



Indian Society of Agricultural Engineers

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A Professional non-profit organization established in 1960 aimed to promote and encourage the profession of Agricultural Engineering and to advance the standard of Agricultural Engineering in the areas of Research, Development and Education.

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Editor's Column

Dear All

I am happy to bring to you yet another issue of our E-newsletter. We all are looking forward to the forth coming 47th annual convention to be held in Hyderabad. The international symposium on the side of convention is getting very good response from overseas scientists and academicians. The team of Prof. Raghavan as Chair and Prof. Indrajit Choubey as Convener is doing wonderful job of motivating foreign participants not only to attend but also give important presentations. It is heartening to note that all publications of ISAE are coming on time. The joint membership of ISAE members with CIGR has now been formalised and we need have some activities conducted under its aegis.

The process of awards was made transparent by the last executive and the same is being followed by us as well. The committee of Dr. B. S. Pathak as Chairman, Dr. A. K. Bhattacharya as member and Dr. N. C. Patel, Director (Awards) as member Secretary has been formed for recommendation of different awards. Similarly another committee has been formed comprising of Dr. S. R. Singh as Chairman, Dr. S. R. Verma and Dr. B. P. N. Singh as members for recommendation for ISAE Fellow.

The world food day was celebrated both at Coimbatore as well as at AAU, Anand. The Anand function which was named as ADROIT was so good that it can even become a national event. We can have such events annually at national level for different areas of agricultural engineering at some identified institutes. It will develop renewed interest of the youngsters in our profession. I suggest PAU can do ADROIT on Farm machinery, GBPUAT can do ADROIT on Water, TNAU may do ADROIT on Energy and AAU Anand on Food Processing. Dr. Joshi at AAU Anand has already organised ADROIT on food successfully for 2 years and deserves great appreciation for it.

Farm machine of the month is Arecanut Leaf Sheath Shredder developed at CIAE Bhopal so that this biomass can be used as an alternative for the cattle fodder due to shortage of fodder in areacnut growing areas. The farm innovator introduced in this issue is Bachubhai who has tried a revolutionary idea of controlling the tractor without steering. This is similar to using the concept of joysticks in the toys. The concept will have its own advantages and may be useful in further development of driverless tractors of future managed from the central control point in an air conditioned room.

WISHING YOU ALL A VERY HAPPY DIWALI AND FESTIVE SEASON

R. T. Patil

Message from President

Agriculture Sector in India is in dire need of affordable, accessible and environmental friendly energy for enhancing growth. Fossil fuel dependency will not sustain longer due to declining reserves, increasing cost and its impact on environmental degradation due to burning of fuel. Renewable energy sources like solar, wind etc have their limitations and are not fully explored. Solar energy potential is 178 billion MW which is 20000 times the world demand, however, it's pace of utilization is slow. Wind energy potential in India is about 25000 MW and coastal areas of Gujarat, Maharashtra and Tamil Nadu are most favorite destinations. The potential from sea is estimated as 50000 MW out of which 40000 MW from wave energy.

Bioenergy is another alternative source of energy being explored globally. Biomass includes wood, agricultural waste, residues from food grains etc has been estimated at 580 Million MT available for gasification. The collection of biomass from field and transport are major issues. Biogas from animal dung and sewage are also potential sources of Bioenergy.

Bioenergy has potential to fill the gaps in demand and supply of energy in agriculture sector. There is need to intensify Research and Development efforts in this area. Diversion of food grains for energy generation is also debated as there is concern of global food security. Bioenergy can supplement the energy from other sources to meet future demands, hence 47th ISAE Annual Convention at Hyderabad has scheduled an International Symposium on this theme. The experts from USA, Canada and other countries are expected to make valuable presentations on Bioenergy. I invite all members of ISAE, industries and professionals in this area to participate in the symposium and contribute your experiences for strengthening knowledge base on this very important topic.

Wish you all a very happy Diwali and look forward to meet you at Hyderabad.

(V. M. Mayande)
President

Proceedings of the Executive Meeting

ISAE Executive Council Meeting was held on 06.10.2012 at 12:00 noon in the Conference Hall of ISAE at NASC Complex.

Members present:

1. Dr VM Mayande, President
2. Prof. Gajendra Singh, Past-President
3. Dr AP Srivastava, Vice President (Activity Council)
4. Dr PK Sahoo, Treasurer

Dr RT Patil, Vice President (Technical Council), Prof. Anil Kumar, Secretary General and Dr JP Sinha, Secretary could not attend the meeting due to unavoidable prior commitment.

Dr VM Mayande, President, ISAE welcomed the members and thanked the members of Executive committee for attending the meeting with short notice. He introduced the agenda items of the meeting. After the opening remarks by the President, meeting was opened for discussion on the agenda items.

After detailed and thorough discussion on each agenda item, following decisions were taken unanimously:

1. Review of progress on settlement of account of 46th Annual Convention held at Pantnagar:

The amount received from various organization on the account of 46th Annual Convention has been audited. The organizers of Pantnagar convention will be again apprised to settle account as soon as possible. It was decided to take up the matter with the authorities of AICTE for grant of 2nd installment. Dr.A.P.Srivastava, Vice President (Activity Council) and Dr.P.K.Sahoo, Treasurer may take up the matter.

2. Review of progress of forth coming 47th Annual Convention to be held at Hyderabad:

President, ISAE informed that he had held meeting with local organizers on 3rd August, 2012 for successful organization of the convention. He will again visit Hyderabad to review the progress. The affiliation of ASABE and Canadian Society of Agricultural and Biological Engineers may be added as Co-organizers in the Information Brochure of the convention to help the International participants interested to attend the Annual Convention and International Symposium. The change in the pdf file is only meant for international circulation. NABARD may be approached for sponsorship. The demand may be placed for 10 Lakh INR for 47th Annual convention. Prof. Gajendra Singh was requested to contact key persons from USA and Canada for possible participation.

3. Review of Status of JAE & AET:

The committee appreciated the contribution of Chief Editors and Editorial Boards of JAE & AET for good work. The JAE July-September 2012 issue has come out and been submitted to ICAR before due date. It was decided that the review status of JAE may be checked with NAAS before submission of application. The Executive committee expects better NAAS rating for JAE in the review due to timely publication of the journal.

4. Any other items:

(a) Executive committee approved to send the annual subscription of \$500 to CIGR membership as the society has received the subscription amount for four years from

the members. Prof. Gajendra Singh suggested that the CIGR membership number may be added in the directory of ISAE for wider appraisal of the members about CIGR.

- (b) Executive Committee approved to nominate Dr. B.S. Pathak as Chairman, Dr. A.K. Bhattacharya as member and Dr. N.C. Patel, Director (Awards) as member Secretary for recommendations of different awards. Dr N.C. Patel, Director Awards may please organize the meeting and submit the recommendations before 15th November 2012 to Secretary General/President.
- (c) President suggested the committee comprising of Dr. S.R. Singh as Chairman, Dr. S.R. Verma and Dr. B.P.N. Singh as members for recommendation of eligible candidates for ISAE Fellow. Prof. Gajendra Singh was requested to act as chairman of the committee with co-opted members for awarding the best papers published in JAE during last year.

The proposed date of next Executive Council meeting is 17.11.2012. Secretary General/Secretary may invite agenda from members for the meeting in addition to the agenda already drafted. It was suggested that the Chairmen of various award committees may be requested to send the list of awardees before 15.11.2012 to the President or Secretary General, ISAE.

The meeting ended with Vote of Thanks to the Chair.

Member News

Dr. Digvir Jayas



Dr. Digvir Jayas a Fellow of ISAE has been awarded U of S Alumni Association Achievement Award for his research and significant contributions to the agricultural industry. He is a registered professional engineer and registered professional agrologist in Canada. Holding a Canada Research Chair in stored-grain ecosystems, he conducts research related to drying, handling and storing grains and oilseeds and digital image processing for grading and processing operations in the agri-food industry. Digvir has authored or co-authored over 700 technical articles in scientific journals, conference proceedings and books dealing with storing, drying, handling and quality monitoring of grains. He is currently the Vice-President (research and international) at the University of Manitoba.

Dr. Radhey Lal Kushwaha



Dr. Radhey Lal Kushwaha fellow of ISAE has been awarded U of S Alumni Association Achievement Award for his service to the engineering profession—nationally and internationally. Dr. Lal is one of the first recipients of a PhD in Agricultural Engineering in Canada. His international activities and collaboration—that reach into Asia, Africa and South and Central America—has garnered much recognition from engineering bodies and industry to build upon the reputation of the U of S. He has made significant

contributions to soil–machine interactions—and the transfer of resulting technologies to developing countries—particularly to mechanically neutralize anti-personnel and anti-tank landmines, an area in which he is co-holder of three patents.

Chapter News

TNAU Coimbatore

Interaction Meeting with the Agricultural Machinery Manufacturers

An interaction meeting with the agricultural machinery manufacturers was organised by the ISAE, Tamil Nadu chapter at Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore on 09.08.2012. Prof. Gajendra Singh, Immediate Past President – ISAE and Formerly D.D.G (Engg.), ICAR chaired the meeting. The meeting was attended by 12 manufacturers of agricultural machinery in Coimbatore region and 15 members serving at Tamil Nadu Agricultural University, Agricultural Engineering Department, Govt. of Tamil Nadu, Coimbatore Region and Central Institute of Agricultural Engineering (ICAR), Regional centre, Coimbatore. Prof. Gajendra Singh made a brief presentation covering the importance of farm mechanisation, energy savings in farm sector and developments required in the farm mechnisation sector. The manufacturers highlighted the status of marketing of farm machinery in the state and the subsidy extended by the Union and State Governments to promote farm mechnisation. Also highlighted the farm mechnisation achieved in the state through custom hiring and the further potential. The interaction meeting was much useful for the members involved in mechnisation activities and the manufacturers through Prof. Singh’s thought provoking speech. Dr. S. Santhana Bosu, Dean, Agricultural Engineering College and Research Institute and President – Tamil Nadu chapter, Dr. R. Viswanathan, Secretary and Dr. B. Sridhar, Treasurer of the local chapter organised the meeting.

World Food Day Celebration



World Food Day is celebrated on 16th October of every year, the day Food and Agricultural Organisation of the United Nations was found in 1945. The theme of the World Food Day for the current year is “Agricultural Co-operatives: way to feeding the world”. A lecture on this theme was jointly organised by the ISAE, Tamil Nadu chapter and The Institution of Engineers (India) – Coimbatore local Chapter, on 16.10.2012, at Tamil Nadu chapter at Agricultural

Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore. Mr. K. Sivakumar, Special Officer/ Joint Registrar, Thudiyalur Cooperative Agricultural Services, Coimbatore, delivered the talk on the theme. Mr. Sivakumar, in his talk covered the functioning of the various cooperatives and their support to the national agricultural scenario. He also mentioned about the hunger prevailing in many countries and recalled the revolutions we had to achieve food security and emphasized on the need for cooperative approach and their revival for value addition and processing of crops. The talk was informative for the practicing engineers, entrepreneurs, members and students. This meeting was attended by 50 members belonging to Indian Society of Agricultural Engineers, Tamil Nadu chapter and The Institution of Engineers (India), serving at government organizations and corporate, practicing engineers, entrepreneurs and students. Dr. S. Santhana Bosu, Dean, Agricultural Engineering College and Research Institute and President – Tamil Nadu chapter, Dr. R. Visvanathan, Secretary and Dr. B. Sridhar, Treasurer of the local chapter organised the meeting. Dr. Sai Prasad, Hon. Secretary, Institution of Engineers (India), Coimbatore local centre was also present.

AAU Anand

World Food Day Celebrations as Technical Festival ADROIT -12



The College of Food Processing Technology and Bio-Energy at Anand Agricultural University, celebrated the World Food Day in the form of two days technical festival “ADROIT ’12” during October 15-16, 2012. Three hundred and eight students had registered for the different events from various food processing colleges across the country. The event was inaugurated by Hon. Vice Chancellor, Anand Agricultural University. More than six hundred people including faculty, students from the

schools and colleges of Anand- Vidyanagar and many families visited this event. The food exhibition of the various food processing industries was a great attraction and was appreciated by all. Sixty four new food products and working models designed and developed by the student teams were on display for judging. The pro night with live band was a first of its kind event in the campus. The students had a gala time and enjoyed each moment of it with full enthusiasm. The business idea competition saw eight teams with some brilliant business ideas pitched against each other and was judged by a panel comprising industry persons. The Quiz programme followed by expert lecture by Dr. R.T.Patil was a grand success with a full capacity hall of more than 400 persons. Next year it is expected that this event will be even bigger and more attractive and with a truly national footprint.



Farm Machine for the Month

Arecanut sheath shredder



Areca Catechu Linn, commonly known as Arecanut or betel nut is the product of palm. In India Karnataka is leading state in terms of production. The share of Karnataka is about 41% in terms of area under cultivation. An arecanut tree sheds about 10 leaves (sheaths) per year. The sheath is about 25-40 cm wide and 30-120 cm long. Recently, this leaf has come out as an alternative for the cattle fodder due to shortage of fodder from other sources. Size reduction of this sheath is required to make dry fodder for cattle. The available machines have been tried to chop this sheath. However, due to physical and biological characteristics, none of them were found suitable to get

desired size. The CIAE has designed and developed a compact and energy efficient machine for making the dry fodder using arecanut sheath. (Source: <http://ciae.nic.in/>)

Farmer Innovator

Bachubhai Savajibhai Thesia

A tractor without a steering wheel

Bachubhai Savajibhai Thesia is no ordinary designer a 10th pass, self-taught innovator from village Kalavad, Dist. Jamnagar, Gujrat had developed his small wheel rotary tractor which was operated through a joystick. He demonstrated all functions of tractor like 360 degrees twists and turn,. He has masked his gearbox with card boards. A simple diesel engine was fitted on a chassis made especially for the tractor using an old axle of used vehicle. The idea of making a joystick came from the rope tied to the bullock cart oxen. As you pull the rope on the left or right side, the animal turns and when you pull it hard, it stops. This tractor works exactly like that. It could take sharper turns than any other tractor available in the market. He could maneuver the tractor with great ease using the two joysticks. The tractor operates on a 10 HP stationary engine and consumes around five litres of diesel in around eight hours of work. The steering had been removed and two levers had been put in its place for navigating the vehicle. The levers are connected to the left and right front wheels respectively. The motor powers the rear wheels to which brakes have also been provided.



Announcements

Bhopal Chapter to organize ISAE National Student Competition – 2013

The Bhopal chapter of ISAE is going to organize national Student Competition during Jan 10-11, 2013 as given below

Organiser	:	ISAE – Bhopal Chapter and CIAE, Bhopal
Venue	:	CIAE, Bhopal
Competition dates	:	Two days - January 10-11, 2013
Eligibility for participants	:	Students of B. Tech. / B.E. (Ag. Engg./ Food Engg.)
Events*	:	Team competitions for: <ul style="list-style-type: none">• Best models/ displays of Ag. Engg. Activities• Quiz on Agri. Engineering related topics• Elocution competition on emerging areas in agril engg.
Student Sponsorship	:	Respective Institutes/ Colleges. No TA/DA support by ISAE or CIAE. However, Director CIAE (patron of the chapter) may provide accommodation in CIAE guesthouse/ hostels at concessional rates.
Selection of student teams	:	Deans/ Principals of Agricultural Engineering Colleges/ Institutes will select a team to 4 students to represent their institution.
Team constitution	:	Four students One faculty or staff member of the respective institution (optional).

For further details please contact

Dr PC Bargale, Chairman, ISAE – Bhopal Chapter & Principal Scientist, APPD Central Institute of Agril. Engineering, Nabibagh, Bhopal – 462 038 (MP)	Dr KVR Rao, General Secretary, ISAE – Bhopal Chapter & Senior Scientist, IDED Central Institute of Agril. Engineering, Nabi Bagh, Bhopal – 462 038 (MP)
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Upcoming Events

The XVIII CIGR World Congress 2014

The XVIII World Congress of International Commission of Agricultural and biosystems Engineering (CIGR) will be held in Beijing, China from 16-19 Sept 2014. The theme of this

conference is Agricultural and Biosystems Engineering In Upgrading Our Quality of Life. The detailed instructions will be given when second announcement will be out.

The IV CIGR International Conference-Ag Eng Conference-2016

This conference will be held at University of Aarhus during June 26-29 2016 as joint event between CIGR and EurAgEng (European Society of Agricultural engineering) and co-sponsored by NJF (Nordic Association of Agricultural Scientists) and Aarhus University. The contact Person is Prof. Soren Pederson and email is soeren.Pedersen@agrsci.dk

CIGR Section IV 34th International Conference

This conference will be held at Agricultural University in Krakow, Poland. The main topics discussed will be Biomass, Biogas and Water and Wind Energy. Contact Person is Prof. Janusz Piechocki, Chair CIGR Section IV

First International Conference and Workshop at NIFTEM

National Institute of Food Technology Entrepreneurship and Management (NIFTEM) is a Deemed-to-be university under De-novo category and Autonomous Institution under the Ministry of Food Processing Industries, Government of India.

NIFTEM is organizing 1st International Conference on Innovations in Food Processing, Value Chain Management & Food Safety (IFpvs) in its campus during January 10-11, 2013. International Conference IFpvs-2013 shall witness participation from academic, R&D Institutions, Industries from core and allied sectors of food processing industry in India and abroad. Since safety of food has become an area of major concern of modern consumer, it is planned to have a workshop on food safety just after International Conference IFpvs-2013 in the same venue on January 12, 2013. The workshop will be organized in presence of eminent experts of various fields of food safety from India and abroad. During the same time NIFTEM is organizing exhibition of concerned manufacturers, suppliers, producers, business operators from food and allied sectors in its campus at Kundli.

A detail information brochure and further updates can be seen at NIFTEM's website www.niftem.ac.in.

47th Annual Convention of ISAE and International Symposium on Bio Energy-Challenges and Opportunities

The 47th ISAE Convention will be organized during January 28-30, 2013 at Acharya N.G Ranga Agricultural University (ANGRAU) Rajendranagar, Hyderabad with an aim to bring all stakeholders at a single platform where they will deliberate on all the issues in different technical session and with key note address by national and international experts in the field of Agricultural Engineering. On the sidelines of Annual Convention an International Symposium on “BIO-ENERGY - Challenges and Opportunities” will also be organized.

Important Deadlines

Abstract submission	:	October 31, 2012
Letter of acceptance to authors	:	November 25, 2012
Submission of full length paper	:	December 22, 2012
Final manuscript submission to conveners by concern Technical Directors	:	January 05, 2013

Conference website : <http://www.47 ISAE HYD 2013.in>

Technical Director will decide on the papers to be presented during oral sessions or through poster presentations. After receiving the acceptance, full length paper for oral presentation should be sent both on CD and by e-mail to the respective technical directors. Detailed guidelines for oral as well as poster presentations are available on the web site. Souvenir along-with CD will be distributed during registration. Contact details of Technical Directors are as given below:

Processing, Dairy & Food Engineering Dr D C Joshi, Dean Faculty of Food Processing & Bio-Energy Anand Agricultural University Anand – 388 110 (Gujarat) dcjoshi258@gmail.com +91 9998 009 965	Energy in Agriculture and Other Areas Dr P Venkatachalam, Professor & Head, Department of Bio Energy AEC & RI, Tamil Nadu Agricultural University, Coimbatore – 641 003 (Tamil Nadu) pvenkat55@yahoo.co.uk +91 9442 961 793
Farm Machinery and Power Dr Y C Bhatt 1-Shantinagar, Roopsagar Marg, University Road, Udaipur – 313 001 (Rajasthan) drycb@hotmail.com +91 9414 168 434	Soil and Water Engineering Dr Ashwani Kumar, Director, Water Technology Centre for Eastern Region, Chandrashekharpur, Bhubaneswar – 751023 (Odisha) ashwani_wtcer@yahoo.in +91 9437 475 353

NEW MEMBERS

LM No.	Name	Place	State
2012 September			
LM – 10808	Er. Manoj Kumar	Varanasi	Uttar Pradesh
LM – 10809	Er. Sujit Kumar	Nalanda	Bihar
LM – 10810	Er. Baleshwar Prasad Singh	Patna	Bihar
LM – 10811	Er. Santosh Sambhaji Mali	New Delhi	Delhi
LM – 10812	Er. Rakeshkumar Ishvarlal Naik	Gaborone	Botswana
2012 October			

LM – 10813	Dr. Indrajeet Chaubey	West Lafayette	USA
LM – 10814	Er. R Nagarjuna Kumar	Hyderabad	Andhra Pradesh
LM – 10815	Er. Jitendra Kumar	New Delhi	Delhi
LM – 10816	Er. Alok Kumar Singh	Patna	Bihar
LM – 10817	Dr. Ram Pal	Bikramganj	Bihar
LM - 10818	Er. Marut Kumar	Giridih	Jharkhand
LM – 10819	Er. Navendu Kumar	Patna	Bihar
LM – 10820	Er. Indu Shekhar Prasad Singh	Patna	Bihar

For further details contact:

Secretary General: **Prof Anil Kumar** (anil_k_99@yahoo.com) and/or

Secretary: **Dr J P Sinha** (jpsinha@gmail.com)

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