Recognize the problem
Bean flies, also called bean stem maggots (or Funza wa Maharage in Swahili), are serious pests of all types of beans, especially common beans. A bean fly is tiny, only about half the size of a housefly, and is shiny metallic black. Its larvae feed into and through the leaves. They feed and tunnel down towards the stem and stem base. They attack beans that have 2 to 3 leaves. Leaves of damaged plants become yellow, and drop. There are also swellings and ruptures of the stem near the ground. Because of stem destruction, plants are often stunted, wilt and die which can cause up to 90% loss.

Background
Bean flies mostly occur during the dry season. They lay eggs on the base of both the upper and underside of young leaves on young plants. They can lay up to 70 eggs in their 1 week lifetime. These eggs hatch into larvae after 2-4 days. Larvae are so tiny (less than 3 mm) that they can only just be seen by eye. They feed and tunnel inside the bean leaves and stems, which blocks water and nutrient flow in the plant. They also pupate in the stem near the ground surface. A complete life cycle takes 2 - 3 weeks. Thus 4 - 6 generations can develop in one bean growing season. At the end of the season, larvae and pupae remain in the plant stems and roots of beans and other legumes. Some move into the soil and survive until the next bean cropping season.

Management
• Practice post-harvest ploughing, 15 - 20 cm deep, then harrow the soil with a tractor to facilitate the following:
  ◦ to bury the larvae, pupae and adults that are living in the remaining bean plants, bean residues, and re-growing volunteer bean plants after harvest. When buried deeply, they cannot survive.
  ◦ to expose larvae and pupae onto the soil surface to be killed by the sun and eaten by birds
• Remove infested bean residues after harvest and feed to livestock

Scientific name(s) > Ophiomyia phaseoli, Ophiomyia centrosematis, Ophiomyia spencerella

The recommendations in this factsheet are relevant to: Kenya, Malawi, Rwanda, Tanzania, Zambia