

Safer Agriculture For Employees in Rural – SAFER

Yeşim Benal YURTLU¹, Kerim EKMEKÇİ², Mesut GÖLBAŞI³, Elçin YEŞİLOĞLU¹

¹Ondokuz Mayıs University Faculty of Agriculture Department of Agricultural Machinery, Samsun

²Ministry of Agriculture and Rural Affairs Directorate General for Agricultural Production and Development, Ankara

³Ministry of Agriculture and Rural Affairs International Agricultural Training Center, Ankara
yurtlu@omu.edu.tr

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Abstract: Education/training activities in agriculture forming permanent vocational safety culture is getting gradual importance in our country under the influence of increase in human centered policies executed in the world, harmonization of regulations of EU to our country, raise several projects to creating awareness in this area and pressure to human consciousness generated by accidents. Many works/studies are being conducted in developed and EU countries under the base of safer works in agriculture. With in these studies, two focal points are manufacturing of safe machinery and training of users. In this paper, works related to SAFER project- Safer Agriculture For Employees in Rural- that is conducted by OMU and supported by EU Life Long Learning Leonardo da Vinci Transfer of Innovation has been summarized and the main pathway for reaching the outputs of the project has been given.

Key words: Agriculture, safety, agricultural machinery

INTRODUCTION

Agriculture is one of the most hazardous sectors in many countries. According to ILO, each year, approximately 170 000 agricultural workers die and a high number of world's 1.3 billion agricultural workers suffer from serious injuries or occupational diseases. Exposure to pesticides and other chemicals and farm machinery accidents are two important factors of these fatalities, injuries and diseases. The essential reasons of the insufficient level of occupational health and safety of the agricultural workers are almost similar in undeveloped and developing countries. Among the similarities, deprivation of collective voice because of inadequate organizations of workers, insufficiency of education levels, too many women workers, high level of translocation rate of seasonal farm workers within all agricultural employees are distinctive features (Roskam, 2001).

According to European Statistics Office (EUROSTAT), agriculture is the second most hazardous sector after construction works in the region. In England, agriculture has one of the worst fatal accident and occupational ill health records of any major employment sector. In France, mechanization is the main cause of injury accounting

for 25 % of all cases. In Spain and other European countries at a similar level of development, some 40 % of accidents are machinery related and half of them involve tractors alone (Dupre, 2005; Anonymous, 2000). Furthermore according to 2010 data of United States Department of Labor, agriculture is the one of the most dangerous sectors in United States with regard to fatal accidents. According to BLS data in USA, agriculture, forestry, fishing, and hunting had the highest fatal work injury rate with 30.4 per 100,000 full-time equivalent workers among in all other sectors from the point of view of the rate of fatal occupational injuries. In developing countries the situation is even worse (Anonymous, 2010).

For Turkey in pre-accession period to EU, the actions of harmonization of European Union Directives to Turkish Laws and Regulations about occupational health and safety have been progressed. But there are considerable problems to put in practice them from the point of the view of agricultural sector.

As a rule, the safety employees and experts attach high value on two points for the purpose of safety. The first one is safe design of product/material/

manufacture and the second one is safety education/training. Thus, all products, machinery, systems that will be used in agriculture should be manufactured accepted safety standards. In this regard, it is very much crucial to put into force of 2006/42/EC Machinery Directive in the proper sense. Furthermore, market inspections which are conducted by the Ministry of Industry and Trade are also valuable works to provide safe and standard products to the agricultural employees in Turkey. But, the stated inspections are valid for manufacturers who apply to Ministries for certain purposes. Therefore, the products/machinery manufactured in small shop locally and in accordance with domestic demand have not been safety standards and out of certain inspection circumstances. This situation creates an important problem for safe works in agriculture. In this regard, to create awareness it is necessary to perform multipurpose education/training for the people who manufactured these types of machineries been mostly in rural. The self employed people (needs education much more than others), professional farmers, farmers' families especially women, seasonal farm workers, agricultural machinery and equipment manufacturers and dealers should be in the context of safety education/training in agriculture. Generally, illiteracy between farm workers is very high. This situation is also big hamper to conduct safe work in agriculture.

The main aim of "Safer Agriculture For Employees in Rural-SAFER" project is to transfer of innovative training materials from successfully completed projects and adapt them to the national and sector requirements and improving innovative training modules for safer working conditions of employees in agricultural sector.

MATERIAL and METHOD

SAFER project is a EU supported Life Long Learning, Leonardo da Vinci, Transfer of Innovation Project that conducted by coordinator Ondokuz Mayıs University. Project is carried out by partnership with Agro-alimentary Federation of CCOO (CCOO)-Spain, Asesoria Declerq SI European Studies-Spain, Italian National Body for Agricultural Mechanization (ENAMA)-Italy, Ministry of Agriculture and Rural Affairs International Agricultural Training Centre

(UTEM)-Turkey, Ankara University-Turkey, The Turkish Association of Agricultural Machinery and Equipment Manufacturers (TARMAKBIR)-Turkey, The Union of Turkish Chambers of Agriculture (TZOB)-Turkey and Ministry of Agriculture and Rural Affairs Directorate General for Agricultural Production and Development-Turkey (Figure 1). SAFER project has been carrying out since December 2008. Total project period is 24 months.

The project is based on transferring the pilot project "Training for the Correct Use of Farm Machinery—FORMAAGRI (<http://80.38.213.111/formaagri>)" (Anonymous, 2010a). The prime aim of the FORMAAGRI project is to put together innovative training materials tailored to the needs of the specific target audience which is made up of small and medium-sized enterprises (SMEs) and self-employed workers in the agricultural sector from the standpoint of its productive structure and, given its employment structure, young people. Within this category, special emphasis is placed on young apprentices and immigrants who represent an alternative for employment levels to be maintained in agriculture and for the sector itself. The training materials are devised to foster the correct use of tractors and other farm machinery in order to achieve several aims: improve safety and, therefore, reduce the excessively high number of accidents that occur in the workplace in this sector; ensure proper maintenance of farm machinery in the European Union and maximise its performance as a result. Project partnership is consisting of 6 different countries as Spain, Italy, France, the Czech Republic, Poland and Portugal. Each partner uses the project material in their own language and broadcast from project web site.

Target groups in SAFER project are composed of two main sections: agricultural machinery manufacturers and end users that are self employed people, professional farmers, farmers' family member especially women, seasonal farm workers. Project partnership has initially analysed transfer project method and outputs and collected, compiled and analysed the training needs of stakeholders in Turkey. A questionnaire for detection of users and manufacturer training needs used in the survey that is based on FORMAAGRI project questionnaire after adopting to Turkey conditions. Training needs detection



Figure 1. Logo of SAFER project and project partners.

questionnaires conducted by experts mainly face to face interviews with users, manufacturers, agricultural machinery dealers, representative of several public bodies, civil society organizations and university staff totally for users 42 and for manufacturers 38 persons. Secondly, SAFER project

Partners have developed training modules and tools according to analysis result and previous experiences. Pilot training activities have organised in last step. In order to make good use of communication technology with computer, a website has developed and thus continuity in education has been provided. These types of websites are very common most of developed countries. Furthermore, some audio visual materials and leaflets produced to support safety training activities. To prepare these documents and tools, previous project's outputs used after adapting to national requirements by studying with experienced project partners. In this way transferred outputs tested on target groups with pilot studies. While the SAFER project is going on and after finished, it is expected that level of safety knowledge, awareness and consciousness of target group will be improving. In this way it is aimed that safer working conditions will catch in agricultural areas, in rural for employees. For increasing of the impact on target group, in the SAFER project, pilot areas will be created selected employees will be educated. In the long term qualified employees will share/transfer his/her knowledge with ordinary agricultural employee and other people who work in rural. Same method will be used for the agricultural machinery manufacturers. Web page and TV programmes will support the cascade effect of SAFER project.

RESULTS and DISCUSSION

The results of the training needs detection survey evaluated with two reports for end users and

manufacturers. According to these two reports and previous experience, SAFER project is dedicated mainly to the elaboration of 17 training modules (in Turkish) (Table 1). Various dissemination activities has been carried out such as: participation to fairs, presentation of posters and papers at national and international events, distribution of leaflets, printing of articles in specific reviews and newsletters, TV broadcasting, creation of web pages and a CD presenting the project and including the full text of the training modules and materials. Also, Safe Agricultural Machinery Workshop has done at the end of first year in Ankara-Turkey. Safety in Agriculture Conference will be organized at the end of the SAFER project. The deliverables of the project included: training modules and materials (practical sheets) in Turkish, animations, videos, CDs, web pages (<http://safer-omu.net>) (Anonymous, 2010b), various questionnaires, posters and papers, published articles and leaflets. All developed modules full texts and tools have been in the project web page for being easy to access. Limited training CDs will be delivered to the related body and persons by project coordinator.

As a result, SAFER Project aims to determine and develop training materials for safety in agriculture in Turkey. The activities developed within SAFER project are a solid background for the future safety operations in agriculture. Important effort needs to be made to support training initiatives for safety in agriculture especially in Turkey as well as in the other developing countries. Furthermore, there is a need to increase information and dissemination, as well as to foster cross-information activities. Proactive initiatives are therefore necessary. As a result, safety issues should be included into the education system from the initial learning cycles to high educations, especially agricultural engineer's level.

Table 1. SAFER project training modules.

• Plant protection machinery	• Silage machinery
• Pedestrian controlled tractors with mounted rotary cultivators, motor hoes, motor hoes with drive wheels	• Self-propelled agricultural machinery
• Soil working machines with powered tools	• Miller and mixers
• Rotary mowers and flail mowers	• Grinders
• Mixer feeders	• Drive shafts
• Harvesting machinery	• Trailers
Balers	• Threshing machinery
	• Elevator and handling machinery
	• Agricultural tractors
	• Personal protective equipment

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