

Soil Scrapper cum Loader

Innovator	Address	Contact Details
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Problem addressed:

Uneven agricultural land is difficult to sow. Sometimes it also becomes important to remove extra soil, which may have deposited on the surface after rains. Resham Singh and Kuldeep Singh have independently developed machines, which could not only scrap soil and level the land but also fill tractor trailers with the scrapped soil.

Product:

The land leveler cum loader is a PTO driven rear mounted attachment of tractor which collects sand from the surface through the scrapper blade and fills it in the tractor’s trailer through a conveyor arrangement.

It consists of two conveyors which are perpendicular to each other in the plane, which is perpendicular to the plane of land. Conveyor 1 is at 55 degrees to the land while conveyor 2 is horizontal to land and is placed at output of conveyor 1. Conveyor 2 is placed around a height of six feet from land.

Sand is accumulated by the scrapper blade from the ground and collected by angles which are placed on the belt of conveyor 1. This sand is conveyed along the chain of conveyor 2 which drops it from a height of eight feet in the trailer of the tractor moving parallelly.



Technical Specifications

- The conveyor comprises a set of chains; it can cut 4” deep at a time and takes about two minutes to fill an 11 ft x 6 ft x 2.25 ft size trailer
- It can fit in any tractor of 50 hp and above
- While using this machine, the tractor consumes about five to six liters of diesel in an hour.
- The machine has cutting width of 4 ft and sand is dropped from a height of 8.5 ft height.

Key Competitive Advantage:

- It seems to have great potential in some regions where soil has to be scrapped for lifting canal water as well as in construction of roads, house etc.
- On an average, the machine can level 1 bigha of land (5/8 acre) in a day by removing 150 trailers of sand.
- It can also be used for custom hiring; one can charge Rs 2 per sq ft, per ft depth. The sand scrapped is sold at cost of Rs 250-300 per trailer.



Time to deliver:	1 Month
Price	Rs. 1, 50,000/- (Ex-factory price + packaging). The price does not include transportation costs, taxes, etc.
Achievements:	NIF has felicitated innovator with a National award in Seventh Biennial Award Function of National Innovation Foundation. While Resham Singh has sold forty machines in Hanumangarh and nearby areas, Kuldeep Singh claims to have sold over 200 machines in Punjab, Rajasthan, Haryana, Maharashtra and Gujarat.
IPR Status:	Indian Patent Applies ((158/DEL/2012)
BD Website link	http://nif.org.in/innovation/resham_singh_soil-scrapper_loader/513
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