

Rodents in Australia

The good and the bad

Rodents have had a large influence on history and human endeavour. Over 42 percent of all mammal species belong to this one order, whose members live in almost every habitat, often in close association with humans. Frequently this association is not beneficial for humans, because rodents consume prodigious quantities of stored food and spread diseases. In Australia there are 62 native rodent species and three introduced species. Only 7 of these cause major problems.

Not all rodent species are bad and many rodents play an important role in ecosystems. For example, rodents help in dispersing spores of fungi that help plants in extracting nutrients and water from the soil. They are also an important part of the food web.

Outbreaks of house mice in agricultural lands in Australia cause enormous economic losses. They also cause damage to agricultural crops, stored products and structural components of buildings. Gnawed electrical cables can cause fires, leading to economic impact.

Other rodent species cause major problems in crops such as sugar cane, macadamia and other nuts, fruits and vegetables. The three introduced species cause problems in urban areas.

Habitat and appearance

Rodents occur in virtually every habitat. Some live in trees, seldom coming down to the ground, while others spend their entire lives in an underground network of burrows. Some have webbed feet and are semi-

aquatic, often undertaking complex engineering programs to regulate water levels, while others never touch a drop of water throughout their entire lives.

All rodents have characteristic teeth, including a single pair of razor-sharp incisors. With these teeth rodents can gnaw through the toughest of husks, pods and shells to secure the food contained within.

Life of a rodent

- Can live up to 12 months in the field; most live 4 to 6 months
- High reproductive rate – pregnancy of 3 weeks; mate the day after they give birth; mature at about 6 weeks old.
- Mice can enter gaps of 8 mm.
- They can climb almost any surface.
- Are color blind but have excellent sense of smell and use their whiskers for navigation.

Rodent control

To control the impact of rodents, the simplest method is to reduce their habitat, nesting sites and available food. Early action is important. Around houses, traps can be effective. The use of rodenticide – fast-acting, non-selective poison – is effective, but has technical and ecological disadvantages.

In a search for more humane control techniques, other research is focusing on the use of biotechnology in developing new control methods that sterilise mice.

Contacts

CSIRO Enquiries

Phone: 1300 363 400

Email: enquiries@csiro.au

<http://www.cse.csiro.au/rodents> (for further information)

