



Design & Fabrication of Pedal Operated with Dual Chaff Cutter Machine

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ABSTRACT

A specific agricultural device, the Pedal-Operated Dual Chaff Cutter Machine changed into meant to growth fodder processing performance with out depending on outside power sources. This low cost, green system runs on manual pedalling and is appropriate to be used in far off regions with low power supply.

Its cutting structures will let you concurrently chop distinct sorts of fodder, inclusive of grass and straw, therefore decreasing the time and paintings required for feed training. Though the ergonomic layout guarantees simplicity of use, the strong production guarantees lifetime and low protection. This gadget not best boosts output however additionally helps sustainable agriculture practices by lowering reliance on fossil gas.

Designed to offer an green, user-friendly, and environmentally aware solution for fodder processing in reaction to the growing want for sustainable agricultural gadget, the pedal-operated twin chaff cutter machine This machine combines a pedal-driven system, which now not only reduces running fees but additionally promotes person physical interest.

Its small, sturdy design guarantees easy delivery and preservation, so qualifying it to be used in faraway regions without get entry to to electric powered-powered machines. This generation enables to improve fodder fine, lessen waste, and boom common farm production

Key Words Pedal operated chaff cutter, dual chaff cutter, manual chaff cutter, fodder cutting machine, energy-efficient chaff cutter, agricultural machinery, livestock feeding, sustainable farming, mechanical chaff cutter.

1. INTRODUCTION

A pedal-operated twin chaff cutter system is a clever and sustainable solution intended to boost the performance of fodder slicing for cattle. Traditional chaff cutters rely Starting with A modern-day agricultural device, the pedal-operated twin chaff cutter gadget is supposed to streamline the education of fodder for animals. Running mostly on human energy thru a pedal mechanism, this system is a sustainable and environmentally friendly alternative to traditional motorised or gasoline-powered chaff cutters. Rural regions, where access to strength could be limited or nonexistent, locate it specially useful. By disposing of the need for external energy sources, the device gives a fairly priced preference for small and medium-scale farmers.

2.LITERATURE REVIEW

The want of small-scale farmers in rural and faraway areas motivates the advent of a dual chaff cutter machine with pedal operation. The maximum essential task in agriculture is farm animals farming. The quality and accessibility of feed determines how nicely cattle production rises. However, traditional and modern-day techniques of fodder guidance are inefficient, time-eating, and occasionally unreachable due to price or lack of infrastructure.

3.CONSTRUCTION

Components

Components

Comprising several key components working in live performance to effectively reduce fodder, a pedal-operated dual chaff cutter system is The primary additives are:

Frame: Provides structural help and machine balance.

Pedal-operated foot mechanisms turn human attempt into mechanical movement, therefore using the slicing blades.

Cutting blades are sharp blades that chop the fodder into smaller portions.

The flywheel maintains smooth operation by storing rotational strength.

Improving performance, the equipment system moves strength from the pedal mechanism to the reducing blades.

By pushing the raw fodder into the slicing blades, the feeding tray procedures it.

For clean handling, the release chute collects and directs the chopped fodder.

Support clean motion of rotating additives and assist to lower friction by bearings and shafts.

Protects the user from unintended contact with shifting components.

A twin reducing mechanism utilized in simultaneous or change reducing improves output.



4. ADVANTAGES

Perfect for sustainable family, it calls for no energy or gas.

Fewer shifting elements imply less put on and tear, making it simpler to maintain than electric powered or diesel-powered machinery.

The machine is operated by hand, so it has much less jogging fees and lower preliminary price. The dual chaff cutters save effort and time with the aid of allowing greater fodder to be processed without delay.

A pedal-operated dual chaff cutter system offers many benefits in particular for small-scale farmers and rural regions. Its low cost is one of the key blessings as it gets rid of the want for gasoline or electricity, therefore saving operating prices. This is ideal for farmers looking to decrease their energy charges or for places with constrained strength.

At remaining, the system is strong and smooth to preserve, requiring less servicing when compared to motorised alternatives. Its simple mechanical design boosts its lifetime and makes it a reliable investment for farmers by means of simplifying and cheapening maintenance. All things taken into consideration, a pedal-operated dual chaff cutter is a good, reasonably-priced, eco-friendly option that reinforces agricultural production and promotes sustainable farming.

5. APPLICATIONS

The gadget chops grass, maize stalks, sorghum, millet, sugarcane leaves, and crop waste into tiny, uniform portions. Simplifies fodder for animals—farm animals, sheep, goats, buffaloes, and so forth.—to chew and digest. Increases farm animal nutrient absorption. Reduces fodder waste.

Transforms crop leftovers into usable farming or disposable attainable portions. Reduces the bulk of agricultural waste. Aids in composting or recycling remnants.

6.RESULT

A pedal-operated dual chaff cutter machine is a manually powered tool supposed to slice agricultural products like hay, grass, or different fodder into tiny bits for animal feed. Operating on a pedal machine, it shall we the consumer pedals to generate power this is then despatched through a mechanical system to perform the cutting blades. Its principal advantages are its simplicity and environmental friendliness because it does not require electricity or gasoline, so it's miles suitable for small farms or web sites with restrained energy get right of entry to. Typically, the machine consists of two foremost components: the pedal mechanism and the dual slicing gadgets. When the consumer starts pedalling, a gear or chain device sends the rotating motion to the blades. This lets the cutting tool function without external energy resources. By reducing the cloth in parallel, the two slicing gadgets permit the device cope with more material in less time, so enhancing performance. The feed chute shall we the operator placed the fodder into the gadget; because the blades flip, they chop the cloth into smaller, even portions.

The chopped cloth is then directed into a set chamber or chute, from which it's miles ejected right into a bag or box. Changing the blade settings or the usage of diverse mesh sizes facilitates farmers to get the needed consistency for animal feed, accordingly modifying the scale of the chaff. The pedal-operated design ensures the device remains portable and clean to use even in faraway places in which strength won't be reachable.

7.FUTURE SCOPE

The pedal-operated twin chaff cutter system has future promise driven via technological traits, monetary viability, and environmental sustainability. From a technological angle, the mixture of electric pedal help, smart sensors for performance monitoring, and adjustable reducing mechanisms could beautify performance. Compact, transportable designs might make the system greater available for small-scale farmers.

Economically talking, this gadget is in particular beneficial for small and subsistence farmers as it offers a reasonably priced, gas-unbiased replacement for motorised gadget. It should support rural business through presenting inexpensive, long lasting tools and services.

8. CONCLUSION

In the give up, the pedal-operated twin chaff cutter machine is a sensible and green solution for small to medium-scale farmers. Its lower priced and environmentally pleasant preference as it runs on human power, so doing away with reliance on energy or gas. The twin cutting system significantly increases the output of the machine, consequently permitting quicker fodder processing, which is critical for retaining a constant meals deliver for animals. By decreasing the want for complex preservation, its strong, simple design ensures constant performance for rural or off-grid areas. Moreover, the mobility of the device guarantees its relevance in lots of agricultural settings, from far flung villages to larger farms, so presenting operational flexibility.

The gadget's low strolling prices and fee assist to make it an awesome investment for farmers looking to maximise efficiency with out spending a variety of money. It also encourages sustainable farming practices, consequently decreasing the carbon footprint of agricultural operations. By the use of renewable human strength, the pedal-operated twin chaff cutter lowers dependence on non-renewable resources, so supporting international sustainability efforts. Essentially, this gadget improves output and animal feed processing as well as supports rural farming groups to be sustainable and resilient over the years.

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