



A Yearly Insight into the Current Agriculutral Activities

Agriculture Engineering

Newsletter

Hindustahan College of Engineering And Technology

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Valley Campus, Pollachi Highway,

Coimbatore - 641 032

About the Department

"We need a new vision for agriculture...to spread happiness among farm and rural families. Bio-happiness through the conversion of our bio-resources in to wealth meaningful to our rural families should be the goal of our national policy for farmers."

In India, approximately 84 Percentage of farmers have less than 1 ha of agricultural land. There is the necessity of special attention and effort on implementation of farm mechanization among the Marginal, Small, Semi-Medium and Medium category farmers for enhancing their production and productivity of agriculture. Mechanization of agriculture improves productivity and utilization efficiency of inputs *like* ., water, nutrients and seeds *etc*, reducing human drudgery and cost of cultivation.

To support farming community, the department of Agriculture Engineering was established in the year of 2018 in Hindusthan College of Engineering and Technology with an intake of 60 students. A pragmatic Professional Career in the field of Agriculture Engineering gets knitted with a multi-disciplinary application of the Agricultural Science and Engineering Designs. This eventually culminates into a value-added on-demand professional status for the students aspiring for a formidable career with impeccable earnings after graduation.

The department has a well-established laboratory with state of the art facilities and all classrooms are equipped with SMARTBOARD, which improves student learning skills. The students are getting hands on experience through Laboratory courses which provide intensive experience in experiment/data design, measurement, and analysis. Our students are allowed to practice and learn Deign, Coding program and data analysis through our CAD/CAM and GIS laboratory.

For improving R & D, we have a separate workshop. This is completely utilized by our students/staff for the design and fabrication of agricultural machinery and support to the farming community.

The primary focus of the department is to empower our students with overall progress. We are working with the following scheme

- ➤ To focus on outcome-based education by innovative teaching, research, and industry-academic interaction, *etc.*,
- ➤ To provide technical knowledge for the development of agricultural gadgets for improving farming practice in this region.

- ➤ To promote agripreneurship among our student through conducting various entrepreneurship development programmes.
- ➤ Regular monitoring of our students through a class advisor, tutor and mentors for emphasis in good academic, placement, and participation in co-curricular activate.
- ➤ The faculty members are engorged to publish research paper in a reputed journal, conducting /participation in FDP, Conference, Seminar, and Workshop through a well-supported system.

Our motto is set to produce one-step ahead and second to none agriculture engineering professionals, bringing laurels to their alma mater as HICET alumni.

THANK YOU FOR VISITING US

HOD Message

"Investments in agriculture are the best weapons against hunger and poverty, and they have made life better for billions of people."

Welcome to the Department of Agriculture Engineering at Hindusthan College of Engineering and Technology Coimbatore. The department is running four years degree programme of B.E Agriculture Engineering with full strength and excellent performance. We started our journey in the year of 2018. Over the last four years, we have grown our expertise and competence in the core Agriculture Engineering curriculum and syllabus.

"Without access the modern farming techniques or machinery let alone science-based climate and weather data, farmer's livelihoods hinge precariously on a changing environment that they're struggling to understand"

Considering the above quote, our department offers advanced technology and current need-based engineering curriculum. As well as the course contents are periodically updated for introducing new scientific and technological developments. The key objective of our curriculum is, to transform our student could able to understand the current agriculture scenario and promote their problem solving skill to solve the various issues in agriculture. In addition to that, we offer a huge number of optional courses *like*., Professional Elective (PE), Open Elective (OE), Value-added course and one-credit courses for providing options to the students for pursuing their interest.

"I am a teacher born and bred, and I believed in the advocacy of teachers. It's a calling. We want our students to feel impassioned and empowered."

We have well qualified and experienced staffs along with well-equipped laboratory facilities in our campus. We have an excellent record in both teaching and research. We maintain active research groups among the staff and students for carrying out collaborative and interdisciplinary research.

Our faculty members have admirable academic qualifications and are highly regarded. They have been conferred with many prestigious awards at state and national levels. Several faculty members serve on the editorial boards of national and international journals, review technical articles for journals on a regular basis. As we regularly organize following events in our department *like*., Field demonstrations, Group discussions, Mock interviews, Presentations,

Seminars, Conferences, and visits to agricultural industries for the overall development of our students.

The Department of agriculture Engineering looks forward to contributing to solving the problems on implementation of modern agriculture in village side and active participation from all sections of the society.

Our graduates play a vital role in society to meet the agricultural production needs of the nation through mechanization and technology.

This website provides an overview of the academic activity, faculty details, and student activities and achievements. If you have a query after browsing this website, please do not hesitate to contact us and use the addresses shown on the departmental pages.

Thank you for visiting us.

Vision of the Department

- ❖ Providing excellence in quality education and research for enhancing and sustaining productivity in the farming sector with advanced machinery and new technologies.
- ❖ Providing excellence for individuals to develop technologically superior in the branch of agriculture engineering, socially conscious and nationally responsible citizens.

Mission of the Department

- ❖ To provide excellence in academic activities and learning environment for make over our students into proficient in modern technology, research process, transfer of technology and agripreneurship.
- ❖ To provide innovative solutions for various issues in agriculture production and new inventions in core through research, extension and entrepreneurship.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- 1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

- 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME EDUCATIONAL OBJECTIVES

PEO1: Graduates shall exhibit their sound theoretical, practical skills and knowledge for successful employments or higher studies or research or entrepreneurial assignments.

PEO2: Graduates shall have lifelong learning skills, professional ethics and good communication capabilities along with entrepreneur skills and leadership, so that they can succeed in their life.

PEO3: Graduates shall become leaders and innovators by devising Engineering solutions for social issues and problems, thus caring for the society.

PROGRAMME SPECIFIC OUTCOMES

- **PSO 1:** Ability to understand agricultural scenario in World and India and superimpose agricultural engineering technologies for uplifting the agriculture.
- **PSO 2:** Ability to solve various issues in agriculture by infusing farm mechanization, conservation strategies for soil, water and renewable energy, advanced irrigation techniques and post-harvest technology.

DEPARTMENT OF AGRICULTURE ENGINEERING

"Investments in agriculture are the best weapons against hunger and poverty, and they have made life better for billions of people."

Is B.E. Agriculture engineering right for me?

Do you have an interest in agricultural practices? Would you like to support farming community for increasing productivity for our future need and improving economic status of our farmers and reducing employability problem in agriculture? Are you interested in Engineering? If so, you should consider the B.E Agriculture Engineering major as you plan for study in college.

The agricultural practices are mainly depending on social aware, creative and skilled persons, like you, can use their agriculture and life sciences knowledge along with the problem-solving skills in engineering, to create a new system and find solutions for present and future problems in agricultural practices. For our imminent need, we should incorporate advance technology in Agriculture practices. That's why, if you are interested in contributing direct the future of agriculture, a degree in agricultural engineering is what you need.

Why I choose B.E (Agri.Engg) in HICET

Welcome to the Department of Agriculture Engineering at Hindusthan College of Engineering and Technology, Coimbatore. The department is running four years degree programme of B.E (Agriculture. Engineering) with full strength and excellent performance. We started our journey in the year of 2018. Over the last four years, we have grown our expertise and competence in the core Agriculture Engineering curriculum and syllabus.

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- ➤ To provide technical knowledge for the development of agricultural gadgets for improving farming practice in this region.
- ➤ To promote agripreneurship among our student through conducting various entrepreneurship development programmes.
- Regular monitoring of our students through a class advisor, tutor and mentors for emphasis in good academic, placement, and participation in co-curricular activate.
- We encourage our student to publish research paper in a reputed journal, conducting /participation, Conference, Seminar, and Workshop through a well-supported system.

List of laboratory in HICET

Crop Husbandry laboratory
Farm machinery laboratory
Soil and water conservation laboratory
Post harvesting laboratory
Bio energy laboratory

Laboratory photos and Details

1. Crop Husbandry laboratory

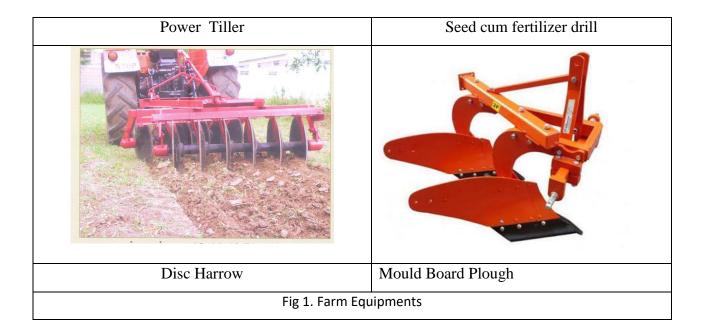
Lab established for hands on experiential learning in dry land, garden land and wetland crop production. The students will also get exposed to the usage of Primary and Secondary tillage machinery and implements in forming bunds, channels, ridges and furrows/check basins for raising these crops.



2.Farm machinery laboratory

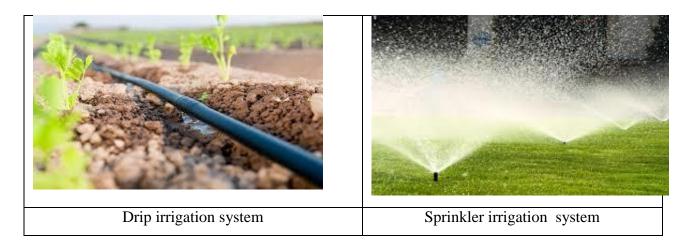
Lab established for identifying suitable farm implements to increase the production and productivity of different crops through farm mechanization. As well as to increase profitability of farmers besides saving in labour and time, energy resources, natural resources such as land, water etc. and other inputs like chemicals, fertilizers, seeds.

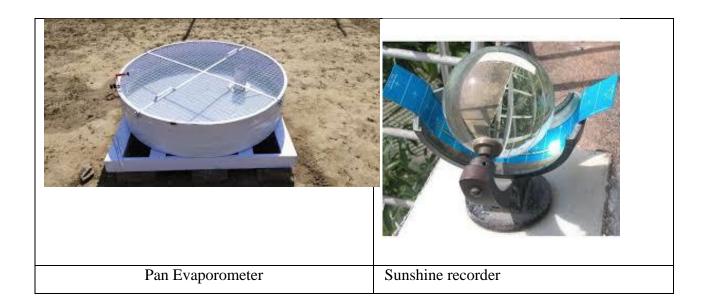




3. Soil and water conservation laboratory

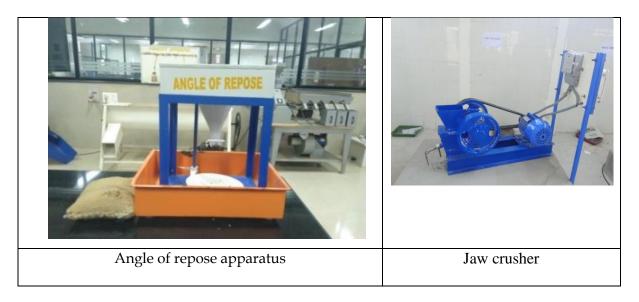
Soil and water conservation laboratory established for controlled application of water in the form of micro irrigation systems either drip or sprinkler units to arrive at high order or irrigation and water use efficiencies. The students are exposed to the Hydraulic design layouts and performance evaluation in getting maximum yields with conserved water storages after rainwater harvesting.

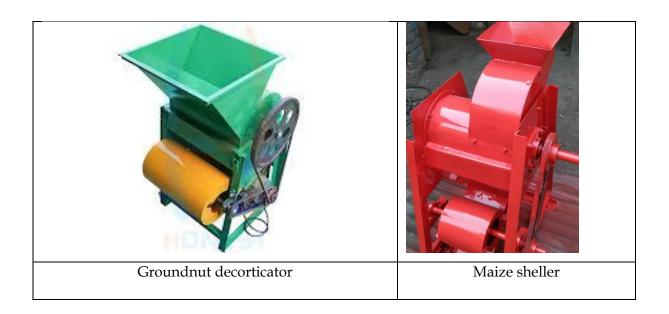




4. Post harvesting laboratory

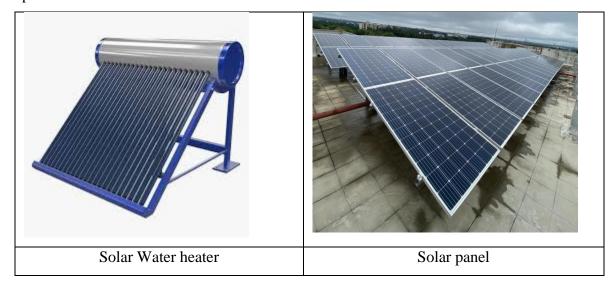
Lab established for to get aware about post harvest loss and their control measures. As well as to be familiar with marketing channel and possible losses.





5. Bio energy laboratory

Lab established for studying the utilization of renewable energies for various agricultural practices.



Department Achievements till date

Special Lectures and webinars conducted:

- 1) Dr. Ramasamy, Department of Agricultural Engineering, Kalaignar Karunanidhi Institute of Technology, has delivered a special lecture on "Recent developments in agricultural and food industries" on 28th September 2019.
- 2) One day seminar on "Advancement in Dairy Processing and Value-added Dairy Products" delivered by Dr. T.V. Ranganathan, Professor, Karunya Institute of Technology and Sciences and Mr. G. Godwin Berlin Das, Managing Director, Benny Foods.
- 3) Er. John vincent, Head and Business Development, Dvara E Dairy has delivered a special lecture on "Discussion on Agri Startup for emerging Agricultural Engineers" on 6th march 2021.
- 4) Dr. P. Soman, Vice president and Global head Agronomic services, Jain irrigation pvt ltd. has delivered a special lecture on "Innovative sustainable solutions for water scarcity" on 23rd march 2021.
- 5) Mr. G. Ranjith Kumar, Specialist, Technology & Network, B & R Industrial Automation has delivered a special lecture on "Innovative Technology to drive IoT in Agriculture Sector" on 19th Feb 202.
- 6) Mr. Sagar Athithiyan, Zonal Head south India at Farmx-ICAR has delivered a special lecture on "Entrepreneurship and Business Opportunities in Agribusiness and Food Industry" on 06th Feb2021.
- 7) Two days workshop on "application of drone technology in various field "conducted by Aeronautical Department, HICET, Coimbatore on 22 January 2020.

8) Mr. Sibin C. Baby, Sales and Marketing head, Waycool foods and Products ltd, Kerala has delivered virtual webinar on the topic, "Agripreneurship – a new window for the future" on 07th July 2021 in association with Entrepreneurship Development Cell.



Dr. Ramasamy, Professor and Head, KIT – Coimbatore.



Dr. T.V. Ranganathan, Professor, Karunya
Institute of Technology and Sciences





Aeronotical Department – HICET, Coimbatore

Student Activities & Achievements

• As to the modern era requirements learning becomes a continuing process even for teachers. Both staff and students are encouraged to take up online courses *like* Coursera,

- NPTEL for updating the knowledge base in an era of e-bases almost in all professions. Totally 216 courses was completed by our student.
- All agricultural Engineering student were participated one day seminar on "Advancement in dairy processing and value added dairy products" on 06th Feb, 2020 in Dept. Food Technology, HICET Coimbatore.
- All agricultural Engineering student were participated one day workshop on "Drone technology and its application in agriculture" on 06th February, 2020 in Dept. Aeronautical, HICET Coimbatore.
- All agricultural Engineering student were participated and presented given solution for various problem statements in Smart India Hackathon (SIH)-2020 HICET, Coimabtore on 21th Feb,2020
- Sakthi Kumar M. and Sriram V. (II Agrl.Engg) had presented a paper "Sustainable Agriculture" in the national level technical symposium Organized by Department of Agrl. Engg at Savetha college of engineering and Technology on 6.9.2019.
- Maheshwar L. and Ajay Franklin (II Agrl.Engg) had presented a paper "Importance of crop residues decomposing in soil" in the national level technical symposium Organized by Department of Agrl.Engg at Savetha college of engineering and Technology on 6.9.2019.
- A. Abitha and Ponsivasankari K. (II Agrl.Engg) had presented a paper "Importance of hydroponics in future" in the national level technical symposium Organized by Department of Agrl.Engg at Sri Shanmuga College of engineering and technology on 4.10.2019.
- Sakthi Kumar. M and Saran Raj.R(II Agrl.Engg) participated "Farm tractor and Machinery one day workshop" in Society of Agriculture and Irrigation engineering college of engineering, Guindy, Anna University Chennai-25 at 18.2.2020
- Maheshwar L. participated CATC CAMP (NCC), PSG College of Technology, Coimbatore at 17.6.2019 and ALC CAMP (NCC) NATIONAL LEVEL, HICET Coimbatore at 5.12.2019
- M. Arun Participated zonal level and college level cricket competition at 5.12.2019

Industrial Visits

Visit to Agricultural Engineering department, Tamil Nadu agricultural University Coimbatore .





Visit to Jain irrigation Pvt. Ltd., Udumalpet, Tamil Nadu



Cultural Activities in our department

AGRIFIED- The Half Engineer's day celebration

With the objective of creating awareness among the young minds to take part in skill development and social responsibility, the Department of Agriculture Engineering in association with "VITHAI" (The student's chapter of Agriculture Engineering) organized "AGRIFIED"- the Half Engineer's Day Celebration on 7th July, 2021. As a part way for this event, various cultural activities were conducted daily from 24th June 2021 to 6th July 2021 to refresh student's minds by physical and Brain storming activities. It improved team spirit and leadership ability of our students by exploring themselves to participate inter/outer campus, national and international level competitions. The events were coordinated by Ms. Chinju Saju, Ms. Athira P. & Ms. Ramya K., the Assistant Professors of the Department under the guidance of Dr. Sridhar N., HoD, Department of Agriculture Engineering.

The occasion was started with a prayer by choir team followed by welcome speech by Dr. Sridhar N., HoD of Department of Agriculture Engineering. The function was inaugurated by Dr. T. Senthilkumar, Principal Scientist, ICAR CIAE, Regional Centre, Coimbatore and he shared his thoughts as a webinar on the topic "Role of Agriculture Engineer on Technology Transformation". Dr. K. Kanukaran, CEO of Hindusthan Educational Institutions, delivered presidential address on this auspicious occasion. Felicitations were given by Dr. Magudeswaran P. N., DEAN (Academics), HICET & Dr. Jaya J, DEAN, H ICET. Department Magazine name and Cover page was also launched during this event. Prizes for all the events were also announced on this occasion. The Celebration was concluded with a Vote of Thanks by Ms. Nivethasri, Joint Secretary, VITHAI Association. The cultural events conducted are tabulated below with corresponding student coordinators list:

Sl.	Event Name	Date	Student Coordinators	
No.				
1	Event name Competition for the "Half	24-06-2021	Donn P N, Abdul Bahiz&	
	Engineers Day Celebration"		Sajith Gaffar B	
2	Emblem for Agriculture Engineering	24-06-2021	Tharani, Soumya,	
			Hemalatha&Jothika	
3	Essay Writing Competition	28-06-2021	Sanjay, Ponsivasankari&Sankari	
4	Wealth out of waste	29-06-2021	Soundarya A, Sowndarya B. &	
			Chythanya	
5	Elocution/Extempore	30-06-2021	Vidhyadharshini,	
			Sreelakshmi&Abinaya	
6	Drawing competition	01-07-2021	Kameshkiruba,	
			JeyaSurya&Nivethasri	
7	Singing competition	02-07-2021	Priyanka, Anjali&Abinaya	

8	Dancing Competition	02-07-2021	Megha, Sandra &Ardra, Abitha
9	Slogan Writing Competition	3-07-2021	Dharsha, Ranjitha& Christy
10	Story Writing Competition	3-07-2021	Sreejith, Sanjay, Ponsivasankari&Sankari
11	Quiz Competition	5-07-2021	Dhanalakshmi, Saranraj& Pavithra
12	Dubsmash	6-07-2021	Sreelakshmi, Rahul & Anjali

Overall monitoring was done by student coordinators- Mr. Ajay, Ms.Gopika, Mr.Guhan, Mr.Sakthi and Ms.Nivethashri. The Winners of each event are tabulated below:

Sl. No.	Event Name	Number of Participants		Winners Name list	Register No.	Year
1	Event Name	15	1	Guhan E V-	19111017	III
	Competition for the		2	Nivethasri P	19111035	III
	"Half Engineers Day		3	Gopika P	19111016	III
	Celebration"		3	Sankari M	19111043	III
2	Emblem for Agriculture	24	1	Ajay kumar	19111005	III
	Engineering		2	Mukesh Kanna.M	18111016	IV
			2	Nivethasri.P	19111035	III
			2	SANKARI.M	19111043	III
			3	Nayanthara P R	18111017	IV
				vidhyadharshini	19111054	III
			3	Kameshraj. K	19111024	III
3	Essay Writing	15	1	Nivethasri.P	19111035	III
	Competition		2	Priyadarshini	18111019	IV
			3	Thanushree.P	18111037	IV
4	Wealth out of waste	6	1	Nivetha sri	19111035	III
			2	Vidhyadarshini	19111054	III
			3	Soumiya	19111046	III
5	Elocution/Extempore	6	1	Sreelakshmi	18111031	IV
			2	Nivethasri	19111035	III
			3	sozharajan	19111049	III
6	Drawing competition	4	1	Nivethasri	19111035	III
			2	Nayanthara	18111017	IV

			3	Priyanka	19111037	III
7	Singing competition	4	1	Anjali Prakash	18111039	IV
			2	Nivethasri	19111035	III
			3	Christy Joy	19111012	III
8	Dancing Competition	6	1	Nayanthara P. R.	18111017	IV
			2	Nivethasri	19111035	III
			3	Megha Nair K V	19111031	III
			3	Kameshraj	19111024	III
9	Slogan Writing	10	1	Nayanthara P R	18111017	IV
	Competition		2	Sreelekshmi	18111031	IV
				Saseendran		
			3	Guhan E.V.	19111017	III
			3	Brindha.s	19111011	III
10	Story Writing	8	1	Sreelekshmi	18111031	IV
	Competition			Saseendran		
			2	Pavithra	19111036	III
			3	Soumiya	19111046	III
11	Quiz Competition	15	1	Sreelakshmi		IV
				Saseendran	18111031	
			2	Ranjitha S.	18111021	IV
			3	Hemalatha	18111010	IV
12	Dubsmash		1	Kartheeswaran P	19111025	III
			2	Nayanthara P R	18111017	IV
			3	Sandra	19111041	III

Posters for all cultural activities are presented below:





















The function was captivated by showing Department based video of two batches. The link of the two videos, video of prize winners, overall poster and cover-page of magazine are shared in the following link:

https://drive.google.com/drive/folders/1WgX9VShgdTKgUh_4Xl6ZudvvAxt1HzWE?usp=sharing

Reports of every events and corresponding documents are shared in the following link:

https://drive.google.com/drive/folders/1i7r8NgPKKiTQmFKTOgobWWHn-

AZ3UkVf?usp=sharing

Scoresheet of each events are also shared in the following google sheet link:

https://docs.google.com/spreadsheets/d/1oloEQR-MCSD6LsWLK-

hpr0Q7QHBAPHJBVQ1hQoq7KPs/edit?usp=sharing

Career Opportunities of B.E. Agriculture Engineers

Always, the demand for agriculture engineers is high all the time.

Leading agricultural companies, government services, and consulting agencies seek graduates in B.E. Agriculture Engineering. A, B.E (Agri. Engg) degree holder can open doors around the world in large corporations and small businesses, including careers in agricultural equipment and machinery design, water quality, erosion control, food processing, structural design, materials handling and environmental engineering etc.,