



Sugarcane Harvester: Working, Key Features and Advantages

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INTRODUCTION

Sugarcane is a major and essential cash crop of India. It involves less risk and farmers are assured up to some extent about return even in adverse condition. Sugarcane provides raw material for the second largest agro-based industry after textile. After Brazil, India is the second-largest sugarcane producer country. It occupies an area of 4.73 million hectares with production and productivity of 379.91 million tonnes and 80.1 tonnes per ha, respectively. This crop requires about 375 man-days/ha for different agronomic practices. High scarcity of labour due to industrial development and globalization and unavailability of labour during peak days of season forces the sugarcane growers to use modern farm implements and machinery. In India, mechanization in sugarcane cultivation is limited to land preparation, planting and to some extent intercultural operations. Harvesting of sugarcane is done manually using hand tools and is very difficult, time consuming and tedious operation.

Sugarcane harvester is a highly advanced machine to harvest standing cane crop from field. It is a chopper harvester with a cleaning system and whole cane harvesters are also available. It can harvest one/two rows of the crop at a time. In ideal conditions, the harvester can cut nearly 400 tonnes of sugarcane per day. The machine comes with many useful features that make sugarcane harvesting smooth and easy.



Working

The sugarcane is fed between the crop dividers. It is de-topped from top and simultaneously cut at the root zone by base cutter blades. Then, the cane is fed through the roller train and cut by the chopper drums into small cane pieces of 24.5 to 30 cm. It is cleaned in the primary extractor before being conveyed to the elevator. The cane is then cleaned again with the secondary extractor and loaded onto a vehicle for transportation.

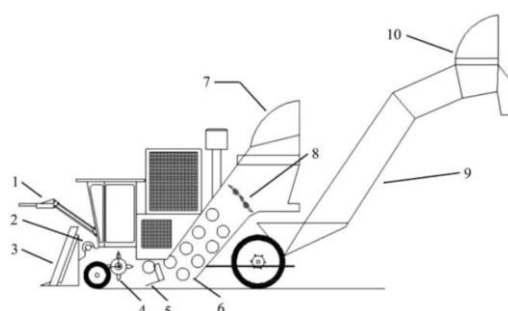
Major Components

- | | |
|----------------------|---------------------------|
| 1. Topper | 2. Knockdown roller |
| 3. Crop divider | 4. Fin roller |
| 5. Base cutter | 6. Feeding rollers |
| 7. Primary extractor | 8. Chopper |
| 9. Elevator | 10. Discharging mechanism |

Some key features of sugarcane harvester

- Tracking System: It consists of GPS that tracks the harvester's location and information on performance data through the SMS and web supervisor features.
- Base Cutter: It has a heavy-duty adjustable cutter that cuts the cane effectively. The blade holders rotate in the opposite direction and cut the cane at ground level.

- Extractor: It removes mud, dirt, dust, etc. from the canes before delivering into a container. It provides clean canes to sugar factories, which improve income.
- Crop Divider: This ensures that the harvester takes cane from the targeted row only.
- Cabin: Sugarcane harvester is provided with an AC cabin. The cabin has a comfortable driver seat with joystick controls and height adjustment for individual functions.



Advantages of Sugarcane Harvester

- High capacity and ease in operation
- It saves time, labour and money
- It completes de-topping, stripping, cutting, chopping, cleaning and loading operations in a single pass

- The water material ejected by the sugarcane harvester onto the field acts as a fertilizer.

Some sugarcane harvesters available in India

- John Deere CH570 Sugar Cane Harvester
- Shaktiman Sugarcane Harvester

- New Holland Sugarcane Harvester Austoft 4000
- New Holland Sugarcane Harvester Austoft 8000
- Sugarcane Harvester GSH8000 Darsh Palesse

Price: 1.04 Crore (Approx.)