

# FOOD AND WATER

Crickets and mealworms require less water and feed than any other conventional livestock animal. For 1 kg of protein cattle need 200 m2, 10 kg of feed and 15 liters of water. Crickets need only 1.7 kg of feed and 15m2 of living space and 3 liters of water.

Crickets emit only 1 gram of Greenhouse Gas per one kilogram of protein, comparing to 300 g from chicken, 1130 g from pigs or 2850 g from cattle.

# NUTRITIONAL VALUE

The nutritional value of insects varies considerably from insect to insect. The flavor and texture of each insect varies as well making this both a new and ancient culinary experience.

As an example, we will look at the cricket raised on a high protein grain diet. They are packed with B vitamins being especially high in B12. In fact, crickets offer over triple the amount of B12 when compared to salmon.

They are also a good source of the biologically active form of vitamin A and Riboflavin (also known as B2). Crickets, as an example, have a perfect Omega 3:6 balance.

When it comes to minerals, edible crickets pack almost five times as much magnesium as beef and three times as much iron. They supply more calcium than milk and they are high in zinc.

# FOOD PRODUCTS

The following processed food products are produced by several producers in North America, Canada, and the EU.

- Insect flour: Pulverized, freeze-dried insects (e.g., cricket flour)
- Insect burger: Hamburger patties made from insect powder / insect flour (mainly from worms or from house cricket) and further ingredients
- Insect fitness bars: Protein bars containing insect powder (mostly house crickets)
- Insect pasta: Pasta made of wheat flour, fortified with insect flour (house crickets or mealworms)
- Insect bread: Bread baked with insect flour (mostly house crickets)
- Insect snacks: Crisps, flips or small snacks (bites) made with insect powder and other ingredients

# PROTEIN POWER

The protein content of an insect is 20-76% of dry matter, depending on the insect's type and development stage.

Some benefits of insect protein are improved weight loss, increased muscle mass and increased strength. Muscles, bones, and skin all count on protein to grow and to repair themselves.

Shakes, vitamin supplements, and protein bars are popular ways to try to fill in the protein gap.

Crickets need six times less feed than cattle to produce the same amount of protein.

# BENEFITS OF CHITIN

Chitin is a fibrous biopolymer consisting of polysaccharides. It's the major constituent of the exoskeletons of arthropods like insects and crustaceans, and the cell walls of fungi.

There are many health benefits of eating chitin like increasing immune defense, combating inflammation (in some cases cancer) and probiotic growth.

Research suggests that chitin has prebiotic properties. Prebiotics are a type of fiber that serve as a food source for probiotics, which are the good bacteria in your gut.

# INSECT FAT

Fat is an essential nutrient to the body helping with a variety of important functions. By eating edible insects you can increase the amount of healthy fats in your diet, while reducing unhealthy and harmful fats.

The fats you eat give your body energy, keep your body warm, your skin and hair healthy, help you absorb vitamins from food and produce hormones.

Edible insects are a great source of essential fatty acids. Their essential fatty acids may make you smarter, decrease inflammation and ensure your blood is clotting.

