

GENERAL OCCUPATIONAL SAFETY AND HEALTH NOTICE FOR OPERATORS OF THE AGRICULTURAL SECTOR



Prepared by the Department of Occupational Safety and Health of Ministry for Innovation and Technology within the framework of the two-year national occupational safety and health campaign “Focus on Agriculture – Occupational Safety First”.

INTRODUCTION

Several serious, fatal accidents at work occur in agriculture in Hungary every year. Due to the potential accident and health hazards, this is one of the most dangerous sectors in terms of occupational safety and health.

This publication provides general information to operators of the agricultural sector on the fulfilment of the main occupational safety and health obligations.

The publication contains numerous statutory references to the detailed rules of specific topics.

The primary goal of occupational safety and health is to safeguard the workers' health and physical integrity. Based on Act XCIII of 1993 on Labour Safety (hereinafter as "Labour Safety Act"), the employer is responsible for fulfilling the requirements necessary to carry out work safely and without risks to health. To observe the occupational safety and health provisions, the employer can employ – in case of statutory tasks, **must employ** – an occupational safety expert and an occupational health service.

A detailed list of related regulations can be found in subpage "Legislation" of the website <http://www.ommf.gov.hu>.

The photographs presented in this publication were taken during occupational safety and health inspections.

Further information¹ on this campaign can be found on page "Agricultural Campaign 2017–2018" of the website <http://www.ommf.gov.hu>.

1. OCCUPATIONAL SAFETY AND HEALTH ACTIVITIES, OCCUPATIONAL HEALTH CARE

The legislation specifies the daily /weekly employment time of occupational safety and health experts based on the number of employees and the hazard class of the employer's activity².

The legislation provides relief for employers with less employees and less hazardous activities.

In the case of an employer with up to 9 employees (micro-enterprise), and in case of an employer that – based on the performed activity – falls under hazard class II³ or III and employs less than 50 people (small enterprise), instead of appointing (employing) an extra individual as an expert, the employer – if the employer is a natural person – can perform the tasks related to carrying out work safely and without risks themselves or have a designated employee perform these tasks. Provided that the employer or the designated person has the knowledge, skills and proficiency required to perform occupational safety and health tasks in considering the employer's actual professional activity.

¹ http://www.ommf.gov.hu/index.html?akt_menu=559

² Decree No. 5/1993. (XII. 26.) MüM on implementation of certain provisions of Act XCIII of 1993 on Labour Safety

³ E.g. plant production, stock farming, wildlife management and related services, fishing, fishery management

Duties of an occupational safety expert with an occupational safety qualification:

- a) performing a preliminary occupational safety inspection of a hazardous facility, workplace, work equipment, technology [Labour Safety Act, Section 21 (3)],
- b) performing periodic safety reviews [Labour Safety Act, Section 23 (1)],
- c) participation in the extraordinary inspection of the workplace, personal protective equipment, work equipment, technology [Labour Safety Act, Section 23 (2)],
- d) participation in the preparation of the rescue plan [Labour Safety Act, Section 45 (1)],
- e) development of the occupational-safety content of the prevention strategy [Labour Safety Act, Section 54 (1) (g)],
- f) participation in the risk assessment [Labour Safety Act, Section 54 (2)],
- g) participation in the occupational safety and health training [Labour Safety Act, Section 55],
- h) establishing the internal system for the provision of personal protective equipment [Labour Safety Act, Section 56],
- i) investigation of work accidents [Labour Safety Act, Section 64].

The tasks listed in items *a)*, *c)*, *f)*, *h)* are considered to be expert activities related to occupational safety and occupational health.

Employers often do not have an employee who has the qualifications required to perform the tasks of expert activities. In this case these tasks can also be performed by an external service provider under a civil-law contract.

Basic tasks of the occupational health service⁴:

- a) conducting occupational medical fitness tests and initiating the necessary specialist medical examinations⁵,
- b) reporting and investigation of occupational diseases and cases of excessive exposure⁶,
- c) written documentation of the examination of working conditions and the harmful effects of work performance,
- d) providing counsel on personal protective equipment⁷,
- e) tasks related to the chemical safety of workplaces⁸,
- f) providing information on the employees' health and safety related questions associated with their working conditions,
- g) tasks related to job-specific vaccinations⁹,
- h) preventive care for workers with chronic illnesses,
- i) medical fitness test for road transportation vehicle drivers in certain cases¹⁰,
- j) expert opinion on employability in cases specified by legislation¹¹,
- k) contribution to the identification of workplace hazards,

⁴ Decree No. 27/1995. (VII. 25.) NM on occupational health service

⁵ Decree No. 33/1998. (VI. 24.) NM on the medical examination of and opinion on fitness for a job or a profession and personal hygiene aptitude

⁶ Decree No. 27/1996. (VIII. 28.) NM on the reporting and investigation of occupational diseases and excessive exposure

⁷ Decree No. 65/1999. (XII. 22.) EüM on the minimum safety and health requirements pertaining to personal protective equipment use by employees at the workplace

⁸ Joint Decree No. 25/2000. (IX. 30.) EüM-SzCsM on the chemical safety of workplaces

⁹ Decree No. 18/1998. (VI. 3.) NM on the epidemiological measures necessary for the prevention of communicable diseases and epidemics

¹⁰ Decree No. 13/1992. (VI. 26.) NM on determining the medical fitness of road transportation vehicle drivers

¹¹ Decree No. 33/1998. (VI. 24.) NM on the medical examination of and opinion on fitness for a job or a profession and personal hygiene aptitude

- l) contribution to the solution of tasks associated with occupational health, physiology, ergonomics, and hygiene,
- m) contribution to the provision of material, personal and organizational conditions for workplace first aid, to the organization of emergency medical assistance, to the professional training of first aid responders,
- n) contribution to occupational rehabilitation,
- o) contribution to the development of the employer's disaster prevention, relief, management plan and rehabilitation plan for suffered damages.

Occupational health services can be provided through a service provider operated by the employer or under a contract concluded with an external service provider.

2. PERSONAL CONDITIONS

Many occupational accidents can be traced back to a lack of occupational safety knowledge and to the employee's lack of appropriate qualifications and experience.

In the scope of personal conditions, we set out the type of work the employee can undertake and the employee is required to have any professional qualifications or experience to perform it.

The employee is allowed to work in a condition suitable for safe work performance.

An employee can only be employed for a job if

- the employee has appropriate physiological characteristic,
- the work does not affect adversely the employee's health, physical integrity or healthy development (in case of minors),
- the work does not endanger the employee's fertility, foetus,
- the employee does not endanger the health and physical integrity of others and has been examined to be apt for work,
- the employee has the necessary qualifications to perform the work in a safe and manner that does not pose risks to health.

Attention!

No work is allowed to be performed alone where there is a hazard present!

And if the work is performed by two or more employees simultaneously, one of the employees must be appointed to be in charge of the work, and this must be communicated to the others!

Pupils and students participating in practical training do not yet have the necessary practical knowledge and proficiency. Therefore, special attention must be paid to them. They may not use dangerous machines or equipment or may only use them under supervision and may not perform certain works due to their age-related characteristics.

Vocational Qualification

If the work may be hazardous for the employee, the legislation specifies the vocational qualifications and experience required to perform the work.

A ministerial decree lists the agricultural and forestry-related vocational qualifications¹². The legislation may also provide for qualification requirements for the handling of certain work equipment. Hoists¹³, welding equipment¹⁴, loading machines¹⁵, chainsaws, forestry forwarders¹⁶, drying equipment¹⁷ are example of such work equipment.

Attention!

Newer, more powerful, modern, but technically more complex machinery may require the employment of technically more qualified experts.

However, in case of certain vocational qualifications, no further examination is required to operate a given machine. Thus, in addition to the certificate of vocational qualification, the machine operator's license is issued on request. The detailed rules for this are also set out in a specific piece of¹⁸ legislation.

It is important to note that a machine operator's license in itself does not give entitlement to drive a vehicle, and the driving license required for road transport is not sufficient to operate a machine.

Occupational medical fitness test, employability test, ban on employment, vaccination

The main considerations for the examination of the occupational medical fitness of employees are the aetiological factors, health risks and stresses arising from work activities and the work environment.

The form of employment shall also be considered, as different rules may apply, for example, to seasonal or occasional work in the framework of simplified employment and to work in public employment.

Agricultural workers are usually employed with health risks present (e.g. biological risk, exposure to hazardous substances / mixtures, noise and vibration), and therefore, they have to undergo a **preliminary occupational medical fitness test** prior to starting the work. After the preliminary occupational medical fitness test, periodic fitness tests are required at a specified frequency in order to re-evaluate the occupational aptitude of the employee. The occupational health medical practitioner issues an occupational medical fitness opinion based on the tests, indicating to the employer whether the employee is fit to work, the validity period of the test and the date of the next aptitude test.

In case of employees performing seasonal or casual work or public employees within the scope of simplified employment, an **employability examination** is required for issuing an employability expert opinion.

¹² Decree No. 56/2016. (VIII. 19.) FM on the professional and examination requirements for vocational qualifications within the scope of authority of the Minister of Agriculture

¹³ Decree No. 47/1999. (VIII.4.) GM on the issuance of the Lifting Equipment Safety Regulation

¹⁴ Decree No. 143/2004. (XII.22.) GKM on the issuance of the Welding Safety Regulation

¹⁵ Decree No. 10/2016. (IV. 5.) NGM on the minimum level of safety and health requirements for the use of work equipment

¹⁶ Decree No. 15/1989. (X. 8.) MÉM on the issuance of the Forestry Safety Regulation

¹⁷ Decree No. 16/2001. (III. 3.) FVM on the issuance of the Agricultural Safety Regulation

¹⁸ Decree No. 83/2003. (VII. 16.) FVM on the introduction and rules for issuance of agricultural and forestry machine operators' licenses

In case of **seasonal work and casual work in the scope of simplified employment**, the employee is examined at the initiative of the employer or the natural person looking for employment.

The expert opinion on employability is initiated by the capital and county government offices acting as public employment bodies in the case of municipal **public employment** and by the public employer in case of other public employment before the commencement of the public employment.

The fee for issuing an employability expert opinion is to be borne by the initiator of the examination!

An employability expert opinion issued for simplified employment is not a mandatory condition for employment, with the exceptions specified in a specific decree¹⁹, however, an expert opinion issued for public employment is a mandatory condition for the commencement of the public employment!

Further requirements on the medical examination and opinion on fitness for a job or a profession and personal hygiene aptitude are specified in the relevant decree²⁰.

Special cases must also be taken into account during the employment. People with allergic reaction to bee stings **must not be employed** in beekeeping; pregnant women, nursing mothers, minors under the age of 18 and people with a gastrointestinal infectious disease or a pyodermic disease **must not be employed** at stock farming premises.

If the employee may be exposed to a risk arising from exposure to biological agents which endanger the employee's health and safety and for which an effective **vaccination** is available, the employer must offer the vaccination to the employee as a condition of employment. Such an effective vaccine is available, for example, to prevent tick-borne encephalitis. Vaccination requirements are described in specific decrees^{21,22}.

Occupational Safety and Health Training

Employees are allowed to perform the work in accordance with the occupational safety and health training, observing the occupational safety and health rules and instructions.

Employees must be informed of the relevant rules, instructions and information as part of the occupational safety and health training. Unfortunately, there were numerous of fatal accidents in recent years due to the improper training of the employees.

Training should be repeated in case of changes in work performance (e.g. role change, introduction of new work equipment, technology, change of regulations).

The training must cover:

- health regulations,

¹⁹ Decree No. 33/1998. (VI. 24.) NM on the medical examination of and opinion on fitness for a job or a profession and personal hygiene aptitude

²⁰ Decree No. 33/1998. (VI. 24.) NM on the medical examination of and opinion on fitness for a job or a profession and personal hygiene aptitude

²¹ Decree No. 61/1999. (XII. 1.) EüM on the protection of health of employees exposed to biological agents

²² Decree No. 18/1998. (VI. 3.) NM on the epidemiological measures necessary for the prevention of communicable diseases and epidemics

- obligations, rights provided for in occupational safety legislation,
- provisions of internal policies (e.g. fire protection),
- technological, operative, handling and maintenance instructions,
- hazards and risks associated with the work, arising from the local conditions, the manner of their elimination, the expected behaviour in case of emergencies,
- the correct use of the tools, materials and protective equipment,
- traffic-safety and environmental regulations.

Attention!

In the case of outdoor work, employees must be informed of the following:

- *Tick-borne Lyme disease, to make sure they see a doctor right away if any initial symptoms are observed!*
- *Risk of infection through bite from rabid animals or direct contact with rabid animals!*
- *Danger of bee and wasp stings!*
- *Places where vipers may be found!*

Employees must be trained in the following—if possible, with the assistance of an occupational health medical practitioner:

- Prevention of tick bites (closed clothing, avoiding tick habitats, use of repellents).
- Proper and fast removal of ticks pierced into the skin (tick tongs must be provided by the employer to the employees at the place of work).
- The importance of recognizing the symptoms in case of a sting (cockade-like dermatitis around the sting site, moderate fever, muscle pain may occur).
- Necessary measures in case of bee and wasp stings.
- The necessary measures (first aid responders) in case of a viper bite (delaying the absorption of the poison).

At stock farming premises the training provided by the employer must cover the following:

- diseases transmitted from animals to humans,
- methods of protection against gases from manure treatment and storage equipment,
- habits and nature of the animals.

The training must also cover the **aetiological factors** determined in specific pieces of legislation²³, which may affect workers in the course of a given activity:

- biological aetiological factors (bacteria, viruses, parasites, fungi)
- hazardous substances / mixtures,
- manual material handling,
- noise,
- vibrations, etc.

Training sessions shall be held during regular working hours, and shall be repeated periodically as appropriate. The training curriculum has to be prepared by an occupational safety expert. The completion of the training must be recorded in writing indicating the curriculum and signed by the participants.

Employees may not be assigned to independent positions until the acquisition of the required knowledge.

²³ http://www.ommf.gov.hu/index.html?akt_menu=532

Important!

The risk assessment governs the widest possible exploration of the risks and hazards endangering the health and safety of employees.

Risk assessment provides the basis for the measures (e.g. specification of personal protective equipment, compilation of occupational safety and health training curriculum) aimed at the prevention of work-related accidents, occupational diseases, excessive exposure.

3. MATERIAL CONDITIONS FOR OCCUPATIONAL SAFETY

The level of safety of the tangible assets used for performing the work is critical for occupational safety. The employer must ensure that the appropriate facilities are available for the activity and must provide its employees with work equipment appropriate for the given work.

Facilities:

Attention should be paid to the following in the buildings and facilities:

- ensuring the appropriate temperature and illumination,
- ensuring non-slip, trip-free routes,
- marking or separating traffic and material handling routes.

Signs:

If the hazards present make it necessary, safety and health **signs** must be used to protect employees and those within the zone affected by the work. The detailed rules for this are set out in a specific piece of²⁴ legislation.

Electrical Shock Protection:

Electrical shock protection requirements must be considered:

An electrician must inspect the facilities and work equipment in a documented form regarding electrical shock protection at installation of the electrical equipment and periodically. Relevant requirements are set out in a specific piece of legislation²⁵.

It is important to note here that the elimination of defects found by the expert must also be documented.

As a common practice the electrician can correct the detected defects during the inspection to eliminate the need to issue two separate reports (one on the inspection, one for the repair).

Naturally, the employer must also ensure the elimination of electrical problems that occur in between two inspections (such as damaged, inadequately insulated electrical wires, electrical wires “repaired” with insulating tape, open switch cabinets, luminaires without cover in intermittently humid environments, lack of protective covers, electrical equipment with inadequate IP protection).

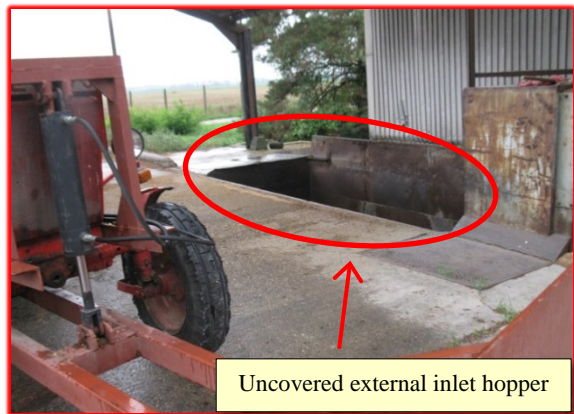
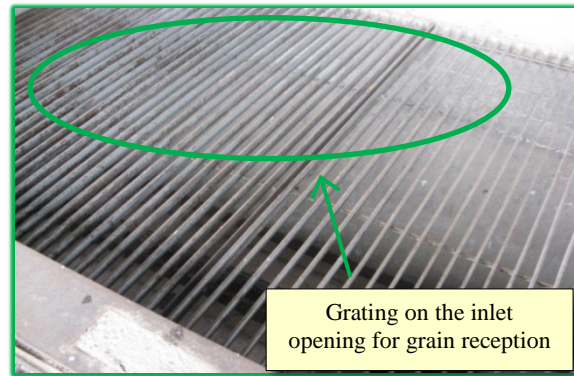
²⁴ Decree No. 2/1998 (I. 16.) MüM on health and safety signs applicable at workplaces

²⁵ Decree No. 10/2016 (IV. 5.) NGM on the minimum level of safety and health requirements for the use of work equipment

Risk of falling in and falling down:

In case of shafts, floor drains, inlets, chutes, operator areas higher than or deeper than 0.8 m must be protected against the danger of falling in and falling down by **covers** (a steel grid with a mesh distance not more than 0.04 m may be used) or **guard rails**.

The detailed provisions are set out in specific pieces of^{26 27} legislation.



Work equipment

Any machines, devices, tools or appliances used during or in connection with performing work are considered work equipment. Work equipment may only be used for the intended purpose and circumstances. This requirement shall apply to the work equipment in whole or in part as well. Furthermore, it is not acceptable to replace the work equipment - or any part thereof - for a similar equipment with different characteristics (e.g. using a similar-sized screw instead of a safety hitch pin for trailers).

Warning!

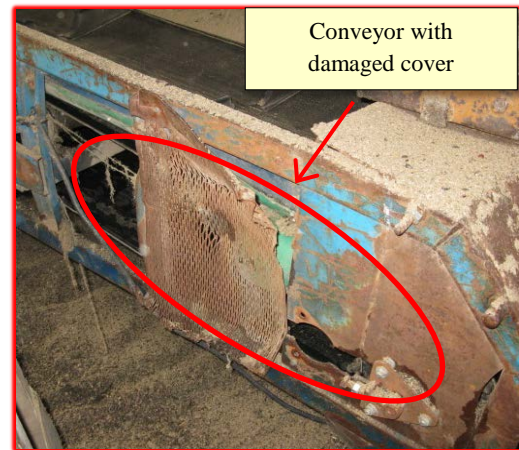
*While using the work equipment, employees must be prevented from reaching into **rotating or moving** parts, or accessing danger areas.*

²⁶ Decree No. 16/2001. (III. 3.) FVM on the issuance of the Agricultural Safety Regulation

²⁷ Joint Decree No. 3/2002. (II. 8.) SzCsM-EüM on the minimum level of occupational safety and health requirements

The moving parts of the work equipment must be supplied with safety devices suitable for delimiting the danger area or for stopping the movement of the dangerous part before reaching the danger area.

A danger source can be, for example: missing safety covers of screw conveyors, transloading or separating conveyors, hoppers or V-belt drives.



Example of a work accident:

An employee was working on a seed cleaning machine, when he noticed seed spillage. In order to find the defect, he removed the protective cover while the machine was in operation. While searching for the cause of the spillage, he steadied himself with his left hand on the machine frame in place of the removed protective cover. The plate on the eccentric rotating shaft of the machine slapped his thumb into the vertical part of the machine frame, amputating the left thumb.

The work equipment must always be installed and used in accordance with the manufacturer's instructions! Adequate space must be ensured for operation!

The **control elements** of the work equipment must be easy to identify.

The function of the control elements must be marked appropriately. Avoid operating the machine out of routine; the control elements must be equipped with labels or pictograms clearly marking their functions.

Each work equipment must be equipped - preferably outside the danger area - with control elements suitable for safe operation and complete shutdown.

Each control panel must be equipped with an emergency stop device that can stop any movement dangerous for the employee.

The work equipment must be designed in a way that ensures that it can only be started by intentionally switching on the start equipment, that is, a machine stopped due to power outage must be prevented from restarting after such power outage is eliminated.

Machines and equipment should not be left unattended **during operation**, except in case they are located in a closed, inaccessible area, and their operation or failure during operation poses no danger to persons.

Agricultural works involve an extremely wide range of work equipment.

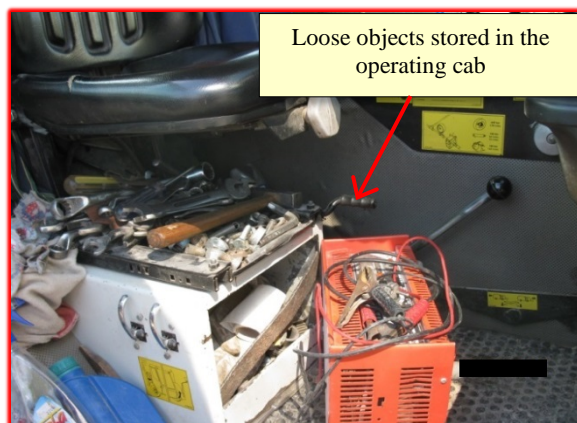
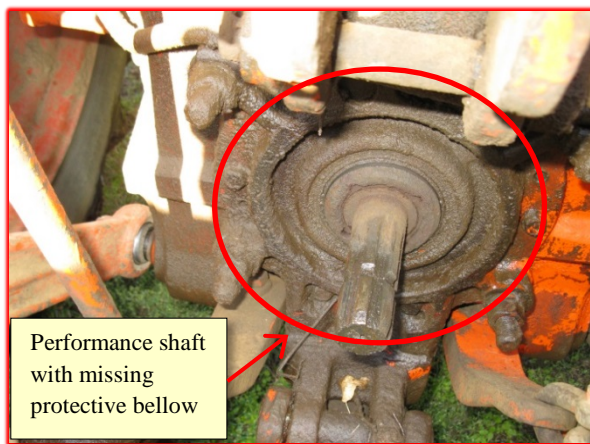
Because of their hazardous nature and frequent use, the use of **power machines and machinery (loading, lifting and earthwork machines)** must be further discussed.

Missing protective covers are danger sources in the case of these machinery as well (performance shaft, belt drives, shaft drives), but the non-operational status of the safety equipment is also a serious deficiency (e.g. sound signalling devices, brake system, safety belt, devices eliminating/decreasing the risk of rolling/turning over).

It is necessary to provide appropriate field of vision, and suitable lighting fixtures for the work site.

There may be no loose objects (e.g. tools) left in the operating cab, and persons may only be transported in the places designed for this purpose (e.g. transport is forbidden on stairs).

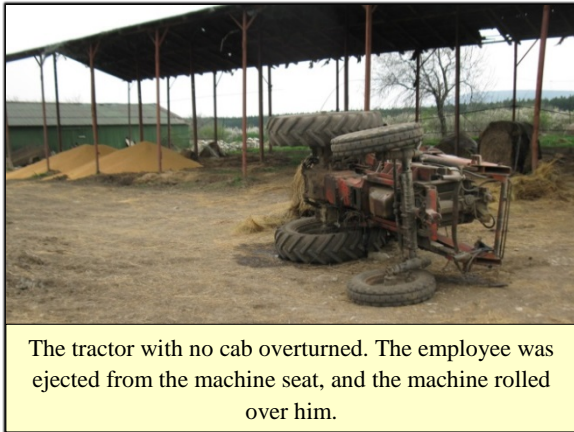
Do not get on or off moving machinery.



When leaving a machine, it must be secured against unintended movements and starting up by unauthorized persons.

Using remodelled agricultural tractors for forestry works is extremely bad practice. Old type tractor cabs normally only provide protection against the weather. As a result, there have been a number of fatal or severe work accidents caused by the lack of the safety cab or protective frame.

Examples of work accidents:



It is a basic requirement of **remote controlled work equipment** to stop automatically when reaching the monitored control zone. It is also an important requirement that remote controlled work equipment that may bump into employees or press them against objects during intended use, must be equipped with safety equipment eliminating or reducing the risk of such collision or crushing.

Attention should be called to the fact that the effective occupational safety and health requirements - or in lack of specific requirements, the requirements applicable to the level of science and technology - must be complied with. It means that a work equipment must comply with the requirements effective at the time of use, instead of those in effect at the time of manufacturing.

The specific requirements applicable to the work equipment are defined in the relevant^{28,29,30} legal provisions.

Commissioning under occupational safety and health standards, periodic safety inspection:

The operating employer is required to issue written instructions for the operation of hazardous facilities, workplaces, work equipment or technological processes (hereinafter: **commissioning under occupational safety and health standards**).

The list of dangerous work equipment is contained in the relevant statutes³¹. However, such list is not exhaustive, and not only the work equipment listed therein are required to be commissioned.

A facility, work equipment, material/mixture, work process or technology (including activities where employees are exposed to physical, biological or chemical aetiological factors) is considered dangerous if the employees' health, physical integrity or safety may be exposed to

²⁸ Decree No. 16/2001. (III. 3.) FVM on the issuance of the Agricultural Safety Regulation

²⁹ Decree No. 15/1989. (X. 8.) MÉM on the issuance of the Forestry Safety Regulation

³⁰ Decree No. 10/2016. (IV. 5.) NGM on the minimum level of safety and health requirements for the use of work equipment

³¹ Annexes 1/a. and 1/b. of Decree No. 5/1993. (XII. 26.) MüM on implementation of certain provisions of Act XCIII of 1993 on Labour Safety

harmful effects if not equipped with proper protection, as well as work equipment under authority supervision.

Commissioning under occupational safety and health standards is contingent upon having a **preliminary inspection for occupational safety and health conducted in advance**. The performance of this inspection shall be construed as a specialized occupational safety and occupational health activity.

In order to maintain safe technical condition, the **periodic safety inspection** should be performed by the employer every five years, unless more frequent inspection periods are required by law, standards, or the operational documentation.

The rules pertaining to commissioning under occupational safety and health standards and periodic safety inspection are specified by law^{32,33}.

Checking inspection:

In case of work equipment with no mandatory commissioning under occupational safety standards - however, the safe operation of which may depend on the conditions of installation - after installation but prior to being put into operation, as well as each time it is moved to a new site or workplace, the person assigned by the employer - who has the relevant professional qualifications, experience and practice - must check, within the framework of a checking inspection, safe installation and that the operating conditions and circumstances pose no danger to health and are safety.

Periodic checking inspection:

Periodic checking inspection must be performed in order to ensure compliance with the health and safety requirements, to detect any deficiencies in time, and to introduce the appropriate preventive measures.

The method of performing the periodic checking inspection, the work equipment covered by the periodic checking inspection, as well as the frequency and method of the inspection must be defined in writing. The circumstances of operation, the contents of the standard relevant to the work equipment, as well as the specifications of the manufacturer's instructions for use, and the operating and maintenance documents must be taken into account.

The maximum period between inspections may not exceed five years.

The findings of the inspection, as well as any measures must be recorded in the protocol, which should be retained until the date of the next periodic checking inspection, with one copy - in case of an installed work equipment - stored at the premises.

In case the work equipment is used outside the premises, the work equipment should be clearly marked with a sign that includes the date of the latest periodic checking inspection.

³² Sections 21-23 of Act XCIII of 1993 on Labour Safety

³³ Decree No. 5/1993. (XII.26.) MüM on implementation of certain provisions of Act XCIII of 1993 on Labour Safety

4. ORGANIZATION MEASURES

It is not unusual that employees of various employers are involved in work at the same workplace and at the same time (e.g. logging). In this case work must be **coordinated** so that it shall pose no danger to the workers and other persons present at the workplace.

Providing the **appropriate number of employees** is of vital importance for the safety of work. Where there is danger to workers, they are not allowed to perform work alone, and only those persons are allowed access to the danger zone who were provided with training covering this topic.

If more than one person work on the same job, a person should be assigned to supervise the work. In this case, the employees must be clearly informed of this person, that is, whose instructions they must follow. It is extremely important when the assigned supervisor is other than the usual foreman, senior, etc.

Accidents of persons present in the work area (bystanders, visitors, customers of the service) must be prevented.

No unauthorized persons - especially children - are allowed near the farmyard and the farm buildings.

Warning signs, technical solutions should be placed, or maybe guarding, monitoring person should be employed to prevent **unauthorized persons** from getting near dangerous areas (buildings for livestock, haylofts, slurry storage areas, silos, dangerous equipment and machinery, forestry cutting areas, etc.)

Most works related to agriculture are performed outdoors, and therefore, employees are exposed to various **weather conditions** (e.g. cold, hot).

Heat has particularly harmful effects on the human body, which may lead to work accidents or lethal occupational diseases.

Attention should also be called to the hazards of work in cold environments. The adverse effects of work in cold environments are primarily present during work performed outdoors (e.g. logging, work at livestock farms).

The current information materials published by the Department of Occupational Safety and Health on adverse weather conditions (hot, cold)^{34,35} are available on the website <http://www.ommf.gov.hu> (under the Menu “NEWS” 21 June 2017, 02 January 2017).

Carbon dioxide generated during fermentation causes several, even fatal accidents during the grape harvest period - although such tragedies could be prevented by diligence and proper precautions.

Carbon dioxide (CO₂) is generated during the fermentation of grape must, which is accumulated near the floor of wine cellars with poor ventilation, and may cause suffocation as it spreads to the upper regions and extracts oxygen from the air.

Carbon dioxide is a colourless, odourless gas that is heavier than air, and accumulates near the floor of cellars, holes, rooms. It is generated in great quantities during the fermentation of organic materials, plants or fruits with sugar content.

³⁴ http://www.ommf.gov.hu/index.php?akt_menu=172&hir_reszlet=574

³⁵ http://www.ommf.gov.hu/index.php?akt_menu=172&hir_reszlet=547

Small concentrations excites the respiratory centre, while high concentrations cause suffocation due to the lack of oxygen. Therefore, the preventive measures must always be followed when entering cellars where grape must is fermented, and only enter after thorough ventilation.

Information³⁶ on the dangers of grape must fermentation published by the Department of Occupational Safety and Health are available on the website <http://www.ommf.gov.hu> (under the Menu “NEWS” 01 September 2017).



The employer should ensure that in case of being **bitten by a viper**, the injured person is provided professional medical assistance (antivenom injection) within 30 minutes. The locations assigned for storing and administering the serum (doctor's office) must be clearly marked at the workplaces where there is a danger of viper bites, as well as at the accommodations.

In case of being **stung by a bee**, the injured person must immediately be transported to see a physician. After being **stung by a wasp**, before receiving medical assistance, efforts should be made to slow down and inhibit the absorption of the venom already in the body (e.g. applying compression bandage above the sting). Anyone allergic to wasp sting should keep at hand the medication prescribed by the family physician, and use it if necessary.

Information on the dangers of bee and wasp stings published³⁷ by the Department of Occupational Safety and Health are available on the website <http://www.ommf.gov.hu> (under the Menu “NEWS” 18 April 2017).

In case of any **injury caused by animals** seek proper medical assistance within the shortest possible time.

In case of injuries suffered outdoors, if the **wound is contaminated with dirt**, immediately seek medical assistance because there is a risk of tetanus infection.

³⁶ http://www.ommf.gov.hu/index.php?akt_menu=172&hir_reszlet=585

³⁷ http://www.ommf.gov.hu/index.html?akt_menu=172&hir_reszlet=557

The material, personnel and organizational conditions of workplace **first aid** must be provided at the workplace - appropriately for the nature and location of the workplace, the number of employees, the organization of the work, and taking into account the effects of the work environment and the aetiological factors that adversely affect health.

Outdoor field works are usually performed by the employees individually, and therefore, it is often difficult to ask for or provide help. Therefore, the possibility of **asking for assistance** must be provided.

5. RISK ASSESSMENT, OCCUPATIONAL SAFETY AND HEALTH DOCUMENTATION

Risk assessment

Risk simply means the combined effects of the possibility and severity of injury or health damage in an emergency. The employer must have risk assessment available, which should include the quality and, if necessary, the quantity evaluation of the risks endangering the health and safety of the employees, with special regard to the work equipment used, the dangerous materials and mixtures, the loads on the employees, and the design of the workplaces.

The following items should be identified during the risk assessment:

- the expected risks, risk sources, risk situations,
- the scope of persons at risk,
- the nature of the risk,
- the extent of being at risk.

During the risk assessment, in case of any presence of aetiological factor under health limit values, work hygiene examinations should be performed to identify the extent of exposition. The employer is required to perform risk assessment prior to starting the activity, and after that every 3 years - unless otherwise regulated by law.

Risk assessments should be additionally conducted

- in case of a change (e.g. introduction of new work equipment, technology, or new work process) that may have led to the modification of the working condition factors affecting the health and safety of the employees - including work climate, noise, and vibration load, or air conditions (quality and quantity change in gaseous, dust, fibre air contaminants),
- in case the deficiencies of the used activity, technology, work equipment, or work method led to a work accident, excessive exposition or occupational disease.

The performance of the risk assessment shall be construed as a specialized occupational safety and occupational health activity.

*The relevant provisions of the Labour Safety Act and the contents of the chapter AETIOLOGICAL FACTORS should be taken into account during the risk assessment, and there is also technical guidance available on the website <http://www.ommf.gov.hu>, under the Menu "Risk Assessment"*³⁸.

³⁸ http://www.ommf.gov.hu/index.html?akt_menu=221

Order at the site, technological process instructions and other instructions

The employer is responsible for defining the requirements necessary to carry out work safely and without risks to health.

In respect of **livestock farms**, the process instructions - including the site order - should be created, with definition on the occupational safety and health requirements and the rules of maintaining order and cleanliness. The instructions should be stored at a place accessible for any person; new entrants must be informed about their content at the time of entry.

The Agricultural Safety Regulation defines the requirements applicable to the specific work processes, however, it is also necessary to take into account the local characteristics for certain processes.

The instructions and safety requirements relevant for these works should be defined by the employer (e.g. stacking, transporting, moving and feeding livestock, emptying barns, slurry handling, removing manure, operating the drying machine).

The chronological and geographical order (with local characteristics), as well as the related material and personnel conditions of performing the **logging works** safely should be defined - prior to the start of logging - by taking into account the standard requirements contained in the technological process instructions. The content requirements relevant to the technological process instructions are contained in the Forestry Safety Regulations.

Prior to starting the logging works, the cut manager should inform the workers - at each new cutting area - about the contents of the technological process instructions. During the site visit, he should show the signs marking the edges of the logging sections, and define the next work order.

It is important to note that preparing these employer's occupational safety and health instructions requires knowledge specific to the profession, and therefore specialized occupational safety and occupational health experts should be involved.

The system of the occupational safety and health rules is recommended to be included in an occupational safety and health policy.

Rescue plan

In case abnormal conditions occur, when the safety regulations for normal operation cannot be complied with, a rescue plan must be drawn up, taking into account the nature, location and extent of the workplace and the effects of hazards, the persons who are within the work range, and the persons required for the rescue operation should be designated. The rescue plan can also be prepared as part of a security, safety, action or any other similar plan prescribed by separate legislation.

6. AETIOLOGICAL FACTORS

While performing agricultural works, workers may be exposed to various risks adversely affecting health. Due to the diverse activities within the sector, employees are exposed to almost all aetiological factors (physical, chemical, psycho-social, ergonomic), sometimes at the same time.

Out of **physical** aetiological factors, exposure to noise and vibration should be mentioned. In places where the noise level of machines exceeds the maximum permissible limit value, employees must wear hearing protection equipment. The rules on the noise exposure of employees are specified by separate³⁹ legislation. Workers on the machinery are most of all at risk of full-body vibration. However, illnesses resulting from local vibration cannot be ruled out either. Requirements pertaining to the vibration exposure of employees are governed by the⁴⁰ relevant law.

Regarding **chemical** aetiological factors, most of all the risk of poisoning caused by pesticides should be taken into account. Pesticide exposure may not only occur to the employees while diluting, mixing or applying the agents but, in case of machine spraying or spraying from airplanes, also during the filling or maintenance of the machines.

Exposure to exhaust gas, lubricants or chlorine-containing hazardous disinfecting agents or compounds should also be taken into account. Therefore, employers should make sure that employees are familiar with the Material Safety Data Sheets of hazardous materials/compounds and any other data related to the given hazardous material that may be relevant from a work perspective. (See also Point 2: PERSONAL REQUIREMENTS – Occupational safety and health training.)

Attention!

Packaging materials that are originally manufactured or used for the packaging of hazardous materials or compounds shall not be used for the storage of foodstuff, feedstuff or ingredients thereof, not even in a cleaned and neutralized condition, and not even temporarily!

It is necessary to point out that packaging materials that are originally manufactured or used for the packaging of foodstuff shall not be used for storing hazardous materials or hazardous compounds either!

Make sure that the stored hazardous material or hazardous compound does not jeopardize anyone's safety, health or physical integrity, and does not pollute or harm the environment.

Unfortunately it still happens today that hazardous materials or compounds are filled into mineral water or soda bottles, and unintended ingestion of such compounds may lead to severe health damage. Further requirements related to chemical safety are governed by the relevant laws^{41,42}.

³⁹ Decree No. 66/2005. (XII. 22.) EüM on the minimum safety and health requirements concerning workers' exposure to noise

⁴⁰ Decree No. 22/2005. (V. 24.) EüM on the minimum safety and health requirements concerning workers' exposure to vibration

⁴¹ Joint Decree No. 25/2000. (IX. 30.) EüM-SzCsM on the Chemical Safety at Workplaces

⁴² Act XXV of 2000 on Chemical Safety



Powders (organic or inorganic) are of particular importance in this sector. Organic powders can vary depending on the given agricultural branch or profession. Just to mention a few: grain, mould, spores; powders coming from insects, mites or birds; plant-based powders or feedstuff residues. Concerning inorganic powders, possible hazardous compounds of soil dust can be: quartz, silicates or clay.

Illnesses caused by **biological** aetiological factors related to plants and plant-based powders also pose significant health risks to growers. These can be, for example, microorganisms (bacteria, actinomyces, fungi), mycotoxins or zoonoses (leptospirosis, tularaemia, Q fever, psittacosis, brucellosis, anthrax etc.). (See also Point 2: PERSONAL REQUIREMENTS – Vaccination; Occupational safety and health training.)

Getting in touch with sick animals can cause parasitic or other infections to humans. The prevention of zoonoses is a field in which the cooperation between veterinarians and physicians is of outstanding importance.

Long workdays, seasonal work or working away from the family might entail **psychosocial** risks or pose increased psychological load on the employees.

Part of the machinery hardly meets even the minimum **ergonomic** requirements. This, in combination with climatic impacts often leads to musculoskeletal disorders that can be traced back to overexertion, manual handling, asymmetrical or repetitive movements or a cold and moist work environment.

7. PERSONAL PROTECTIVE EQUIPMENT

For hazardous work processes or technologies, in order to mitigate risks and reduce harmful effects, personal protective equipment should be determined for each hazard; employees should be provided personal protective equipment, trained on their proper use and obliged to wear them properly.

Important!

The necessary personal protective equipment should be determined on the basis of a proper risk assessment.

Next, the employer is responsible for laying down in writing the internal procedure for providing personal protective equipment; the performance of this task qualifies as a specialized occupational safety and occupational health-related activity.

The protective equipment is for personal use and has no estimated useful life.

The employer shall provide the protective equipment free of charge, and is responsible for ensuring through maintenance, cleaning, repair or replacement that it is always ready for use and in a proper hygienic condition. Protective equipment that has lost its protective properties shall not be used any longer.

It should be pointed out to the employees during occupational safety and health training that opting out of using protective equipment is not a valid option.

The employer is responsible for informing the employers in advance, on which hazards the protective equipment protects them from, and shall make sure the employees are capable of using the equipment correctly, by providing hands-on training, if necessary.

Upon handing over the protective equipment, the employer should also make the necessary information and the user manual of the equipment available for the employees (in Hungarian).

The minimum safety and health requirements of personal protective equipment usage are governed by the relevant⁴³ law.

8. SPECIAL ACTIVITIES RELATED TO AGRICULTURAL WORKS

Material handling

Material handling is an extremely diverse and complex activity, and it is one of the work processes that involve the most types of work equipment.

You can find detailed technical information material on material handling at the <http://www.ommf.gov.hu> website under “*Munkavédelmi kiadványok*” (Occupational Safety and Health-Related Publications)⁴⁴: “*A gépkezelés biztonságáért. „Kisokos” a gépkezelői munka biztonságának javításáért*” (For the Safe Operation of Machinery. A Practical Guide for Better Job Safety of Machine Operators – available in Hungarian) and at the <http://tamop248.hu> website under “*Findings/Publications*”⁴⁵ („*A raktározási munkák, és a kézi anyagmozgatás egészségügyi kockázatai*”; „*Emelőgépek biztonságos használata*”; „*A szállítás, raktározás baleseti veszélyforrásai*”; „*A szállítmányozási, raktározási, anyagmozgatási munkafolyamatok főbb veszélyforrásai*” – “*Health Risks of Warehousing and Manual Handling*”; “*The Safe Usage of Lifting Machinery*”; “*Risks of Accidents During Transportation and Warehousing*”; “*The Main Risks of Haulage, Warehousing and Material Handling Processes*” – all available in Hungarian).

Work involving entry

Agricultural activities may also involve entering hazardous objects. But first of all, what kinds of objects are classified hazardous, and what types of work involve entry?

⁴³Decree No. 65/1999. (XII. 22.) EüM on occupational safety and health requirements applying to the use of personal safety equipment by employees at workplace

⁴⁴ http://www.ommf.gov.hu/index.html?akt_menu=507

⁴⁵ <http://tamop248.hu/2/index.php/eredmenyek/kiadvanyok?start=20>

A hazardous object is any object which involves any technological process (e.g. storage, processing, transportation) or activity involving entry, that may pose any hazard or cause any harm (for example, corrosive, toxic, flammable or explosive materials are developed or the oxygen levels in the air drop). Such objects are containers, bunkers, pits, ducts, boilers, transport containers, silos, open tanks, tankers or confined spaces in general.

Any activity that needs to be performed by leaning into, or staying inside of an object that was not originally designed for human entry, is classified as work involving entry.

The detailed rules of work involving entry are regulated by the⁴⁶ relevant standard. This standard shall be observed in each case!



An example for a fatal work accident:

An employee was collecting lumpy, stuck pieces of crop in a silo at a drying plant, without observing the rules pertaining to works involving entry. He got buried under the barley that was stored in the silo. His life could not be saved. The employee was removed by members of the disaster management team through a hole that was cut into the side of the silo.

Maintenance

Maintenance works and related activities are performed at every workplace. These are often everyday activities.

The purpose of maintenance is to ensure that work equipment and facilities remain functional, and thereby maintain productivity as long as possible.

From an occupational safety perspective, it is relevant because the usage of insufficiently maintained work equipment or working in run-down facilities might lead to accidents even if all the relevant rules are observed. For this reason, scheduled preventive maintenance is crucial. However, so-called troubleshooting maintenance activities are also often required. In such cases, malfunction needs to be fixed in a relatively short time.

⁴⁶MSZ-09-57.0033:1990 Standard on the Safety Requirements for Work Involving Entry into Hazardous Spaces

For individuals performing maintenance activities, often more hazards can be identified than what they might encounter during agricultural activities. For this very reason, it is important that such activities (including welding, surfacing, smaller construction works, repairing smaller electric failures, vehicle repair) shall always be performed by personnel who are properly trained and skilled in the given activity.

Detailed technical material on hazards related to maintenance activities can be found at the <http://www.ommf.gov.hu> website under “*Munkavédelmi kiadványok*”⁴⁷ (Occupational safety and health-related publications): “*Karbantartás és munkavédelem*” (Maintenance and Occupational Safety and Health) and “*Biztonságos karbantartás a gyakorlatban*” (Safe Maintenance in Practice) (both available in Hungarian).

9. WORK ACCIDENT, OCCUPATIONAL DISEASE AND EXCESSIVE EXPOSURE

Work accident

Work accident: any accident that happens to the employee during organized employment or in relation thereto, regardless of its location, time or the contribution of the (injured) employee.

An accident happens in relation to work if the employee suffers an accident during employment-related transport, material sampling, material handling, showering, organized canteen meals, using occupational health services or other services etc. offered by the employer.

An accident cannot be considered a work-related accident (work accident) if it happens on the way from the employee’s home (lodging) to work, or on the way home (or to the lodging) from work, except for cases when the employer’s own or rented vehicle was involved in the accident.

Attention!

Work accidents are not to be confused with industrial accidents.

The term “industrial accident” belongs to the field of social security, and its definition can be found in Act LXXXIII of 1997 on the Services of the Compulsory Health Insurance System (Sections 52 and 53). Industrial accidents do not form a subject of this publication.

The person who got injured in the accident or witnessed it, shall report the accident without delay, to the person who directly supervises the work. It is important to make the employees aware of this responsibility, because, if someone fails to do so, it’s up to the injured employee to prove that the accident happened during work or in relation to work.

Each case an accident is reported or otherwise becomes known to the employer, the employer shall determine whether it should be considered a work accident. If the employer doesn’t consider it a work accident, (s)he shall inform the injured person (or a family member in case of a fatal accident) on this decision and on further available legal remedies.

⁴⁷ http://www.ommf.gov.hu/index.html?akt_menu=507

Any work accident that causes incapacity shall be investigated by the employer without delay, and the findings of the investigation shall be recorded in a work accident protocol.

The occupational health medical practitioner shall be informed on the commencement of the investigation.

It is at the doctor's discretion to decide whether a doctor should be involved in the investigation.

The circumstances should also be clarified in cases when the accident did not lead to incapacity, but in such cases, issuing a work accident protocol is not necessary.

Any work accident that results in more than 3 workdays of incapacity, as well as cases of occupational disease or excessive exposure shall be reported, investigated and registered.

A separate work accident protocol shall be issued on each injured person, and the protocol shall be sent once the investigation is concluded, but by no later than the 8th day of the reference month, to the following parties:

- to the injured person or to a relative, in case of a fatal accident;
- to the relevant authority for occupational health and safety based on the location of the work accident, in case of fatal work accidents or work accidents that cause incapacity for more than 3 workdays;
- in case of any accident that is listed in point b) and involved an employee of a Hungary-based employer on a foreign assignment, external service or temporary employment: to the relevant authority for occupational health and safety, or the mining authority relevant based on the employer's registered seat;
- to the social insurance cash benefit disbursement location or, in absence thereof, to the district office acting on behalf of the government office of Budapest and the relevant county in health insurance cash disbursement matters;
- to the employment agency or the assigner in case of temporary employment or assignment.

The duration of incapacity may not be known by the date the investigation is concluded, or the work accident protocol may need to be amended for any reason later on. In such cases the employer shall send the protocol that contains the total number of days of incapacity, or the protocol on amended content.

The employer shall report each severe work accident without delay, and with all available data included, to the district office acting on behalf of the relevant occupational health and safety government office of Budapest and the county based on the location of the accident.

A work accident is severe if it leads to any of the following:

- *the death of the injured person (in case the injured person dies within a year from the date of the accident, and it is stated in the medical report that the cause of death was related to the accident,*

the accident is also considered a fatal work accident); the death of a fetus or new-born baby of the injured person; permanent damage which impedes self-sufficient lifestyle;

- *the loss of, or significant damage to any sensory organ, sensory capacity or reproductive capacity;*

- *life-threatening injury or damage to health, that is supported by a medical report;*

- *loss of thumb(s) or loss of the larger parts of 2 or more fingers or toes, or more severe mutilation;*
- *loss of speech; remarkable distortion, paralysis or derangement.*

In case of a severe work accident, once the rescue activities are finished, the employer shall keep the location of the accident in the same condition as it was when the accident happened, until the representatives of the authority for occupational health and safety arrive.

If the preservation of the accident conditions would pose further severe hazards or cause significant material damage, photos or videos shall be made on the location of the work accident, or any other type of records which can aid the investigation.

The employer is not entitled to refuse the investigation of a severe work accident based on the fact that it is already being investigated by the authorities, or they are waiting for the investigation findings of other authorities (e.g. the police). Even in such cases the employer shall conduct an internal investigation, and conclude it by the specified deadline. The work accident protocol can be modified if new facts or data become known.

In case of a severe work accident, the doctor of the basic occupational health service provider shall take part in the investigation.

An example for a severe work accident:



An employee climbed up on a round baler that was in operation. The baler was attached to a tractor by a rubber band. His right arm was caught in the top shaft of the machine on which the rubber band was running, and was ripped from his body.

Occupational disease and excessive exposure

If work possibly involves contact with animals and various plants, there is a higher risk of infections or inhaling toxic, allergenic or irritating dust. Activities involving pesticides (spraying, aerosols, crop dusting, steeping, fumigation etc.) may also cause acute or chronic occupational poisoning.

Occupational disease: acute or chronic damage to health that occurred during work, or chronic damage to health that appeared or developed after work, which:

- a) can be traced back to work-related physical, chemical, biological, psychosocial or ergonomic aetiological factors that are present during work processes or activities, or*
- b) resulted from exertion of the employee that is larger or smaller than the optimum.*

Excessive exposure: if the concentration levels or measures of certain biological exposure (impact) markers that shall be assessed in case of occupational chemical exposure as per the ministerial decree on the chemical safety of workplaces exceed the biological thresholds in the body of the employee during work or in relation thereto; or, in case of noise, a hearing loss of 30 dB on 4000 Hz in any ear.

If any occupational disease, acute or chronic poisoning or excessive exposure to noise or any of the chemicals listed in the relevant law is detected during occupational medical practice, it shall be reported to the relevant district office of the government office of Budapest and the county based on the registered seat of the employer, as the relevant authority for occupational health and safety.

Any physician can report who is in medical practice and diagnosed an occupational disease or discovered excessive exposure or suspicion thereof.

Further detailed requirements on reporting, investigation and employer responsibilities are governed by the relevant law⁴⁸.

10. OCCUPATIONAL SAFETY AND HEALTH REPRESENTATIVE

Attention!

An occupational safety expert is not the same as the occupational safety and health representative.

An occupational safety and health representative is a person who has been elected by the employees and represents employee rights and interests related to safe and health risk-free performance of work in cooperation with the employer.

To ensure safe and health risk-free work, the employer shall consult the employees or their occupational safety and health representatives, and offer them the opportunity in a timely manner, to take part in the preliminary discussion on the health and safety-related measures the employer is planning to take.

An occupational safety and health representative shall be elected at each employer who employs 20 or more employees. Conducting the election and fulfilling the necessary requirements is the employer's responsibility. An occupational safety and health representative may be elected below 20 capita as well, if the employees express the need for having one.

The occupational safety and health representative is an intermediary between the employees and the employer.

Within one year of election, the occupational safety and health representative shall complete a 16-hour training, and take part in an 8-hour refreshment training each year later on. As a result of ongoing training, the occupational safety and health representative is capable of expressing occupational safety-related issues of the employees in a sophisticated and professional manner.

⁴⁸Decree No. 27/1996. (VIII.28.) NM on the reporting and investigation of occupational diseasees and cases of excessive exposure

The occupational safety and health representative takes load off the employer's shoulders: (s)he is much more aware of the occupational safety and health gaps that may be present at the workplace, and is more up-to-date on the issues of the employees than the employer or the occupational safety expert. Therefore, (s)he can contribute to solving those problems effectively, and faster results can be achieved in improving the working conditions.

Regarding the election of the occupational safety and health representative, the information and recommendation⁴⁹ of the National Occupational Safety and Health Committee as the highest national forum of alignment of interests can be found at the website <http://www.ommf.gov.hu> under “*Országos Munkavédelmi Bizottság*” (available in Hungarian).

⁴⁹ http://www.ommf.gov.hu/index.html?akt_menu=529