



State Award – Assam

Sheetal Bichona – the Cooling Bed, Belt System Dryer (BSD) for Green Tea and others

Suren Barua
Tinsukia, Assam

Suren Barua (51) is a serial innovator and a fabricator. He owns a fabrication house named Tea Engineering Works where, he has developed many innovative machineries like BSD dryer, tea rolling table, tea steamer, Sheetal Bichona, domestic room heater and many more. Suren has been involved in developing tea processing machineries at an affordable cost for small tea growers/producers.

Sheetal Bichona- The Cooling Bed

During summers, in hot conditions, one feels uncomfortable due to continuous perspiration. Air conditioners are costly and not everyone can afford them. Suren has developed a bed with an in-built air cooler so that one does not feel uncomfortable while lying down on the bed. This cooler can also be used by the sick and elderly, who may have to lie down on the bed for long periods of time.

The cooling bed is an innovative steel box type bed, consisting of an electric motor, air compressor fans, a voltage regulator and an air duct. The cooled air passes through the perforated rubber mat through air duct and cools the top surface of the bed. The temperature of the bed can be regulated by varying the voltage of voltage regulator as per need of the user. It costs Rs 20,000/- .

Belt System Dryer (BSD) for Green Tea.

The existing tea dryers in operation face lot of problems like the drying trays getting stuck, higher maintenance and production cost, higher vibration and noise generation etc. At least 2-3 trained workers are required to operate these dryers. Suren Barua has developed a tea dryer to address these problems.

Suren's drier can be used to dry green tea leaves and other edibles like turmeric, paddy, ginger etc. It comprises a heat chamber, a drying chamber, a power source and a transmission system. Items to be dried are put on the belt driven drying trays. The machine can achieve drying temperature of up to 200°C. The three variants available are turbo type, L type and straight type suiting space availability of the users. Their capacity ranges between 150 kg – 3000 kg/8h. It costs Rs 4.85 - 12 lakhs and 35 units have been sold till now. The uniqueness of this dryer is that the belt driven drying trays (SS mesh) have been aligned properly for smooth and continuous operation during drying resulting in proper drying of leaves ensuring their good quality.

