Hot peppers to control rice weevil in stores

Recognize the problem
The rice weevil is a major pest of rice grains and seed throughout Africa, particularly in Sierra Leone. Tunnels (passages) are bored by the young weevils (tumbu) from the surface of the grain to the inside. Round holes can be seen on the surface of the grain.

Background
Eggs are white and oval (slightly round). The female lays its eggs inside the grain by chewing small holes in which the eggs are deposited. The holes are then closed with wax by the insect. Eggs hatch into tiny tumbu which stay and feed inside the grains and are responsible for most of the damages. Mature tumbu are small, without legs and dirty-white with a curved appearance. Tumbu attack starts in the field and is later carried into the grain stores if harvesting is delayed. The tumbu grow into pupae which are white and later change to brown. Pupae change into adults inside the grains. Adult weevils come out by biting circular holes through the outer layers of the rice grain.

Management
• Dry threshed and winnowed rice for at least a week in the sun or to a moisture content of 12 to 14 % (bite grain to test dryness)
• The store should be cleaned completely before carrying out direct control measures
• Hot pepper can be very effective in controlling rice weevils in storage containers such as jute bags, wooden boxes, barrels, etc
• Mix dried husk rice seeds with dried hot peppers, putting the mixture into either 50 kg jute bags or containers with tight lids
• Make sure that bags and other containers used are filled to the brim and tightly locked or tied to suffocate the eggs and adult weevils, which will kill them
• For greatest effectiveness, add 5 to 10 kg dried fresh hot peppers to 50 kg dried husk rice
• At the end of the storage period, separate the mixture and use the peppers either for sales or cooking
• Store containers on wooden pallets for up to 3 months and check regularly for signs of weevil on the containers

Scientific name(s) > *Sitophilus oryzae*

The recommendations in this factsheet are relevant to: Sierra Leone

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Edited by Plantwise.

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