

“Drumseeder Manual”



**Agricultural Productivity Promotion Project
(APPP/JICA)**

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① Drumseeding's merits (A main field become a big nursery!)



Pls. think of your own situations to apply which Method to be better?

Nursery-Transplanting Method

1st Step: Nursery



2nd Step: Line-Transplanting

Drumseeding Method



Growth

Use Minimum amount of seed and seedling grows bigger, Easy Field Management on Weeding & Fertilizer Application,

More seed is needed for planting. Due to high density, seedling may grow smaller than Nursery-Transplanting method

Economy

High growth per seedling could lead to High Income per unit land area

Line-planted effect may lead to high yield resulting high profit for low cost operation

Constraints

Time & labor consuming could result in less profit

Need to obtain a drumseer which is costing 70-80 USD/Unit as of Nov. 2013

② Think of a strategy for drumseeding based on raining pattern & irrigation levels in your areas

1. Well Irrigated Area
2. Double cropping is possible
3. Early Variety + Middle/ Late Variety



1. Limited Irrigation Area
2. Potential High Flooding
3. Single Cropping only
4. Early Variety



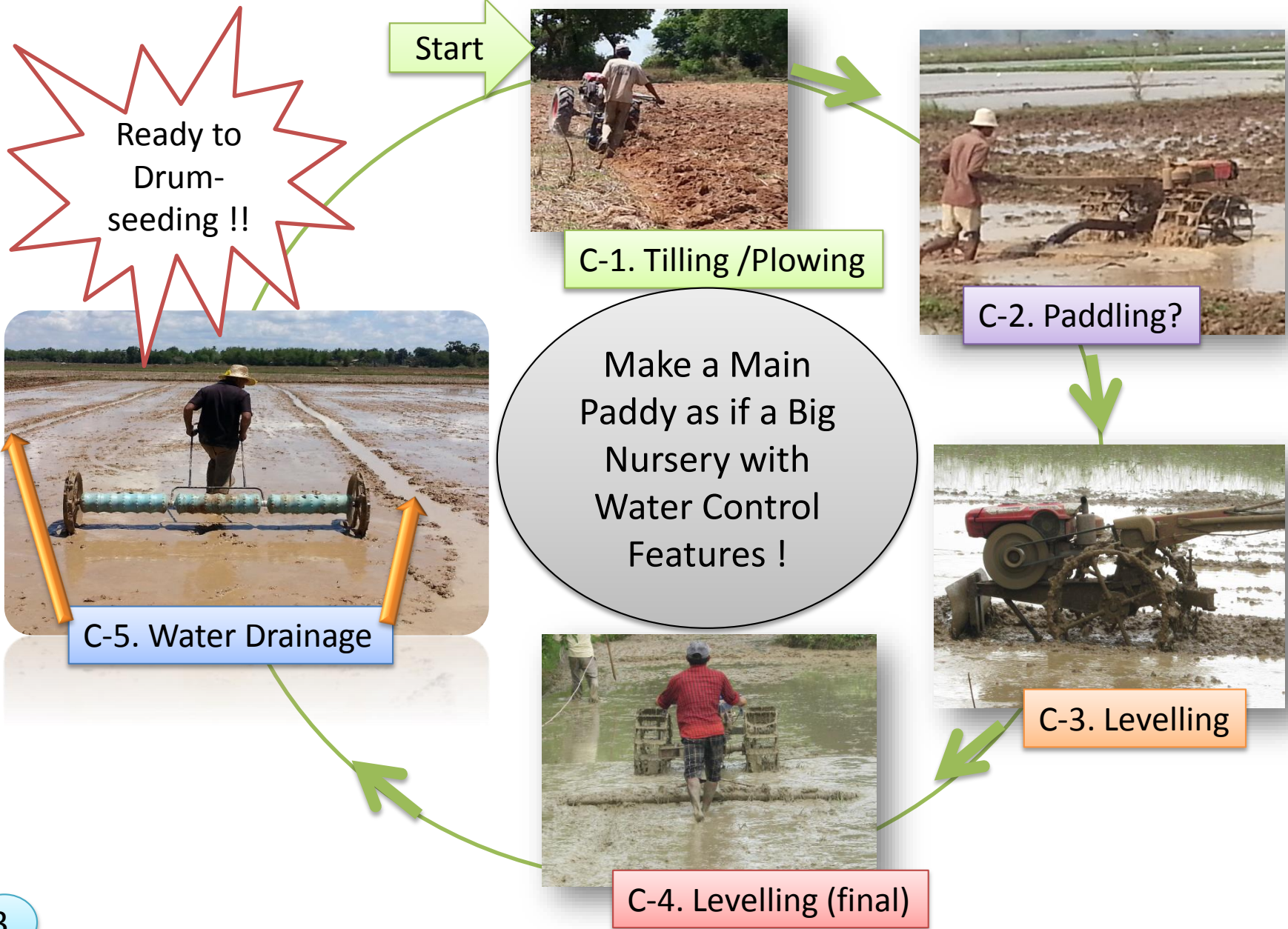
1. Limited Irrigation Area
2. Potential Flooding
3. Single cropping only
4. Middle or Late Variety



More Rain

Months 1 2 3 4 5 6 7 8 9 10 11 12

③ Land Preparation, this process is same as “Nursery-transplanting” method



④. What is Drum Seeder?

**Drum seeder is
"Man-operated
semi-automatic
rice seeding tool.**

Handle:
Pulling by arms
and /or one can
be inside to
draw it as if
"RickShaw"



A drum to
hold and
drop seed

Holes
to
drop
seed

A lid of drum
for open &
close

This joint part is most easily be broken after
many times of use. Be ready to repair.

A cover belt of holes: In this type of drum seeder,
there are two different holes, one with many and
the other with less, to adjust dropping rate of
seeds thus controlling seeding amount. This belt
can be slid sideways

⑤ Seed treatment 2-3 days before drumseeding



2. Check 60°C



3. Shake seed nets in the hot water well to Remove floating poor quality seeds spending 10 min. at 60°C exactly.

4. Move good seeds into normal temperature water



1. Make a fire place to heat water



5. Soak in it (24h) and incubate (24h) for germination to seed

With this simple methods, selection of good seeds and disinfection of seeds are achieved simultaneously!!



⑥ Seeding amount and its dropping rate adjustment

A. Which level of germination good for drum-seeding?



Ideal for Drum-seeding

Grown too much, may get stack on the hole

No Good!

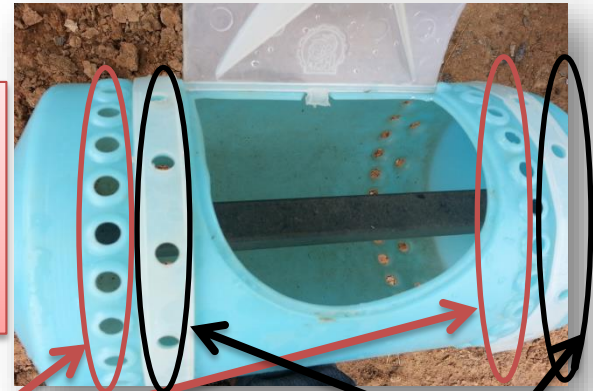
How to prepare: After the seed treatment, soak the seed in water for 24h and take it out, drain and incubate using a sack for 24h

Seeds under Incubation



B.

Which side of holes to open?



A side of more holes

More seeding amount (60-80 kg/ ha)

To be used under following conditions :

- ✓ Poor quality seed
- ✓ Poor water condition
- ✓ Poorly levelled paddy
- ✓ Poor weed management

A side of fewer holes

Less seeding amount (40-60kg/ha)

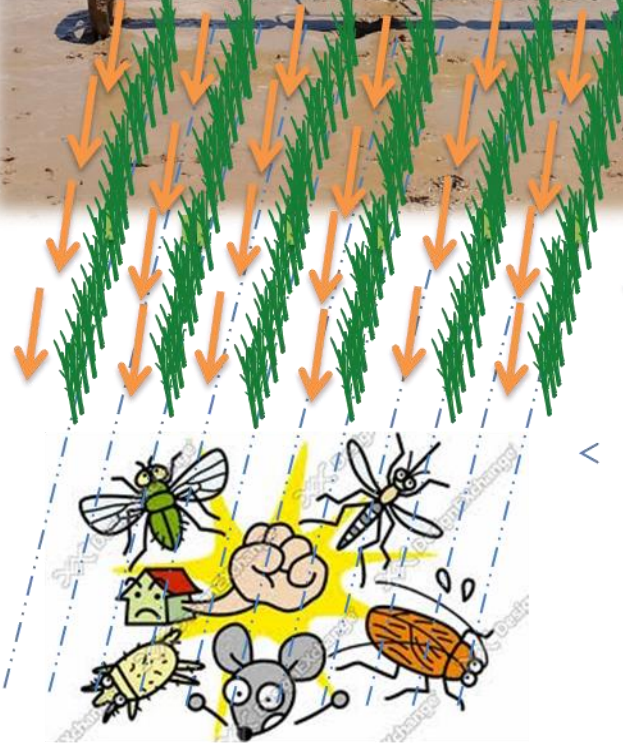
To be used under following conditions:

- ✓ Good quality seed
- ✓ Good water condition
- ✓ Well levelled paddy
- ✓ Good weed management



Never open the two sides at the same time, resulting in losing the good effects of "Line-Planting" & seeding too much! . Its opening & Closing is done by a plastic cover which can slide to either direction..

⑦ The goal is to achieve “Line-Planting Effect ” by drum-seeder



Good air ventilation in the paddy is necessary for not creating an environment for increasing disease agents like insects, fungus, etc....

Use a leading strings to follow to make straight line-drumseeding. This can achieve a good effect of **ventilation and spacing** for good rice growth and disease prevention.

⑧ Risk management



1.

Choose a best timing to drumseed!

2.

Secure a source of water under draught



3.

Drain water under flooding



4.

Prepare a supplemental nursery



⑧ Risk Management(2)

5.

Fertilizing the main paddy to promote growth



Basal Fertilizer during land preparation

DAP
50kg/ha



1st additional UREA after transplanting 20 – 25 day

UREA
50kg/ha



2nd additional UREA after Panicle initiation (PI)

UREA
50kg/ha



6.

Weed regularly to help healthy growth of rice plants



Manual Weeding



Good management of water in the rice field can prohibit the grass growth

8.

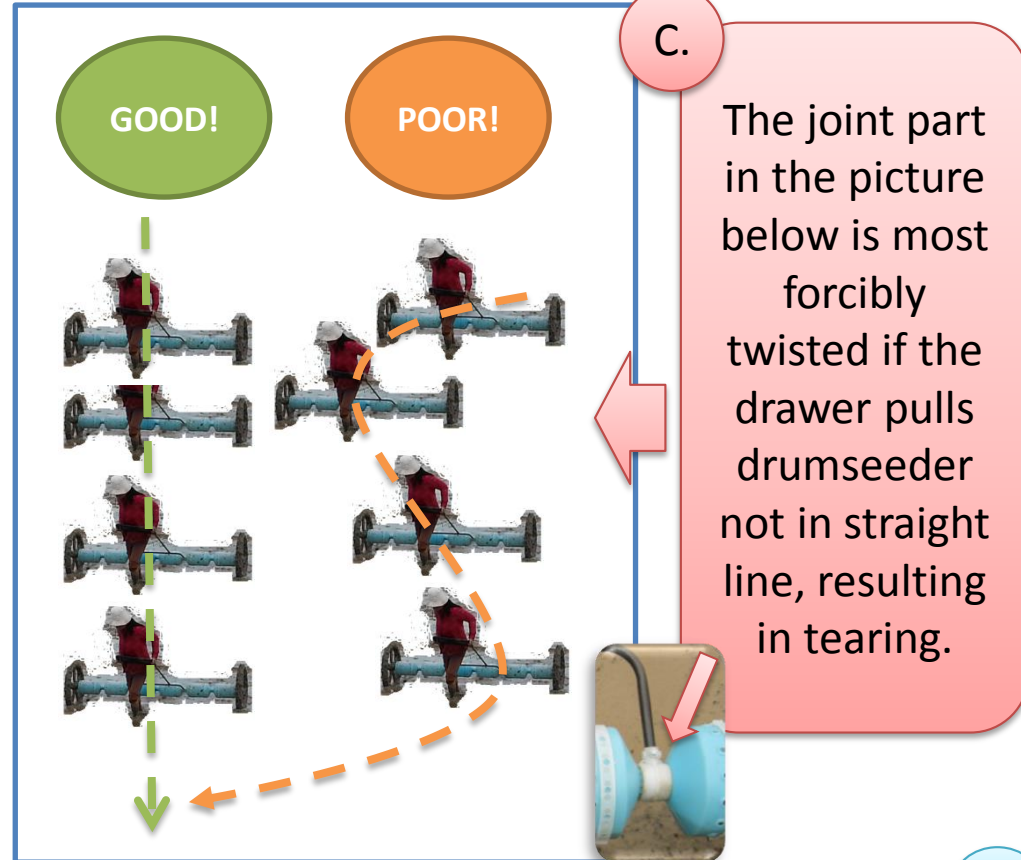
⑨ Take care of “Drum seeder”



A. As a Drumseeder is almost made of plastic, it is safe and very important to wash and remove soil right after its use, and keep it in dry place (not under direct sunshine). A careful use of it should prolong its functionality without major breakdowns for several to many years.



B. Do not feed too much wet seed into the plastic drums. The wet seed is heavy and stuck on the holes. The heaviness may break some of the seeder's joints.



⑩ How to obtain “Drum seeder”

Name of Supplier	Address/Contacts	Prices offered (As of ___/___/___)

➤ The Project (APPP) is not responsible for the availability of “Drumseeder” and is not assuring their prices. This is only to share the information for anyone who are willing to purchase the tool. Hence, the information here maybe different when ones contact them.