ACHARYA NG RANGA AGRICULTURAL UNIVERSITY

ROBOTIC E-TRACTOR : TECHNOLOGY TRANSFER BROCHURE

ANGRAU

Dr. NTR College of Agricultural Engineering, ANGRAU, Bapatla has developed an advanced Robotic E-Tractor with multiple attachments for planting, intercultivation and spraying. The technology offers unprecedented precision, efficiency and ease of operation for modern and sustainable agriculture.

SALIENT FEATURES

- Triangular track system for superior navigation in dryland and uneven terrains.
- 48V 120Ah LiFePO4 battery delivering 5.4 kW power with efficient electric motors.
- Multirow operation with adjustable spacing (45–120 cm).
- Attachments: row crop planter, pneumatic planter, intercultivator, foldable sprayer.
- Eco friendly design with minimal soil compaction.

SPECIFICATIONS

1. Operating system: WiFi Remote Control
2. Power: 7 HP equivalent electric drive
3. Working width: 45–120 cm
4. Field coverage: 0.35–0.40 acre/hr
5. Suitable crops: cotton, maize, pulses, vegetables

TECHNOLOGY TRANSFER TERMS & CONDITIONS

- Transfer of Technology will be on NON EXCLUSIVE rights basis.
- One time License Fee: Rs. 2,00,000 (Rupees Two Lakhs only).
- Royalty: 3% of production cost for a period of 5 years.
- MoU will be executed as per ANGRAU norms.
- Technology package include production drawings and circuit diagrams.

A WIN–WIN COLLABORATION

- Industry partners gain access to proven indigenous robotic technology.
- Farmers benefit through reduced drudgery and precision operations.
- University fulfills mandate of outreach and commercialization.

CONTACT DETAILS

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Robotic E Tractor

Dr. NTR College of Agricultural Engineering, ANGRAU, Bapatla developed robotic E-Tractor with attachments for planting, weeding and spraying to offer unprecedented precision, efficiency, and ease of operation with following specifications:

1. **Triangular Tracks for Superior Navigation**

- Unique Design: Equipped with triangular tracks, this planter effortlessly traverses diverse terrains such as sandy soils, rocky slopes, and uneven ground.
- Eco-Friendly: The design minimizes soil compaction, preserving the delicate balance of dryland ecosystems.
- Stability: Ensures steady maneuverability even in challenging conditions.

2. **Powerhouse Performance**

- Battery-Powered: Operates on a 48V 120AH LiFePO4 battery, delivering 5.4KW of power.
- Efficient Motors: Features 48V electric motors paired with robust gearboxes, ensuring reliable and consistent performance.
- Multi-Row Planting: Capable of planting 3 to 4 rows simultaneously with adjustable spacing, catering to various crop requirements.

3. **WiFi Remote Control for Effortless Operation**

- User-Friendly Remote: Operated via a WiFi-enabled remote control, allowing precise management of the planter's functions.
- Real-Time Monitoring: Equipped with a live camera feed accessible through the remote, enabling progress tracking and obstacle avoidance.
- Convenience: Ensures easy operation without the need for a mobile device, enhancing accessibility.

4. **Attachments for Versatility**

- Rotary Power: Attach rotary tools for tilling and soil preparation.
- Pulling Power: Connect planting attachments for planting and spraying

- Cost-Efficient: Reduces the need for multiple machines, enhancing productivity and cutting operational costs.

Specifications:

Operating system: Remote

control Power: 7 HP

Attachments: Row crop Planter, Pneumatic planter, Intercultivator, foldable sprayer

Working width: 45-120 cm

Field coverage: 0.35-0.4acre/hr