

Acheta domesticus

Brown House Cricket



Background

The brown house cricket *Acheta domesticus* is a common cricket that is found world-wide. It is a popular insect for keeping at home as it is readily reared and can be used as food for a range of reptiles. It is highly omnivorous, eating a wide range of vegetables as well as dry cereals etc. It is reared on an industrial scale by live-food producers and companies that are now growing them for human food.

Lifecycle

Female crickets readily lay eggs in damp materials, such as soil. When breeding crickets, damp moss or sand is frequently used to collect the eggs, as shown below. The eggs are 2-3 mm long and readily visible to the naked eye. The eggs take 2-3 weeks to develop, depending on the temperature. During the incubation period of the eggs, the substrate must remain damp otherwise the eggs may desiccate. The crickets emerge from eggs as nymphs, often known as pinheads due to their tiny size. The nymphs will moult 8 or 9 times before they reach the adult stage.

Adults of *Acheta domesticus* have wings and the female is differentiated by the presence of a long ovipositor through which it lays eggs. Adults are about 0.4g when newly moulted but the female will increase in weight afterwards as she becomes full of eggs. Females take about a week before they start



laying eggs and they will continue to lay eggs for up to two months, depending on temperature. Each female can produce as many as 3000 eggs over her lifespan in optimal conditions (at home this is usually less).

Crickets are warmth loving and develop optimally at around 30°C and will develop very slowly at temperatures of less than 20°C. At temperatures of less than 10°C the insect will become virtually immobile.

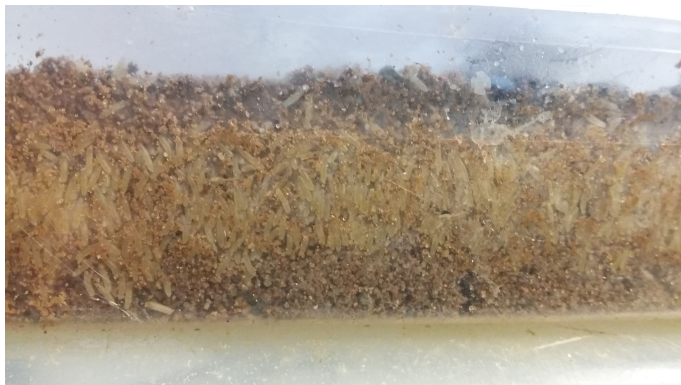
Developmental parameters of *A. domesticus* (at around 25-30°C)

Egg period	2-3 weeks
Nymph period	45-60 days
Number of nymph stages	8 or 9
Adult lifespan	6-8 weeks
Eggs laid	Up to 3000
New adult female	0.4-0.5 g
Egg laying female	0.5-0.6g

Keeping Crickets

A place to live

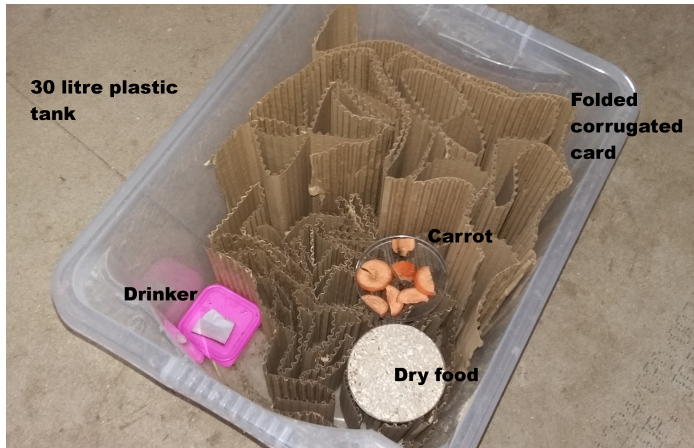
Firstly, a warm place is necessary if you intend to breed crickets. Temperatures of above 25°C will allow *A. domesticus* to breed but temperatures of around 30°C will speed things up markedly. Crickets can be kept in plastic storage tanks such as the one pictured below. These tanks can be bought from hardware stores and supermarkets for less than £5. The lids of these tanks are solid and the best way to allow air exchange is to cut out an area of the lid and replace it with a fine mesh (net curtains work well for this). Ventilation is important so that humidity does not build up in the tanks, making everything damp



Many thousands of eggs are visible that have been oviposited into damp sand



and, eventually, smelly. Tanks can be filled with old folded-up cardboard (as shown) to give extra area for the crickets to roost. The crickets cannot climb shiny plastic but they will hop out unless you have a lid firmly in place.



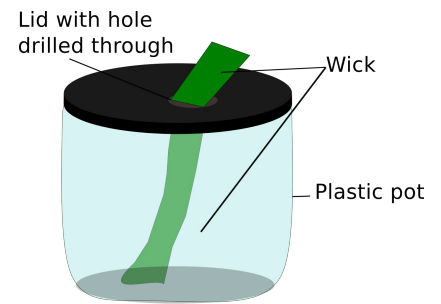
A 30 litre plastic tank ready for holding crickets

Food and water

Crickets can and will eat a vast range of materials. As a result, you probably will have something in the house that they will like. A mixture of ground breakfast cereals works quite well (Cornflakes, oats, Weetabix etc.). Add some dried peas (preferably ground) or milk powder to increase protein content for faster development. Crickets will eat most vegetables to a greater or lesser extent but potatoes and carrots work best as they do not rot as quickly as many leaf vegetables at the high temperatures crickets are usually kept at. Commercial chicken feeds are widely used in large-scale cricket farming operations. For people who want to increase the mineral content of their crickets so that they can be fed to reptiles, special feeds are available at pet stores.

Place feed in shallow dishes and ensure that the crickets can access the food. If small crickets struggle to access the food, make little bridges out of cardboard so they can climb onto the food. Drinkers can be made by taking plastic food containers with a snap-on lid and drilling a hole through the lid. Pass a wick (e.g. tissue paper, rolled up cotton wool) through the hole and fill the pot with water. The wick will get dirty after a few days so replace as frequently as possible.

Design of a simple cricket drinker made from a plastic pot (or jam jar)



Breeding *A. domesticus*

When adults start to appear, place them in a new clean tank. Around half of the insects will be female. Provide these crickets with a damp material, such as sand or soil, in a plastic tub or pot and ensure the crickets can access it. The females will lay eggs in this sand. After one or two days, remove this pot and place a lid on the tub that has good ventilation, such as many fine holes punctured in the lid. Place this tub in a warm place and check frequently to ensure that the sand is damp (not too wet, though - no standing water). After about two weeks the eggs will be ready to hatch and the tub can be placed in a new tank so start the next generation. Egg collection can be completed as often as is necessary to ensure your colony is maintained at the size you require. An adult colony of around 50 should be enough to produce all the eggs you will need for a small home colony. New adult colonies can be setup as and when necessary to maintain egg production.

Useful References

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