

**INTRODUCTION:**

- VENUS PADDY DRUM SEEDER is used for direct sowing of paddy seeds eliminating the need for transplantation and thus reducing labour cost in phenomenal measures.
- Seed sowing is very uniform which results in very easy care of growing plants.
- There is marked benefit of reduction in seed rate and thinning cost.
- This process completely eliminates continuous drilling of seeds.
- VENUS PADDY DRUM SEEDER is manufactured on a strong and durable frame, which can withstand any kind of physical stress.
- The wheels of VENUS PADDY DRUM SEEDER are light in weight but strong enough to ensure optimum high speed maneuvering.
- VENUS PADDY DRUM SEEDER can be easily assembled for use and equally easily disassembled for cleaning, maintenance and storage.
- VENUS PADDY DRUM SEEDER can be used in any kind of rice growing field provided that all instructions given in this manual are strictly adhered to.
- Fully assembled VENUS PADDY DRUM SEEDER is very light in weight and a single person can carry and handle it.
- The user is advised to strictly follow the complete instructions given in this manual to ensure maximum advantages of using VENUS PADDY DRUM SEEDER!

**ASSEMBLING THE VENUS PADDY DRUM SEEDER:**

- VENUS PADDY DRUM SEEDER can be assembled in a few minutes.
- First attach one wheel to one end of axle securing it with axle fastener.
- Lay out the four drums on the ground in the preferred order with spacers in between. The width between rows can be adjusted by using spacers. (Please take help of diagram provided)
- Slide the drums and spacers over the rectangular axle in the order chosen above.
- Do not forget to insert the handle holders in their appropriate positions.
- The inlets of the drums must be in one line.
- Attach the other wheel to the other end of axle securing it with axle fastener.
- Choose and open the required holes on all the four drums for dropping of seeds for sowing.
- Attach handle to the seeder with the fasteners provided.
- One person can lift and move the drum seeder wherever required because of it is very light in weight (about 12 kilograms).
- VENUS PADDY DRUM SEEDER is now ready for use

**FIELD PREPARATION FOR SOWING:**

- The rice field to be sown must be filled with water and leveled thoroughly. Proper flooding and land leveling can increase yield by a considerable percentage (over 20%).
- A properly leveled rice field will ensure improved water coverage. This helps in reducing weeds to a very large extent.
- Land leveling also enhances reliability of direct seeding and can reduce labour requirement and cost substantially.
- Excess water must be drained out 24 hours before sowing.
- While sowing only a paper thin film of water should be uniformly spread out over the field.
- Ensure that no patch or area of the field is left dry and exposed to the sun.
- A manageable and effective drainage system of the entire paddy field is essential to control water level at least for a month after sowing.
- Once the plants grow to a desirable height the paddy field can be flooded to need-based level, never engulfing the seedlings.
- In areas where heavy rains occur, water management becomes the 'key' towards success of direct seeding by ensuring that newly sown seeds are not drained away by rainwater.

**PREPARATION OF SEEDS FOR DIRECT SOWING:**

- The rice seeds used for sowing are newly sprouted in such a way that shoots do not become very long.
- The best way to achieve this is to soak the seeds in gunny bags for about 20 to 25 hours.
- Allow 10 hours of incubation before sowing.
- Immediately before sowing, the seeds have to be spread out in shade for about 10 to 20 minutes so that they are dry enough for rolling inside the drums.
- When ready, fill up the drums between half to two-thirds drum volume through the inlets using a wide funnel. The drums can be filled up using hands, which will require more time.
- Close the inlet mouths of the drums tightly with the knob-lids provided.
- While sowing, refill the drums as soon as they become more than three-fourth empty in the same way as instructed above.
- Approximately, 12 to 15 kilograms of seeds are required in an acre.



**PROCEDURE FOR DIRECT SEEDING:**

- Once the drums have been filled with sprouted seeds and the paddy field is ready for sowing, the VENUS PADDY DRUM SEEDER is placed at one end of the field.
- The seeder is pulled by a single person walking at normal speed of about 1 kilometer an hour.
- It is pulled backwards with help of handle making the drums roll dropping off seeds from the seeding holes in exact rows.
- Usually 8 rows are sown in straight lines with row-to-row spacing of 20 centimeters.
- After completing the first line, the seeder is lifted and turned around placing it such that the wheel of second line should move on the wheel impression of the first line. This will help to maintain uniform row-to-row spacing.
- Keep checking the drums at regular intervals for refills. The drums must never be filled more than 2/3<sup>rd</sup> of their capacity and must be refilled when about 1/4<sup>th</sup> empty.
- Steady walk while pulling in a straight line ensures uniformity of rows.
- A watch must be kept occasionally on dropping of seeds from seeder holes. If clogged or obstructed, the holes must immediately be cleaned open.
- A single person can easily sow approximately an area of two-and-a-half acres in a day.
- The crops from direct seeding mature at least a week earlier as compared to crops that are raised by the cumbersome and cost intensive 'Transplantation' method.

**CARE OF PADDY FIELD AFTER DIRECT SEEDING HAS BEEN COMPLETED:**

- Water level must be properly managed after sowing so that the seeds take root and grow without getting dried out in the sun or washed away with excess water.
- The field should be puddled with water once in 3 days after sowing and drained out immediately.
- This practice is to be followed for two weeks.
- Thereafter, as the seedlings grow, the depth of water can be increased respectively.
- The seedlings must never get completely submerged in water.
- Water level can be raised as seedlings grow. With water flooding the field weeds are controlled naturally.
- After two weeks, when the seedlings are firm, the field should be kept continuously filled with water increasing the level as the seedlings grow, never submerging the seedlings completely.
- Extra care must be taken during wet rainy season since rainfalls can easily wash away newly sown seeds.

**WEEDING:**

- Growth and proliferation of weeds is arrested naturally if the rice field is kept flooded with water as instructed above.
- However regular care is important and physical weeding may be required at regular intervals.
- Usually first proper weeding is undertaken about ten days after sowing.
- Two more physical weeding may be required in intervals of ten days as seedlings grow and mature.

**MAINTENANCE AND CARE:**

- Once the complete sowing of paddy is achieved, the drum seeder must be disassembled and thoroughly cleaned.
- All parts of the drum seeder must be dried and packed properly for storage and reuse.

**SPARE PARTS:**

- All parts of the Venus Paddy Drum Seeder are available on payment.
- The user can refer to the Venus Paddy Drum Seeder website and send a request to any of the contacts given there.

