Design of Engine Operated Weeder

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Abstract – Visualizing the current conditions of Indian farmers in the agricultural field and as per the condition of farm field it needs to implement the new agricultural techniques which will lead high productivity rate and will directly affect the economic condition of farmers. Now a day one of the most important agricultural unit operation is Weeding. Weeding operation can affect adversely if it is being delayed or ignored at particular time and it can count up to crop yield of 30 to 60%. In Indian agriculture, the methods of conventional farming may severe affect to the crop weeding by means of manpower or bullock operated equipments. To overcome this problem we introducing an alternative solution that is "engine operated weeder". Because of this machine we are trying to reduce human efforts with less maintenance cost.

Index Terms – Engine, PRO-E, Weeding machine.

1. INTRODUCTION

The term weeding machine is mostly used by the farmers for weeding operation in their farms. Market survey shows more demand of cheapest weeding machine for weeding operation, hence we have designed advance weeding machine. In conventional weeding process, it is done with the help of animal power (bullocks). This process is so lengthy and time consuming and it requires human power also. Now a day this technique is vanishes up to 20-40%.in small scale farm the animal drawn technique used for weeding but in case large scale farms this method is gets complex and time consuming. Although it is available in the market with high cost, hence to provide solution for this we have designed Engine Operated weeder which is substitute for available weeder with fewer prices. We simply reducing the animal power and man power and we also overcome overtime. This is very beneficial and easy in handling.

2. DESIGN OF MODEL

2.1 Design of weeder

Our design provides simple and less expensive construction related to the all existing machines of weeding operation. According to the market survey and hurdles of complexity and economy, the design of our product is simple in operation and partially automated. Product life and cost effectiveness can be increased by selection of proper materials. By studying and evaluating of all the parameters of farming we created our design in pro-e software. The actual model is given below.

Since the design is differs than existing machines design of weeding machines which consist of engine, weeding blades, seating arrangements etc. which gives higher efficiency and human comfort.

Fig.2.1: Design of Weeder

3. SCOPE OF STUDY

1. By using our system ,we can deals with all types crops needs in better way
2. Comfort level of system and operator is increased.
3. Handling of crops is secured because of operation is smooth.
4. Our system reduces the use of pesticides.

4. ADVANTAGES

1. It removes unwanted trash from the field
2. Cost of weeding can be minimised.
3. Animal power can completely eliminated
4. Operating time is less for weeding as compare to the conventional weeding methods.

5. CONCLUSION

We conclude all possible ideas to the model before implement it actual system with the help of software based design. The main intension of the study is to soar up the design of weeder, showing multi blade arrangement may find substitute for farmers for complex weeding operations. Our aim is to give

better alternative to for the farmer; those cannot afford the expensive weeding equipment.

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