

e-NEWSLETTER**INDIAN SOCIETY OF
AGRICULTURAL ENGINEERS**

.... Connecting Engineers in Agriculture

July-Aug., 2022

**4500 + Life Members****36 Chapters****2 Scientific Journals****Published by****INDIAN SOCIETY OF AGRICULTURAL ENGINEERS**

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Message From The President



***My Dear Countrymen!** The Indian agriculture has golden past. Despite several odds, it has achieved greater heights; and not only feeding more than 1.3 billion Indians, but also supports many needy countries in the world. It is, though, performing outstandingly, has numerous challenges, and you will be happy to know that Agricultural Engineering & Technology is in forefront of contributing in solutions for most of them, including contributions in “save soils” movement by giving several such equipment/machine/technologies. The Indian Society of Agricultural Engineers’ (ISAE) is the only society spearheading its cause and now is leading from the front.*

***The dear team ISAE!** Efforts have yielded results. **The ISAE** has till now conducted eight executive committee meetings, one executive council meeting, six constitution amendment committee meetings, two editorial board meetings of JAE and four that of AET, besides being in close contact with them almost on daily basis. Letters for opening agricultural engineering directorate and employing agricultural engineers in block and district levels in each state had been got written by the Hon'ble cabinet minister of the Central Government. JAE and AET are now open for contributions from any one without ISAE membership. You must have had enjoyed New avatar of AET. Constitution amendment committee has submitted the final version of ISAE constitution, bye-laws and rules and you all have tremendously contributed in form of comments/ views in online mode.*

***Dear Agrineers!** Looking the activities of ISAE, numerous industries, government officials and other societies have shown interests in joining hands with ISAE. Membership drive is on and every two months we are getting more than 150 memberships of the society. During the period, efforts of society towards employment of fellow engineers have also bore fruits. Many vacancies, in state Governments, Central Government and private sectors have come out. ISAE job portal is also getting relevant advertisements, but still a lot has to be done together.*

***Dear ISAEians,** the Country has taken five vows from the red fort on its 76th Independence day. We have to be the developed country by 2047. We cannot change the traditional way of farming overnight and change division of lands amongst family members are also unavoidable. So land degradation and division is difficult to stop, but we can come forward by developing small robots to perform all kind of agricultural operations in tiny land holdings. All agricultural engineers have to get themselves converted to agricultural robotic engineers to lead Indian agriculture to the level of the developed countries. **Dear Foodeneers!** Please come! Join hands! Make a comprehensive programme and implement them in collaborations with ISAE. Together we can complete all five vows taken by Hon'ble Prime Minister for our beloved mother land India.*

S N Jha
President, ISAE

From the Chief Editor's Desk



It is pleasing to note that the Indian Society of Agricultural Engineers (ISAE) is moving into a new phase of its development, towards a growing reputation and reaches to Agricultural Engineering professionals. During the period of July-Aug., 2022, the ISAE has taken several steps for betterment of the society, conducted interaction with Agricultural Engineers, training programmers, ISAE calendar-2023 conceptathon etc..

This newsletter is featured with glimpses of efforts made through activities, training program and interactive sessions, advancement in the field of agriculture engineering conducted during this period of July-Aug., 2022 across the country by various agricultural engineering institutes for dissemination of knowhow to all stakeholders.

A new column of "Do you Know!" has been added in this issue and onwards. I hope the content on various technologies through this e-newsletter will give takeaways on latest technologies to Agricultural Engineering professionals in introducing and implementing the same for benefit of farming community. All ISAE members are requested to send materials related to any column of this e-newsletter by email at iitkanpur.chandu@gmail.com.

Chandra Shekhar
Chief Editor



e-Newsletter Editorial Board



Chandra Shekhar

(Editor-in-Chief)

Astt. General Manager (Engg./IT)

National Seeds Corporation Ltd.

Beej Bhawan, Pusa Complex, New Delhi -110012

Email ID- iitkanpur.chandu@gmail.com

Dr. I L Pardeshi

(Co-Editor-in-chief)

Professor and Head,

Dept. of PHM of Food Grains and Seeds,

PGI PHM, Dist. Raigad (Maharashtra) – 402116

Email ID- ilpardesi123@gmail.com

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ISAE Happenings

Two Executive committee Meetings held on dated 02.07.2022 and 06.08.2022

In these meetings, several discussions and decisions were taken and action plans were made, few are highlighted as under:

1. The president made the members aware about the Scientific Society's Social responsibility (SSSR) and all the members to come up with some plan to fulfill the obligation of society through SSSR.
2. Most of the state chapters have completed the election process and communicated the list of Members elected/ selected to Executive Board of respective chapters. The secretary general will inform the concern chapter, if there is any shortfall in their EB of the chapter
3. A proposal from Dr. P K Pathak, Director (PDFE) for conducting entrepreneurship programme at Srinagar under banner of ISAE and AICRP was approved.
4. Dr. Ambrish Kumar, Vice-President (Technical Council) was given responsibility to get drafted a booklet on "History of ISAE" or "Glorious Six Decades of ISAE" using materials/frameworks/guidelines given by the president.
5. The progress of 56th Annual Convention was reviewed by the President and suggested to VP TC and Sectary General to take stock of the situation at regular interval and help organizers to conduct the best convection on record. In the 2nd meeting, Dr. Raviraj, Dean, TNAU, Coimbatore & convener of next ISAE convention, with his team, presented the progress in preparation of ISAE convention.
6. Dr. Ambrish Kumar, Vice President (Technical Council) presented the final slides selected for ISAE calendar 2023 through Conceptathon, and 12 final photographs/ design after some suggested modifications were selected and decided to give it to Dr. K P Singh, Director (Award) for finalization including machines/ technologies developed by ICAR/SAUs and are being used by stakeholders.
7. Corporate Membership charges was decided unanimously by the EC to raise to Rs. 100000/- (Rupees One Lakhs) w.e.f 16th Aug. 2022.

ISAE Happenings

Two Executive committee Meetings held on dated 02.07.2022 and 06.08.2022

8. It was decided by the EC to distribute the certificate of appreciation to previous executive members of ISAE and awardee of Conceptathon during ISAE convention at Coimbatore.
9. The draft of ISAE constitution was prepared after number of deliberations among the committee members as well as executive members. The draft of ISAE constitution will be tabled before the General body meeting during the convention to be held at Coimbatore for final adoption



ISAE AET new editorial board and new version

The ISAE AET new Editorial Board was constituted and several meetings of editorial board of AET were conducted. The first release of AET by the new editorial board was made in new look/version and format. It contains mostly articles from industries, technical articles from the scientists, upcoming technologies, important news clippings related to aims and objectives of the society. The journal is looking like fully commercial magazines. It has got numerous applauses even from overseas. The users' number for the journal is growing days and nights.



ISAE Happenings

2nd ISAE JAE Editorial Board meeting held on 19.08.2022

During the meeting, the previous performance of each division of the JAE was reviewed and it was requested to accelerate the publications/ number of paper in each volume. Different issues were discussed and following decisions were taken with consensus of each member.

1. All issues of JAE, henceforth, should be sent to the Ministry of Agriculture and other line departments/ ministries of center/ state and to foreign societies/ associations, with which we have MoU, for better visibility of the work of the society.
2. It was proposed to give appreciation letter by President to the best performing editors and associate editors annually on recommendation of editor-in-chief.
3. Editors and associate editors need to speed up the processing of submitted manuscripts and in any case all acceptance/rejection be done within 3 to 4 months.
4. A Logbook in excel sheet with history of all manuscripts must be maintained by all editors for monitoring the status of papers.
5. The need of increasing the number of papers in each issue was discussed and, it was decided that it should be at least 10-12 papers for the time being and slowly we should increase number of papers in each issue.
6. All editorial board members were requested to get at least two research papers of good quality submitted from his/ her labs/group in JAE
7. Editors were requested to get at least one invited/review paper/article published in each issue. They should invite eminent scientists to contribute in JAE
8. Divisional editors were requested to ensure contribution from the international editorial board members in JAE
9. It was informed that the clause for contribution to JAE essentiality of becoming members of ISAE has been removed. Anyone from anywhere can contribute.
10. Editors will ensure that authors review the articles 2-4 in number from JAE for possible inclusion in their manuscripts
11. Journal is to be indexed in SCOPUS/ Google scholar and the web of science. All efforts should be made for inclusion of JAE latest by December, 2022
12. Each editors' account in ISAE Journal management system have to be opened. Details of each editor/ associate editor and editor-in-chief needs to be compiled and sent to website provider
13. The functionality of ISAE online journal management system has to be tested using dry run and if any problem, that should be removed with the help of website provider. If OK, all associate editors/ editors need to develop reviewers' database on this website. The target to use online journal management system fully was kept as 01.01.2023.

ISAE Calendar Conceptathon

For finalizing the ISAE calendar 2023, a conceptathon was organized by ISAE in which students from various Agricultural Engineering Colleges were invited to participate and submit their concepts on Engineering Intervention for Millets. The presentation of the Conceptathon for 2023 ISAE calendar was held on 17.07.2022 in presence of executive committee members in which Organizing committee of Conceptathon from Dr. RPCAU, Pusa and participants of 10 teams were present.

Each participants were given 15 to 20 min to appraise their thought process about the theme, and all the participants presented nicely and given their thoughts to make the calendar richer with their inputs. Concepts of five teams were shortlisted for further consideration and tentative concepts were decided for finalizing the 12 to 15 concepts which will be finalized by the EC in up coming meeting.



ISAE Calendar CONCEPTATHON

Indian Society of Agricultural Engineers invites Designs/sketches/pictures for ISAE Calendar related to Engineering Innovations for Millet

Inviting idea or real case in the form of 12 designs/sketches/pictures for 12 months of the ISAE Calendar matching with activities of that month in relation to engineering for millets.

Last Date of Submission: 30th June 2022

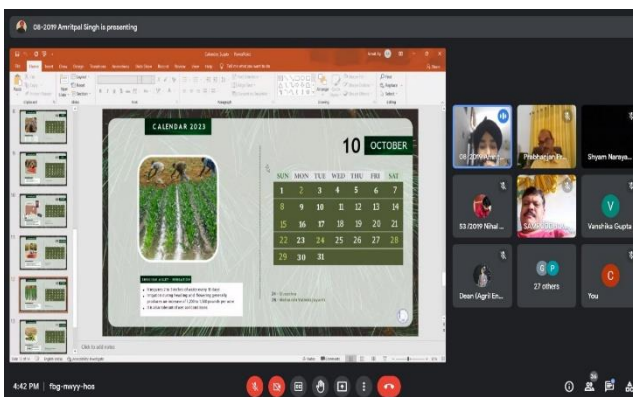
Showcase your INNOVATION Win CASH PRIZES

Nodal Officer: Dr Ambrish Kumar, VP Technical Council, ISAE

Organizing Team
Dr B K. Pranav - Secretary
Dr Ravish Chandra- Member
Dr Vishal Kumar- Member
Er Anupam Amitabh- Member

Technical Team
Er Gaurav Raj
Er Ujjawal Chauhan
Mr Vinit Kumar

Contact for more details
Organizing Secretary
Mob: +91-9436228995
E-Mail: gkpranav@rpcau.ac.in



ISAE Happenings, ODISHA CHAPTER

Journey from CAET to Texas – My Experience, Er. Debasis Mishra

ISAE, Odisha chapter and College of Agricultural Engineering and Technology, OUAT, Bhubaneswar jointly organized a talk for the students on 19.08.2022. Er. Debasis Mishra, PhD Student at Texas A & M University of USA delivered the talk on “Journey from CAET to Texas – My Experience”. Dr. A. K. Goel, Chairman of the Chapter gave the welcome address with a brief introduction of Er. Mishra. Er. Debasis Mishra shared his experiences of failures and successes at CAET, IIT and Texas with the students. He emphasized on good research publications for pursuing higher studies in foreign universities. The students interacted with him regarding the career opportunities and application procedure for higher studies abroad during the question-answer session. Dr. S. K. Dash, Dean, CAET, Bhubaneswar encouraged the students for higher studies and advised them to learn from the experiences of Er. Mishra. About 65 students and 12 ISAE members participated in the programme. Dr. U. S. Pal, Secretary of the Chapter gave the vote of thanks and motivated the students to become the student member of ISAE..



Talk on “Success in Competitive Examinations

A Talk on “Success in Competitive Examinations: A practitioner’s approach” by Dr. S. K. Dash, Dean, CAET, OUAT, Bhubaneswar was organized on 21-07-2022



Brainstorming meet on India@2047: In Agricultural Engineering prospective

The division of Agricultural Engineering, Indian Council of Agricultural Research, recently organized an online meeting with professionals from Agricultural Engineering industries in India to seek their views on the growth and development of Agricultural Engineering technology in India in the next 25 Years.

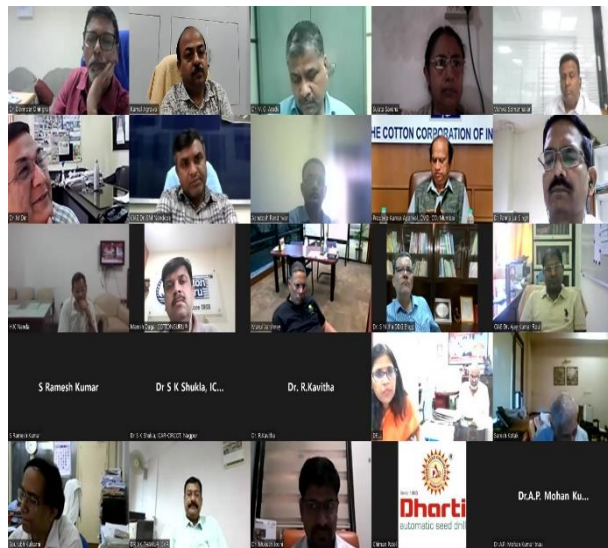
Senior officials and owners on industries, involved in manufacturing of farm machinery and post-harvest equipment, processing and value addition of natural fibers, resins and gums, participated in the discussions along with the scientists from the institutes. More than 110 participants were present. The meeting was chaired by S N Jha, DDG (Agricultural Engineering).

Key participants emphasized upon collaborative research, human upgradation, development of testing facilities and related manpower for equipment/machinery being manufactured using electronic, sensors, artificial intelligence, etc.



Brainstorming session on “Mechanization of HDP cotton planting and picking”

A virtual brainstorming session on “**Mechanization of High Density Planting cotton and picking**” was organized by the Agricultural Engineering Division, Indian Council of Agricultural Research, New Delhi on Aug., 23, 2022 to discuss the present status, strategies, and way forward. The session was chaired by Dr. S N Jha, Dy. Director General (Argil. Engg.), ICAR and attended by officials from ICAR Institutes, Ministry of Textiles, Government of India, CCI, scientists from SAUs, eminent persons from Industries, farmers and FPOs engaged in cotton mechanization.



Dr. S N Jha, Dy. Director General (Argil. Engg.), ICAR in his opening remarks, mentioned that very good processing technologies and gadgets for value addition have been developed for cotton, whereas mechanization of harvesting of cotton is still lacking.

Mrs. Prajкта Verma, Jt. Secretary, Ministry of Textiles, Govt. of India mentioned in her address that there is a huge gap in the quality and quantity of cotton required. There is a need to assess the available cotton strippers developed by private firms to solve the problems in cotton.

Dr. C R Mehta, Director ICAR-CIAE presented the technologies developed by CIAE Bhopal, CICR, Nagpur and other commercially available technologies suitable for cotton planting and harvesting. Dr. V G Arude, Senior Scientist, ICAR-CIRCOT, Mumbai presented the cotton processing technologies to reduce trash content and contamination in mechanically picked cotton.

Dr. Jha thanked the participants from the industries (John Deere, Shaktiman, Dharti Agro) for their active participation in the meeting, and urged the scientists, farmers, and the industries to come together to solve the problems in cotton planting and picking. The need to focus on development of mechanical or robotic cotton harvesters was also emphasized.

Testing of Airless Tire for Agriculture at NSC Farms

National Seeds Corporation Ltd. having large mechanized farms in an Area of 22152 ha is equipped with all the modern farm machinery and irrigation systems. NSC has installed Centre Pivot Irrigation Systems in 1770 ha.

NSC Farms provides opportunities to several Agriculture Machine manufacturers to test their machineries and tools at its farm having vast area and operational requirements. In the similar lines, a Israel based tire company is testing its Air less tires for Centre Pivot Irrigation Systems, which is a new concept in this field. The air less tires are the future and are having several advantages over conventional pneumatic tires.



HAU Student, 1st Drone Pilot of the State

Nisha Solanki, an M. Tech. student at the Department of Farm Machinery and Power Engineering, College of Agricultural Engineering and Technology, Chaudhary Charan Singh Haryana Agricultural University, Hisar (Haryana) has become the first certified drone pilot of the state. Nisha has successfully completed the training of a Directorate General of Civil Aviation Accredited Drone Operator. University Vice-Chancellor Prof. B R Kamboj congratulated Nisha on her achievement.

एचएयू की छात्रा निशा बर्नी प्रदेश की पहली प्रमाणित ड्रोन पायलट

हिस्सा। चौराये चरण सिंह हरियाणा कृषि विश्वविद्यालय (एचएयू) के कृषि अभियांत्रिक एवं प्रौद्योगिकी महाविद्यालय के फार्म मशीनरी एवं पावर इंजीनियरिंग विभाग की छात्रा निशा सोलंकी हरियाणा की पहली प्रमाणित ड्रोन पायलट बनी हैं। उन्होंने चरण विमानन महानिदेशालय से मान्यता प्राप्त ड्रोन ऑपरेटर का सफलतापूर्वक प्रशिक्षण पूरा किया है। विश्वविद्यालय के कुलपति प्रो. बीआर काम्बोज ने निशा को इस उपलब्धि के लिए बधाई दी। कुलपति ने कहा कि ड्रोन का कृषि में बहुत महत्व है। उन्होंने बताया कि फसलों पर पोषक तत्वों, कीटनाशकों व अन्य रसायनों के साथ बीजों के छिड़काव के लिए ड्रोन का उपयोग किया जा सकता है। इससे समय, श्रम, धन की बचत हो जा सकती है और किसानों को भी विभिन्न प्रकार के रसायनों से होने वाले स्वास्थ्य खतरों से बचाया जा सकता है क्योंकि इसके इस्तेमाल से रसायनों और कीटनाशकों का मनुष्य से सीधे संपर्क नहीं होता। उन्होंने कहा ड्रोन से 5-10 मिटर में एक एकड़ भूमि में छिड़काव किया जा सकता है। कृषि अभियांत्रिक एवं प्रौद्योगिकी महाविद्यालय के अभिप्रेता डॉ. कल्याण डोगरा ने बताया कि इस प्रमाणित ड्रोन पायलट कोर्स को करने के उपरान्त निशा को आयेटक, एच-

वीसी बोले- कृषि में ड्रोन का महत्व, फसलों पर पोषक तत्वों कीटनाशकों के साथ बीजों के छिड़काव में ड्रोन का हो रहा प्रयोग



Fb page- Newspaper Articles

ड्रोन से बीजों के अंकुर मिल रहे हैं। फार्म मशीनरी एवं पावर इंजीनियरिंग विभाग की अग्रगण्य डॉ. निखा रानी ने बताया कि निशा सोलंकी कोर्स में एग्जिट की छात्रा हैं। वह भविष्य में पीएचडी को रिसर्च ड्रोन पर करना चाहती हैं। बीजे

प्रदेश की पहली प्रमाणित ड्रोन पायलट बनी निशा सोलंकी



हिस्सा/ 08 जुलाई / रिपोटर

चौधरी चरण सिंह हरियाणा कृषि विश्वविद्यालय के कृषि अभियांत्रिक एवं प्रौद्योगिकी महाविद्यालय के फार्म मशीनरी एवं पावर इंजीनियरिंग विभाग की छात्रा निशा सोलंकी प्रदेश की पहली प्रमाणित ड्रोन पायलट बनी हैं। उन्होंने चरण विमानन महानिदेशालय से मान्यता प्राप्त ड्रोन ऑपरेटर का सफलतापूर्वक प्रशिक्षण पूरा किया है। विश्वविद्यालय के कुलपति प्रो. बीआर काम्बोज ने निशा को इस उपलब्धि पर उसे बधाई देते हुए कहा कि ड्रोन का कृषि में बहुत महत्व है। कृषि अभियांत्रिक एवं प्रौद्योगिकी महाविद्यालय के अभिप्रेता डॉ. कल्याण डोगरा ने बताया कि इस प्रमाणित ड्रोन पायलट कोर्स को करने के उपरान्त निशा को आयेटक, एच-

पायलट कोर्स को करने के उपरान्त निशा को काफी फायदे हुए हैं। उन्होंने बताया उन्हें काफी कंपनियां जैसे आयेटक, एच-ड्रोन से नौकरी के ऑफर मिल रहे हैं। फार्म मशीनरी एवं पावर इंजीनियरिंग विभाग की अग्रगण्य डॉ. निखा रानी ने बताया कि निशा सोलंकी वर्तमान में एग्जिट की छात्रा हैं। उन्होंने बताया कि वह भविष्य में पीएचडी को रिसर्च ड्रोन पर करना चाहती हैं। इस रिसर्च को करने के लिए किसी दूसरे पायलट पर निर्भर नहीं रहना पड़ेगा क्योंकि अब वह स्वयं ड्रोन उड़ाने में सक्षम हैं। इस अवसर पर ओएसडी डॉ. अतुल दोगड़ा, मीडिया एडिटर डॉ. संदीप अग्रवाल आदि उपस्थित थे।

IGFRI Diamond Jubilee Online Lecture Series Organized in Collaboration with ISAE & RMSI

There are many more crops other than cereals, pulses and oilseeds, which might have innovative utilization and have scope for improving livelihood of farmers. In this direction, ABI Centre of Indian Grassland and Fodder Research Institute, Jhansi (ICAR-IGFRI, Jhansi) initiated a lecture series on the occasion of celebrating Diamond Jubilee year (1962-2022) of ICAR-IGFRI, Jhansi and 75 years of independence of India (*Azadi Ka Amrit Mahotsav*) on the third Saturday of every month, from 23rd April, 2022.

The IGFRI Diamond Jubilee Online Lecture Series-2022 on "Entrepreneurship Development in Processing Fodder and Allied Crops" is being conducted online on Zoom platform in association with Indian Society of Agriculture Engineers, New Delhi and the Range Management Society of India, Jhansi.

04 lectures were conducted during April – June, 2022, and following 04 Lecture series were conducted during the period of July – Aug., 2022

1. Current Status of Agri-food Robotics and Artificial Intelligence
2. Prospects of Entrepreneurship from Rural & Urban Wastes
3. Business model canvass and financing innovation: issues and opportunities
4. Entrepreneurship and Agroforestry for timber production



IGFRI Diamond Jubilee Online Lecture Series - 2022
"Entrepreneurship Development in Processing Fodder and Allied Crops"
 Organized by
 Agri-Business Incubation Centre
 ICAR-Indian Grassland and Fodder Research Institute, Jhansi - 284 003
 In Collaboration with
 Indian Society of Agricultural Engineers, New Delhi
 &
 Range Management Society of India, Jhansi

Lecture - 5
 Current Status of Agro-Food Robotics and Artificial Intelligence
 on July 20, 2022 at 14:30 h – 15:45 h

Dr. Puneet Mishra
 Senior Scientist
 Advanced Sensing Technologies and Chemometrics
 Wageningen University & Research, Wageningen,
 Gelderland - Netherlands

Lecture - 6
 Prospects of Entrepreneurship from Rural & Urban Wastes
 on July 20, 2022 at 15:45 h – 17:00 h

Dr. Shiva Dhar
 Principal Scientist
 Agronomy Division
 ICAR-Indian Agricultural Research Institute (IARI)
 PUSA Campus
 New Delhi

Meeting ID: 886 3856 2322
Passcode: 261654

Organizing Team
 Dr. Amaresh Chandra, Director, ICAR-IGFRI and President, RMSI, Jhansi
 Dr. Prabha Kant Pathak, PS & Head, FMPHT Division and PI, ABIC
 Dr. Dana Ram Palsaniya, Principal Scientist (Agronomy)
 Er. Amit Kumar Patil, Scientist (Farm Machinery & Power)
 Dr. Deepak Upadhyay, Scientist (Livestock Production & Management)
 Sh. Kailash Prakash Rao, Chief Technical Officer (AKMU)

For more details, please contact:
 Dr. Prabha Kant Pathak
 Director (Processing, Dairy & Food Engineering) ISAE, New Delhi
 Mob. 9450078170 e-mail: pkpathak65@gmail.com

Dr. Dana Ram Palsaniya
 Secretary, RMSI, Jhansi
 Mob. 9889387292 e-mail: drpalsaniya@gmail.com



IGFRI Diamond Jubilee Online Lecture Series - 2022
"Entrepreneurship Development in Processing Fodder and Allied Crops"
 Organized by
 Agri-Business Incubation Centre
 ICAR-Indian Grassland and Fodder Research Institute, Jhansi - 284 003
 In Collaboration with
 Indian Society of Agricultural Engineers, New Delhi
 &
 Range Management Society of India, Jhansi

Lecture - 7
 Business Model Canvass and Financing Innovations: Issues and Opportunities
 August 20, 2022 at 14:30 h – 15:45 h

Dr. K. Srinivas
 Principal Scientist, Member EAC, SISF
 ICAR: Krishi Anusandhan Bhawan - I
 Pusa, New Delhi - 110 012

Lecture - 8
 Entrepreneurship and Agroforestry for Timber Production
 August 20, 2022 at 15:45 h – 17:00 h

Dr. Arun Kumar Handa
 Principal Scientist
 ICAR-Central Agroforestry Research Institute
 Jhansi - 284 003 (UP)

Meeting ID: 815 7105 1055
Passcode: 20082022

Organizing Team
 Dr. Amaresh Chandra, Director, ICAR-IGFRI and President, RMSI, Jhansi
 Dr. Prabha Kant Pathak, PS & Head, FMPHT Division and PI, ABIC
 Dr. Dana Ram Palsaniya, Principal Scientist (Agronomy)
 Er. Amit Kumar Patil, Scientist (Farm Machinery & Power)
 Dr. Deepak Upadhyay, Scientist (Livestock Production & Management)
 Sh. Kailash Prakash Rao, Chief Technical Officer (AKMU)

For more details, please contact:
 Dr. Prabha Kant Pathak
 Director (Processing, Dairy & Food Engineering) ISAE, New Delhi
 Mob. 9450078170 e-mail: pkpathak65@gmail.com

Dr. Dana Ram Palsaniya
 Secretary, RMSI, Jhansi
 Mob. 9889387292 e-mail: drpalsaniya@gmail.com

An Agrineer at the Exceptional Services in the Country



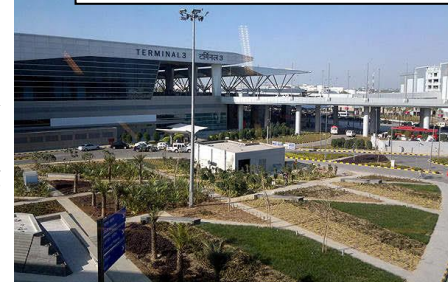
Er. R.D. Borgude

Many of ours might have been to airports like Hyderabad, Bengaluru, Delhi & Mumbai. You may be surprised to know the fact that the infrastructure required to establish greenery and landscape at these airports are an ideas of Indian Agrineer, Er. Raosaheb Damu Borgude. Er. Borgude is Agricultural Engineering graduate from MPKV, Rahuri (Maharashtra) and Postgraduated in Soil and Water Engineering from IIT, Kharagpur (West Bengal).

Bengaluru International Airport



Delhi International Airport



Hyderabad International Airport



Mumbai International Airport



Mumbai International Airport



Presently working with Reliance Industries as Asst. Vice President and Head for Horticulture department and responsible to build the infrastructure to maximize the greenery for refinery project. He has attended many trainings & conferences in Australia, Singapore, Japan, Germany & USA regarding Green infrastructure engineering & waste water management. He has paved the way for Agrineers to enter into such exceptional services in India and abroad. After he left each prestigious job site for his vertical growth, the concerned companies preferred agrineers only, in a row. Now, nearly 15 agrineers are working at different such sites after report built up by Er. Borgude, therein. **Congratulations Borgude!** (Source: Er. RD Borgude).

56 Annual Convention of ISAE

The 56th Annual Convention of Indian Society of Agricultural Engineers (ISAE) and International Symposium is being jointly organized by the Indian Society of Agricultural Engineers, New Delhi and Tamil Nadu Agricultural University, Coimbatore, during November 9-11, 2022 at TNAU, Coimbatore. The theme of the annual convention is 'Agricultural Engineering Innovations for Global Food Security'.

The event will facilitate the researchers, academicians and technocrats to work on their innovative ideas pertaining to smart agriculture practices; precise and automated control of irrigation management systems; postharvest management of crops for quality, safe food; development of energy efficient farm power machinery tools and adaptation of renewable energy technologies in modern agriculture.

Scientific sessions of the convention include lead papers and keynote addresses by national and international experts on the subject. Original research work will also be presented in oral and poster paper sessions.



56th Annual Convention of Indian Society of Agricultural Engineers
on
Agricultural Engineering Innovation for Global Food Security

Hybrid Mode

International Symposium on India @ 2047: Agricultural Engineering Perspective

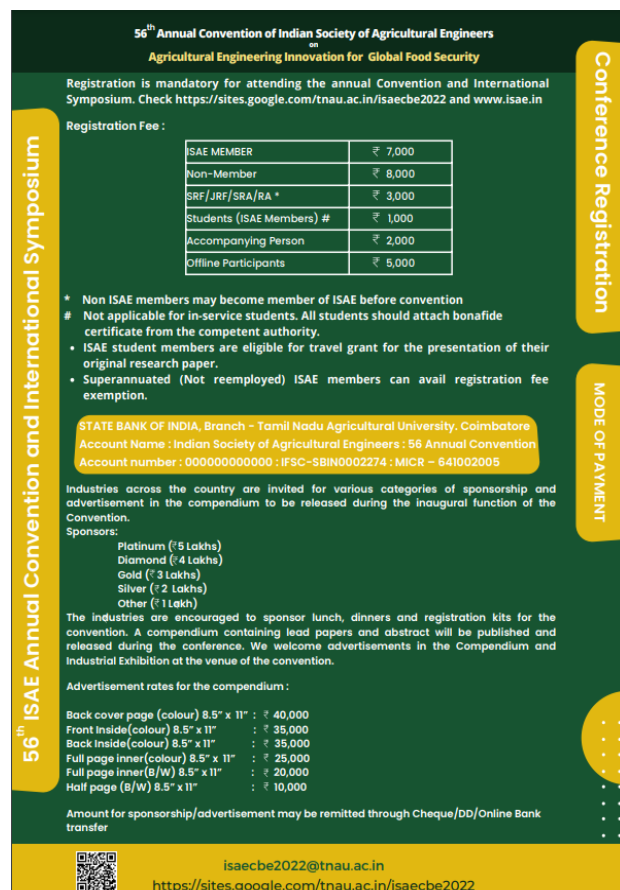
November 9 - 11, 2022 **TNAU, Coimbatore**

Jointly organised by

Indian Society of Agricultural Engineers
New Delhi

Tamil Nadu Agricultural University
Coimbatore

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56th Annual Convention of Indian Society of Agricultural Engineers
on
Agricultural Engineering Innovation for Global Food Security

Registration is mandatory for attending the annual Convention and International Symposium. Check <https://sites.google.com/tnau.ac.in/isaecbe2022> and www.isae.in

Registration Fee :

ISAE MEMBER	₹ 7,000
Non-Member	₹ 8,000
SRF/JRF/SRA/RA *	₹ 3,000
Students (ISAE Members) #	₹ 1,000
Accompanying Person	₹ 2,000
Offline Participants	₹ 5,000

* Non ISAE members may become member of ISAE before convention
Not applicable for in-service students. All students should attach bonafide certificate from the competent authority.

- ISAE student members are eligible for travel grant for the presentation of their original research paper.
- Superannuated (Not reemployed) ISAE members can avail registration fee exemption.

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Industries across the country are invited for various categories of sponsorship and advertisement in the compendium to be released during the inaugural function of the Convention.

Sponsors:

- Platinum (₹5 Lakhs)
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The industries are encouraged to sponsor lunch, dinners and registration kits for the convention. A compendium containing lead papers and abstract will be published and released during the conference. We welcome advertisements in the Compendium and Industrial Exhibition at the venue of the convention.

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56th ISAE Annual Convention and International Symposium

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MODE OF PAYMENT

Do You Know !

Karl Howard Norris, the Founder of Near-Infrared Reflectance Spectroscopy: **An Agricultural Engineer** who worked beyond disciplinary boundaries



MAY 23, 1921–JULY 17, 2019

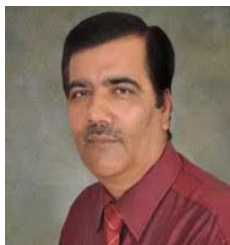
Karl H. Norris was born in Glen Richey, Pennsylvania on May 23, 1921. He graduated in Agricultural Engineering from Pennsylvania State University in 1942. He joined the US Army Signal Corps and received training in advanced radio, electronics, and microwaves at the University of Chicago during 1942–1943 as a part of Armed Services Programme. After his training he served there as an instructor. He offered his services in the Office of Strategic Services and worked in India during World War II.

He started his career as Radio Engineer with Airplane and Marine Instrument Co and served there during 1945–1946. He joined Institute of Radiobiology and Biophysics, University of Chicago as Electronic Engineer in 1946 and served there till 1949. There he developed instruments for biophysical research. Soon after this, in 1950 he joined Instrument Research Laboratory of the USDA Agricultural Research Centre, Beltsville, Maryland as a Research Agricultural Engineer and led the Instrumentation Research Laboratory. With acquired knowledge and expertise in spectroscopy, he focused on the application of near-infrared (NIR) radiation spectrum for quantitative analysis of agricultural samples. He introduced and pioneered the development of NIR spectroscopy for the quick, inexpensive, and precise estimation of protein, oil, moisture, and fiber content of products, especially cereal grains, soybeans, and forages was pioneered and developed by him (Finney, 2021). Almost all of the current use of NIR spectroscopy extends from the work of Karl Norris. Use of NIR spectroscopy for analysis of analytes in food, animal feeds, polymers, wool, textiles, pharmaceuticals, chemicals and petroleum follow the pioneering work of Karl Norris on NIR spectroscopy (Davies, 1998). Recognizing his pioneering work, the international NIR community made him the First Fellow of Near Infrared Spectroscopy (Davies, 1998). He was recognized as founder of the field of near-infrared spectroscopy. He was complimented by the President Dwight D. Eisenhower way back in 1953 for developing the sorting equipment.

Karl Norris was an outstanding Agricultural Engineer with thorough knowledge of physics, mathematics, electronics computing technology. He made a place for himself in scientific community of across the disciplines at a time when Agricultural Engineering profession was still struggling to get recognition. His contribution in development of rapid and chemical-free analysis will always be remembered. He was an excellent human being who shared freely his vast knowledge and expertise with all those who had desire to learn. His discoveries will always inspire students to make career in the field of Agricultural Engineering. The story is lesson for youngsters to do something else than taught. (Contributer: Prof. D. K. Singh, IARI New Delhi)

Do You Know !

Makhana has a geographical indicator (tag) as “Mithila Makhana”



Dr. S N Jha

By the Continuous efforts of several persons leading from BAU Sabour, Govt. of Bihar and Dr. S. Jha, *Makhana* got geographical indicator tag as “Mithila Makhana”. The journey of this was started way back in 1988, when the first post-harvest mechanization work started at IIT Kharagpur. It has now taken full circle from unknown crop to having GI tag of “Mithila Makhana”. Dr. Jha is pioneering in Post-harvest research on *makhana*.

UNITECH TECHNOCRATS

MAKHANA/FOX NUT POPPING MACHINE
GST No. 02AIZPG3748E1Z6



प्रारूप O-2
बौद्धिक सम्पदा भारत

भारत सरकार
GOVERNMENT OF INDIA

भौगोलिक उपदर्शन रजिस्ट्री
Geographical Indication Registry

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भौगोलिक उपदर्शन संख्या:
Geographical Indication No.: 696

CERTIFICATE NO. 421

दिनांक
Date : 14.08.2020

प्रमाणित किया जाता है कि भौगोलिक उपदर्शन (जिसे इस संख्या के साथ उपाख्य है)

के नाम से वर्ग में संख्या के अधीन दिनांक को

के लिए रजिस्टर में रजिस्ट्रीकृत किया गया है।

Certified that the Geographical Indication (of which a representation is annexed hereto) has been registered in the register in the name of **Mithilanchal Makhana Utpadak Sangh at Sahwan Hata, Janta Chowk, P.O. - Purnea, P.S. - K. Hat, Block - Purnea East, District - Purnea - 854 301, Bihar, India** Facilitated by: 1. Bihar Agricultural University, Sabour, Bhagalpur and 2. Director Horticulture-cum-Mission Director, State Horticulture Mission, Directorate of Horticulture, Department of Agriculture, Government of Bihar.

in class 29 under no. 696 as of the date 14.08.2020
in respect of MITHILA MAKHANA Falling in Class - 29 - in respect of - Makhana

आज दिनांक 15th day of August 2022 को चेन्नई में मेरे निदेश पर मुद्रांकित किया गया।
Sealed at my direction this 15th day of August 2022 at Chennai.

रजिस्ट्रार, भौगोलिक उपदर्शन
Registrar of Geographical Indication

Retirement



Dr. Prem Shankar Tiwari, Head Agricultural Mechanization Division, CIAE Bhopal, superannuated on July 29, 2022.

- B. Tech. From GBPUA&T, Pantnagar - 1985
- M. Engg. From GBPUA&T, Pantnagar - 1990
- Ph. D. from JNKVV Jabalpur - 2010

Dr. Prem Shanker Tiwari, was Head, Agricultural Mechanization Division and LCPC, CRP on Farm Mechanization and Precision Farming, ICAR-Central Institute of Agricultural Engineering, Nabibagh, Berasia Road, BHOPAL-462038. He joined ICAR on 5th December, 1989 as a Scientist Trainee at NAARM, Hyderabad, then as a Scientist at CIAE, Bhopal, in 1990. His professional interests include root crop harvesting, power tiller technology, ergonomics and safety in agriculture and linked activities, and precision farming. His professional achievements include the potato digger windrower, operator's seat for power tiller, light-weight power tiller, seed-cum-fertilizer plot drill, human strength measurement set-up, tractor trailer turning indicator, dynapod, controller based seed-cum-fertilizer plot drill, laser sensor based site-specific herbicide applicator, pre-emergence herbicide strip applicator-cum-planter, and field performance evaluation studies. Recently he worked on sensor-based solutions for site-specific and exact application of seeds, fertiliser, herbicides, insecticides, and water. He has written 40 research papers in national and international journals, 40 in seminar/ symposium proceedings, 60 popular articles in newspapers and magazines, 9 technical bulletins, 25 book chapters, 2 books, and 7 folders.

We wish him a happy and healthy post- retirement life.

Joining

Dr. Indra Mani has joined as Vice-Chancellor, Vasantao Naik Marathwada Krishi Vidyapeeth, Parbhani (Maharashtra).



Prof. Indra Mani

Dr. Indra Mani has taken the Charge of Vice-Chancellor, Vasantao Naik Marathwada Krishi Vidyapeeth, Parbhani (Maharashtra). Prior to this, he served as Joint Director, Research and Head, Division of Agricultural Engineering at ICAR-Indian Agricultural Research Institute, New Delhi. During illustrious career spanning 30 years, he has made exemplary contributions in the area of machinery development for agro-residue management, dry-land agriculture, vegetable mechanization, small farm mechanization and equipment for enhancing fertilizer use efficiency. He has guided 23 Ph.D. and 12 M.Tech. Students and published more than 150 papers in peer reviewed national and international journals. The outstanding contributions of Prof Mani have earned him many prestigious awards, to name the few are:

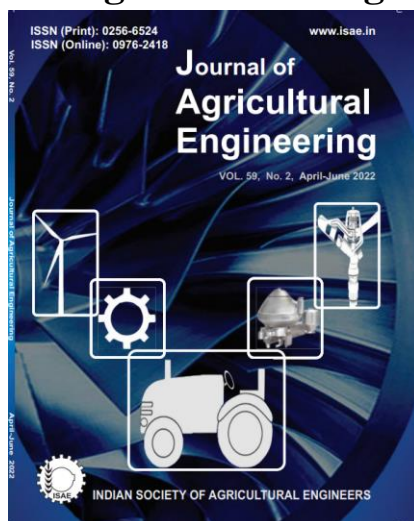
- ICAR -Bharat Ratna C Subramaniam Outstanding Teacher award,
- ASABE Presidential Citation award,
- ICFA Apollo tyres award,
- MoWR ground water augmentation award,
- ICAR-Jawahar Lal Nehru award,
- IARI best teacher award,
- Institution of Engineers Gold medal, ASPEE award,
- ISAE fellowship,
- IE(I) fellowship,
- ISAE team award and ISAE outstanding book award.

Dr. Indra Mani has also served as President ISAE (2018-21) and made remarkable contributions in developing Industry – Institution – farmers – innovators linkage for effective diffusion of technologies.

We congratulate and wish him a best of luck for the future.

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Obituary

Prof. G. B. Bangal, the former Associate Dean, Dr. AS College of Agricultural Engineering and Technology, MPKV, Rahuri (Maharashtra) passed away on Aug. 22, 2022. He was 81.

He did his B. Sc. (Agriculture) from College of Agriculture, Pune (1964), B. Sc. (Agril. Engg.) from Allahabad Agriculture Institute, Allahabad and M. Tech. (Soil and Water Engineering) from IIT, Kharagpur (1979).



He served Mahatma Phule Krishi Vidyapeeth, Rahuri (Maharashtra) from Aug. 22, 1970 in capacity of Assistant Professor, Associate Professor and Professor and got retired as Associate Dean of Dr. AS College of Agricultural Engineering and Technology, Rahuri on May 31, 2002. He was a great teacher and guided several M. Tech. students. He was key person to Govt. of Maharashtra in making soil conservation policies. He also chaired local chapter of Institute of Engineers. After retirement, he served the NGO 'Don Bosco' for its soil conservation works. Society wish his soul Rest in Peace.

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3.	D.M. <u>Kadam</u>	Vice President (Activity Council)	vicepresident_ac@isae.in dmkadam11k@gmail.com	
4.	<u>Ambrish Kumar</u>	Vice President (Technical Council)	vicepresident_tc@isae.in aktswc@gmail.com	
5.	P.K. <u>Sahoo</u>	Secretary General	secretarygeneral@isae.in sahoopk1965@gmail.com	
6.	T.K. <u>Khura</u>	Secretary-I	secretary1@isae.in tapankhura2020@gmail.com	
7.	Chandra <u>Shekhar</u>	Secretary-II	secretary2@isae.in agm.engg@indiaseeds.com	
8.	A.K. Thakur	Treasurer	treasurer@isae.in drakthakur65@gmail.com	



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Contact details

Secretary General: Dr. P K Sahoo

(isae1960@gmail.com)

INDIAN SOCIETY OF AGRICULTURAL ENGINEERS

G-4, A-Block (Ground Floor),

National Agricultural Science Centre Complex,

Dev Prakash Shastri Marg, Pusa Campus, New Delhi-110012

Tel: 011-21520143

Website: www.isae.in

ISAE GSTIN NO.: 07AAATI6307C1Z3