

Field capacity, ha/h
: 0.08
Unit cost, Rs
: 2500

Bullock Drawn Drum Seeder (8 row)

It is a 8 row pregerminated rice seed drill pulled by a pair of bullocks. It is used in puddled field with out standing water. It consists of frame made of M.S angle, 2 ground wheels, one axle, a float, 4 cylindrical seed boxes with 2 rows of holes at both ends, 2 metal strips over each box to cover the holes, an operator's seat, a handle at the back to control the seed drill when operator's seat is not used and a wooden beam. Clean pregerminated rice seeds are filled upto 50% depth in the 4 seed boxes by opening the lids. The operator seats on the seat fitted over the frame to guide the bullocks. The row spacing can be adjusted for 150 or 200 mm by covering the holes of the boxes by metal strips.



Specifications:

Dimensions (L*B*H) mm	: 2980 x 1720 x 1150
Weight, kg	: 57
Row spacing, mm	: 150 or 200
Seed metering	: Gravity flow through holes
Seed rate, kg/ha	: Adjustable, (20-100)
Draft, kg	: 30
Field capacity (ha/h)	: 0.2
Unit cost (Rs)	: 3500

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Seed Drills for Sowing Pregerminated Rice Seeds in Puddled Soil Developed at CRRRI

F.C. Das

Transplanting of 30 days old rice seedlings uprooted from nursery is the most popular method of rice cultivation by farmers through out the world. The transplanting method is preferred over direct seeding in rainfed shallow low land and irrigated ecosystem to avoid severe weed problem. However the process of nursery raising, uprooting of seedlings and transplanting are labour intensive and involves lot of drudgery. Line sowing of pregerminated rice seeds reduce seed requirement by 50%, labour requirement of transplanting replaced by sowing by 80% and weeding cost by 70%.

Preparation of Pregerminated Rice Seeds and Sowing by Seed Drill

Clean paddy seeds are soaked in water for 24 hours, are taken out and incubated in gunny bags inside straw for 24-48 hour depending upon the weather temperature. Pregerminated rice seeds of 1-2mm germination length are well suited for use by seed drill.

After puddling the field is left for 6-24 hours for settling of puddled soil. The settling time depends upon the type of soil.

The seed rate of 60-80 kg/ha is adjusted in the seed drill.

Row to row spacing of either 15 or 20 cm can be maintained by adjusting the covering belt of holes in 6 row or 8 drum Seeder. In other designs there is only provision of 20 cm row spacing. The seeds are sown in continuous line in 5 row, 6 row and 8 row drum seeder. By 2 row multi crop seed drill and 3 row hill seeder, hill spacing of 15 cm is maintained between two hills.



Multicrop Seed Drill (2 row)

It is a manually pulled seed drill suitable for dry and wet seedling of rice and dry sowing of other crops such as wheat, jowar, soyabean, gram & groundnut. It consists of frame, a handle, seed box, 2 cup metering wheels with 10 cups in wheels, one axle, 2 ground wheels, float & 2 furrow openers are fitted in the frame for dry sowing.

Specifications:

Dimensions(L*B*H),mm	: 500 * 710 * 640
Weight, kg	: 15.5
Row spacing, mm	: 200
Seed metering	: Cup type
Seed rate, kg/ha	: Adjustable (20-100)
Draft, kg	: 14
Field capacity, ha/h	: 0.07
Unit cost, Rs	: 1500

Drum Seeder (2 row)

It is a manually pulled 2 row seed drill suitable for sowing pregerminated seeds in puddle soil by women workers. It consists of a tubular frame, a cylindrical seed box with 2 rows of 9 mm diameter hole at the two ends, 2 holes covering metal strips, a axle, 2 ground wheels, a float and a handle for pulling. There is provision for row spacing of 150 mm or 200 mm by covering the rows of hole in the drum by 2 metal strips. Pregerminated seeds are filled upto 50% depth of seed box by opening the lid. When ground wheel rotates the seed falls on the soil surface in continuous line in 2 rows with desired row spacing.



Specification:

Dimensions (L*B*H),mm	: 1840 x 510 x 740
Weight, kg	: 13
Seed metering	: Gravity flow through holes
Seed rate kg/ha	: adjustable (20-100)
Draft, kg	: 10
Field capacity, ha/h	: 0.05
Unit cost, Rs	: 900

Drum Seeder (6 row)

It is a manually pulled drum type 6 row seed drill suitable for wet seeding of pregerminated rice seeds in puddled soil. It consist of a tubular frame, a axle, 2 ground wheels, 3 cylindrical drum seed boxes with 2 rows of holes at both ends of each drum, metal strips over holes, a float and a handle. The pregerminated seeds are filled in

each box upto half depth and the lid of each drum is closed. The row spacing can be 15 cm or 20 cm by covering the holes on the drum by 2 metal strips provided over each box.

Specification:

Dimensions (L*B*H),mm:	1350 x 1380 x 800
Weight, kg	: 20
Seed metering	: Gravity flow through holes
Seed rate, kg/ha	: Adjustable (20-100)
Draft, kg	: 18
Field capacity	: 0.1 (ha/h)
Unit cost, Rs	: 2000

Pregerminated Hill Seeder (3 row)

It is a manually pulled 3 row rice seed drill suitable for hill seeding of pre-germinated rice seeds in puddled soil. It consists of a frame, handle, 3 seed boxes, 3 seed metering boxes, with cell type rollers, a float, a axle and 2 ground wheels. The seed rate is controlled by varying the position of seed boxes. When ground wheels rotate 3-4 seeds are picked by the grooves of the metering roller which falls on the levelled puddle surface. Row spacing of 20 cm and hill spacing of 15 cm can be maintained.



Specifications:

Dimensions (L*B*H), mm	: 1680 *1085 *780
Weight, kg	: 22
Row spacing, mm	: 200
Hill spacing, mm	: 100 or 150
Seed metering	: Cells on roller
Seed rate, kg/ha	: Variable (20 –100)
Draft, kg	: 14