EDIBLE INSECTS & HUMAN NUTRITION

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INSECTS MEET ALL HUMAN ESSENTIAL AMINO ACID CRITERIA

ALTHOUGH SMALL THEY ARE PACKED WITH PROTEINS (50-80 % DRY MATTER BASIS, 7-48% FRESH-WEIGHT PROTEIN)*

Proteins are necessary for the growth and development of the body

- ✓ PROTEINS
- ✓ FATS
- ✓ FIBRES
- ✓ MINERALS
- ✓ VITAMINS

* The protein content of insects also varies strongly by species

CONSUMED BY OVER

2 BILLION PEOPLE IN 80% OF THE COUNTRIES

AROUND THE GLOBE. MORE THAN 2,000 INSECT SPECIES ARE REPORTED TO BE EDIBLE

DID YOU KNOW?

ESTIMATED UP TO 80% OF AN INSECT IS EDIBLE VS 55% FOR CHICKEN & PIGS AND 40% FOR CATTLE

- ✓ Insects have a high content of minerals important for human nutrition
- ✓ Rich in trace elements such as copper, iron, magnesium, manganese, phosphorus, selenium and zinc

Fe P Zn Mg

Promote chemical reactions in the human body and may form part of many tissues. Required in small amounts for metabolic purposes

- ✓ High in monounsaturated fatty acids and/or polyunsaturated fatty acids (MUFA, PUFA) at acceptable standards
- ✓ Omega-6 and Omega-3 fatty acids

Fatty acids constitute the main component of lipids and are required as a source of energy, for metabolism and structure
The human body cannot produce specific fatty acids, so we need supplementary sources

- ✓ Prebiotic fibres, such as chitin, provide nutrients for probiotic gut bacteria in humans
- ✓ Chitin-derived substances are commonly found in insect exoskeletons

Fibres are necessary to have a healthy human gut

B1 B2 B12

- ✓ B12 (Cobalamin), B2 (Riboflavin), B1 (Thiamine) and other vitamins are present in insects

Essential for normal growth and activity of the body, as well as for energy production, immunity and other functions

INTEGRATING INSECTS IN A BALANCED DIET FOR:

- ✓ Combating undernutrition and micronutrient deficiency
- ✓ Fulfilling nutritional deficiencies in case of change in behaviour or dietary preferences
- ✓ Boosting current diets, as insects are packed with proteins and essential amino acids, good fats, fibre, vitamins and minerals

CAUTION: Insects contain similar allergens to crustaceans, molluscs and dust mites

HOW CAN YOU EAT INSECTS?

Insects can be consumed whole or as ingredients in food products (e.g. pasta, energy bars, burgers, etc.)

Van Huis, Arnold, et al. Edible insects: future prospects for food and feed security. No. 171. Food and Agriculture Organization of the United Nations, 2013.
FAO human nutrition http://www.fao.org/ag/humannutrition/nutrition/en/
Churchward-Venne, Tyler A., et al. "Consideration of insects as a source of dietary protein for human consumption." Nutrition reviews 75.12 (2017): 1035-1045.