ICAR-Central Institute of Agricultural Engineering
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ICAR-CIAE Remote-controller system for four Wheel Rice Transplanter

Utility

A four-wheel rice transplanter to reduce human drudgery and enable unskilled operation in puddled paddy fields. The system includes a ten-channel remote and an electronic control unit (ECU) that manages steering, speed, braking, transplanting functions, and emergency stop. Actuation is achieved via motor drive modules using wiper motors and linear actuators, while a microcontroller enables remote start up to 500 m. An Arduino Nano-based obstacle detection system with ultrasonic sensors ensures emergency stopping. The system is attachable/detachable and was successfully tested at TNAU, Coimbatore, with remote operation up to 200 m.

Specification and Performance results		
Field capacity	:	0.27 ha/h
Field efficiency	:	70.9 %

Design: ICAR-CIAE, Bhopal

Commercialization Status: Ready for Commercialization

Proposed stakeholders: Rice growers, Custom hiring operators and manufacturers.

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