Locust feeding, crop damage and control



Insect mouthparts

The ancestors of insects had three sets of mouthparts. Locusts have similar mouthparts to those of ancient insects. The first set of mouthparts is used to bite or saw-off pieces of vegetation. These jaws move from side to side. The other mouthparts are used to manipulate the food.

Mouthparts have become specialised in some other types of insects: butterflies have long sucking tubes (called a probosis), flies have sponge-like mouthparts, mosquitos have piercing and sucking mouthparts.



The mouthparts of a locust

What do locusts eat?



Artwork: Dr Damon Crook

Locusts eat plant material. They are a problem because swarming locusts will strip an area of its vegetation including the crops.

Locusts very often live singly or in small groups, sometimes the numbers build up and they can do a great deal of damage to the crops. Although the young hoppers can't fly, they still march in bands, eating the crops in their path. They march during the day, moving about a km a day, and rest at night in plants and shrubs. They moult and grow until they become adults. Then they start to fly and move in a vast swarm. A single swarm may contain ten thousand million locusts and cover an area larger than greater London. Swarming adult locusts can fly 80km a day and they may travel several 1,000km before they settle to breed.

The swarming locusts will devastate an area. A large swarm may eat 160,000 tonnes of food each day. This amount of corn would feed 800,000 people for a whole year.

Who or what eats locusts?

Locusts can be eaten by spiders, birds, lizards and desert foxes. The birds can eat so many that they become too heavy to fly off. In some parts of Africa people even eat locusts with honey!

How can we stop the locusts eating our crops?

Farmers used to try to drive away the locusts by lighting fires. They also dug up the eggs. Now crops can be sprayed with insecticides from vehicles or aeroplanes. Scientists are trying to improve the control of locusts, by preventing or dispersing swarms. Farmers and scientists also link to try to predict when a swarm will appear, so that controls can be introduced earlier.

We can also use fungal pathogens to control grasshoppers and locusts, this is called biological control. The fungal pathogens can be sprayed onto the locusts. Locusts can also be attacked by parasites that develop inside the locusts or their eggs.

