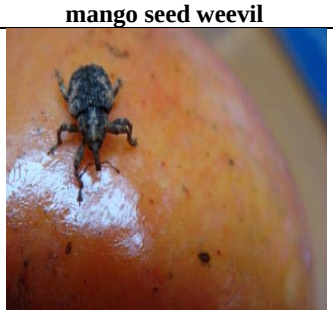
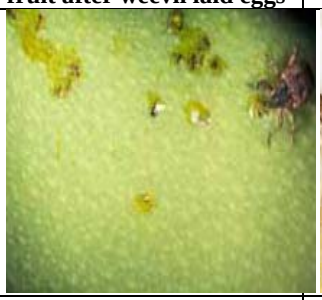
KARI E-mimea Plant Clinic

KARI/Mimea Factsheet No.14/2014

Pest: **Mango seed weevil *(Sternochetus mangiferae)***

Crop: **Mango**

			
Clean mangoes free from mango seed weevil	**A scar left on a mango fruit after weevil laid eggs**	**Mango fruit affected by weevil**	**Damaged fruit and mango seed**
			
Adult weevil laying eggs on the surface of a mango fruit	**Hatched eggs burrowing onto mango fruit**	**Weevil larvae feeding onto mango seed**	**Weevil larva developed into pupa and then adult inside the seed**
Photos from http//www.google.com			

Pest Name	Mango seed weevil *(Sternochetus mangiferae)*
Description	The mango seed weevil is a pest in most mango growing countries. This species breeds only in mango seeds and cannot survive in other fruits. The adult mango seed weevil is an oval-shaped, dark brown beetle 9-10 mm long with mottled markings on the wing covers and a long snout. It is very well camouflaged and almost impossible to detect on the fissured bark of mature mango trees where it spends a considerable part of its time. The weevil has a life cycle of about 45 days.
Pest Category	Continuous
Symptoms	After five to seven days, the first instar larvae hatch from the egg and burrow through the mango flesh to the soft developing seed. The seed is often completely destroyed by the feeding activity of two or more larvae. After the fruit matures and falls to the ground (or is harvested), the adult weevils chew a hole through the seed covering to emerge. Although the adult weevils are capable of flight, they rarely fly. Once they emerge from the mango seed, they usually stay in close proximity to their host tree and shelter within crevices in the bark where they are very difficult to detect. During the early fruit-set stage, adult weevils move to the flower panicles or, if available, soft flush leaf tissue, to feed and may be seen at night or in

	the early morning. As the humidity decreases during the morning, the weevils retire to more sheltered areas inside the tree where they remain immobile and well camouflaged on the bark. They have been known to survive for more than four and a half months without food and water, and 21 months when food and water were supplied.
Conditions prevailing that contribute to success	The main condition that is favorable for its success is mango seeds left in the field as well as lack of field hygiene.
Control Strategy	**Restrict unnecessary movement of fruit and planting material.** As mentioned above, movement of potentially infested material should be restricted as far as possible between and within orchards. **Hygiene.** Since the adult beetles emerge from fruit which has been picked or rotted after falling to the ground, growers should attempt to collect fallen fruit and seeds after harvest (preferably within three weeks). This fruit should be burnt or buried at least 1 m deep. Before burial, the infested fruit should be thoroughly sprayed with fenthion (75 ml of 550 g a.i/litre product per 100 litres of water). Small volumes of fruit or the cleaned seed husks can be placed in the deep freeze for three days to kill weevils within the seed before disposal in a compost heap or garbage. **Chemical control.** Sprays that are registered for mango seed weevil are carbaryl and fenthion. Carbaryl should be applied pre-flowering at the rate of 125 g of 500 g a.i. product per 100 litre of water to reduce the number of adult weevils. Then, two sprays of fenthion (75 ml of 550 g a.i. /litre per 100 litre of water) should be applied, the first at golf-ball stage and repeated about three weeks later. These sprays are targeted at both the free living adults and the larvae inside the fruit.
Mode of Spread	**Fruits:** The movement of mango fruits and seeds in different parts of the country could be the number one cause for the pest spread in Kenya. The pest may move as eggs or caterpillar.
Mandate Centres	All KARI Centres in the mango growing areas.
Reference Links	**(http://www.plantwise.org/KnowledgeBank/CountryHome.aspx)**
Geographic Coverage The pest has been reported in the yellow highlighted counties but this may change after a full country survey is conducted. The border counties are also likely to have the pest.	Although probably native to the Indo-Burma region, it is now found in southern and eastern Africa, most Asian countries, parts of the South Pacific and in Hawaii. In Kenya, the mango weevil is found in the entire major mango growing areas of Coast, Eastern, Central, Rift Valley, Western, Nyanza and parts of North Eastern regions (see map below showing where it has been cited).
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