



State Award – Kerala

Clove Bud Separator

Shine Joseph
Kozhikode (Calicut), Kerala
Scout: PDS Kerala

Shine Joseph (40) completed his higher secondary and took up farming as a full-time profession. While his main interest lies in agriculture, he also tinkers with tools and equipment required in the field.

Conventionally, the clove buds are removed from the stalk manually after harvesting. This is done by holding a cluster in one hand and pressing it against the palm of the other. Proper precautions should be taken before separating the clove buds to avoid contamination. The stems and buds are separated and dried separately. The stems can also be processed for oil distillation. For the separation of clove buds, 40 labours are required to process approximately 600 kg of clove buds in a day, making it a labour and a time-consuming process. Looking at the problem, Shine developed this machine for self-use in 2018. Now farmers in his

neighbourhood also rent this machine for their use.

The machine separates stalks and clove buds from clusters by rubbing. The bud cluster is passed through a cylindrical drum inside which three spiral blades rotate, resulting in rubbing and separation of stalk and buds. A 1hp motor operates the machine. This machine can process 400 kg clusters per hour with an efficiency of 99%. By the conventional method, costing of bud separation comes to be Rs. 12/kg, while using this machine, it comes to less than Rs. 1/kg. The cloves obtained after processing through the device are dipped in a saltwater container to remove unwanted impurities sticking to the buds. After several trial and error attempts, Shine found that salt water at 7.2% can clean the clove buds efficiently.

