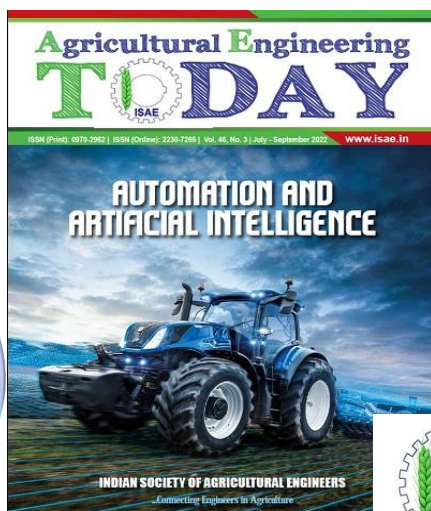


e-NEWSLETTER

INDIAN SOCIETY OF AGRICULTURAL ENGINEERS

.... Connecting Engineers in Agriculture

Sept.-Oct., 2022



5600 + Life Members

36 Chapters

2 Scientific Journals

Published by
INDIAN SOCIETY OF AGRICULTURAL ENGINEERS

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Message From The President



Dear readers! The Indian Society of Agricultural Engineers (ISAE) is working at full speed towards betterment of the Indian Agriculture and food systems. In the changed scenario of world order due to conflict, climate change and COVID, food supply chain is badly affected. The ISAE therefore is organizing a national convention on “Agricultural Engineering Innovation for Global Food Security” and an International Symposium on “India@2047” during 9-11 November at TNAU Coimbatore to become India not only a good but also a reliable global food supplier besides a manufacturing leader in most of items the world needs. The conglomeration of large number of Agricultural and Food Engineers, Food Technologists and Industry officials will discuss the issue thoroughly and will come up with a strategy plan. An Annual General body meeting is also being held side-by-side on the evening of the 9th November. Numerous new changes such as ISAE logo, new name of journals, revised and updated ISAE Constitution, bye-laws and rules etc. are going to be adopted in this historic AGM. You all are earnestly requested to attend and give your valuable input.

Friends! Contributions of ISAE members in in-situ management of crop residues to prevent burning in the northern India is immense and are helping the country to fight against pollution in air in these areas. Several equipment, machinery and products have been developed and commercialized to accelerate the production, processing and income generation of all stakeholders involved in the Indian Agri-food system. I thank all and everyone for these accelerated efforts and achievements. An article published in the September issue of Agricultural Engineering Today on Agri-Food system is a must read article.

Dear Agrineers! During the period lot of activities were held for betterment of state agriculture. Letters were written, committee at ICAR for making a document was made to have a written guidelines for establishing Directorate of Agricultural Engineering in each state. Three meetings of that committee have been held. You must be knowing that now MP's Directorate of Agricultural Engineering is expanded. Odisha, Haryana, Andhra Pradesh etc. have come up with 100s of posts for Agricultural Engineers. In one year I think about thousand posts have been advertised. All those efforts put by the society and their members, and Agricultural Engineering division at ICAR are bearing fruits. For further effect, we have started sending journals and AET physically to all line departments/ministry in the centre.

Dear ISAEians. Parliament Standing committee on Agriculture have taken two sittings only on farm mechanization and on their demand document post-harvest has also been submitted. This is the first time that a separate meeting on Engineering was taken by an apex body. This show the importance. So, friends, the country needs you and your service urgently and earnestly. We have to show our worth ourselves wherever we are. If it is so things will flow automatically. In due course efforts should not get slowed down but accelerated. Numerous initiatives are in store. We will meet and discuss in AGM on the 9th November 2022.

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 reach to Agricultural Engineering professionals/ Agrineer.

The period of Sept.- Oct. 2022 was special, during this period the ISAE has taken several steps for betterment of the society, conducted interaction with Agricultural Engineer, training programmers, finalization of program for the 56th Annual convention, Modification of ISAE logo 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 Sept.-Oct. 2022 across the country by various agricultural engineering institutes for dissemination of knowhow to all stakeholders.

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 .

Chandra Shekhar
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ISAE Happenings

Two Executive committee Meetings held on dated 03.09.2022 and 01.10.2022

In these meetings action taken on previous EC meetings were discussed/ appraised and various discussion for action were made, highlights of which are as under:

1. After thorough deliberation, the committees for evaluation of ISAE awards applications were constituted. The application received for different awards and fellow will be scrutinized as per score card/guidelines for preliminary screening and after that it will be handed over to the respective constituted committee.
2. It was decided that letter of Interest to host the next ISAE convention (2023) may be invited from different institutions. The president ISAE has sent message to all the state chapters.
3. Review of arrangement of upcoming ISAE convention at Coimbatore was made and monitoring is being done by Secretary General and Vice-president (Technical Council) at regular interval.
4. A brief presentation by the organizing secretary regarding the overall preparation of the 56th ISAE convention was made and suggestions of the committee was noted for further action.
5. It was decided that the soft copy of the souvenir will be given in the P&N drive to all the registered participants of the convention in registration kits
6. The platinum sponsors will be given time slot for presentation during industry session.
7. International Symposium should be allotted 2 hours session after inauguration and lead speakers, Chairman/ Co-Chairman etc. were suggested, but were not limited to the suggested ones.
8. The modified logo was approved and was decided to use the same from now every places.
9. It was decided to make Agricultural Engineering Today (AET) an open access with quality contents and advertisement to make it self sustainable.
10. The proposal from Tezpur University to be Co-Organize an international conference in collaboration with Oman University under IASE banner was agreed.
11. The recommendation of the committee constituted for evaluation of application/Nomination on for different ISAE awards (Mason Vaugh Pioneer award, ISAE gold Medal, ISAE best book Award, Best paper award, best reviewer award, commendation Medal, ISAE team Award, ISAE fellow) were approved.

ISAE Happenings

Notice for Annual General Meeting 2022

The 56th ISAE Convention and International Symposium are being organized during 9-11 November 2022 at TNAU Coimbatore. Annual General Body meeting therefore of our beloved society is also called on the evening of the 9th November at the same venue. All honorable members of ISAE are requested to attend and make our society further more professional and vibrant. Agenda of AGM 2022 are:

1. Confirmation of the minutes of last GB meeting held at Patna on Nov 23, 20213.
2. Report by Secretary General
3. Report by Treasurer
4. Ratification of Modified ISAE logo, tagline, change in name of JAE to JAE(India), new/revised format of AET and making it open access, ISAE wall calendar 2023, rent agreement of ISAE flats' renewal, Editorial boards of JAE(I) and AET, removal of Jain irrigation award
5. Information/discussion on work carried out and vacancies of Agricultural Engineers/ opening of Directorate in each state and B. Tech. in each IIT/NIT
6. Discussion and adoption of circulated Draft Revised and updated Constitution, Byelaws and rules
7. Review of organization of ISAE Convention
8. Venue of next ISAE convention in 2023 10. Any other matter with the permission of the Chair

Activity of ISAE, Odisha Chapter

A talk was jointly organized by ISAE, Odisha chapter, IDP-NAHEP and College of Agricultural Engineering and Technology, OUAT, Bhubaneswar on 03.09.2022. Er. M Barik, Plant General Manager, Veolia North America delivered the talk on "My journey from CAET in search of excellence". Dr. R. C. Dash, Principal Investigator, IDP-NAHEP gave the welcome address with a brief introduction of Er. Barik. Er. M. Barik described his journey for higher studies abroad and shared his work experiences in power plant and chemical plant. He discussed on the scope and opportunity of Agricultural Engineering degree in diversified fields. Dr. S. K. Dash, Dean, CAET, Bhubaneswar, in his concluding remark stated that a well defined vision, effort and dedication are the key factors for success. He also motivated the students to excel in their career citing the example of Er. Barik. About 50 students and ISAE members participated in the program.



ISAE Happenings

Activity of ISAE, Rajasthan Chapter

1st meeting of ISAE Rajasthan Chapter was organized in Jodhpur, The Chairman Dr. R K Agrawal, Vice Chairman Dr. Bhagirath Vishnoi, Secretary Dr Yogesh Chandra Gaur discussed on increasing productivity, processing of agriculture produce and transport to urban areas, rain water harvesting, ground water recharge and use of renewable energy.



भारतीय कृषि अभियंता संघ के चेयरमैन ने ली इंजीनियरों की बैठक

जोधपुर। भारतीय कृषि अभियंता संघ राजस्थान राज्य चैप्टर की पहली बैठक जोधपुर में आयोजित की गई। इसमें चेयरमैन आरके. अग्रवाल, वाइस चेयरमैन भागीरथ विशनोई, सचिव योगेशचंद्र गौड़, मानद सदस्य तन्मय सैन ने संबोधित किया। बैठक में मारवाड़ प्रान्त के कृषि अभियंताओं ने भाग लिया। बैठक में कृषि अभियंताओं का ग्रामीण एवं शहरी क्षेत्रों में कृषकों के उत्पाद को बढ़ाने एवं कृषि उत्पादों का प्रोसेसिंग कर शहरों तक पहुंचाने का कार्य, वर्षा जल संचयन, भू-जल पुनर्भरण, पारम्परिक एवं अक्षय ऊर्जा क्षेत्र में किए गए सफलतापूर्वक कार्यों के बारे में चर्चा की गई। कृषि अभियंता संघ की आजीवन सदस्यता अधिक से अधिक कृषि अभियंता को लेने हेतु प्रोत्साहित किया गया। राष्ट्रीय स्तर के संवैधानिक मंच से जुड़ने के फायदे भी बताए गए। भारतीय कृषि अभियंता संघ इंडियन सोसायटी ऑफ एग्रीकल्चर्स इंजीनियर्स (नई दिल्ली) के नाम से सन् 1960 में बनाया था। राजस्थान राज्य का चैप्टर 1986 उदयपुर में बनाया गया था।

ICAR-IARI issued Notification for UG Programs including BTech (Ag. Engg.)

Division of Agricultural Engineering, IARI (Established in 1945) is one of the oldest Departments established in any educational institution in India after the Department of Agricultural Engineering at AAI Allahabad (now Prayagraj). It has been offering Masters and PhD programme in three sub-disciplines of Agricultural Engineering and as of now IARI does not have UG programme.



National Education Policy-2020 provided an opportunity to expand the academic activities of IARI, and ICAR- IARI has provided opportunity to the Division of Agricultural Engineering to start UG programme. About 100 years back in 1923 IARI has started Diploma of Associateship of IARI (Associate IARI) which was recognized as equivalent to the M.Sc. degree of Indian Universities by the Ministry of education in 1949. This is another historic decision by the institute.



Engineers Day Celebration @ ISAE

National Engineers Day is celebrated every year on September 15, commemorating the birth anniversary of Bharat Ratna Mokshagundam Visvesvaraya, one of the best engineers of the nation. On this occasion ISAE celebrated the Day across the country through various program conducted by ISAE chapters. The glimpse of few are as under:

ICAR-CIPHET, Punjab Chapter:



ISAE, Andhra Pradesh Chapter : ISAE, Andhra Pradesh Chapter at Dr. NTR College of Agricultural Engineering, Bapatla, Andhra Pradesh celebrated Engineers Day



ISAE Ranchi, Jharkhand Chapter : The College of Agricultural Engineering, BAU, Ranchi & Indian Society of Agricultural Engineers, New Delhi, Jharkhand Chapter Ranchi at Smart Lecture Hall cum Examination Hall, CAE, Ranchi



ISAE Sikkim Chapter and CAEPHT-CAU, Ranipool, celebrates Engineer's Day



GANGTOK, SEPT 15/-// Indian Society of Agricultural Engineers (ISAE), Sikkim Chapter and College of Agricultural Engineering and Post Harvest Technology (CAEPHT), Ranipool Sikkim celebrated 55 th Engineers' Day in the old auditorium of CAEPHT today. Prof. P. P. Dabral, Dean, CAEPHT and Patron, ISAE Sikkim Chapter graced the function as the Chief Guest of the programme. Dr. G. T. Patle, Chairman, ISAE Sikkim Chapter welcomed the chief guest and other dignitaries, faculties, staff and students. Dr. G. T. Patle, Chairman ISAE Sikkim Chapter informed the august gathering about

the activities of Indian Society of Agricultural Engineers (ISAE) and paid tribute to the Bharat Ratna Sir M. Visvesvaraya.

He explained role of engineers in the present era for nation building and food security. Prof. B. C. Kusre, Director SWE, ISAE, New Delhi delivered the speech on aspect of agricultural engineering and future prospects for engineers and also dwelt on the biography of Bharat Ratna Sir M. Visvesvaraya. Prof. M. S. Seveda, Director Membership & Public Relation, ISAE, New Delhi delivered speech on smart engineering for better world. Prof. P. P.

Dabral, Chief Guest of the programme encouraged the enthusiastic engineers for developing smart techniques for the wellbeing of farmers and the society. He urged to extend ISAE Sikkim Chapter activities by engaging more agricultural engineers. Dr. Sudhir Kharpude, Secretary, ISAE Sikkim Chapter encouraged the students for developing technologies for farming community and also extended the vote of thanks. Er. Uttarkash Dwivedi, Er. Apaksha and Er. Manisha, Councillors of ISAE Sikkim Chapter extended the support for successful organization of 55 th Engineers' Day (EODC)

Engineers Day Celebration @ ISAE

ISAE-Bihar Chapter and CAET, Pusa : The event was jointly organised on this auspicious occasion by ISAE-Bihar Chapter and CAET, Pusa in hybrid mode. The event was convened by Dr. Ambrish Kumar, Dean, CAET, in support of the co-convenor Dr. R. Suresh and organising team with Dr. Vishal Kumar and Er. Anupam Amitabh and Er. Ankit Kumar from CAET, Pusa



कृषि अभियंत्रण महाविद्यालय में अभियंता दिवस आयोजित

पूसा, निज संवाददाता। डॉ. राजेन्द्र प्रसाद केन्द्रीय कृषि विवि कृषि अभियंत्रण महाविद्यालय में गुरुवार को 55वां अभियंता दिवस मनाया गया।

इसमें भारत रत्न व महान अभियंता भारत रत्न डॉ. मोझमुदम विश्वेश्वरैया के चित्र पर माल्यार्पण कर श्रद्धांजलि दी गयी। समारोह में मुख्य अतिथि भंडारण विकास एवं विनियामक प्राधिकरण के सदस्य हरप्रीत सिंह (ऑनलाईन), एफसीआई, पटना के उप महाप्रबंधक चन्द्रसेन कुमार व एग्रीवील कंपनी के ई. रौशन कुमार उपस्थित थे। इस दौरान



कृषि अभियंत्रण महाविद्यालय में आयोजित अभियंता दिवस में मौजूद अधिकारी।

रेल ऑफ एग्रीकल्चर ग्रेजुएट्स इन एग्रीवेयरहाउसिंग सेक्टर विषय पर बेविनार हुआ।

प्रारंभ में स्वागत डीन डॉ.अम्बरिश कुमार ने किया। मौके पर डीन ने पीजी डिप्लोमा इन कृषि भंडारण प्रबंधन एवं

बोटिक खाद्य प्रौद्योगिकी पर विस्तार से चर्चा की। मौके पर डीन डॉ.पीपी श्रीवास्तव, निदेशक शिक्षा डॉ.एमएन झा, निदेशक योजना डॉ. आरती सिन्हा, डॉ. रामसुरेश, डॉ. एसके पटेल, डॉ. पीडी शर्मा, डॉ. एसके जैन, डॉ. एसपी गुप्ता, डॉ. विशाल कुमार, ई. अनुपम अमिताभ, ई. सुभाष चन्द्रा आदि मौजूद थे। इधर विवि के कार्यपालक अभियंता कार्यालय में अभियंता दिवस समारोह की अध्यक्षता ई.पुर्णेन्दु कुमार, ई. विपीन कुमार समेत अन्य अभियंता मौजूद थे।

ISAE-Anand Chapter and CAET, Godhra : The collage of Agricultural Engineering & technology, Godhra and ISAE, Anand Chapter celebrated Engineers Day at conference hall CAET Godhra.



Launch of ICAR-CIAE tractor operated drum type pneumatic planter

ICAR-CIAE Bhopal has developed a tractor operated drum type pneumatic planter suitable for precision planting of seeds of crops such as cotton, maize, groundnut, grams, pigeon pea, soybean, rice and other small seeds. This technology has been developed by Dr. BM Nandede and team of scientists of Agricultural Mechanization Division.

Developed planter is low cost, nine row unit and can be extended up to 18 rows as per the spacing requirement. Single and multiple seeds can be sown at a place by having single/multiple orifices at a place on the periphery of the drum. It is available with smart seed planter kit in which one has to enter the row to row spacing and planter will adjust drum speed to match the row spacing irrespective of the tractor forward speed. Moreover, it provides information about area of coverage and cost of operation based of the working hours and non-working duration of the machine. It is also available without smart kit in which seed spacing can be changed by changing the speed ratio. It can save the precise seeds as compared to other mechanical planters. The cost of the machinery is about one third the cost of other commercially available pneumatic planters in the market.

Patent on the developed pneumatic metering mechanism of the planter has been filed and the machinery has been released for commercial manufacturing by the Institute. The technology was launched for commercialization by a licensee manufacturer M/s Dharti Agro Engineering, Rajkot, Gujarat in Agri World Expo 2022 held at Rajkot, Gujarat during September 16-18, 2022. About 200 manufacturers and 20000 farmers visited the demonstration of the machine on stall of the Dharti Agro Engineering in the Expo.



ICAR-CIPHET, Ludhiana Organised Makhana Stakeholders Meet at ICAR-Makhana Research Center Darbhanga

Makhana has been proven to be high nutrients food which is rich in medicinal properties and good for daily health diet. The crop is high value commodity, commercially cultivated mainly in Mithila region of Bihar. To give boost in this sector, ICAR-CIPHET, Ludhiana in collaboration with ICAR-Regional center on Makhana, Darbhanga organised a one day Stakeholders meet on Makhana on 5th Sept. 2022. the programmed was attended by Makhana Growers, Manual makhana popping workers, makhana processors and various govt. officials

The programme was inaugurated by Sh Shanjay Saraogi, Hon/ble MLA, Darbhanga. Dr. SN Jha, DDG (Engineering) ICAR, New Delhi presided over the function . Others present were Shri Rajiv Roshan, IAS, Distt Magistrate, Dharbanga, Dr. M S Kundu, Director Extension Education, Dr. RP Central Agril University, Dr. Ashutosh Uphadhyaya, Director ICAR-research complex of Eastern Region, Patna, While the programme was hosted by Dr. Nachiketa Kotwaliwale, Director ICAR-CIPHET, Ludhiana,

Director CIPHET presented overview of post harvest processing technology of makhana and other food commodities.

Entrepreneurs, Farmers and makhana processor discussed difficulties in makhana production and processing. It was suggested that for the development of makhana it is necessary to have an active collaboration between makhana research centre and ICAR-CIPHET, Ludhiana. It was further suggested that the makhana research centre may be converted to regional centre of ICAR-CIPHET, so that mechanization is promoted appropriately.

Dr. S N Jha emphasizes on the historical importance of makhana in the development of this region. He also requested farmers to use mechanized way of popping of makhana for higher productivity, health of workers and income generation. In his address, he requested to organize makhana Mahotsav on the occasion of Kojagra festival celebrated on Sharad Purnima in Mithila region






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

In continuation to 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.



08 lectures were conducted during April – Aug., 2022, and following 03 Lectured series were conducted during the period of Sept.-Oct. 2022

1. Innovation and prospects of MSMEs in the Agriculture Sector of India
2. Entrepreneurship Potential and Opportunities in Natural resin and Gums for Start-ups
3. Prospect of green technologies in processing sector and next generation of future food for entrepreneurship development


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 - 9
 Innovation and Prospects of MSMEs in the Agriculture Sector of India




Sept. 17, 2022 at 14:30 h – 15:45 h

Speaker

 Dr. K.K. Goyal
 Director, MSME & Start-ups
 All India Forum of MSME Delhi
 (Retired Assistant Director,
 Ministry of MSME, Govt of India, Delhi)

Lecture - 10
 Entrepreneurship Potential and Opportunities in Natural Resins and Gums for Start-ups

Sept. 17, 2022 at 15:45 h – 17:00 h

Speaker

 Dr. Niranjana Prasad
 PS & Head, MPE Division and
 Project Coordinator
 AINP on Harvesting, Processing and
 Value Addition of Natural Resins & Gums
 ICAR - Indian Institute of Natural Resins and Gums, Ranchi
 - 834 010, Jharkhand

Meeting ID: 833 8119 4457
 Passcode: 17092022

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)

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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 - 11
 Prospects of Green Technologies in Processing Sector and Next Generation of Future Food for Entrepreneurship Development

Oct. 14, 2022 at 15:15 h – 16:15 h

Speaker

 Dr. Sunil Pareek
 Head, Department of Agriculture & Environment
 Sciences NIFTM, Kundli, Sonapat (Haryana)



Meeting ID: 827 6675 1174
 Passcode: 14102022

Organizing Team

Dr. Amaresh Chandra, Director, ICAR-IGFRI and President, RMSI, Jhansi
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Dr. Dana Ram Palsaniya
 Secretary, RMSI, Jhansi
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For e-Certificate, please write to pkpathak65@gmail.com

Registration Link on Google
https://docs.google.com/forms/d/e/1FAIpQLSulUNQ0B1LcLxLo3XS_E9gTh6wNGzPPXNAsbzZ1Ap5BXqicYg/viewform?usp=pp_url&entry=1215977735&Option=1&entry=14121526&Option=1

The 56th Annual Convention of ISAE

The 56th Annual Convention of Indian Society of Agricultural Engineers (ISAE) and International symposium is being jointly organized by Indian Society of Agricultural Engineers, New Delhi and Tamil Nadu Agricultural University, Coimbatore, during 9-11 November 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.

President ISAE has invited all the members to attend the said convention, International Symposium and annual AGM and grace the occasion.



INDIAN SOCIETY OF AGRICULTURAL ENGINEERS

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National Agricultural Science Centre (NASC) Complex
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ISAE GSTIN No: 07AAAT16307C1Z3

DR. S. N. JHA, ARS

FISAE, FNAAS, FIE, FNADSL, FJSPS Japan

ISAE & ISI Gold Medalist, LMAFSTI, LMDTSL, LMIDEA

ICAR's Rafi Ahmed Kidwai Awardee

President

F. No. 02-56th/ISAE/2022

Dated: 22/09/2022

Subject: Invitation to grace the occasion of the 56th Annual Convention of Indian Society of Agricultural Engineers (ISAE) and International Symposium during November 9-11, 2022 at TNAU, Coimbatore

Dear Member,

It is our pleasure to inform you that the Indian Society of Agricultural Engineers is organizing it's the 56th Annual Convention on "Agricultural Innovation for Global Food Security" and International Symposium on "India @2047: Agricultural Engineering Perspective" during November 9-11, 2022 at TNAU, Coimbatore, India. The theme of the convention is chosen in the context of the pivotal role played by the agricultural engineers in ensuring India's food security in present day scenario.

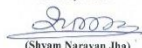
The event shall connect the researchers, academicians, technocrats, industrialists and entrepreneurs including students to all stakeholders of Engineering in Agriculture. It will give exposure to latest researches, technologies transferred and entrepreneurship being developed during three days' deliberations to all participants. As India is aspiring to be the developed nation by 2047, an international symposium side-by-side is also being organized on theme India@2047:in Agricultural Engineering perspectives for visualizing, analyzing the situation and making an implementing plans as vision documents of ISAE. In addition, Annual GB of this time is going to be an historic event as completely revamped, revised, updated and elaborated ISAE constitution, bye-laws and rules; change of name of JAE, ISAE logo etc. are going to be deliberated and adopted. ISAE will calendar 2023 on concept of "India celebrates International year of millets" will also be unveiled during the inauguration of the events on the 9th November 2022.

You are a pillar of your own discipline and are having vast experiences in the field, your presence shall definitely motivate us and several youngsters to shape the plan and to do much more to become our mother land a truly the developed country by 2047.

It is our great pleasure to invite you to attend the said convention, International Symposium and Annual AGM and grace the occasion during November 9-11, 2022 at TNAU, Coimbatore and oblige. The copy of Information Brochure is enclosed herewith for your kind perusal and planning to attend this historic event of your beloved Society.

With kind regards,

Sincerely Yours


(Shyam Narayan Jha)
President, ISAE

Mobile: 9417601715, E-Mail: snjha_ciphet@yahoo.co.in, www.snjha.in



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

International Symposium
on
India @ 2047: Agricultural Engineering Perspective

November 9 - 11,
2022

TNAU,
Coimbatore

Hybrid
Mode

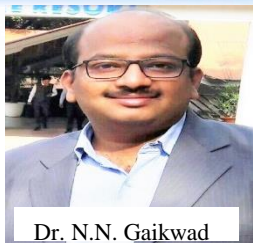
Jointly organised by

Indian Society of Agricultural Engineers
New Delhi

Tamil Nadu Agricultural University
Coimbatore

isaecbe2022@tnau.ac.in
<https://sites.google.com/tnau.ac.in/isaecbe2022>

A unique patent on Pomegranate Seed Oil Extraction Process: Granted to an Agrineer



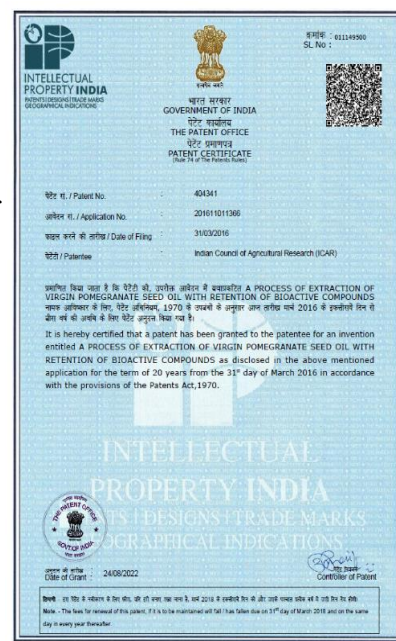
Dr. N.N. Gaikwad

Dr. Nilesh N. Gaikwad, Senior Scientist from ICAR-National Research Centre on Pomegranate, Solapur, Maharashtra has been granted patent for his innovation "A Process for Extraction of Virgin Pomegranate Seed Oil". Dr Gaikwad and Dr R K Pal has developed a process protocol for the extraction of pomegranate seed oil through cold press technique.

Pomegranate seeds are the byproduct of the juice processing industry. The pomegranate aril contains a seed which is around 4-10% of fresh fruit weight. Pomegranate seeds are an excellent source of dietary fiber, rich source of various minerals and micronutrients (K, P, Mg, Ca, Zn, Mn, and Fe) and has unique profile of fatty acids. The pomegranate seed oil is a unique natural product with major component of polyunsaturated fatty acids (PUFA). Indian soft seeded cultivars of pomegranate such as Bhagawa and Ganesh has around 25-26 % (v/w) of pomegranate seed oil. Pomegranate seed oil consists of 65-80 % conjugated fatty acids, the most important of which is puniceic acid (9-*trans*-11-*cis*-13-*trans* octadecatrienoic acid). Conjugated fatty acids are important because they inhibit eicosanoid metabolism at several points in the synthesis of prostaglandins from arachidonic acid. This makes them significant natural anti-inflammatory agents. Pomegranate seed oil contains other significant bioactive compounds, for example, it is the richest known plant source of a steroidal estrogen, estrone. Other important compounds found in pomegranate seed oil include gamma-tocopherol a rare and potent form of Vitamin E and phytosterols i.e., beta-sitosterol, stigmasterol, and campesterol, etc. Seed oil has been linked to improving heart health, skin health and also indicates to protect against cancer and atherosclerosis.

Dr. Gaikwad has standardized protocol for extraction of pomegranate seed oil through cold press technique for which he has been granted patent. The patented industrial scale cold press technique of pomegranate seed oil extraction includes cleaning and separation of pulp from the seeds, drying, size reduction and extraction of oil in cold press. The technology of pomegranate seed oil extraction has been transferred to M/S Sam Agri., Telangana and M/S Ortiz Beverages, Maharashtra. Since, pomegranate seed oil is very sensitive to light, temperature and easily undergo cis/trans isomerization. In recent past Dr Gaikwad has successfully encapsulated the pomegranate seed oil using ionic gelation technique and spray drying technique for retention of its quality during storage. He has worked on microwave pretreatment of pomegranate seeds for improvement in recovery and quality of oil, utilization of the de-oiled pomegranate seed cake for development of fiber rich cookies. We congratulate Dr. Gaikwad and his team on their achievements.

(Source: Dr. N. N. Gaikwad, Sr. Scientist, ICAR-NRC on Pomegranate, Solapur, Maharashtra).



GI tagged products appeared on Postal Special covers: Extraordinary efforts by Agrineer in Indian Postal Services (IPoS)



Er. R. K. Jayabhaye

Recently, Pune Region Celebrated Philately Day by releasing three Special Covers: 1. Special Cover on G.I tagged "Ambemohor Rice", 2. Special Cover on G.I tagged "Purandar Fig" and 3. Special Cover on "Tomato" on the theme of "One District One Product" by **Shri. Ramchandra Kisan Jayabhaye, Postmaster General, Pune Region, Pune**, in the presence of Smt Simran Kaur, Director Postal Services, Pune Region, Capt Dr. Anjali Dutta, President, Deccan Philatelic Society (Sponsor), Col. Shri.R.K Chavan, Treasurer, Army Philatelic Society (Sponsor), Shri.Appasaheb Kalbhor, President, Akhil Maharashtra Anjir Utpadak Sanshodhan Sangh, Pune., Shri. Harish Mengade, President, Mulashi Taluka Ambemohor Savardhan Sangh and other members of these associations.



Presently Postmaster General in Pune since May 2022. as an officer of the Indian Postal Service (IPoS), Er. Ramchandra Kisan Jayabhaye, topper of 1996 B. Tech. (Agri. Engg.) batch from Annasaheb Shinde College of Agricultural Engineering, MPKV, Rahuri, has number of GI tagged products brought on postal special covers to his credit. He was instrumental in releasing a special cover on Vikram Trombay Chattisgarh Rice (a variety developed jointly by BARC and Indira Gandhi Agricultural University Raipur useful in making murmuras, less expensive in production and yielding 60 quintal per hectare), besides special covers on GI tagged products -Jeeraphool rice and Baster wooden and iron craft - last year as Postmaster General Chhattisgarh Circle at Raipur

He did M. Tech in 1998 in Post-Harvest Engineering from IIT, Kharagpur and was selected in TISCO Systems, through campus selection at IIT, Kharagpur. He later joined Small Industries Development Bank of India (SIDBI) as Assistant Manager & in Reserve Bank of India (RBI) as Manager in years 1998 & 1999. He passed Civil Services Examination (UPSC) in 1998 with 352nd rank.

He joined the Indian Postal Service (IPoS) on 10.1.2000 and has served in the Department of Posts in various capacities at Ongole, Goa, Mumbai, Aurangabad, Nagpur, Pune, Ahmedabad, Bhopal and Raipur and was involved in implementation of various projects of the department of posts like Project Arrow, Mail Network Optimisation Project, IT Project-2012, Post Office Passport Seva Kendras and Aadhar centres, India Post Payments Bank.

(Source: Shri. R.K. Jayabhaye, IPoS, Postmaster general, Pune)



Success Story SAFARMS, Srinagar, Kashmir

Saffron is a very important high value spice and a cash crop of Kashmir. Regardless of its high demand for consumption and massive production potential, the future of saffron production is still uncertain in Kashmir valley. Saffron is considered as a cultural asset and is associated with substantial amounts of indigenous knowledge. It is a very important part of the heritage of Kashmir. According to a legend dating back to the 12th century, two Sufi saints planted the saffron corms in the Karewas of Kashmir. It is a very special crop for the people of Kashmir. Kashmir, despite being one of the oldest historical saffron-producing areas, is now facing a rapid decline. Lately, Kashmiri saffron has been tagged as a geographical indication that would help increase its prominence in the world market.

Leading a meaningful, purpose-driven life was all Maliqa, an Agricultural Engineering graduate wanted to learn, create, contribute and make a difference, however small it was. Maliqa gained cognizance of this problem during a saffron conference that she attended during her bachelors. During her M.Tech, she worked on developing soil-less farming systems and evaluating their performance under the temperate conditions of Kashmir. She later published this study in one of the leading journals of Soil and Water Conservation Engineering under the title “Evaluation of hydroponic systems for the cultivation of Lettuce (*Lactuca sativa* L., var. *Longifolia*) and comparison with protected soil-based cultivation”. After concluding her research, she realized that soil-less farming could possibly offer a solution to the saffron production problems. With this as the guiding light and under the mentorship of Dr. Junaid N. Khan, she worked on developing a prototype for the soil-less cultivation of saffron. Her technology offers an engineered way of growing saffron that utilizes a soil-less growth medium and a nutrient solution optimized through intelligence algorithm and IoT to deliver the calculated resources to the saffron bulbs. With her technology, she is taking saffron farming to a vertical dimension. Her farming systems have a control toolbox that offers a simulation of the intellectual processing ability of humans and helps growers make informed and timely decisions about the saffron crop. The technology aims at helping urban growers, tech-savvy growers, and marginal farmers.

First of its kind smart vertical soil-less farming system for growing saffron that offers an affordable but technical solution to the hitches faced in traditional saffron production



Formation of ravines is continuous process and it is faster and more severe on the alluvial soil of Chambal valley. The process is continuing unabated year after year, and it is estimated that ravines have affected 948 villages in Bhind and Morena Distt. The ravines are eating into the social life of the villages and some villages have already gobbled up completely by Chambal Ravines and were required shifting to a new site

For this purpose Government of Madhya Pradesh has been allotted 885.34 ha. Land to Ministry of Agriculture and Farmers Welfare in 4 villages of Morena District (Gadoura, Jakhona, Rithora Khurd and Gorkha). This Farm play constructive role for development of area For establishment of Farm was initiated and after several discussions with Scientists/team of Experts, methodology and study requirement was assessed for development planning of ravines into Agriculture Farm. The development activity of the farm started by Engineering team of NSC in Sept.2022



Establishment of Mechanized Farm by redemption of Chambal Ravines

The Farm was inaugurated by Hon'ble Minister of Agriculture and Farmers Welfare, Govt. of India on 25th Sept. 2022, in Jakhona village of Morena Distt. the highlights of the speech area as under :

- Ravines will be developed to modern mechized farm
- The farm will demonstrate the advance technique of seed production, farming and ravines development to the farmers
- The farm will be helpful in improving the socioeconomic condition of the area



कृषि एवं किसान कल्याण मंत्रालय, भारत सरकार मुरेना में एनएससी के जैविक बीज फार्म का केंद्रीय कृषि मंत्री ने किया शिलान्यास

राष्ट्रीय चंबल वन्य जीवअभयारण्य की 207 हेक्टे.

भूमि केंडी-नोटिफिकेशनका निर्णय- श्री तोमर

अभयारण्य क्षेत्र राजस्व भूमि होने से रेत उपलब्धता स्थानीय स्तर पर होगी, रोजगारबढ़ेंगे बीज फार्म से किसानों को उच्चउपज के बीज मिलेंगे एवंसामाजिक-आर्थिक स्तर सुधरेगा



उनका सामाजिक-आर्थिक स्तर सुधरेगा इस मौके पर श्री तोमर ने घोषणा की कि पर्यावरण, वन, जलवायु परिवर्तन मंत्रालय ने राष्ट्रीय चंबल वन्य जीवअभयारण्य की 207 हेक्टे. भूमि डी-नोटिफिकेशन करने की अनुमति बड़ाफैसला लिया है। यहअभयारण्य क्षेत्र राजस्व भूमि होने से रेत की उपलब्धता स्थानीय स्तर पर होगी, जिससे रोजगार भी बढ़ेंगे। केंद्रीय मंत्री श्री तोमर ने बताया कि केंद्र सरकार ने मुरेना (म.प्र.) में जैविक बीजों के उत्पादन के लिए बीहड़ क्षेत्र में भूमि सुधार करके फार्म स्थापित करने का निर्णय लिया है। इसके लिए म.प्र. सरकार द्वारा केंद्रीय कृषि मंत्रालय को मुरेना के 4 गांवों (गडोरा, जाखोना, रिलोरा खुर्द, गोरखा) में 885.34 हेक्टे. जमीन आवंटित की गई है। यह भूमि चंबल का बीहड़ क्षेत्र है एवं क्षेत्र में रेगडॉस होने से कृषि

कार्य नहीं हो पा रहा था, चूंकि एनएससी किसानों को गुणवत्तायुक्त बीज पहुंचाने के लिए प्रतिबद्ध है व 15 लाख किंवांट गुणवत्तायुक्त प्रमाणित बीज उत्पादित कर किसानों को उपलब्ध करा रहा है, इसलिए केंद्रीय कृषि मंत्रालय ने मुरेना में जैविक बीजों के उत्पादन के लिए फार्म विकसित करने की जिम्मेदारी एनएससी को सौंपी है। मुरेना में रेगडॉस क्षेत्र में बीज उत्पादन से भूमि में सुधार होगा व भूमि उपजाऊ होगी। स्थानीय किसान भूमि सुधार से प्रेरित होकर अपने खेतों में भी भूमि सुधार कर नवीनतम वैज्ञानिक पद्धति से बीज उत्पादन कर खेती में कम लागत से उच्च आर्थिक लाभ प्राप्त कर सकेंगे। कृषकों को यहां बीज उत्पादन की नवीनतम तकनीक सीखने को मिलेगी। एनएससी के विशेषज्ञों द्वारा स्थानीय व प्रदेश के किसानों को ट्रेनिंग के जरिये नवीनतम बीज उत्पादन तकनीक सिखाई जाएगी। मुरेना के स्थानीय श्रमिकों को फार्म में भूमि सुधार एवं बीज उत्पादन से रोजगार प्राप्त होगा। मुरेना फार्म से किसानों को नवीनतम एवं आधुनिक व मौलिक

रूप से शुद्ध जैविक तिलहन बीज प्राप्त होने से अच्छा उत्पादन प्राप्त होगा, जिससे न केवल प्रदेश के कृषकों के सामाजिक-आर्थिक स्तर में सुधार होगा, बल्कि कृषकों को पोषण सुरक्षा भी प्राप्त होगी। श्री तोमर ने कहा कि प्रधानमंत्री श्री नरेंद्र मोदी के नेतृत्व में कृषि क्षेत्र में चेतना का काम होने से भारत की साख दुनियाभर में बढ़ी है, हमारा देशवसुधैव कुटुम्बकम् की भावना से कार्य कर रहे हैं। पीएम का नारा है 'जय जयान, जय किसान, जय विज्ञान, जय अनुसंधान'। मुरेना का बीज फार्म किसानों की प्रगति के लिए विज्ञान व अनुसंधान का पूरा उपयोग करेगा। बीजकृषि का आधारवामुख आदान है। उन्होंने कहा कि खेती के लिए अच्छे बीजों की उपलब्धता से उत्पादन-उत्पादकता में वृद्धि व किसानों के लिए उच्च आय के अलावा एग्री इको-सिस्टम व अर्थव्यवस्था को समग्र रूप से लाभ होता है। केंद्र सरकार, राज्यों में बीजउपलब्धता सुनिश्चित करने के साथ ही विविध योजनाओं द्वारा बीज वितरण में सहायता करती है। केंद्रीय कृषि मंत्रालय ने फसलों के

गुणवत्ता वाले बीजउत्पादन व गुणवत्ताबढ़ाने के लिए 2014-15 से बीजविकास समग्रीउपमिशन लागू किया है, ताकि किसानों को पर्याप्त बीजमिले। बीज संबंधी विभिन्नगतिविधियों के जरिये राज्यों व सार्वजनिक क्षेत्र के बीज संगठनों को, बीज गुणवत्ता नियंत्रण को मजबूत किया जा रहा है। बीते 8 साल में व्यावसायिक खेती के लिए 304 किस्में अधिसूचित की गई हैं। राष्ट्रीय चंबल वन्यजीव अभयारण्य क्षेत्र में डी-नोटिफिकेशन से होंगे कई लाभ-केंद्रीयमंत्री व क्षेत्रीय सांसद श्री तोमर के प्रयासों से डी-नोटिफिकेशन होने से, यह एरिया अभयारण्य क्षेत्र के बाहर हो जाएगा, जिससे यहां से रेत की उपलब्धता स्थानीय स्तर पर ही होगी व इसमें रोजगार के नए अवसर मिलेंगे और स्थानीय निर्माण/विकास कार्यों में रेत आसानी से सस्ते दाम पर मिलेगी। श्री तोमर ने डी-नोटिफिकेशन किए जाने के संबंध में पर्यावरण, वन एवं जलवायु परिवर्तन मंत्री श्री भूपेंद्र यादव से आग्रह किया था।

Do You Know?

Mason Vaugh a Pioneer of Agricultural Engineering in India



Mason Vaugh

27th June,1894- 7th Oct, 1978)

Mason Vaugh was an American agriculturalist who developed the first Agricultural Engineering department outside North America in 1921 at Allahabad Agricultural Institute

He served in the US Army during World War I. In 1919 he was given a B.Sc. in agriculture from the University of Missouri and in 1928 earned the equivalent of a M.Sc. In Agricultural Engineering in 1928.

In 1921 he became a missionary in India, teaching agricultural engineering at Allahabad Agricultural Institute. Vaugh adapted traditional Indian materials into modern agricultural implements. Among his innovations was the Shabash, an improved plow consisting of a Ploughshare, a mouldboard, a few bolts and a wood beam. Improved implements such as the Shabash made it possible for farmers to plow larger areas than previously possible. Vaugh introduced several other implements, such as hoes, cultivators and the wheat threshers.

- He has often been called the Pioneer of Agricultural Engineering in India.
- Developed the 1st Indian Agri-Engineering deptt in 1921 at Allahabad Agriculture Institute.
- Persuaded education authorities to recognize Agri-Engineering as an academic field in which degree examinations could be held
- It was the first course of its kind in South Asia and the only one in India for 10 years
- Led the Agriculture Development Society in Naini to manufacture and sell improved implements
- Innovated with accepted Indian material, farmers could plough larger area then previously possible
- In his honor Indian Society of Agricultural Engineers (ISAE) established the Mason Vaughn Agricultural Engineering Pioneer Award.



New Appointment



1. Dr. K.Narsaiah, appointed as ADG (Process Engineering) at Krishi Anusanfhan Bhavan, N. Delhi



2. Dr. S K Shukla, appointed as Director, CIRCOT, Mumbai



3. Dr. A. Kar, appointed as Director, National Institute of Secondary Agriculture (NISA), Ranchi&



4. Dr. U. S. Kadam , appointed as Director (Education), MCAER, Pune (under Govt. of Maharashtra)

The ISAE family congratulate all you on your great achievements

Obituary



Er. U. S. Lagad

Er. Umesh Shrikant Lagad, the Founder Director of Krishi Sahyadri Farmers Producer Company Limited, Ahmednagar (Maharashtra) died on Oct. 23, 2022 due to heart attack. He was 50. Er. Lagad was B. Tech. (Agril. Engg.) from MPKV, Rahuri.

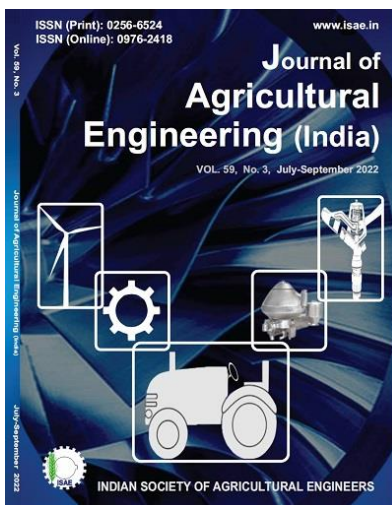
He was grand support for many new comers in the field of Agricultural Engineering.

All Agrineer family prays for peace of his soul in heaven and extend the moral support to his family.



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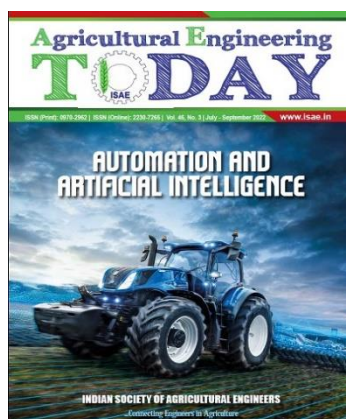


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