

Lesser grain weevil on maize

Sitophilus oryzae Rice weevil



S. 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"> Use modern structures such as improved granaries and mini silos. Building them well isolated, ventilated and with the least possible windows and cracks Harvest the maize early to reduce the attack in the field Practice good store hygiene, as it plays an important role in limiting infestation <ul style="list-style-type: none"> Before storing new grains, remove infested residues from the previous harvest, sweep floors and inspect walls for holes and mend any cracks Use new or clean and dry empty bags/sacks before filling with maize kernels and seal carefully No planting of maize or other cereals near storage area, keep store surroundings clean Store the maize bags on pallets at a sufficient distance from the ground, away from the walls and the roof. Maintain the store at a temperature below 10 °C by ventilating and cooling Dry maize grains in the sun to achieve 13% moisture content Apply a thin layer of ash to cover the grain in store to protect them against weevil attacks 	<ul style="list-style-type: none"> The adults are small (2.5 to 4.0 mm long), brown weevils with a long, narrow snout Females lay eggs inside the grain and the larva feeds inside the grain causing irregular holes, weight loss, fungal growth and quality loss Regularly inspect the floors and walls of the store for signs of weevils: <ul style="list-style-type: none"> Inspect once a week the stored grains in bags and sacks for weevils or damaged grains As soon as any weevils are detected, consider taking action to control them 	<ul style="list-style-type: none"> Frequent inspection of maize while in storage and re-drying and retreating if infested Apply neem seed powder into grain storage at 20g/kg of maize. Alternatively, 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. Mix 1 kg of diatomite powder (diatomaceous earth) per bag of maize grain Coating of grain with wood ash, edible oils or inert clay to prevent further development of the weevils. Sun dry bags of infected maize grains for 48 hours using either tarpaulin sheets or drying floors Sieve infested grains and dry again in the sun to kill the remaining eggs and adults 	<ul style="list-style-type: none"> When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval. There are a number of fumigation chemicals on the market but they are usually extremely toxic during application, are flammable gases; and can only be applied by an experienced, officially trained and registered fumigator. Many of these products and applications are forbidden in Zambia Always consult recent list of registered pesticides (ZEMA). No chemicals are registered in Zambia for control of Sitophilus oryzae on maize 	

Zambia

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