



AAAE Objectives

1. To strengthen the profession of Agricultural Engineering by promoting information exchange, improving communications, minimizing duplication of activities, and optimizing use of resources.
2. To formulate, establish, and promote voluntary academic, professional and technical standards of relevance to the profession of Agricultural Engineering in Asia.
3. To support, at the International level, the activities of National Agricultural Engineering societies or related associations and to maintain liaison among them.
4. To coordinate and assist in organizing timely international meetings in cooperation with national societies/associations within Asian region.

Contact

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Agricultural
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**Register for the
International Conference
IAEC2025/TSAE 2025**

<https://aaaesociety.org/register-iaec2025/>

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**INTERNATIONAL AGRICULTURAL ENGINEERING
CONFERENCE 2025**

11-14 September 2025 | Kathmandu, Nepal

Hosted by,
Napalese Society of Agricultural Engineers

Partners
Asian Association for Agricultural Engineering
Thai Society of Agricultural Engineering
Indian Society of Agricultural Engineers

Asian Association for Agricultural Engineering
is organizing IAEC2025 - International Conference
on
“CLIMATE RESILIENT AGRICULTURE FOR ASIA”

Register below:
<https://aaaesociety.org/Register IAEC2025/>

Papers presented in the conference will be published in the International Agricultural Engineering Journal (ISSN 0858-2114) after a peer review process. The journal is published by the Asian Association for Agricultural Engineers.
URL : <https://aaaesociety.org>

Featured Article

AAAE

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สมาคมวิศวกรรมเกษตรแห่งประเทศไทย
THAI SOCIETY OF AGRICULTURAL ENGINEERING

Thailand's Agricultural Machinery Roles

By: **Dares Kittiyopos**, President of Thai Society of Agricultural Engineering

Overview of Thailand's Agricultural Sector

Thailand is a major agricultural producer in Southeast Asia, renowned for its exports of rice, fruits, tapioca, para rubber, and oil palm. These crops form the foundation of the country's export-oriented agricultural industries. Agricultural land use in Thailand is classified by crop type as follows: paddy fields 43%, fruits and perennial crops 27%, upland field crops 20%, and other uses 10%.

The aging workforce represents a critical challenge for Thailand's agricultural production. Over the past decade, agricultural labor has declined significantly from 47% to 30% of the total workforce between 2013 and 2023. Additionally, 60% of farmers are over 55 years of age. These demographic pressures have driven Thailand to accelerate the adoption of farm machinery and mechanization.

Agricultural Machinery in Thailand

The first 4-wheel farm tractor with an 8.5 horsepower engine was built in Thailand in 1961. Today, Thailand manufactures diverse agricultural machinery including farm tractors up to 50 HP, rice combine harvesters, sugarcane harvesters, mechanical planters, cultivators, drones, irrigation equipment, and agricultural IoT platforms. These machines serve not only Thailand but also ASEAN and other countries. The farm machinery manufacturer and distribution is: micro and small-scale manufacturers 74%, medium-scale manufacturers 19%, and large-scale manufacturers 7%.

Small-scale farming with an average holding area of 2.3 hectares per household is the major obstacle to farm machinery adoption in Thailand. Custom hiring services operated by local farmers provide the primary solution for machinery use in small holdings and represent the main form of farm machinery operations.

Thailand both imports and exports agricultural machinery. Imported machines are led by crop protection equipment, tractors and parts, and harvesters and equipment respectively. Exported machines are led by tractors and parts, crop protection equipment, and harvesters and equipment respectively. This demonstrates that Thailand serves as a regional hub for agricultural machinery.

Young Farmers and Agricultural Machinery Technology & Innovations

Young farmers comprise 15% of Thailand's total farming population. While the younger generation has less hands-on agricultural experience, these farmers come from various educational backgrounds. They aim to pursue agriculture as entrepreneurs by utilizing modern machinery technology and innovations. Government policies and projects support young farmers in advancing Thailand's new agricultural paradigm through training and competitions in agricultural drones, intelligent tractors, and IoT for agriculture across regional areas of Thailand.

Thailand's Collaboration with Neighboring Countries

Thailand connects with ASEAN countries by land and maintains good relations with neighboring populations. Thailand and its neighbors share farming knowledge including rice, maize, sugarcane, and fruit cultivation, as well as agricultural machinery, due to similar agricultural procedures, product types, and climate conditions.

In agricultural engineering collaboration, ASEAN has a network called ACABE - ASEAN Cooperation in Agricultural and Biosystem Engineering. Members share knowledge and technology innovations. The Thai Society of Agricultural Engineering is a major organization within this group. Additionally, Thailand collaborates through the Thai Society of Agricultural Engineering with AAAE – Asian Association of Agricultural Engineering to extend agricultural engineering's role in enhancing Asian agriculture, which is a significant mission.

"Water – Vigyansamvad"- How to save water and Environment in the challenging areas of Indo-Gangetic plains

Asian Association for Agricultural Engineering conducted a webinar series on "Water – Vigyansamvad" - How to save water and environment in the challenging areas of Indo-Gangetic plains, during April 2025. Sessions were held on Fridays and Saturdays.

Details of Speakers and the corresponding recorded youtube link

4th April 2025 <https://youtu.be/Ac4tqBnENqg?si=qdGxT8puFQTojXjF>

Dr. H S Sidhu- Conservation Agriculture and Water Saving for Sustainability

Dr. T B S Rajput- Smart Irrigation Systems

5th April 2025 <https://youtu.be/TqVansqMXqo?si=CwrdMGTzm2sRvls2>

Mr. Chandrasekhar Badsavle - Mechanization in Regenerative Agriculture

Mr. Ravi Pratap Singh- Water, Green Entrepreneurs and environmental Conservation

11th April 2025 https://youtu.be/ilxqpjyw4X4?si=4OiUZAc2fNug_BMI

Dr. Rakesh Sharda- Water saving technologies, A step towards sustainability

Dr. Srinivasulu Ale- Simulated efficient irrigation strategies for sustaining crop production under declining water availability

12th April 2025 <https://youtu.be/g4AMZRlqbEo?si=7B37iiE9XaouUjU>

Dr. Manjeet Singh- Mechanization & Automation for Irrigation Water Management

Dr. K Inkarsal- Irrigation projects and their socioeconomic importance

18th April 2025 <https://youtu.be/-45YAt3wNZw?si=8rIxUzAEGCA-yI8Y>

Dr. Samanpreet Kaur- Monitoring and Management of Groundwater Resources

Dr. TR Kesavan- Stakeholders' collaboration in Irrigation management

19th April 2025 https://youtu.be/JxbVVJBr_Eo?feature=shared

Dr. DC Baruah- Energy choices for irrigation: Analysis for small & marginal farmers in Assam

Dr. Murtaza Hasan- Advanced protected cultivation and water management technologies for sustainable water management

25th April 2025 <https://youtu.be/e2pwO3Zd5Fs?feature=shared>

Dr. S Selvakumar - Next-Gen Hydrological Insights: Cloud Computing at the River Basin Scale

Er. Sebastian Britto Raj - Rain water harvesting - needs and techniques for future

26th April 2025 <https://youtu.be/6AXc1PkIK5E?feature=shared>

Summary Presentations by Experts, Discussions and Way Forward

**AAAE
Consortium**

Members

- Thai Society of Agricultural Engineers (TSAE)
- Indian Society of Agricultural Engineers (ISAE)
- Agricultural Machinery Manufacturers Association (AMMA) INDIA
- Nepal Society of Agricultural Engineers (NSAE)

Join Us

All professionals working in the field of Agriculture/ Agricultural Engineering are eligible to become a member.

<https://aaaesociety.org/join-us-2/>



From the Presidents Desk...

Prof. Indra Mani

President, Asian Association for Agricultural Engineering
Vice-Chancellor, Vasantrya Naik Marathwada Krishi Vidyapeeth,
Parbhani (Maharashtra) India

Dear Esteemed Members,

Warm greetings to all of you.

At the outset, I convey my sincere gratitude to each one of you for your enthusiastic participation and continued support in all the activities of the AAAE during the year 2024–25. The successful organization of the International Conference in Bangkok, in collaboration with the Thai Society of Agricultural Engineering, stands as a proud milestone in our journey. We also hosted an impactful webinar series on water conservation in agriculture in April 2025, which received wide appreciation. Building on this momentum, we propose to initiate a regular series of webinars and discussions on emerging and critical issues in Asian agriculture. I invite your valuable suggestions on topics and potential contributors to enrich these discussions.

Looking ahead, I am pleased to announce that our upcoming International Agricultural Engineering Conference (IAEC 2025) will be held at Kathmandu University, Nepal, from 11–14 Sept, 2025, in collaboration with the Thai Society of Agricultural Engineering and the Nepal Society of Agricultural Engineering. I warmly encourage all members to register early and participate in large numbers. This event will provide a dynamic platform for professionals from across Asia and beyond to exchange knowledge, showcase innovations, and build lasting collaborations.

The central theme of “**Climate Change and Agricultural Resilience**” is highly relevant as our region experiences increasing climatic uncertainties. Collective sharing of knowledge, solutions, and technologies will go a long way in supporting our farmers and ensuring food and environmental security.

Let me also emphasize that the Future Agriculture is Engineering Agriculture. The pathway forward is driven by Collaboration, Innovation, and Commercialization, underpinned by the AIG Model (Academia–Industry–Government). Collaboration and support from industry and corporates through CSR funding can significantly strengthen the research endeavors of universities and make agricultural education more practical and application-oriented. Such partnerships will provide an effective platform for skill enhancement of graduates, preparing them as industry-ready professionals. This mutually beneficial model not only empowers students but also ensures a steady pipeline of skilled manpower for the industry. A shining example of this is the work being carried out at VNMKV, Parbhani, India, where collaborative research on Agri-PV systems and the promotion of Agri-Drone technology through industry partnerships is bringing about impactful change.

Artificial Intelligence (AI) in agriculture is now indispensable. Recognizing its potential, the Government of Maharashtra has approved ₹500 crore to promote AI-based solutions. One notable initiative is the Mahavistaar App, a statewide AI-powered mobile platform designed for farmers—integrating services, advisories, and access to technology in a single application. Furthermore, drone technology and digital innovations are transforming the agricultural landscape. As engineers, researchers, and policymakers, it is our duty to embrace and advance these technologies for the betterment of farmers and the sustainability of our food systems.

Let us come together to make IAEC 2025 not just a conference, but a turning point in reimagining agricultural engineering for the future of Asia.

AAAE Awards

Asian Association for Agricultural Engineering invites nominations for Awards 2025. The Awards shall be presented during the IAEC2025 International Conference at Kathmandu University on 11-14 Sep 2025.

For Details : [AAAE Awards Download](#) and Nominations at [AAAE Award Nomination Form Download](#)

Kindly send your nomination form & supporting documents to office@aaesociety.org by 1 August 2025

Dr. Shard Patel (ASPEE) Outstanding Young Indian researcher award every year from 2025



Dr. Nobutaka Ito



Prof. Dr. Nobutaka Ito, passed away peacefully on January 2, 2025.

Nobutaka Ito, Ph.D in Agricultural Engineering, Visiting Professor, Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Thailand

Asian agriculture characterized by small scale, family labor and low income may be improved by the cooperation between Asia, resource oriented and ASEAN+3, technology oriented countries through ASEAN Economic Community. The process is 1) To make Asia, a world food pantry in safe, high quality food production and supply with competitive price, 2) To create Asian food brand for sustainable economic promotion and regional peace keeping, and 3) To build up a win – win relationship between countries for mutual benefit and prosperity. This presentation shows the project scheme and framework

Academic background: B.S in Agricultural Machinery, Mie University, Japan 1965,

M.S in Agricultural Engineering, Kyoto University, Japan 1967, Ph.D in Agricultural Engineering, Kyoto University, Japan 1976, Past Status: President of AAAE, Asian Association of Agricultural Engineering (2004 -2005), Honorary Doctor awarded by CMU (January 2007), Honorary Citizen of Hochiminh city, Vietnam (December 2016), Academic Contribution; He joined writing seven books. Original publication is more than 100 and the other articles are more than 250.

Dr. H S Chauhan



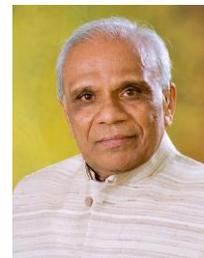
The first generation renowned Agricultural Engineer, mentor of teachers of our teachers and true well wisher of Agricultural Engineering profession

Dr H S Chauhan was born in Balrampur of Uttar Pradesh on 17 November 1936. He was third batch graduate (Agricultural Engineering, 1954- 58) from IIT, Kharagpur. He did M.Tech. in SWCE from IIT, Kharagpur in 1959 and Ph.D. from Ohio State University, USA, in 1967.

He was Professor (1969-96), Prof. and Head, Agrl. Engg. (1971-80), Dean, College of Technology (1980-84), including additional charge of Pro Vice-Chancellor, Professor and Head Irrigation and Drainage Engg. (1984-87) and Dean College of Post Graduate Studies (1987-90) of College of Technology, G.B. Pant Univ. of Agri. & Tech., Pantnagar. He was Member, Land Reclamation and Drainage team to Iraq (1974-75).

He was recipient of ICAR Rafi Ahmed Kidwai Award (1975-76), ISAE Award for Education (1986); G.B.Pant Memorial Gold Medal (1993); ISAE Gold Medal (1995) ; ISAE Lifetime Work Award (1999); ISAE Mason Vaugh Agricultural Engineering Pioneer Award, (2018). He was a fellow of the National Academy of Agriculture Sciences; Indian National Academy of Engineering; Indian Society of Agricultural Engineers; Institution of Engineers (India).

Dr. Sharad L Patel



Born on 25th November 1933, Sharad L.Patel was functioning as Managing Director of American Spring & Pressing Works Pvt.Ltd (Aspee Group of Companies). He obtained Bachelor's degree in Mechanical Engineering from the Gujarat University in 1956 and then obtained Master's degree (specialized in production) Mechanical Engineering from the University of Michigan , U.S.A. in 1958. He was also the Director of various Aspee group organisations. Through these organisations, he promoted higher education by awarding Research Fellowships. Has guided and assisted research project of M.Tech./Ph.D. (more than 100) students at Tansa /Bhiwadi and is still continuing the same till today. He had achieved many milestones and recognitions in his career. Some of the notable ones are :

Awarded ISAE Gold Medal for the year 2004-05. Awarded the prestigious ISAE Mason Vaugh Agricultural Engineering Pioneer Award 2017. Awarded with an Honorary Doctorate Degree (Honoris Causa) in Agricultural Sciences from Navsari Agricultural University during their 18th Convocation ceremony. The award was presented by the Governor of Gujarat, his Excellency Shri. Acharya Devvratji, on March 3, 2023. Awarded with Asian Association for Agricultural Engineering (AAAE) Foundation Fellow Award 2024.