

Agricultural Engineers and Indian Agriculture

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Agricultural engineers and graduates have been pioneers in bringing innovative, reliable and smarter solutions. Institutions such as Indian Council of Agricultural Research (ICAR), Indian Agricultural Research Institute (IARI), Central Institute of Agricultural Engineering (CIAE), State Agricultural Universities and other Agriculture academic institutions have played a pivotal role in India's journey to Agriculture modernization. The industry plays an important role by further honing these talents, skills and knowledge to bring unique solutions to the farmers. Over the past five decades the solutions to Indian farms have seen a dramatic change – from very rustic manual solutions to mechanical, hydraulic assisted, electro-mechanical to fully electronically controlled smarter solutions today.

Undoubtedly, a strong partnership between Government – Researchers – academia and Industry is needed for enhanced agricultural productivity, sustainability, food security that shall benefit millions of farmers across the nation. This is essential for an end-to-end solution 'across the crop value chain' for an integrated advancement. Agriculture Engineers and Graduates are making noticeable contributions



in several areas that include, seeds, chemicals & fertilizers, land prep – crop care – harvest and post-harvest technologies, weather advisory, Fintech, storage/ logistics solutions and micro food processing sector. Engineers are sensitive to future needs,

technological advancements and most importantly keeping sustainability as a key criterion.

These innovations and smarter solutions have enabled farmers to cultivate larger areas more efficiently, leading to increased crop yields and reduced labor costs. The government's framework and policies along with brilliant work done by KVK's is proving as a catalyst to modernization of Indian Agriculture. Furthermore, the adoption of data-driven approaches, including precision agriculture, artificial intelligence (AI), computer vision & machine learning (CVML) and remote sensing (RS) empowers farmers with access to real time data for a much-informed





decision. This results in improved crop management, efficient resource allocation, and higher profitability.

Agriculture graduates and other sectorial experts also address environmental concerns by promoting sustainable practices. Practices in areas such as soil conservation, agroforestry, and organic farming are being developed to minimize the ecological footprint of agriculture, ensuring future generations can continue to thrive.

In alignment with these advancements, John Deere consistently innovates by introducing technologically advanced products and solutions aimed at empowering farming communities to

improve productivity and profitability. Our focus on precision & AI based solutions enhances machine performance and delivers sustainable results for our customers. Over the past 26 years in India, we have introduced distinctive products featuring first-in-market technologies such as power steering, power reverser, MFWD and now smart connected machines.

As India embraces mechanized and sustainable agriculture, technologically advanced tractors and farm equipment play a key role in supporting the economic growth of the 'Farming Communities'. Understanding these needs, John Deere brings unique features and solutions to the market. Recently, John Deere introduced the

powerful 130 HP 5130 M tractor and innovative solutions like the 5042D GearPro, launched during the Power and Technology 6.0 event. The 5130 M tractor, launched on February 14, 2025, is the most powerful in its class, designed to handle tough tasks with ease while revolutionizing farming practices in the country through a combination of power, innovation, and user comfort. Additionally, models like the 5042D GearPro, 5045D, 5050D GearPro Lift Pro, and 5210 Perma Clutch have been launched to enhance performance, improve user experience, and foster customer loyalty.

Improving the quality of life of the farming community and sustainable agriculture growth in India shall need continued focus and priority for enhanced productivity, reduced operating costs and robust last mile connectivity. As India continues to evolve, the contributions of agricultural engineer in coordination with Academia, Industry and government shall remain vital in achieving food security and advancing economic development.

As a subsidiary of Deere & Company USA, John Deere India has a rich heritage of over 187 years of serving customers with cutting-edge products and leadership in agriculture, construction, and road-building equipment.

