

# Lesser grain weevil on maize

*Sitophilus oryzae* Rice weevil



*Sitophilus oryzae* (lesser grain weevil or rice weevil); adults in rice grains (James Litsinger)



Adult weevil (NBAIR)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> <li>Use of modern structures such as improved granaries and mini silos building them well isolated, ventilated and with the least possible windows and cracks</li> <li>Early harvesting reduces the attack in the field</li> <li><b>Good store hygiene plays an important role in limiting infestation:</b> <ul style="list-style-type: none"> <li>Before storing new grains, remove infested residues from the previous harvest, sweep floors and inspect walls for holes and cracks to amend</li> <li>Use of new or clean and dry empty bags/sacks for filling with maize kernels and seal carefully. Use hematic bags or tripple bagging of maize</li> <li>No planting of maize or other cereals near storage area, keep store surroundings clean</li> <li>Make sure that the bags are stored on pallets at a sufficient distance from the ground, away from the walls and avoid touching the roof.</li> </ul> </li> <li>Dry maize grains in the sun to achieve 12% of moisture content</li> <li>Apply a thin layer of ash to cover the grain in store to protect them against weevil attacks</li> <li>Alternatively, apply neem seed powder into grain storage at 20g/kg or maize or finely spray the maize grains with neem oil or neem leaf extract. Spray the grain in shade and wait for the grains to dry well and put them back into storage.</li> </ul>	<ul style="list-style-type: none"> <li>Inspect once a week the stored grains in bags and sacks for weevils or damaged grains</li> <li>Regularly inspect the floors and walls of the store for signs of weevils                             <ul style="list-style-type: none"> <li>The adults are small (2.5 to 4.0 mm long), brown weevils with a long, narrow snout</li> </ul> </li> <li>Inspect the grains for irregular holes, weight loss, fungal growth and quality loss</li> <li>When weevils are detected, take action to control them</li> </ul>	<ul style="list-style-type: none"> <li>Re-dry and retreat infested maize</li> <li>Mix 1 kg of diatomite powder (diatomaceous earths) per bag of grain</li> <li>Coating of wood ash, edible oils or inert clay to prevent further development of the weevils</li> <li>Sun dry bags of infested maize grains for 48 hours using either tarpaulin sheets or drying floors</li> <li>Sieve infested grains and dry again in the sun to kill the remaining eggs and adults</li> </ul>	<ul style="list-style-type: none"> <li>Use personal protective equipment when handling and applying pesticides, follow the label recommendations. Do not eat, drink, smoke when mixing or applying pesticides.</li> <li>Fumigate with Aluminium phosphide (56%), e.g. Phostoxin tablets                             <ul style="list-style-type: none"> <li>Actellic Gold Dust (Pirimiphos-methyl 16g/kg + Thiamethoxam 3.6g/kg)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Since Phostoxin is toxic avoid swallowing or inhaling fumes; Following fumigation, wait for two (2) weeks before consumption or sale of grains to avoid taking in residues of Phostoxin; Maximum application of Phostoxin should be once a month; Active ingredient (AI) is 30%; Use 2-4 tablets per ton; Use small container such as an empty tomato cup for each Phostoxin tablet and place inside the container or around the stack or under the fumigation sheet; Drop fumigation sheet to reach the floor to prevent gas escape; Drop weights such as metal rods or sticks to ensure that the gas does not leak</li> <li>WHO Class III Slightly hazardous) Apply 50 g/90kg of maize. Treated maize may be consumed after 2 weeks</li> </ul>

## Ghana

CREATED/UPDATED: July 2017

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