Out of the 150 disadvantaged districts, NRGs are important source of subsidiary income to farmers in around 70 disadvantaged / aspirational districts.

Therefore, sustenance of interest in production systems of NRGs would necessitate proper tuning of production economics coupled with appropriate operation scales. The production and application of natural resins and gums would receive more attention as greater emphasis will be laid on quality of human life with enhanced stress on human and environmental safety of products and technologies and it may be really challenging task to meet the demand potential of NRGs, which is likely to emerge in future.

Globalization of various activities is likely to touch new heights in the coming years. The R&D efforts and technology diffusion would be needed to provide the desired impetus to position the country as a global leader in production of NRGs. Adequate emphasis on basic research would be extremely important for carving out novel applications in specialised areas. Industrial linkage right from conception stage would ensure better relevance and adoption of new technologies. In view of extremely specialized applications, linkages with overseas laboratories would be important for convergence of scientific expertise to develop new products, especially in frontier areas. Keeping these challenges in mind, the Society for Advancement of Natural Resins and Gums was formed to integrate the stakeholders engaged in production, refinement, utilization, research and policy making. With initial hiccups and modest beginning, the Society has started to spread its wings. Three national level Seminars / Meets have been organized under its aegis with useful recommendations. The Society also envisages to have linkages with overseas organizations to comprehend the global scenario. Views and opinions of stakeholders would essentially be important to carve out better future of NRGs. The first issue of SANRAG e-Newsletter has been brought out with the aim of sharing the latest information and expecting fruitful suggestions for improving the functioning of the Society. Hope, you will find the issue useful!

### Society for Advancement of Natural Resins and Gums (SANRAG)

The Society for Advancement of Natural Resins and Gums (SANRAG) was formed on 29 November 2011 under Societies Registration Act 21, 1860 with Registration No. 982, to serve as a platform for convergence of all those interested in the production, research, growth, development and innovative applications of resins and gums of biological origin. It is located at premises of ICAR - Indian Institute of Natural Resins and Gums, Ranchi. Under the aegis of this Society, two National Symposia and one Entomologists' Meet have been organized so far.

#### **Objectives of SANRAG**

- To integrate the forces engaged in production, refinement, utilization, research & extension and policy makers related to natural resins and gums to achieve the goal of the Society
- To promote natural gums and resins industry of the country through various activities
- To coordinate various persons/agencies interested in gums and resins for advancement of natural gums and resins



- To promote scientific knowledge on natural gums and resins in India and abroad including its practical application for national welfare
- To hold and sponsor topical meetings/symposia along with similar organizations
- To act as an advisory body of gums and resins in the health and growth of the country
- To promote the studies on natural gums and resins at graduate and post-graduate levels
- To encourage and publish research work and other useful information related to gums and resins
- To safeguard the interests of the industry in the country
- To perform all other acts that may help in fulfilment of the goal of the Society

#### ICAR - Indian Institute of Natural Resins and Gums

ICAR-Indian Institute of Natural Resins and Gums (ICAR-IINRG) is the pioneer R&D Institution in the Natural Resins and Gums (NRG) sector. The Institute provides holistic support in research of the NRG sector under one roof, including production of lac, processing, value addition, product development and application of NRGs, training, information repository, technology dissemination, national and international cooperation of NRG sector.

The institute started its journey as Indian Lac Research Institute (ILRI) on September 20, 1924 at Ranchi. As a result of reorganization of agricultural research and education in the country after independence, the ICAR took over the administrative control of the ILRI in April 1966. This Institute is thus, one of the oldest institutions within the ICAR system, having completed more than 96 years of existence. It has contributed immensely towards all-round development of lac maintaining India's leadership in production, installed processing capacity and export of the commodity.

Recognizing the importance of other natural resins and gums, which are cultivated and collected in the Indian sub-continent, especially their industrial importance and export markets, the ICAR revised the mandate of ILRI and renamed it as IINRG. All NRGs were brought under its scope, under the revised research mandate of the Institute w.e.f. September 20, 2007. Subsequently, the ICAR also sanctioned a new Network Project on Harvesting, Processing and Value Addition of NRGs in XI plan. Another Network Project on Conservation of Lac Insect Genetic Resources was launched in XII plan. Since November 29, 2009 the Institute is recognized as National Lac Insect Germplasm Centre (NATLIGEC). On May 30, 2015, the Institute was certified as ISO 9001:2008 organization.

#### About NRGs....

While the benefits from forests are numerous, the tangible benefits like timber, bamboo, fuel wood, fodder, Non-Wood Forest Products (NWFPs), etc., are quantifiable. Intangible benefits like maintenance of ecological balance, conservation of soil and moisture, regulating the water flow, carbon sequestration, etc., are not quantified but are of great significance. Forest is an important sector having a significant contribution to the Indian economy. According to the Forest Survey of India, 2015 forest cover is about 21.34% of the total geographical area of the country. Forest produce based industries contribute to 1.2% of India's Gross Domestic Product (Economic Survey, Ministry of Finance, 2011). In India, there are around 1.73 lakh villages located in and around forests (MoEF, 2006). Though there are no official census figures for the forest dependent population in the country, different estimates put the figures from 275 million (World Bank, 2006) to 350- 400 million (MoEF, 2009).

#### **Current status of NRG sector**

About 70% of the NWFP collection in India takes place in the tribal belt of the country (Mitchell et al., 2003). Around 55% of employment in forestry sector is attributed to this sector alone (Joshi, 2003). NRGs of commercial importance like lac (Kerria lacca Kerr), pine resin (Pinus roxburghii Sarg.), guar gum (Cyamopsis tetragonoloba L.), gum karaya (Sterculia urens Roxb.), dhawada gum (Anogeissus latifolia Roxb.), tamarind gum (Tamarindus indica L.), char /piyar gum (Buchanania lanzan Spreng.) and babool gum (Acacia nilotica L.) are produced in India. India holds monopoly in international trade over some of the NRGs such as lac, gum karaya and guar gum. NWFPs based on their chemical composition may be classified in three categories namely natural resins, natural gums and gum resins. Natural resins are solid or semi-solid materials, usually a complex mixture of organic compounds called terpenoids, which are insoluble in water but soluble in certain organic solvents. Resins are secretion of several plants, particularly coniferous trees. Lac is the only resin of animal origin.

Resins are used in the production of varnishes, adhesives and food glazing agents. These are also used as raw material for synthesis of incense and perfume. This group of natural resins includes lac secreted by the insect genus *Kerria* and plant originated products like rosin, copal and dammar. Solidified resin from which the volatile terpene components have been removed by distillation is known as rosin.

Natural gums are polysaccharides of natural origin, capable of causing a high viscosity in the solution. Most often these gums



are found as exudates from woody elements of plants or in seed coatings. In the food industry these are used as thickening, gelling and emulsifying agents and stabilizers. These are also used as adhesives, binding agents, crystal inhibitors, clarifying agents, encapsulating agents, flocculating, foam stabilizers, swelling agents, etc. Natural gums can be classified according to their origin. Firstly, tree exudates e.g. gum arabic, gum ghatti, gum tragacanth, gum karaya, guar gum, locust bean gum, chicle gum, mastic gum, psyllium gum and spruce gum. Secondly, originated from seaweeds e.g. agar and carrageenan and thirdly, produced by bacterial fermentation *e.g.* gellan gum and xanthan gum. They can also be classified as uncharged or ionic polymers (polyelectrolyte). Gum-resins are the natural mixtures of gums and resins in variable proportions therefore possess properties of both the groups. They contain traces of essential oils and are partly soluble in water. They have a penetrating and characteristic odour and taste and are obtained from plants. Olibanum/salai gum (Boswellia serrata), guggal (Commiphora wightii), myrrh, asafoetida, etc. are the major gum resins of national importance.







Fig 2. World import flow of NRGs during XI & XII plan

According to ITC calculations based on UN COMTRADE statistics, the world trade aggregation of lac, natural gums, resins, gum-resins and balsams during 2017 was about 1314.63 million US dollars. Out of this, the world export aggregation of lac, natural gums, resins, gum-resins and balsams during 2017 was about 552.38 million US dollars. Decadal data (2008-2017) on world EXIM aggregation of lac, natural gums, resins, gum-resins and balsams were analyzed and presented in Fig. 1 and Fig. 2. Since 2012, deceleration in the value of world export aggregation was observed and stagnation was found in the value of world import aggregation during the similar period. However, the value of world export aggregation of lac, natural gums, resins, gum-resins and balsams during 2017 increased over the previous year.







Fig. 4. Breakup of the World import aggregation of NRGs during 2017



Major suppliers of NRGs contributing about 92% share in international market are France (24.2%), Sudan (20.8%), India (12.9%), Indonesia (8.0%), Germany (6.5%), USA (6.2%), Brazil (5.3%), UK (4.1%), Thailand (5.9%), Singapore (2.7%), Ethiopia (2.6%), Greece (2.2%), Italy (1.9%). Rest of the 7.92% NRGs are supplied from 58 countries across the world (Fig. 3). Similarly, the world import aggregation of lac, natural gums, resins, gumresins and balsams during 2017 was about 756.62 million US dollars.

Major importers of NRGs contributing about 86% share in the international market are India (22.7 %), France (13.0 %), United States of America (9.5%), Germany (6.3%), China (5.7%), Spain (4.9%), Portugal (3.7%), United Kingdom (3.7%), Italy (3.5%), Russian Federation (2.9%), Netherlands (2.5%), Ireland (2.5%), Switzerland (1.6%), Japan (1.5%), Bulgaria (1.2%), and Brazil (1.2%). Rest of the 13.6% demand of NRGs aroused from the 65 countries across the world (Fig. 4).

## Network Project on Harvesting, Processing and Value Addition of NRGs

Keeping in view the immense potential of these natural, nontoxic and bio-degradable products, the ICAR decided to include these as part of the regular research programmes at IINRG, Ranchi in the network mode. Research on various aspects of production, processing, product development and value addition of all plant resins, gums and gum-resins are undertaken. The project was commenced in XI plan with ICAR-IINRG as a Lead Centre and is continuing till date. Other Network Centres are ICAR-Central Arid Zone Research Institute, Jodhpur (Gum Arabic); ICAR- Central Agroforestry Research Institute, Jhansi (Agroforestry models based on Resins and Gums; Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Solan (Rosins); Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani (Guar gum); Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (Guggul); Indira Gandhi Krishi Vishwa Vidyalaya, Raipur (Karaya gum); Tamil Nadu Agricultural University, Coimbatore (Tamarind seed gum); Kerala Agricultural University, Thrissur (Dammars) and ICAR Research Complex for North Eastern Hill Region, Meghalaya (Pinus kesiya resin).

## Network Project on Conservation of Lac Insect Genetic Resources

Network Project on Conservation of Lac Insect Genetic Resources (NPCLIGR) conceived by IINRG was approved by ICAR with the primary objective of *in-situ* and *ex-situ* conservation of the biological diversity of lac-insects of the

country. IINRG, Ranchi as the Lead Center implements the project in collaboration with eight cooperating centers: (i) Assam Agricultural University, Jorhat (ii) Central Agricultural University, Imphal, (iii) Professor Jayashankar Telangana State Agricultural University, Hyderabad (iv) Sher-e-Kashmir University of Agricultural Sciences & Technology, Jammu, (v) Punjab Agricultural University, Ludhiana (vi) Maharana Pratap University of Agriculture & Technology, Udaipur (vii) Kerala Forest Research Institute, Thrissur and (viii) State Forest Research Institute, Jabalpur. In addition to this, three Voluntary centres *viz.*, (i) Acharya N G Ranga Agricultural University, Guntur, (ii) Krishi Vigyan Kendra (KVK) Sirsi and (iii) ICAR-Research Complex for Eastern Region, Patna, have also been added for strengthening the project.

#### Network for Natural Gums and Resins in Africa

The network has an executive board comprising; representatives from 4 focal points (West Africa, Central Africa, Eastern Africa and Southern Africa), experts on production, marketing and quality control of gums and resins. Each member country is represented by a National Program Coordinator. The Secretariat is hosted in Kenya at the Kenya Forestry Research Institute (KEFRI), Nairobi, Kenya.

The Network for Natural Gums and Resins in Africa (NGARA) is a regional network comprising member countries in sub Saharan Africa producing plant gums and resins. There are currently 14 countries from sub Saharan Africa namely: Burkina Faso, Chad, Eritrea, Ethiopia, Kenya, Mali, Mauritania, Niger, Nigeria, Senegal, Somali, Sudan, Tanzania, Uganda

### Events organized by SANRAG

#### National Symposium on Recent Advances in Beneficial Insects

The National Symposium on Recent Advances in Beneficial Insects - Apiculture and pollinators, Lac-culture and Sericulture from 27-29 November, 2013, organized jointly by SANRAG and ICAR-IINRG, Ranchi was the maiden attempt to bring all the beneficial insects at one platform to have discussion on common and specific problems relevant to emerging scenario of beneficial insects. Central Tasar Research and Training Institute, Ranchi and All India Coordinated Research project on Honeybees and Pollinators were the event partners.

The dignitaries were welcomed by Dr. R Ramani, Director IINRG, Ranchi after a formal introduction to the symposium by Dr. KK Sharma, Convener of the Symposium. Chief Guest, Dr Gurbachan Singh, Chairman, ASRB addressed the inaugural ceremony, where dignitaries from National and International organizations in India were present, including Dr Peter A Kenmore (FAO Representative in India), Dr V P Singh (Regional Representative for South Asia, ICRAF, New Delhi) and Guest of



Honour, Dr. AK Malhotra, PCCF, Jharkhand. Different aspects regarding the beneficial insects from production to policy issues including stakeholders, ecosystem approaches in pest management, integrated farming and productivity were highlighted in the session. Souvenir and Book of Abstracts was also released during the inaugural session.

The three-day Symposium was divided into five sessions -Production System Management; Ecology & Population Dynamics; Systematics, Biochemistry & Biotechnology; Sustainable Utilization & Livelihood opportunity, and Processing & Application of Beneficial Insect Products. Ninetyone delegates participated in the symposium and highlighted their research findings and issues through, 4 Key Note addresses, 10 lead lectures, 47 oral and 22 poster presentations (Fig. 5). Recommendations of all the five sessions compiled by Dr KK Sharma (Convener), Dr Md Monobrullah and Dr A Mohanasundaram (Co-conveners) were discussed and finalized in the plenary session which was chaired by Dr MP Pandey, VC, Birsa Agricultural University, Ranchi and co-chaired by Dr. TP Rajendran, Ex ADG (PP) and OSD, NIBSM, Raipur in the presence of Dr RS Singh, Director, Forensic Science Laboratories, Jharkhand.

The need for harnessing the potential of beneficial insects (BI) to supplement farmers' agricultural income in enhancing their livelihood was emphasized. BI are also highly amenable for incorporation in integrated farming systems. It was pointed out that economic benefit of honey bees through crop productivity much higher than their products and they should be viewed as an input especially for the cross-pollinated crops. It was also felt that there was a need for (i) strong industrial liaison for in appropriate segments of BI, (ii) production of post-Independent compendium of "Fauna of British India," which continues to be an authentic reference book and (iii) Journal of Beneficial Insects, in view of limited publication avenue in some of these sectors. Some of the major recommendations that emerged are:

- Creation of South and SE Asian Network for Natural Resins and Gums, similar to the Network for Natural Gums and Resins in Africa (NGARA), Nairobi, Kenya, with linkage with the latter and the lac producing countries of the world.
- National Mission for Pollinators and natural enemies of pests: To develop a mission-mode programme to integrate pollinators in the agriculture practices, using a system approach. It would also lead to development of a National Policy Paper on Pollinators.

• Support system development in the beneficial insect sector like input supply, credit and marketing support, insurance, etc.

A module on BI may be developed by all the related organizations for use in the educational system of the country: General and Agriculture; this will include course materials suitable for inclusion at different levels (schooland college-levels).



Dr Peter A Kenmore (FAO Representative in India) viewing the poster presentations

#### National Entomologists' Meet

The National Entomologists' Meet was organized jointly by SANRAG and ICAR-IINRG and Network Project on Conservation of Lac Insect genetic Resources (NP-CLIGR) during February 5-7, 2015 at IINRG, Ranchi. The deliberations by the 122 participants of the meet centered around seven theme areas encompassing current and emerging insect pest challenges including resistance, invasive species and outbreaks; integrated pest management; insect vector management; biocontrol agents; biopesticides; chemical ecology; habitat architecture; harnessing insects for economic products; commercial and other beneficial insect farming; impact of climate change, agriculture and anthropogenic activities on insect dynamics; biosecurity; biosafety; biodiversity and conservation; and insect prospecting.

Twenty-four lead lectures were given by eminent entomologists, which highlighted the areas of agricultural entomology which need attention in the present context besides 52 oral and 110 poster presentations, a compilation of which was also released. The dignitaries who were part of the event included: Dr NK Krishna Kumar, Deputy Director-General (Horticulture Science); Dr. George John, VC, Birsa Agricultural University; Dr. TP Rajendran, Former ADG (Plant Protection); Dr. Umesh Srivastava, Former Asst. Director-General (Hort.); Dr R Ramani, Director, ICAR-IINRG, Ranchi; Dr C Chattopadhyay, Director, ICAR-NCIPM; Dr B Vasantharaj



David, Eminent Entomologist and Consultant, besides a number of other senior entomologists from across the country. The meet was organised by Dr KK Sharma, Convener; Dr. Md Monobrullah, Co-convener and Dr. A. Mohanasundaram, Organizing Secretary.

The theme areas of the Meet comprehensively attempted to bring out thrust areas related to insects of agricultural importance with special focus on edible insects. The discussions addressed both desirable and undesirable insect fauna: agricultural pests; commercial insects (lac, silk and honey); edible insects; pollinators and other service providers; soil insects; insects of value in medicine, fashion and ecotourism; etc. The points which emerged during the discussions were crystallized into action points which have been summarized below:

#### Policy interventions (Action: Central/ State Govt.; ICAR)

- Establishment of an Institute of Agricultural Entomology Research: To encompass hitherto unaddressed or underaddressed facets of basic and applied entomological research such as chemical ecology, biosystematics, edible insects, insect tourism, vector management, etc.
- 2. Strengthening the scientific manpower in Entomology of ICAR institutes.
- 3. Modification and finalization of Biosafety and Biosecurity policy in view of emerging scenario.
- 4. Legislation and its execution to prevent illegal trading of edible insects which otherwise lead to the depletion due to unmindful and unscrupulous practices.
- 5. Development of national standards for phytosanitary measures.

#### Infrastructure, support system, services (Action: Central/State Govt.; ICAR)

- Strengthening the national academic infrastructure for capacity building of priority/emerging areas: edible insects, entomotourism, insect vector biology, insect parataxonomy, etc.
- 7. Establishment of IT-based network of agricultural entomologists for exchange of information, consultations, etc.
- 8. Constitution of task force for addressing invasive insect pests.
- 9. Constitution of regional expert panels to address emerging insect pest outbreaks.
- 10. Promotion and support mechanisms including capacity building programmes for establishment of insect biocontrol agents and biopesticides in villages.
- 11. Establishment of biovillages to showcase biointensive pest management (BIPM) for boosting its adoption.

12. In view of acute gap in biopesticide production, a major push for more biopesticide production units for reliable and enhanced production through incentivization and capacity building.

## Research thrusts (Action: ICAR; ICAR institutes; SAUs; Other Universities)

- Creation of national databases of i) Awareness and promotion of edible insects ii) molecular systematics of insects for quick and reliable identification of potential invasive insect pests
- 14. Edible and medicinal insects: Identification of select edible insect species amenable to farming and its development including their nutritional value and farming techniques; documentation of indigenous knowledge and practices.
- 15. Stress on fundamental science research in agricultural entomology: Population genetics of agricultural pests with changing scenario; impact of climate change, agriculture and anthropogenic activities on special and temporal dynamics, behaviour of insects; pesticide residue in food chain including bio-magnification; exhaustive investigations on soil arthropod diversity influenced by agrochemicals; strengthening taxonomic and biosystematics research in agricultural entomology.
- 16. Promotion of multi-cropping to minimize vectortransmitted plant diseases.
- 17. Mission mode programme for increasing crop yields, conservation and fostering of crop-specific pollinators for enhancing crop productivity: habitat configuration based on chemical ecology and through promotion of crop specific *Apis* and non-*apis* pollinators especially in key crops
- 18. Identification of alternate more discriminatory term for "entomophagy" like "insectarian".
- 19. Development of crop, area and season-specific pest calendars for the country.



Dr NK Krishnakumar DDG(HS) addressing the entomologists



#### National Symposium on "Recent Trends in Biopolymers"

A two-day National Symposium on 'Recent Trends in Biopolymers' was organized by IINRG in collaboration with SANRAG at IINRG, Ranchi on February 17-18, 2017. The symposium was inaugurated by Shri Sudarshan Bhagat, Hon'ble Minister of State for Agriculture and Farmers Welfare, Govt. of India. Shri. Prabhakar Behera, General Manager, NABARD, Ranchi and Shri Sanjay Sen, Chairman, Institution of Engineers (India), Jharkhand State Centre, Ranchi were Guests of Honour on the occasion.

The National Symposium was attended by 77 participants from different parts of the country. The presentations were delivered by distinguished invited lectures followed by oral and poster presentations by participants. The oral presentations were conducted through five technical sessions under 5 thematic areas given below:

- Approaches in Production of Biopolymers
- Modern Techniques of Synthesis and Characterization
- Advancement in Processing and Value Addition
- Bio-technological/Nano-technological interventions
- Applications of Green and Sustainable Polymers



#### Release of Souvenir

A total of 8 invited lectures were delivered by Dr. JC Tarafdar, Ex-PS and National Fellow, CAZRI, Jodhpur; Dr. MV Badiger, Chief Scientist, NCL, Pune; Dr. KK Sharma, Director, ICAR-IINRG, Ranchi; Dr. AK Sinha, Director, Central Tassar Research & Training Institute, Ranchi; Dr. RK Dey, Registrar, Central University of Jharkhand, Ranchi; Dr. Gautam Roy, Director, NIRJAFT Kolkata; Dr. GD Mishra, Former Head, Department of Chemistry, Ranchi University and Dr. Niranjan Prasad, Head, PPD Division, ICAR-IINRG, Ranchi. Sixty-two oral and 21 poster presentations were also made by the participants in two-day National Symposium.

The recommendations that emerged during the symposium are as under:

- Shellac based hydrogel can also be utilized in biomedical field of research and found to be suitable for targeted drug delivery for colon specific applications.
- Polysaccharides may serve as gels and associating polymers in biomedical applications due to their excellent properties such as biodegradability, biocompatibility, non-toxic nature, renewability and availability in abundance.
- Water Soluble Polymers (WSPs) show tremendous applications especially in the areas like toothpaste, soap and detergent, food, leather etc. due to their properties to act as thickening agent, stabilizing agent, moisture retention agent and flocculating agent.
- Biopolymers including natural resins and gums have medicinal uses and possibilities should be explored afresh in traditional formulations.
- Lac Integrated Farming System models are helpful for enhancing farmer's income, thereby, increasing lac production and land use diversification.
- Greater need was felt for biological interventions in tassar silk industry which may be helpful for productivity enhancement and generate rural employment.
- Nano induced polysaccharides have shown great potentials for improvement of soil health, which can prove to be immensely useful for farming community.

#### Journey of the Society

- On November 29<sup>th</sup> 2011 Society came into existence with the registration under Society Registration Act 21 1860.
- First General Body meeting held on 8<sup>th</sup> July 2011.
- Second General Body meeting held on 4<sup>th</sup> January 2012.
- Third General Body meeting held on 11<sup>th</sup> October 2012.
- Forth General Body meeting held on 21<sup>st</sup> October 2016.
- Fifth General Body meeting held on 4<sup>th</sup> November 2019.

## First ad-hoc Executive Body of the Society (April 2011 to March 2012)

SI. No.	Designation	Name
1	President	Dr R Ramani
2	Vice President	Dr. A. K. Singh
3	General Secretary	Dr Md Monobrullah
4	Joint Secretary	Dr MF Ansari
5	Treasurer	Dr MZ Siddiqui
6	Assistant Treasurer	Dr Govind Pal



# Second Executive Body of the Society (April 2012 to October 2012)

SI. No.	Designation	Name
1	President	Dr R Ramani
2	Vice President	Dr A Bhattacharya
3	General Secretary	Dr Niranjan Prasad
4	Joint Secretary	Dr Md Monobrullah
5	Treasurer	Dr Govind Pal
6	Assistant Treasurer	Shri Anees K

# Third Executive Body of the Society (November 2012 to October 2016)

SI. No.	Designation	Name
1	President	Dr R Ramani
2	Vice President	Dr A Bhattacharya
3	General Secretary	Dr Niranjan Prasad
4	Joint Secretary	Dr Md Monobrullah
5	Treasurer	Dr AR Chowdhury
6	Assistant	Mr Nandkishore
	Treasurer	Thombare

## Fourth Executive Body of the Society (November 2016 to October 2019)

SI. No.	Designation	Name
1	President	Dr KK Sharma
2	Vice President	Dr MZ Siddiqui
3	General Secretary	Dr Niranjan Prasad
4	Joint Secretary	Dr Thamilarasi K
5	Treasurer	Shri Anees K
6	Assistant	Mr Nandkishore Thombare
	Treasurers	
7	Chief Editor	Dr PC Sarkar
8	Assistant Editors	Dr A Mohanasundaram
		Dr RK Yogi

# Fifth Executive Body of the Society (November 2019 onwards)

SI.	Designation	Name
No.		
1	President	Dr KK Sharma
2	Vice President	Dr MZ Siddiqui
3	General Secretary	Dr NK Sinha
4	Joint Secretary	Dr MF Ansari
5	Treasurer	Er Ranjit Singh
6	Assistant	Mr Tariq Jaman
	Treasurer	

7	Chief Editor	Dr Thamilarasi K
8	Managing Editor	Dr A Mohanasundaram
9	Assistant Editor	Dr RK Yogi

#### **Upcoming events**

SANRAG is organizing a National Symposium on Recent Advances in Beneficial Insects and Natural Resins and Gums at ICAR-IINRG, Ranchi from 15-17 April, 2020 in collaboration with Entomological Society of India, New Delhi, Dr. B. Vasantharaj David Foundation, Chennai and ICAR - All India Coordinated Research Project on honeybees and pollinators, New Delhi.

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