IOT BASED FARM-FRIENDLY HYBRID CULTIVATOR USING RENEWABLE ENERGY

ABSTRACT:

Real-Time Automation of Agriculture for Social Modernization of Agricultural System attracts great attention nowadays. Efficient water management is a major concern in many cropping systems in semi-arid and arid areas. Distributed in-field sensor-based irrigation systems offer a potential solution to support site-specific irrigation management that allows producers to maximize their productivity while saving water. Now-a-days farmers and farming gets reduced due to modernization and technologies are increased. So, in many places peoples are farming with help of machines like Plougher, Transplantor and Fertilizer Sprayer. These machines are available separately. However, it reduces labour cost but its Secondary and fuel cost quietly increased. Our idea hybrid above three machines in a single cultivator and it runs with the help of renewable energy. This cultivator performs operations in simultaneous manner and same time the water level in field is also measured and controlled. The crop field area can be monitored without human interaction. We can also store all the details in the cloud and can be monitored and controlled using IOT.

BIOFUEL AS ALTERNATIVE SOURCE FOR FOSSIL FUEL USING ALGAE

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ABSTRACT

Fossil fuels are the source of energy that formed from the accumulated remains of living organisms that were buried millions of years ago. Pressure, heat and time allow the organic matter to transform into one of three major types of fossil fuels which are coal, oil and natural gas. At present Fossil fuel is an important factor in this world. It is expected to be exhausted within 200 years. Pollution is probably the primary disadvantage of fossil fuels. Burning of fossil fuels can cause greenhouse effect, which is harmful to the environment, it releases toxic gases like carbon monoxide, nitrogen oxide. so now we are in need of an alternative source like solar energy, wind energy, hydroelectric energy and biofuel energy. Biofuel will be a good source for energy in future generation. Algae can be converted into various types of fuels, depending on the technique and the part of the cells used. The lipid, or oily part of the algae biomass can be extracted and converted into biodiesel through a process similar to that used for any other vegetable oil, or converted in a refinery into "drop-in" replacements for petroleum-based fuels**. Algae fuel, algal biofuel, or algal oil** is alternative to liquid fossil fuels that uses algae as its source of energy-rich oils. Also, algae fuels are an alternative to common known biofuel sources, such as corn and sugarcane. On the other hand, Solazyme, Sapphire energy, and Algenol, among others have begun commercial sale of algal biofuel.

KEYWORDS Algae, algal oil, biofuel, fossil fuel, carbon monoxide, drop in process, etc…