

ABSTRACT

DESIGN AND FABRICATION OF AGRICULTURAL CROP REAPER

Abstract - This machine targets the small scale farmers who have land area of less than 2 acres. This machine is compact and can cut up to two rows of plant. It has cutting blades which cut the crop in a scissoring type of motion. There are no cutter on two metal strip (plate) upper cutter plate will be reciprocate by scotch yoke mechanism. It runs on electrical AC motor with 1Hp capacity, this power from motor, is provided through pulley and gear box arrangement to the cutter. A collecting mechanism is provided for the collection of crops to one side after cutting. This mechanism is also powered by pulley arrangement, two sprockets and chain arrangements given for collection of crops. This compact harvester is manufactured using locally available spare parts and thus, it is easily maintainable. This harvester might be the solution to the problems faced by a small scale farmer regarding cost and labor implementation. After testing this machine in farm it is found that the cost of harvesting using this harvester is considerably less as compare to manual harvesting.

Key Words - Crop Reaper, Harvesting, Scissoring motion, Collecting mechanism, Field, etc.

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