

## **Device to remove insect pests from stored grains**

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Stored grains are attacked by several pests. They assume importance as they start their damage in the field itself. Generally insects fly from nearby farms, farm store houses or farmer storehouses and start laying eggs on the grains that are stored. Eggs are the root cause in of damage to the grains during storage. As the use of pesticides and fumigants on or near stored grain is more dangerous to human beings and due to the development of resistance to the insects, mechanical methods like rotation, tumbling and impact of infested grains prove to be effective in the removal of stored-product insects.

### **Limited information**

Mechanical removal of insects from stored grains is an important pest control strategy. Till now only very limited information is available in using the mechanical mode for controlling the egg stages of insects. Hence, a device to remove adult stored product insects and crush the eggs present in stored grain has been developed by Department of Agricultural Entomology, Tamil Nadu Agricultural University, Coimbatore. The device has a grain feeding hopper, insect cleaning unit with an outlet to collect them separately and an outlet for the treated grain. It can be easily operated and within five minutes majority of the insects present in the food grains can be removed and collected in the collection outlet. Further inner arrangement in the insect cleaning unit facilitates crushing of the eggs, if any, in the grains. The capacity of the hand operated machine is 200 – 250 kg/hr. It can be easily motorized depending on the need.

### **Best results**

For wheat and pulses (whole and broken) the perforation size of the insect cleaning unit can be adjusted between 2.8-3 millimetres and for cereals like rice, maize, sorghum, it should be 2 millimetres, so that perforation permits insects alone and not the grains. For best results, the length of the insect cleaning unit can be six feet or more, depending on the grain handling.

The approximate cost of this device is Rs. 2,00,000. The unit can also be fabricated into smaller sizes. It has been licensed by TNAU through Agribusiness Entrepreneurship programme.

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