

# SRI Transplanter

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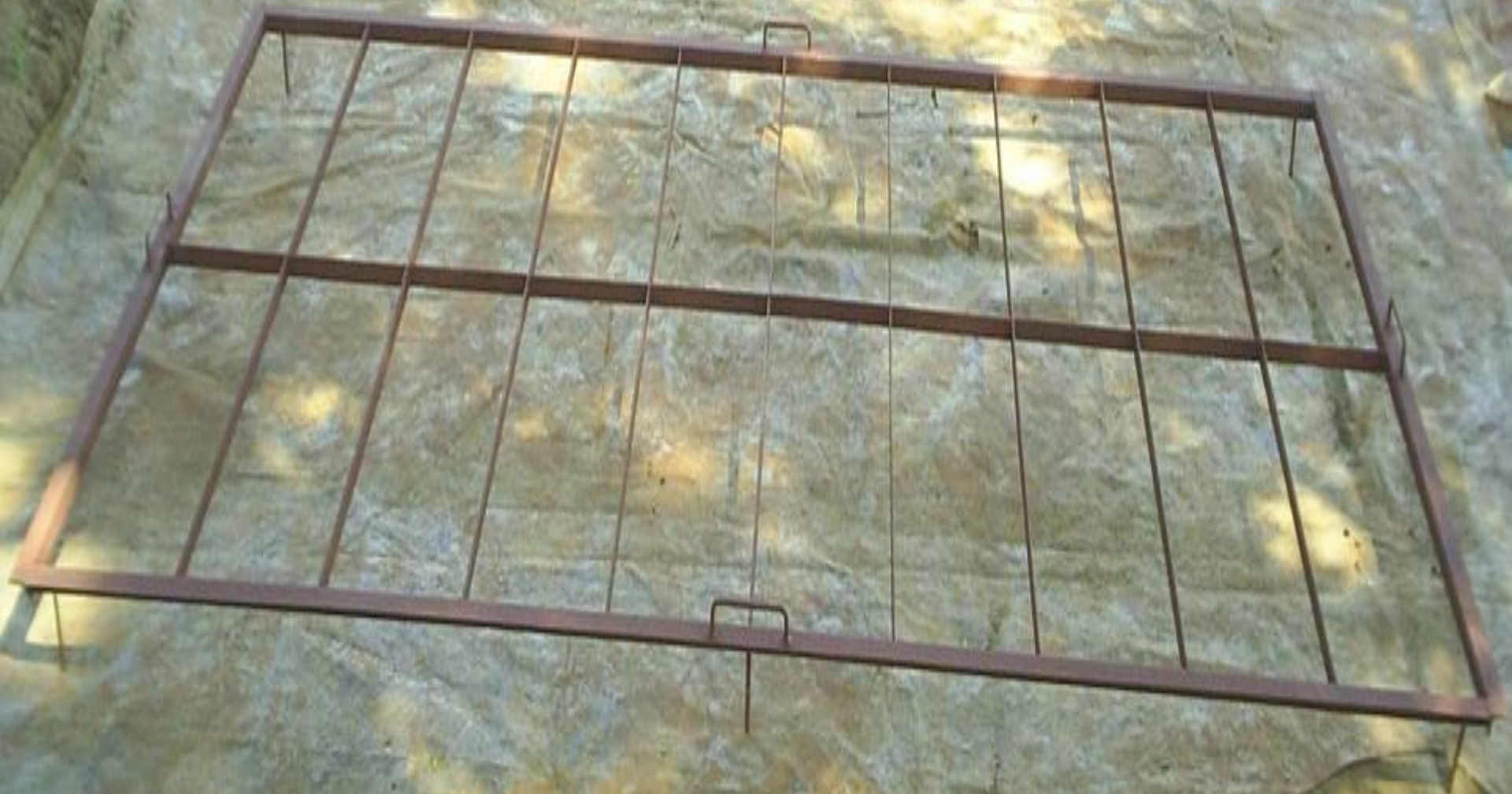
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# NURSERY FRAME



Size: 2.3 m x 1.1 m

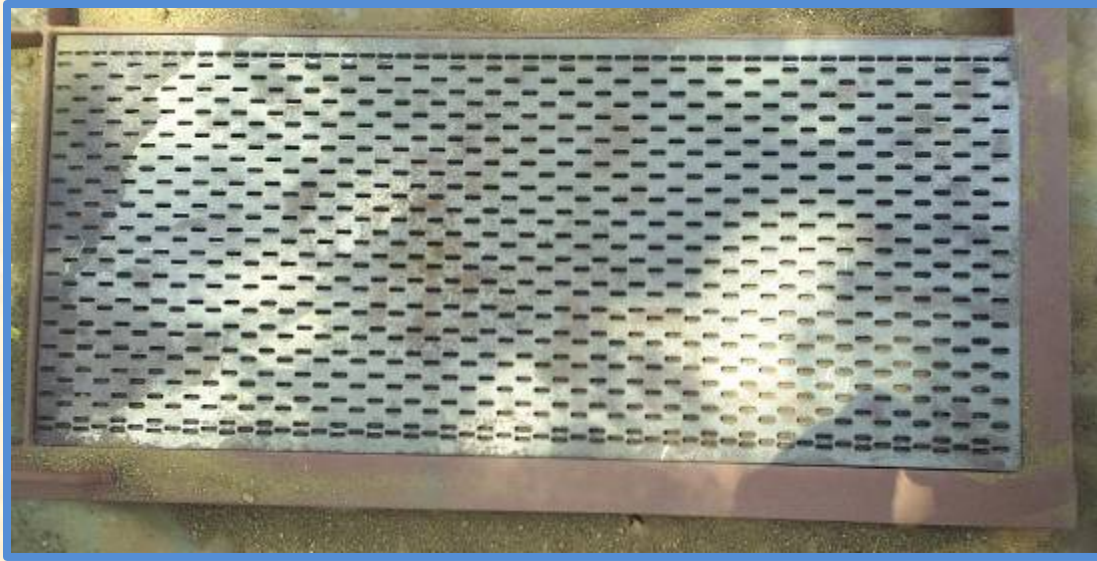
**Placing the frame over a polythene sheet**





Frame with filled soil

## Placing the sieve over the frame



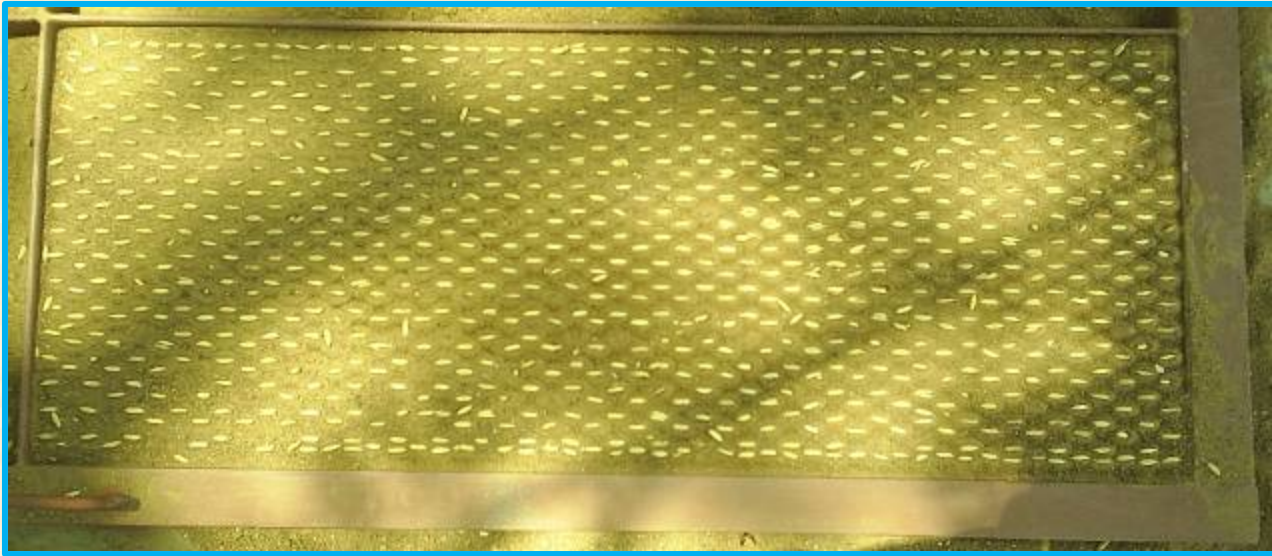
Size of sieve :  
525 X 225 mm

No. of holes : 910



Seed placement

Seeds placed in the nursery frame



Seeds covered with soil



**NURSERY  
RAISED IN  
FRAME**

# NURSERY COST

Frames required	: 4 / acre
Cost of each frame	: Rs. 1,000/- <sup>†</sup>
Total cost of frames /acre	: Rs. 4,000/-
Cost of polythene sheet/acre	: Rs. 100/-
Labour requirement (2 labourers/acre)	: Rs. 160/-
Total Cost	: Rs. 4,260/-

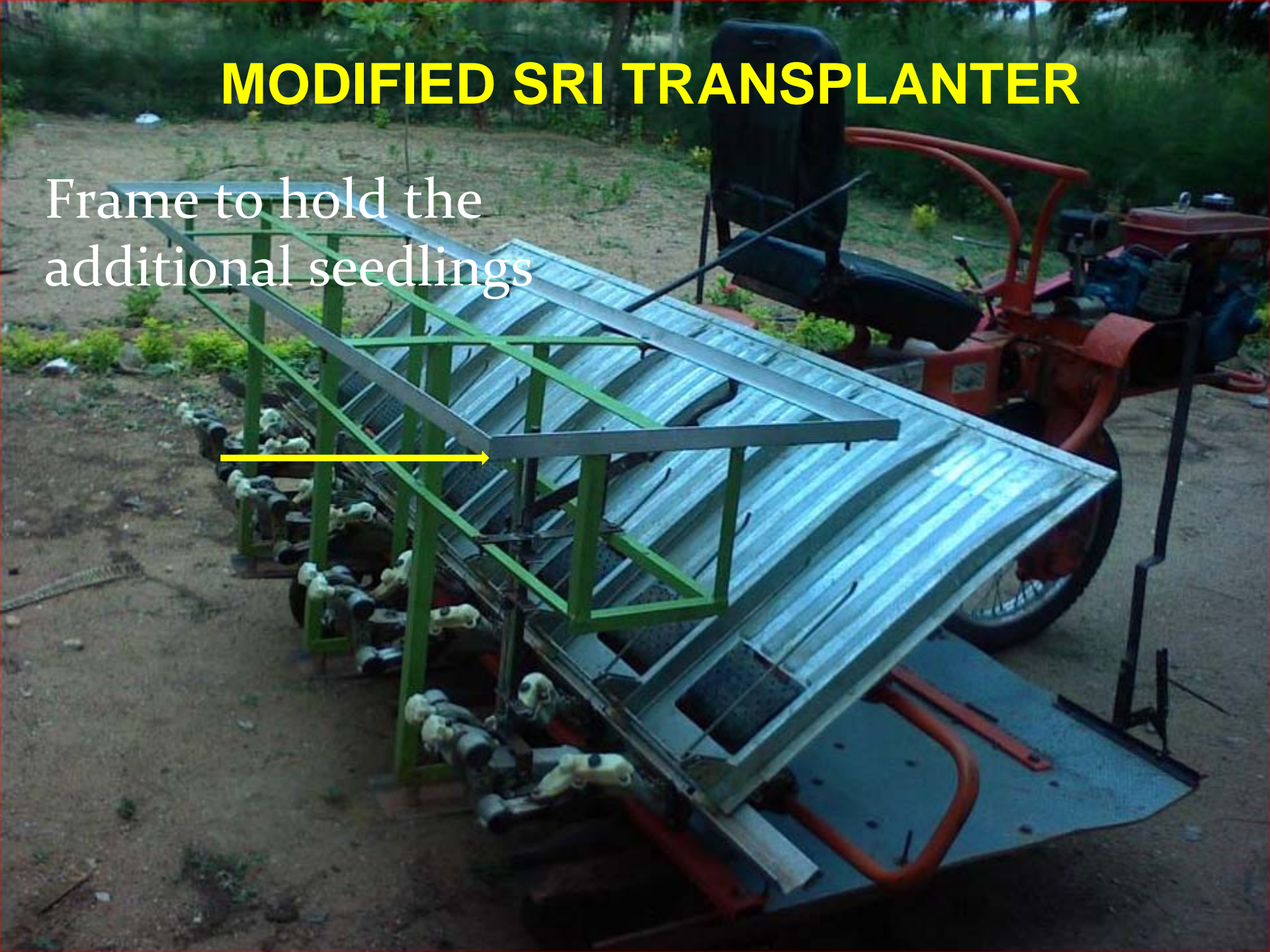
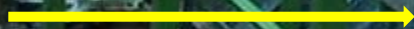


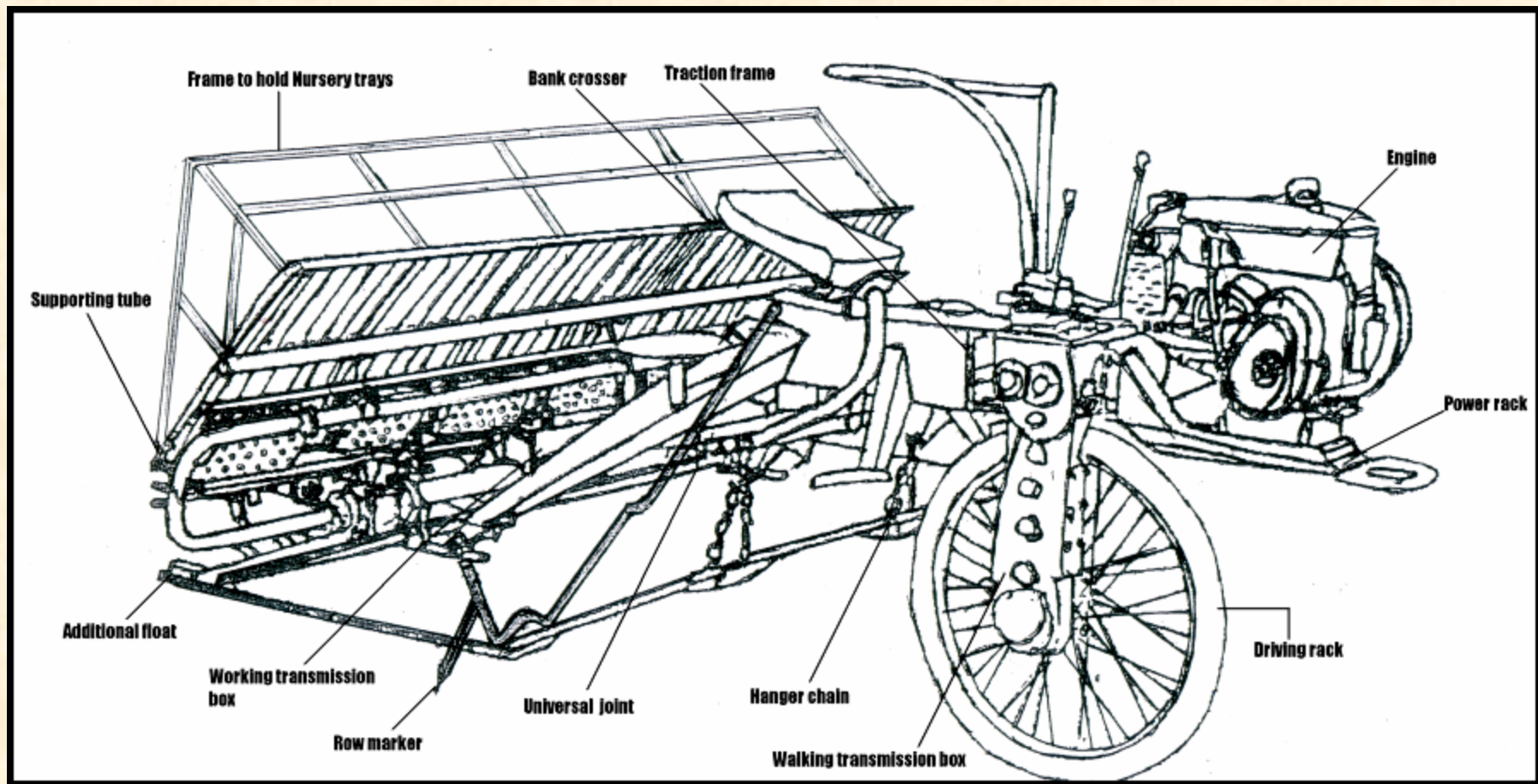


**Chinese (Yanji) Transplanter**

# MODIFIED SRI TRANSPLANTER

Frame to hold the additional seedlings





**Modified Chinese (Yanji) SRI Transplanter**

# Chinese (Yanji) Rice Transplanter

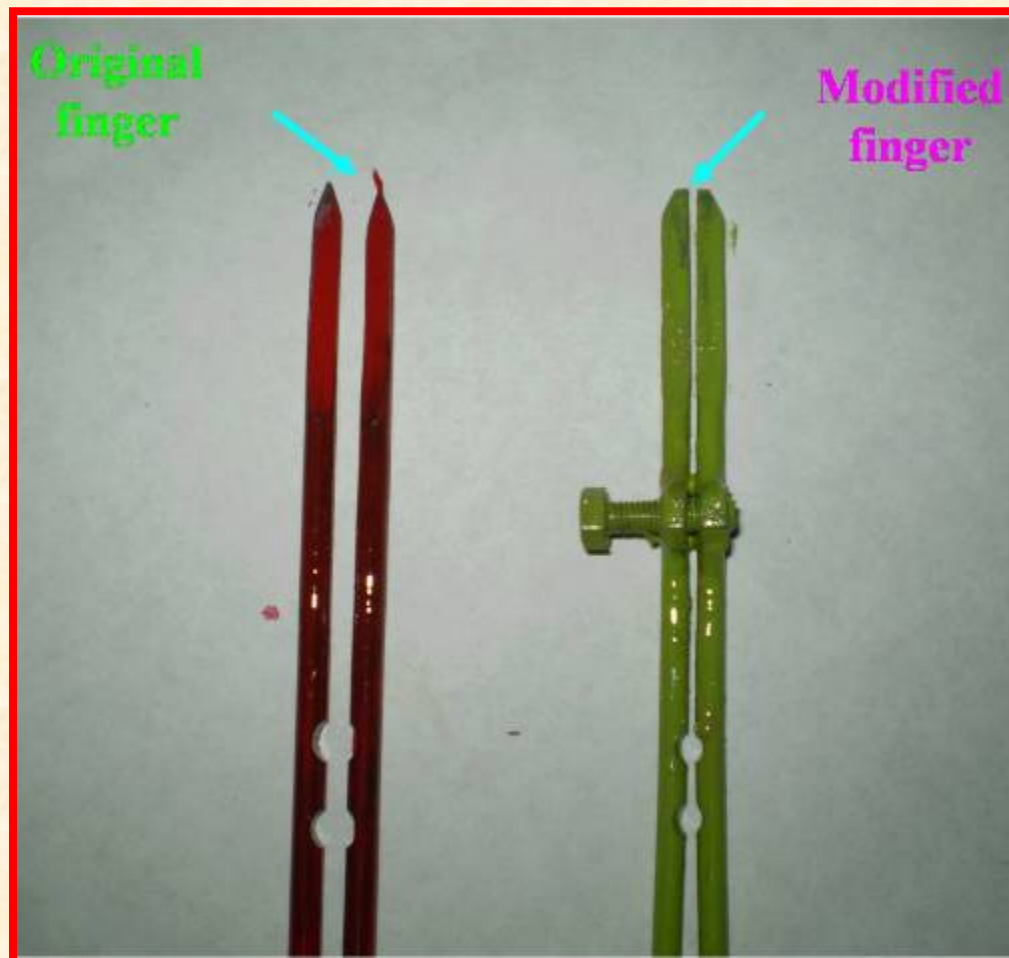
## 1. Square Planting

- ❖ The transplanter can plant seedling with 24 cm row-to-row spacing.
- ❖ In order to have square planting for SRI method, gears in the working transmission gear box were changed in such a way that the plant-to-plant spacing is kept at 24 cm, which is equal to the row- to-row spacing.
- ❖ To have square planting in all the runs of the transplanter, row markers have been provided at both of the ends of the transplanter

Square planting with 24 x 24 cm

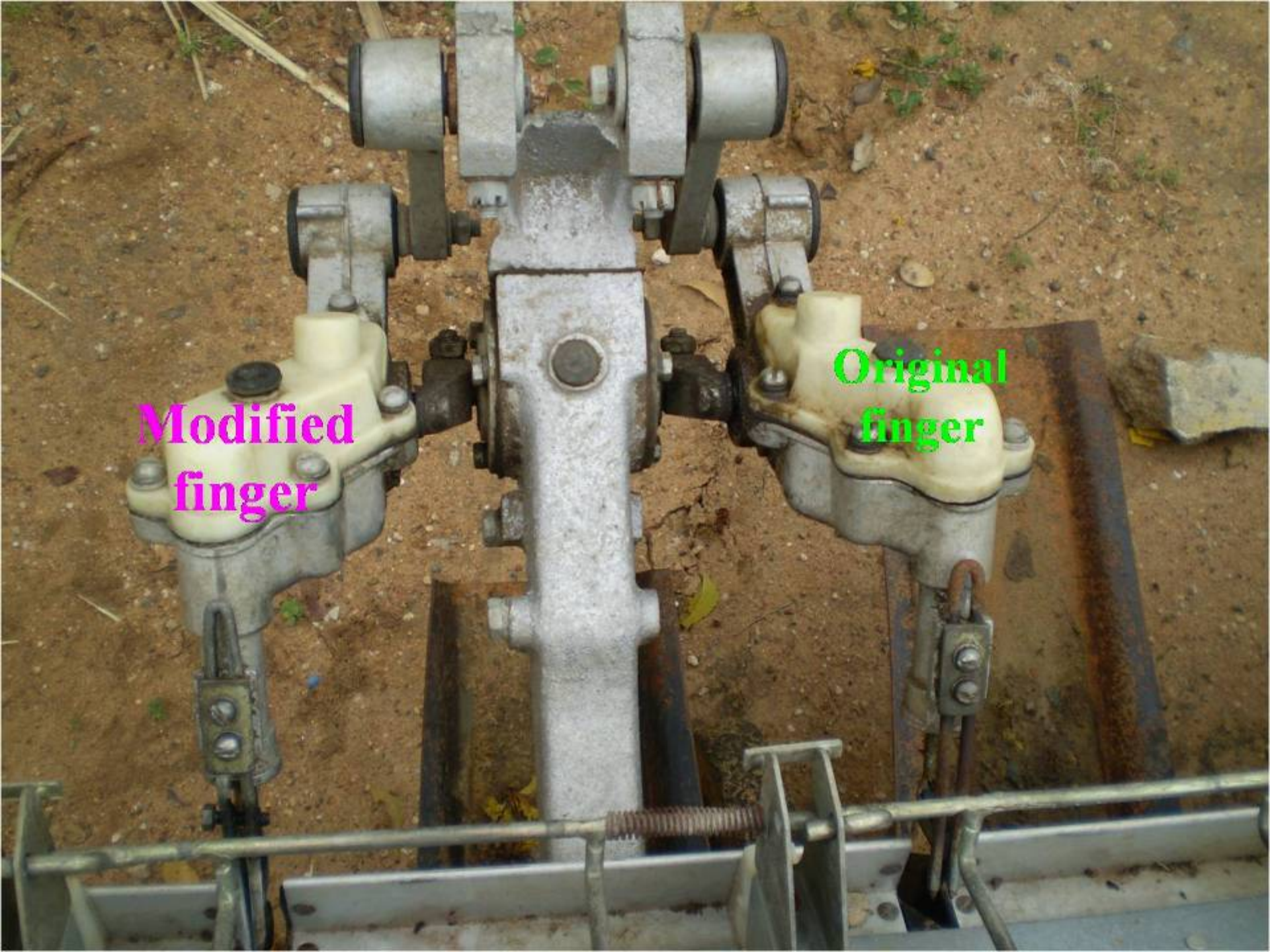




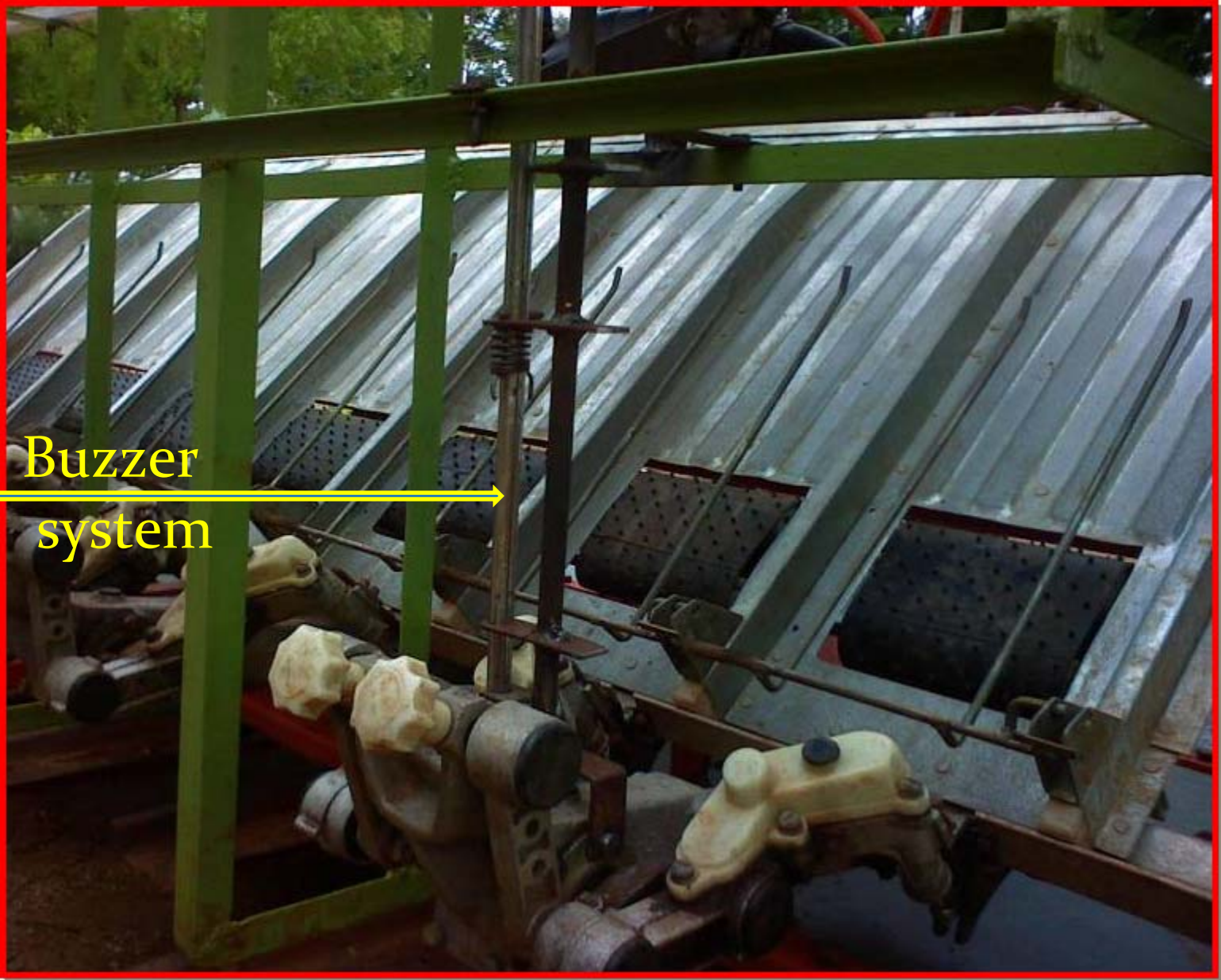


**Modified  
finger**

**Original  
finger**







Buzzer  
system



Additional Float

# SRI transplanter in operation

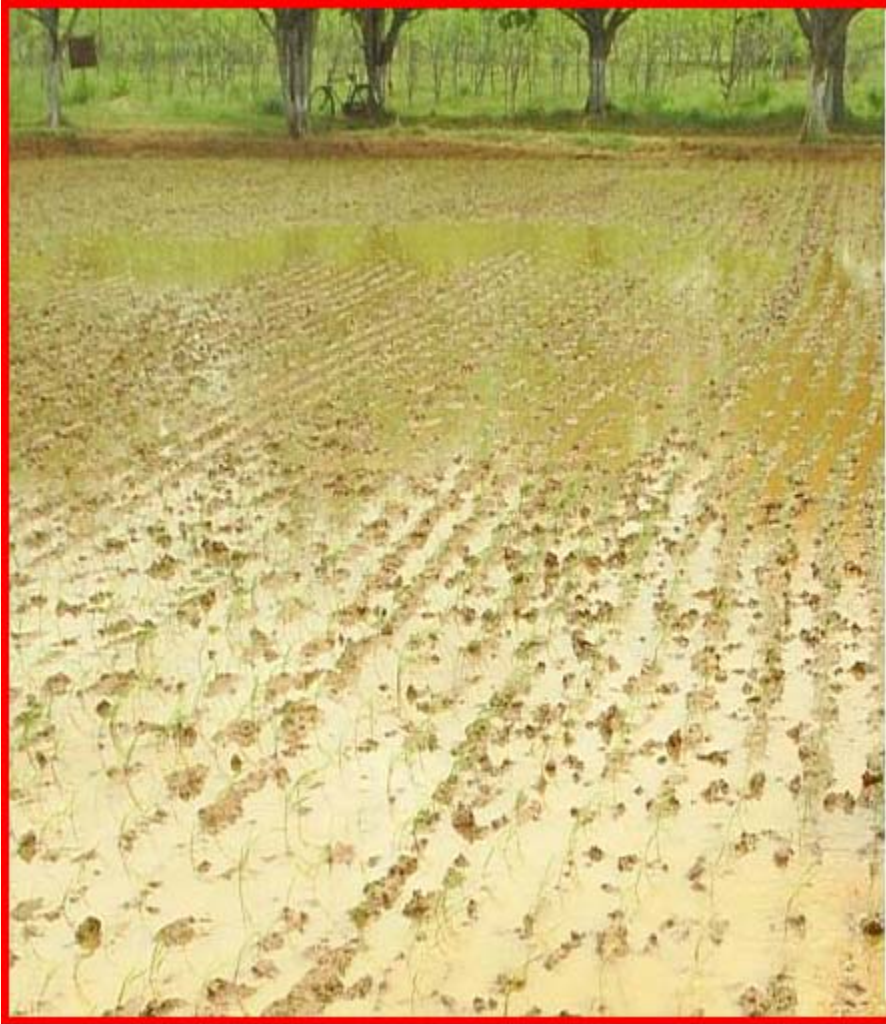


Particulars	Specifications
Engine capacity	2.4 kW
Fuel	Diesel
External dimensions (cm)	241 x 213 x 130
Walking mechanism	Single wheel drives with float
Working mechanism	Separate crank – connecting rod transplanting mechanism

# 1<sup>st</sup> weeding (10 DAT - 24.07.08)



# Field view after 1<sup>st</sup> weeding



# Field view - after 2<sup>nd</sup> weeding (04.08.08)



# Field view - after 3<sup>rd</sup> weeding (26.08.08)





# Results

<b>Particulars</b>	<b>Chinese (Yanji) transplanter</b>	<b>SRI transplanter</b>
Seedlings planted per hill	6 – 10	1 – 2
Plant-to-plant spacing (cm)	10 – 12	24
Row-to-row spacing (cm)	23.8	24
Frequency of non-planting (%)	0-3	0-4
Crop establishment after planting (%)	98-100	96-98
Diesel consumption (litre/acre)	1.75 – 2.0	1.5 – 1.75
Time taken to plant 1 acre (hr)	2 – 3	2 – 2.5

# Results

- Diesel pump nozzle has been calibrated to pump exact amount of diesel so that the transplanter consumes *1.5-1.75 litres* of diesel for one acre of operation
- A jack has been designed for easy changing of iron wheel instead of rubber-tyred wheel
- To increase the field capacity of the transplanter, wheel drive gear speed has also been changed, so that it can cover one acre in *2 -2.5 hours*
- Total cost of all the modifications works out to be *Rs.10,000/*

**THANK YOU**

