

SUMMARY

Title: Attitudes towards edible insects as food and conditions for their acceptance in a model approach

The European Union focuses on balancing agricultural production and protecting natural resources, seeking a solution to the problem of food production, among others, by increasing the rate of agricultural production productivity growth and raising the level of innovation in agriculture, keeping in mind the growing population of people around the world. One solution to the problem of the Food and Agriculture Organization of the United Nations (FAO) is the possibility of using edible insects as a natural and renewable source of food for humans and animals, at the same time being in harmony with the natural environment, safety conditions and low financial outlay. Research conducted for many years in terms of nutrient and health content as well as in terms of production safety for humans show great interest in insects as food. Consumers acceptance is the biggest barrier of the dynamic development of raw material rich in wholesome protein. This is why this study is an opening process to know what is a key factor which influence the process of acceptance of edible insects by Polish consumers (for a start the ones becoming from area of Tri-City). Acceptance by consumers is the biggest barrier to the dynamic development of growing a raw material rich in wholesome protein. Therefore, this study is a prelude to the process of learning the key factors influencing the process of acceptance of edible insects by Polish consumers, at the moment only from the Tri-City area. Consumers' reaction on a new food has been unknown till now. It's based on psychological nature of people. The new food and especially edible insects is causing negative social attitudes which is a result of lack of knowledge and stereotypes existing or influence of a social environment. Attitudes and conditions identifying these products' acceptance presented here is sourced from consumer's assessment and it verifies the hypothesis that consumers from the Tri-City show a positive attitude towards an alternative food source such as edible insects.

The aim of this study was to assess the attitudes of Tricity consumers towards edible insects, expressed in the assessment of food diversity in relation to eating benefits of edible insects and to assessment of the level of dietary neophobia for consumers perceiving the risk of consuming this sort of food. The aim also was to assess determinants of acceptance of edible insects products which was presented in sensory consumer assessment. The study was carried out in two stages. Stage I. was to examine attitudes for consumers from the Tri-

City towards new food and this was carried out as a survey between group of 788 consumers from the Tri-City agglomeration. The questionnaires used included the scale of looking for diversity in VARSEEK food (Variety Seeking Tendency Scale) and the scale of neophobia in relation to FNS food (Food Neophobia Scale) and also the assessment of risks and benefits of insects' consumption. In stage II. was carried out as sensory consumer's assessment in which three species of edible insects were prepared in three different flavour to asses and 101 volunteers were tested (sourcing from the group participating in stage I). Three research hypotheses were adopted to achieve the goal set. Two of them H1 and H3 were positively verified and H2 was verified as negative.

H1 Consumers from the Tri-City, characterized by a high degree of looking for diversity in food see benefits in consuming edible insects.

H2 Consumers from the Tri-City, characterized by a high degree of neophobia, do not perceive the risk of consuming edible insects.

H3 The level of acceptance of edible insects by consumers from the Tri-City is conditioned by the interaction of arbitrarily adopted sensory parameters, which as result of the procedure was reduced to critical parameters, which proved to the taste and appearance.

The model approach allowed the separation of sensory parameters which are statistically significant and which are affected by the level of product acceptance of surveyed consumers. Based on the selected (critical parameters) descriptors, a new products could be proposed in the future. The study presents the history and the benefits of edible insects consumption (entomophagy), their importance in diet, as well as environmental significance and economic benefits which are resulting from their use in human nutrition. A special attention is paid to nutrients of edible insects and this food importance for humans.

The research carried out and described in this paper is one of the first in Europe and may contribute in consumers getting used to edible insects as well as contribute to the effective development of new products that would allow to potential use of edible insects as a raw material and to create food that would be accepted and also would allow to create preferences for food products which contain edible insects.