

Maize Cutter for Combine Harvester

By : Mr. Gurtej Singh, Moga, Punjab

Innovation Description

Profile

Innovator Mr. Gurtej Singh hails from Moga district of Punjab. He owns a workshop where he carries out the manufacturing of combine harvester, a hole digger, maize cutter, high-quality screw conveyor vermin segments, and straw reaper, and also undertakes to repair farm machinery. His grandfather opened the workshop in 1968 and then since 2000, he took responsibility for running the workshop with his brother.

Purpose

Mr. Gurtej Singn has been manufacturing reel-type combine harvesters since 2000. However, he found them to be inefficient for maize harvesting due to the crop height. This led to farmers buying new header cutting type combine harvester. Mr. Gurtej then tasked himself to develop a reel-type cutting unit for maize harvesting in 2013, which could be attached to any combine harvester. He successfully developed a modified cutting unit for combine harvester.



Technical details

The modified cutting unit for combine harvester is mainly for maize crop. This maize cutting assembly is developed by referring to the maize crops harvesting parameters, so it can be more efficient to cut the maize crops. The unit has a rotating reel with three tine bars for covering the maize crop effectively. In this developed cutting unit, three tine bars are used in the reel, so reel has a triangular shape. The diameter of the reel is increasing because of the triangular shape. Due to the high diameter and shape of the reel, maize crop which is high in height is effectively run from it and does not cause any damage to the crop. The developed cutting unit can be attached to any combine harvester. In this machine, when the cutting bar cuts the maize crops, at that time reel assembly can support and pick up the crops. After cutting, auger pickups cutting crops and moves forward to conveyor through the threshing unit in the combine.

Performance

It covers an area of 4.5 to 5 acres per hour with a speed of operation of 5 to 6 km/h at an operational width of 3425 mm.

Benefits

It is easy to use and economically viable. The unit can be attached to any combine harvester.