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Editorial

Ecological Recycling Agriculture

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EDITORAL

Report from UN Climate Change Research Team, with 1 degree Celsius of global temperature increase, the world's food production decreases by 10%. The massive use of fossil fuel releases a huge amount of greenhouse gases, which causes extreme weather and unprecedented natural disasters. In pursuit of high yield, high return and high efficiency in agriculture, massive amount of petroleum is being used as fuel for agro-machinery. Also, petroleum-based fertilizer and pesticides are heavily used. Mechanized grain drying is the most important part of agricultural mechanization. Right after harvest, grain should be delivered into dryers. Fresh drying helps farmers secure the fruit of their hard work. This also allows everyone to have access to fresh, and safe rice. The combustion of one liter of diesel releases 2.7 kilograms of CO2. One cubic meter of natural gas releases 2 kilograms of CO2 after burning. However, the net CO2 emission of biomass energy is neutral, which is eco-friendly. This saves money and reduces carbon emission. Using diesel or natural gas as drying fuel releases a lot of CO2, which causes global warming that reduces agricultural output and may trigger a food crisis. The drying of 10,000 tons of paddy requires 200,000 liters of diesel and emits 540 tons of CO2. Both diesel and natural gas are big expenses. The drying cost will again be out of control when fuel prices hike, which affects profits. To help farmers reduce drying cost and improve rice quality, SUNCUE company has developed exclusive, patented technology to replace diesel and natural gas with paddy husk to dry grain. SUNCUE's paddy husk furnace uses the most common by-product of rice mills" paddy husk" as the fuel for dryers. The ash after burning can be turned into organic fertilizer to return to the field. This improves farming soil, making rice plants stronger through continuous recycling in the ecology. Paddy husk, originally considered as rural waste, is rich in thermal energy. One kilogram of paddy husk could produce 3,000 to 3,500 kilocalories after burning. 2.5 kilograms of husk equals to one liter of diesel in thermal energy produced. SUNCUE's "Complete Combustion" technology is able to dry 3 tons of wet paddy by using husks from merely 1 ton of wet paddy. This triples the efficiency. 10,000 tons of wet paddy produces around 1,765 tons of husk after drying and milling. We need just a third of husk (588 tons) to dry the same amount of wet paddy again. Surplus (1,177 tons) can be used as fuel for heating greenhouses or buildings. The ash has an alkaline pH value of 8~9, capable of amending acidic soil impacted by chemical fertilizer or acidic rain. It is rich in minerals and trace elements, making it a good component for organic fertilizer that helps rice plants grow stronger.According to the proof of our worldwide customers, using paddy husk furnace can help improve rice quality and sharply reduce drying cost. Let's move from petrol-based agriculture to the era of sustainable agriculture and work toward the common goal of giving our land a better future through protecting the environment.

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