HEALTH AND SAFETY IN AGRICULTURE

Turkey is located with a surface area of 78 million hectares in the eastern part of the Mediterranean and South-west of Asia. 26% of this area is forests, 16% is range and pasture areas, 35% is agricultural areas. Summers are hot and dry, and winters are long and cold climate, as well as there is humid regions which has continuous rainfall in every season, it has also Mediterranean mild semi-tropical climate. Due to the geographical structure and the appropriate ecological conditions, Turkey has great potential and optional about quantity and variety of products. In Turkey which has average annual 643 mm. rainfall, there are 14 300 km2 areas of lakes and rivers as a source of suitable water. There is 28 million hectares of agricultural land. Of 8.5 million hectares which is economically irrigable properties, but only 4.7 million hectares are irrigated. With completely introduction of Southeastern Anatolia Project (GAP), 1.7 million hectares will be additional space for irrigation.

When we research our country's geographical structure and climatic conditions, it will be enable to realization of agricultural activities that are all count.

1. Farm agriculture (farming)
   a. Cereal breeding
   b. Vegetable gardening
   c. Greenhouse
   d. Fruit growing and arboriculture
   e. Cultivation of industrial raw material
2. Livestock
   a. Bovine breeding
      Stockfarming
      Dairy farming
   b. Sheep and goat farming
   c. Aviculture
3. Fishing
   a. Sea and lake fishing
   b. Fishing in pool and farm
4. Forestry and logging

Many more differences encounter as worked area, working conditions, using equipment, the level of mechanization, seasonal differences, using chemicals, using technology, production management in every agricultural activity. For this reason, by taking a production of each type separately, revealing problems and developing solutions are an appropriate method to evaluate fully and accurately occupational health and safety in agriculture.

In fact healty and safety problems of agriculture workers which are exposed are great similarity with industry workers. Agriculture workers also face with physical, chemical, biological, ergonomic and psycho-social factors, as well as factors that will cause accidents.
Nevertheless, there are some differences about working conditions, frequency of occurrence of the problem, environmental and personal hygiene and ergonomic and psychosocial problems. Furthermore, accessing to occupational health and safety service is more difficult. Most business have less than 50 workers so they are not evaluated within the scope of labor law. Agricultural enterprises are not well organized like industrial enterprises for now.

Inadequate mechanization, dependent on physical strength, number of small scale family business and employing of all family members here are the reasons that cause differences in employment.

According to the ILO’s 1998 datas, 1,3 billion people work in agriculture, in industrialized countries 9% of population, in developing countries 59 % of population and 47% of world’s population work in agriculture.

According to the results of Household Labour Force Survey 2010 which is conducted by Turkey Statistical Institute, the number of employed people, in 2010, are increased by 1.317.000 compared with the number of previous year and reached 22.594.000. 25.2 % of workers work in agriculture, 19.9 % of workers work in industry, 6.3 % of workers work in building and 48.6 % of workers work in service industry.

There are 13.588 registered workplace engaged in crop and animal product, forestry and logging and fisheries and aquaculture. 116.817 insured workers work in these sectors.

According to the Social Security Institution 2010 statistic;

<table>
<thead>
<tr>
<th>Sector</th>
<th>Men</th>
<th>Women</th>
</tr>
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<tbody>
<tr>
<td>Crop and animal production</td>
<td>341</td>
<td>39</td>
</tr>
<tr>
<td>Forestry and logging</td>
<td>87</td>
<td>9</td>
</tr>
<tr>
<td>Fisheries and aquaculture</td>
<td>24</td>
<td>2</td>
</tr>
</tbody>
</table>

Totally 520 workers suffered an accident at work and 22 of them resulted in death. There isn’t any diagnose of occupational disease case.

When the work accidents rate are compared, turkey’s average is calculated 62% while in these 3 groups which is considered from the agriculture is 0.43 %.

According to the shape of the production and execution of work in agriculture, health destructive factors that workers are exposed and occupational safety issues may change.

To give an example to them, using of tractors and other machineries may cause noise, vibration, dust and adverse climatic conditions according to the season, at the tillage of the soil and harvesting, while pesticide cause an exposure to the chemicals. Workers may exposure to the biological agents and animal attacks at animal husbandary. As well as climate conditions which change according to the season, noise and dust may affect the working conditions that could force the musculo-skeletal system at forestry enterprise.
In consequence of all these, employees may have health issues such as respiratory disease due to dust and other allergens, noise-induced hearing loss, sight impairments like cataract which occurs because of working outdoors, UV(Ultra-Violet) Rays and IR (Infra-Red) Rays, dermatologic disorders such as skin burns, skin cancer and other disorders due to other allergens and virus, bacteria and parasitic diseases.

Besides, they may also have acute poisoning; liver, neurol system, digestive system, hemopoietic, urinary system and vascular disorders and musculoskeletal diseases as a consequence of the exposure to pesticide and other chemical agent.

As a result of these, respiratory system disease which is associated with dust and other allergens, noise induced hearing lost and cataract which is resulting from exposure to UV and IR may seen at agricultural laborer. Furthermore, skin burns, skin cancer and other skin disease, viral, bacterial and parasitic diseases, acute poisoning caused by exposure to pesticides and other chemical agents, liver problem and nervous system, digestive system, circulatory system, and musculoskeletal system disorders are chronic conditions resulting from the diverse hazards of agricultural work.

Furthermore, workers who works at big farms for daily wage, temporary workers, women workers and young and child workers are the most vulnerable groups. Because of the temporary labor in agricultural field, the length of daily works, the unsafe working conditions and the no non-social security, arise of psycho-social problems are expected more frequently.

Consequently;

At each agricultural activities, task and operations, tools and machines may be diferent, so identifying the source of hazard, to estimate their affects and if it is necessary to determine the measurements which should be taken, the appropriate risk assessment must be undertaken.

Operators who do the jobs that require the using of tool, machine or equipment, should get a training course, and the other workers should be informed about general occupational health and safety rules, trainings that is about enviromental and personal hygiene should be repeated frequently, health inspection should be made and appropriate personal protective equipments should be given.

Employers should take the appropriate measures in order to benefit from the services of Occupational Health and Safety, and if it is necessary, small scale business and family business may utilize from joint health and safety unit.