

POWERED TWO ROW PADDY TRANSPLANTER

by

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(2023-18-003)

THESIS

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KELAPPAJI COLLEGE OF AGRICULTURAL ENGINEERING AND

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KERALA, INDIA

2026

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I, hereby declare that this thesis entitled "Powered Two Row Paddy Transplanter" is a bonafide record of research work done by me during the course of research and the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title, of any other University or Society.

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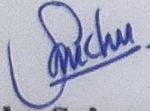
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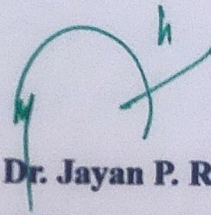
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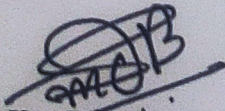
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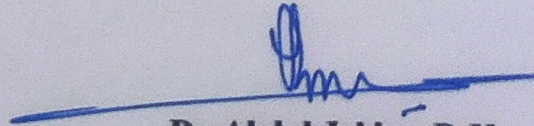
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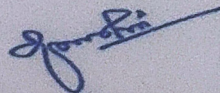
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Devika Guguloth

*Dedicated to my
parents and teachers*

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LIST OF SYMBOLS AND ABBREVIATIONS

ANOVA	: Analysis of variance
ANSYS	: Analysis of System
BRRI	: Bangladesh Rice Research Institute
CRRRI	: Central Rice Research Institute
CI	: Cone Index
CV	: Coefficient of variation
cm	: Centimetre
cm ²	: Centimetre square
cm ³	: Centimetre cube
cc	: Cubic centimeters
DF	: Degree of freedom
DC	: Direct Current
DAS	: Days After Sowing
db	: Dry Bulb
<i>et al.</i>	: And others
FYM	: Farm Yard Manure
FMPE	: Farm Machinery and Power Engineering
FEA	: Finite Element Analysis
GI	: Galvanized Iron
g	: Gram
g cm ⁻³	: Gram per centimetre cube
ha	: Hectare
h	: Hour
ha h ⁻¹	: Hectare per hour
ha day ⁻¹	: Hectare per day
HP	: Horse Power
H	: Height
IGKV	: Indira Gandhi Krishi Vishwavidyalaya
IS	: Indian standard
Kg	: Kilogram
KCAEFT	: Kelappaji College of Agricultural Engineering and Technology
kg m ⁻²	: Kilogram per meter square
Kg ha ⁻¹	: Kilogram per hectare
km h ⁻¹	: Kilometer per hour
kPa	: Kilopascal
kW	: Kilowatt
l	: Length
l h ⁻¹	: Litre per hour
M	: Mass
MS	: Sum of squares
MS	: Mild Steel
MATLAB	: MATrix LABoratory
m h ⁻¹	: Meter per hour
m	: Meter

m^2	: Meter square
mm	: Millimeter
$m s^{-2}$: Meter per second square
$m s^{-1}$: Meter per second
m^3	: Meter cube
N	: Newton
N m	: Newton meter
OUAT	: Odisha University of Agriculture and Technology
PoP	: Package of Practices
PTO	: Power Take OFF
R^2	: R-squared (Coefficient of determination)
Rpm	: Revolutions per minute
Rs.	: Rupees
$Rs h^{-1}$: Rupees per hour
SS	: Mean square
SWMRI	: Soil and Water Management Research Institute
SD	: Standard deviation
SS	: Stainless Steel
s	: Seconds
$t ha^{-1}$: Tonnes per hectare
V	: Volume
W	: Watt
w	: Width
μ	: Coefficient of Friction
θ	: Theta
Φ	: phi
Υ	: gamma
Π	: phi
$^\circ$: Degree
%	: Percentage
+	: Add
-	: Minus
\pm	: Plus or Minus
\times	: Multiply
<	: Less than
>	: Greater than
\leq	: Less than or equal to
\geq	: Greater than or equal to
$\sqrt{\quad}$: Root
\neq	: Not equal to
\approx	: Approximately
Σ	: Sum