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POTATO DIGGER



Facts about potato

In India, it is generally grown when maximum day temperature is below 35°C and night temperature not more than 20°C . Optimum temperature for potato growth ranges from 15 to 25°C .

The seed rate varies according to sowing time. In general, 15-20 q large whole tubers, 10-15 q medium-sized tubers, 8-10 q small size tubers and 6-8 q cut tubers are required for 1 ha area.

It is sown either on ridges or in flat beds.

Sowing on ridges gives higher yield.

Row-to-row spacing for ridges may vary from 45-60 to 75 cm and

15-22 cm from plant-to-plant according to variety and time of sowing.



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Function of potato harvester

Digging

Separation of potato from loose soils

Removal of vines & weeds

Types of potato harvester

Potato digger

Digger windrower



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Types of blades

Blade operates at 10 cm depth

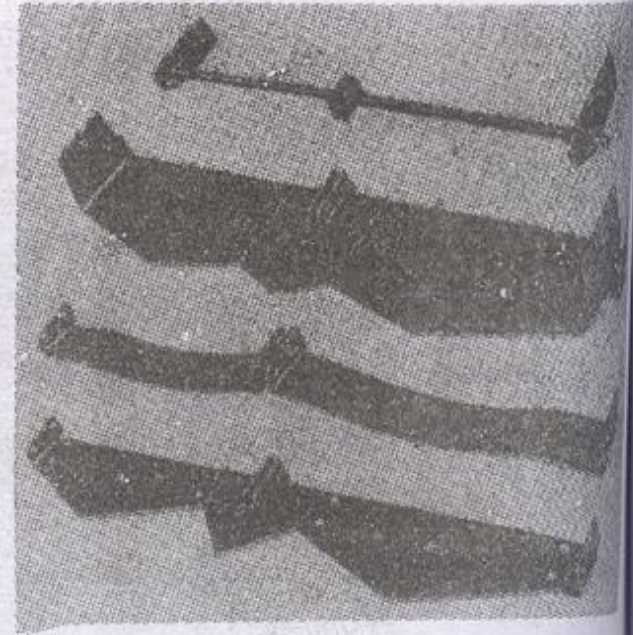
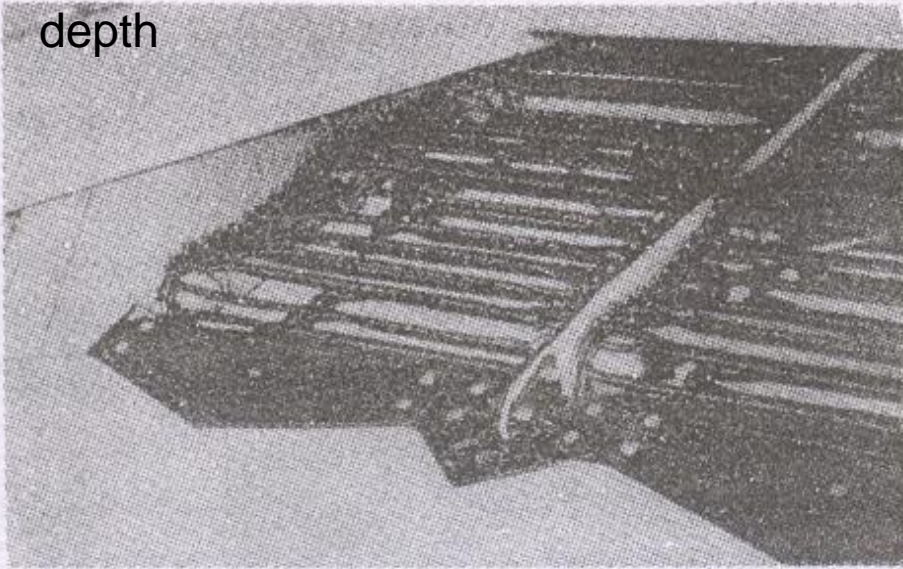


Fig. 20.8. *Left:* Blades and front of digger chains on a two-row potato harvester (or digger). *Right:* Several types of digger blades. Square rod on top unit rotates so the front moves upward as on a rod weeder. It works well in loose, sandy soils. (Courtesy of Hesston Corp.)

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Soil separation

Rod chain type elevator conveyer

Rod dia: 11.1 – 12.7 mm, chain pitch: 39.6 – 50.8 mm

Every 2nd link is usually offset upward about one link diameter from the plane of the rods

Intermediate links are either offset downward or are straight

Agitation is obtained by passing the digger chain over support idlers of various shape

Increase chain speed increases soil separation

Clearance between the rod is limited to minimum size of the potato



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Vine separation

Potato falls through the shaker conveyer

Vines move over the shaker conveyer

A cross conveyer below the conveyor for harvested crop

Stripper rollers placed in contact with the top of the vine conveyer





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Field capacity:
0.035 ha/h

Digging efficiency:
96 %

Draft: 57 kgf

POTATO DIGGER

TRACTOR DRAWN POTATO DIGGER



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Specifications

Power source (hp)	35 hp, tractor
Length (mm)	500
Width (mm)	2250
Height (mm)	1020
Number of blades	2
Length of each blades (mm)	540
Length of rods from cutting edge (mm)	400
Diameter of rods (mm)	12
Pitch between rods (mm)	40
Cutting angle (degrees)	31
Blade angle (degrees)	145
Weight (kg)	80

Uses

Semiautomatic potato diggers are used for harvesting potato tubers.





Specifications

Power source (hp)	35 or above, tractor
Length (mm)	2060
Width (mm)	1195
Height (mm)	1070
Number of furrows	2
Working width (mm)	1070
Size of disc (mm)	510
Weight (kg)	500-525

Uses

Potato diggers are used for harvesting and exposing the potato tubers.

