



**NARNARAYAN SHASTRI INSTITUTE OF TECHNOLOGY
MECHANICAL DEPARTMENT**



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Internal Guide:- Pratik Vyas External Guide :- Tejas Wadiya

Project Title:- “To Design & Manufacturing Agriculture Machine with Multi Cutter for Multi Purpose”

Abstract:-

A brush cutter works on the principle that a line that is turned fast enough is held out from its housing (the rotating reel) very stiffly by centrifugal force. The faster it turns the stiffer the line. Even round-section nylon line is able to cut grass and slight, woody plants quite well. Some monofilament lines designed for more powerful cutters have an extruded shape, like a star, a hedge, that helps the line slash the material being cut; the line is thus able to cut quite large woody plants (small shrubs) or at least ring-bark them very effectively. These lines make disks less necessary for tough jobs. The line is hand-wound onto a reel before the job is started, leaving both ends extending from the reel housing. The motor turns the reel and the line extends horizontally while the operator swings the trimmer about where the plants are to be trimmed. The operator controls the height at which cutting take place and can trim down to ground level quite easily. As the line is worn, or breaks off, the operator knocks the reel on the ground so that a release mechanism allows some of the line in the reel to extend and replace the spent portion.

Software used:-

Autocad, Ansys

Project Application:-

1. Any thick crops cutting, all type of agriculture work could be done.
2. harvesting process
3. Cutting Lawn
4. To Provide Variant shape of trees & plant
5. Cutting crops
6. Cutting grass
7. Cutting unwanted lawn and grass
8. Decoration of garden

Approx. Project Cost:- 13250 Rs.

Project Photo:-



Major Hardware components used:-

1. Main Engine with Handle Attached Strimmer
2. Tools Cover to Strimmer/Cutter Extension Handle
3. Handle to Chain
4. Pruning Saw
5. Pruning Saw Blade
6. Hedge Trimmer
7. Cutter Blade
8. Strimmer Spool
9. Carrying Strap
10. Petrol Mixing bottle