OCTA OPERATIONAL AGRITECH MACHINE

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Key Words :
“Multipurpose AgriTech machine” This entire project is powered by 6KW 4-stroke single cylinder petrol engine. In this project all eight functions runs on single engine.
1. Rotor – to loose the soil
2. Cultivation – using plough
3. Fertilizer Sprinkler – which spreads the Fertilizer
4. Weeder - removes the weed
5. Pesticide Sprayer – Which sprayses chemical pesticides.
6. Blower Fan - Dust separator from grains
7. Seed Sowing
8. Sugarcane Planter

These all applications are mounted on single chasse which drives on four wheels. The rear wheels connected to the engine by means of Chain drive mechanism.

Introduction :
This is the device Octa operational (8 in 1) multi-purpose Agricultural machine has been developed to fulfill needs of all Agricultural applications which are normally used by tractor powered. This project work titled “Octa operational AgriTech machine” having studied the difficulty in the various advanced agricultural applications like Weeding, Cultivating, Harvesting, Fertilizing, Chemical spraying, Underground pipe feeder etc.

Agriculture is the backbone of the Indian economy as we know that around 58% population of India depends on agriculture. It is combined Version of all present or Traditional Agricultural Equipments. Now days employing this technology is becomes very popular for all kinds of development activities. This technology can be extended for spraying chemical, fertilizer on the plants. Feeding irrigation pipes under roundly. In addition, saving in cost of operation time, labour and energy are other advantages to be derived from use of improved machinery for such operations. The developing a multifunctional seed sowing machine which can perform simultaneous operations.

Objectives :
The basic objective of our project is to reduce the work burden to farmer, and time – energy saving. In sowing operation is to put the seed and fertilizer in rows at desired depth and spacing, cover the seeds with soil and provide proper compaction over the seed. In addition, saving in cost of operation time, labour and energy are other advantages to be derived from use of improved machinery for such operations. A traditional method of seed sowing has many disadvantages. This paper is about the different types of methods of seed sowing and fertilizer placement in the soil and developing a multifunctional seed sowing machine which can perform simultaneous operations. In modern times, powered machinery has replaced many farm jobs formerly carried out by manual labour or by working animals such as oxen, horses, and mules. But now we can carryout same operations by machine. The seed feeding, pesticides sprinkling and crop cutting are the important stages in the agriculture field. The design of multipurpose agro equipment machine will help Indian farmers in rural
side and small farm. The engine operated sprayers typically produce more consistent sprayer’s outputs, covers the sprays swath more uniformly, operate at constant speed and results in much more uniform coverage.

Methodology:

“Multipurpose AgriTech machine” This entire project is powered by 6KW 4-stroke single cylinder petrol engine. In this project all eight functions runs on this single engine. These all applications are mounted on single chasse which drives on four wheels. The rear wheels connected to the engine by means of Chain drive mechanism. These following steps were followed to complete the project.

Design:

Design is the creation of a plan or convention for the construction of an object, system or measurable human interaction (as in architectural blueprints, engineering drawings, business processes, circuit diagrams, and sewing patterns).

Market survey:

Market surveys are an important part of market research that measure the feelings and preferences of customers in a given market. Varying greatly in size, design, and purpose

Fabrication:

Fabrication is the building of metal structures by cutting, bending, and assembling processes.

Trial Demo:

All tests and demo is conducted under the guidance of project guide, Head of the department, and all other professors. All corrections, reworks are done successfully.

Conclusion:

The “Octa operational AgriTech machine” has been designed, fabricated and analyzed for its performance. This project was an attempt to achieve three main objectives. First is to make it an economical and efficient Agri machine. Second objective is to reduce the cost involved in maintenance and the third objective is to overcome the lack of availability of skilled labourers i.e Man power. The “Octa operational AgriTech machine” is designed, fabricated and tested. The use of this machine makes harvesting process faster, hence reduces most of the cutting time and labour required. Single person is enough to operate this machine. This machine is very helpful for farmers having small farm land. This machine has several operations which are carried out in small farming area and it is enough to perform all agricultural operations and fulfill the needs of former.

Future Scope:

- There could be continuous supply of liquid pesticide/ fertilizer generated for sprinkler
- The Solar panel unit could be enhanced in order to generate more prolonged electric supply. Moreover, the electricity could be stored; to be used at night or in no sun condition.
- A more with greater efficiency could be used
• More equipment like soil testing tasks could be added to this project