

## **FARMERS' AWARENESS IN THE FIELD OF OCCUPATIONAL SAFETY AND HEALTH IN SUSTAINABLE MANAGEMENT SYSTEM**

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### **ABSTRACT**

Farming presupposes good acquaintance with the use of machinery, equipment, animal care and work schedules to safely perform duties on integrated farms. This is the reason why the farmers' knowledge of occupational health and safety, including the use and application of personal protective equipment, has become a subject of the research. A survey research was conducted among 90 farmers working on an integrated farm or being interested in such a system. Questions concerned harmful and hazardous factors in the work environment, the principles of safe working with animals, use of personal protection measures, knowledge and implementation of safety signs, pre-medical aid, and participation in training in innovative agriculture. The most active age group of respondents were farmers up to 50 years of age who were willing to participate in the study by providing exhaustive answers. Most of the farmers have a basic or secondary education and a large amount of their knowledge comes from their own experience. The greatest role in implementing the assumptions of the integrated management system plays the human factor together with its own state of awareness in the field discussed.

### **INTRODUCTION**

A sustainable management system involves rational use of resources to reduce the negative impact of agriculture on the environment. Such a rational approach also presupposes a proper understanding of the working process and of the requirements related to it, in order to eliminate any risk to health and living conditions of the farmers. In a system of productivity-oriented farming based on precisely scheduled agronomic and animal husbandry practices, in addition to strict control of products and the environment, it is necessary to carry out activities related to occupational health and safety. (Kociszewski, 2011, Kostecka & Mroczek, 2007; Pawlak, et al., 2017; Pawlak & Nowakowicz-Dębek, 2015).

One of the major diseases that farmers are exposed to is an exogenous allergic alveolitis (EAA), which is caused by the inhalation of plant protection products. While trying to avoid poisoning and exposure to biological, physical and chemical agents, it is necessary to remember about appropriate preventive measures. The use of preventive measures requires thorough knowledge of the scope of their implementation (Brodzińska, 2012; Gawda et al., 2015; Nowakowicz-Dębek et al., 2016; Pawlak & Nowakowicz-Dębek, 2015; Pecyna, Pawlak, Maksym, Filipiuk, & Buczaj, 2016; Walusiak-Skorup & Pałczyński, 2010).

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## MATERIAL AND METHODS

A survey research was conducted among 90 farmers working on an integrated farm or being interested in such a system. The anonymous questionnaire contained 22 questions divided into topical units regarding occupational health and safety in the field of agriculture. The surveys were conducted in Central and Eastern Poland among men and women of different age groups (up to 30 years, 30-50 years and over 50 years), (Fig.1). Net results were statistically analysed and are presented graphically.

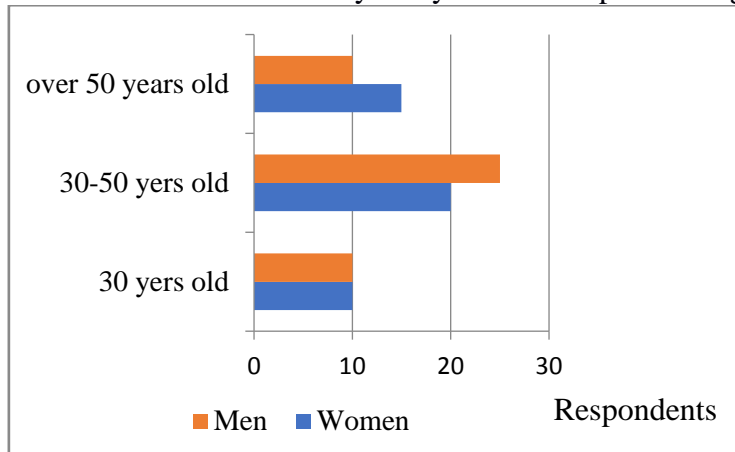


Fig.1. Age structure of respondents

## RESULTS AND DISCUSSION

Questions in the first topical unit concerned harmful and hazardous factors in the work environment, the principles of safe working with animals and the use of personal protection measures. Both the youngest and the oldest age groups of farmers were not able to indicate and describe the harmful and dangerous factors that occurred in their work environment (Fig.2).

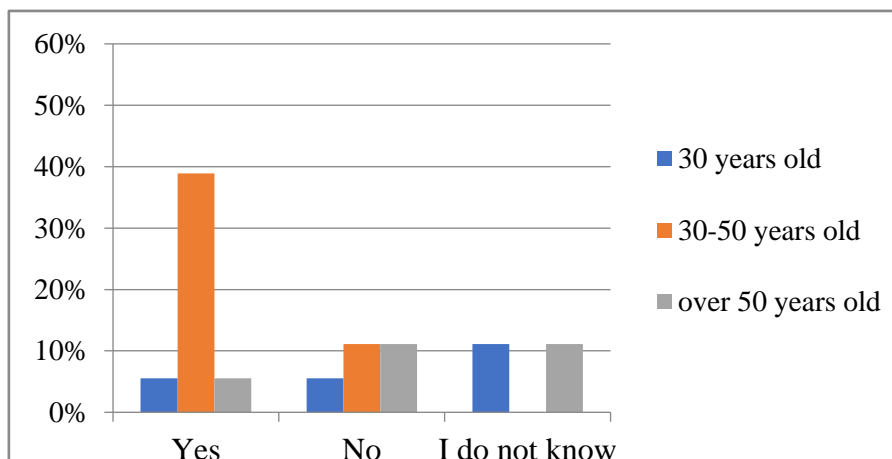


Fig.2. Dangerous and harmful factors in the work environment (% of respondents)

Principles of safe handling with animals are observed by farmers aged 30-50, while younger farmers don't follow these rules (Fig.3).

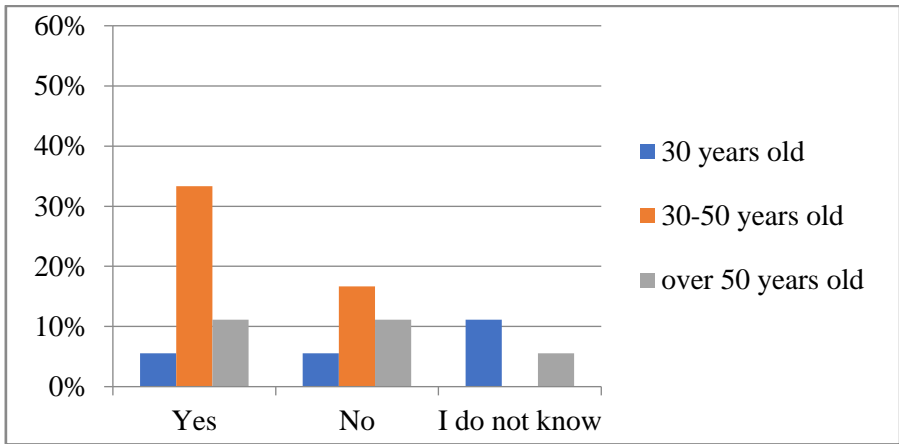


Fig.3. Safe handling of animals (% respondents)

Personal protective equipment is usually used by farmers up to 50 years of age. The oldest respondents have no habit of using personal protection (Fig.4).

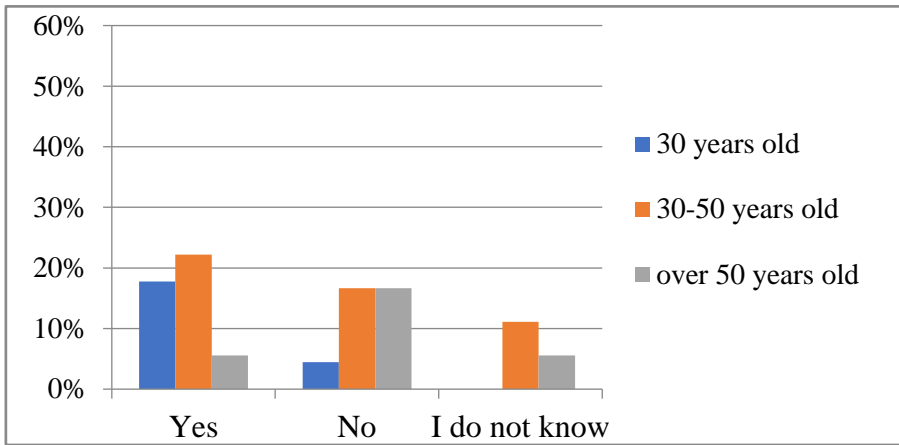


Fig. 4. Use of personal protective equipment (% of respondents)

The second topical unit of questions concerned the knowledge and implementation of safety signs, pre-medical aid, and participation in training in innovative agriculture. All respondents were familiar with the security signs used (Fig.5).

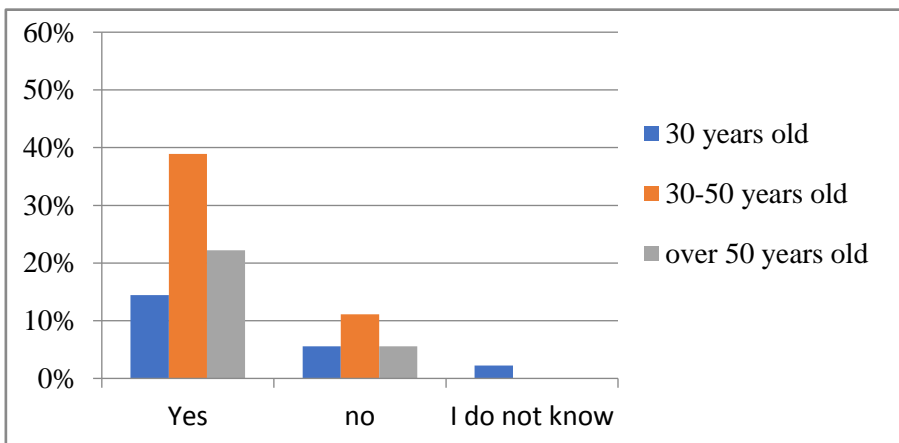


Fig. 5. Knowledge and use of safety signs (% of respondents)

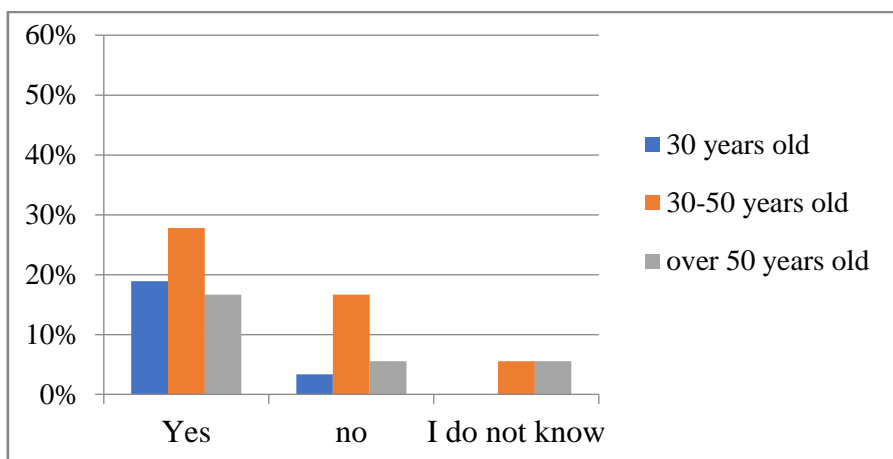


Fig. 6. Pre-medical assistance (% of respondents)

Farmers below the age of 50 had good knowledge in the field of pre-medical aid, although only the youngest were able to react appropriately and provide assistance in case of an accident (Fig.6). Farmers in the age groups of 30 and 30-50 were willing to increase their knowledge by participating in various training courses, being aware that they will need it for further work (Fig.7).

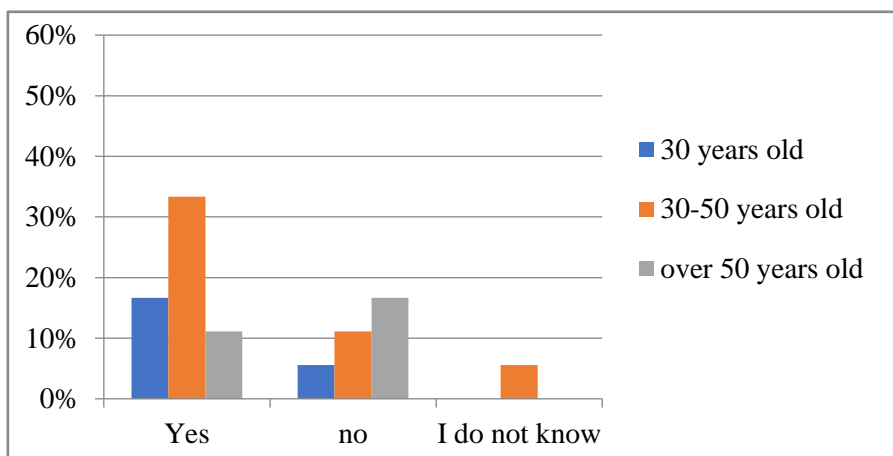


Fig. 7. Training in agricultural innovation (% of respondents)

Limitation of negative habits related to irrational management will reduce the deformation of the environment, while at the same time it will secure general obedience to the rules in the working environment.(Brodzińska, 2012; Gawda et al., 2015; Kałuża, 2009; Pawlak & Nowakowicz-Dębek, 2015).

Kostecka and Mroczek (2007) show that there is an increased interest in new ways of farming. In such a case, the agri-environment programs may be helpful, but the low level of education of farmers and the lack of knowledge in this area is an obstacle.

Similar results were obtained during the research. The greatest role in implementing the assumptions of the integrated management system plays the human factor together with its own state of awareness in the field discussed (Brodzińska, 2012; Kałuża, 2009). Therefore, it would be logical to arrange constant educational activity in rural areas that would make it inevitable to use the principles of good practice and to implement pro-environmental measures in order to maintain the integrated system and to guarantee safety of the farm workers.

## CONCLUSION

In view of the growing problems regarding the rational management system connected with the state of the environment, there is a need to raise awareness about the ecology among people employed in agriculture. These activities should focus primarily on the prevention and elimination of anthropogenic threats mainly related to environmental chemistry. Most of the farmers have a basic or secondary education and a large amount of their knowledge comes from their own experience. The most active age group of respondents were farmers up to 50 years of age who were willing to participate in the study by providing exhaustive answers. The farmers surveyed indicate the need for a proper training related to their work environment. This is particularly important in view of emerging opportunities to use new funding and of implementing the rules for that purpose. Hence, the agricultural school teachers, as well as members of Agricultural Advisory Centres, are of great importance in broadening the knowledge of farmers related to the nature of their business.

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