



TECHNICAL NOTE 6

Germany

Responding to Priority Needs: Understanding and tackling occupational diseases and health hazards



In addition to physical health, the risks to mental health are also significant: Recognizing and dealing with stressful/challenging situations and the balance between life and work are also important factors that influence physical and mental health.

■ Occupational diseases in Germany (general)

In Germany, occupational diseases are legally defined as illnesses that insured persons suffer as a result of their insured activity and "which, according to the findings of medical science, are caused by special effects to which certain groups of people are exposed to a significantly higher degree than the rest of the population as a result of their insured activity". (Siebtes Buch Sozialgesetzbuch, 1996). These special effects are listed in the list of occupational diseases under the respective occupational disease.

For an illness to be recognised as an occupational disease, it must therefore be included in this so-called list of occupational diseases (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, 2021). This list is shown in Annex 1 of the German Occupational Diseases Ordinance (Berufskrankheiten-Verordnung, 2021). It is an ordinance issued by the Federal Government. It contains the list of recognised occupational diseases and obliges the statutory accident insurance institutions to take measures to prevent occupational diseases from developing, recurring or worsening in insured persons. It also regulates the procedure for determining occupational diseases.

The Federal Government decides which occupational diseases are included in the mentioned list of occupational diseases. When including diseases in the list of occupational diseases, the Federal Government is advised by the Medical Expert Advisory Board on Occupational Diseases (ÄSVB) at the Federal Ministry of Labour and Social Affairs.

The relevant employers' accident insurance (German Social Accident Insurance, DGUV, or Social Insurance for Agriculture, Forestry and Horticulture, SVLFG) will take immediate action as soon as a report of a suspected occupational disease is received. It then examines ex officio whether the illness was caused by work, whether it is an occupational disease and, if so, what benefit entitlements exist. This may require a specialist medical report by independent experts. In principle, the occupational physician of the respective federal state is also involved in the procedure.

If an occupational disease is present, the primary objective is to mitigate the consequences of the occupational disease by all appropriate means and to prevent it from worsening. In order to achieve this goal, statutory accident insurance provides benefits ranging from medical care to occupational rehabilitation measures. If the occupational disease results in significant, permanent restrictions, the employers' insurance may pay a pension if the earning capacity is reduced by at least 20 per cent.

Whether an illness can be recognised as an occupational disease is therefore decided by the statutory accident insurance institutions. This is also stipulated by law: Accordingly, only illnesses can be recognised as occupational diseases:

- which, according to scientific findings, were caused by specific harmful effects at work (e.g. noise, carrying heavy loads, contact with dust or chemicals) and
- to which certain groups of people are exposed to a significantly higher degree than the rest of the population as a result of their work.

In addition, in individual cases the illness must be significantly caused by the work. Many influences play a role in the development of diseases: predisposition, lifestyle and environmental factors or factors such as contact with hazardous substances at the workplace. The challenge is to distinguish between the influences that arise at work and those that are attributable to private life. If various causes are considered to trigger the illness, a distinction must be made between work-related and non-work-related causes.

(Bundeministerium für Arbeit und Soziales, 2024), (Deutsche Gesetzliche Unfallversicherung, 2024), (Sozialversicherung für Landwirtschaft, Forsten und Gartenbau, 2024)

Critical and relevant health topics in the Green Sector

Occupational diseases and health hazards

Occupational diseases (OD) provide information on illnesses related to work-related health hazards. Green sector workers often have a long history of health problems, even before they report these problems as an OD. This is why the OD anamnesis is a valid basis for relevant health hazards in the workplace.

If the reported OD is recognised after examination of the responsible insurance (for the green sector this is the Social Insurance for Agriculture, Forestry and Horticulture, SVLFG) benefits are granted. These range from medical benefits and pension payments due to reduced earning capacity to retraining in severe cases and compensation benefits in the event of loss of income. The SVLFG also helps to identify the causes of illness and, if necessary, provides support in modifying the workplace so that the person concerned can continue to work despite their disease.

The SVLFG provides support in the form of customised preventive measures to prevent severe progression or imminent impairment due to the OD. In 2021, 2,642 insured persons generally from the agricultural sector, with recognised respiratory diseases were treated as part of the individual prevention measures. Insured persons receive comprehensive advice and, if required, are provided with fan-assisted respiratory masks and the corresponding filters free of charge. This allows animal owners, for example, to continue practising their profession.

On average, around half of the ODs reported are recognised, as the legal requirements are met. In the past five years (2019-2023), 11,999 of the 23,872 reported OD cases were recognised. In many cases, individualised measures can cure the OD or treat it in such a way that work can continue and the OD does not get any worse. This is also indirectly confirmed by the current OD pension cases at the SVLFG. These amounted to 4,581 pension cases in 2022, which represents a small annual increase against the background of the annual OD recognition.

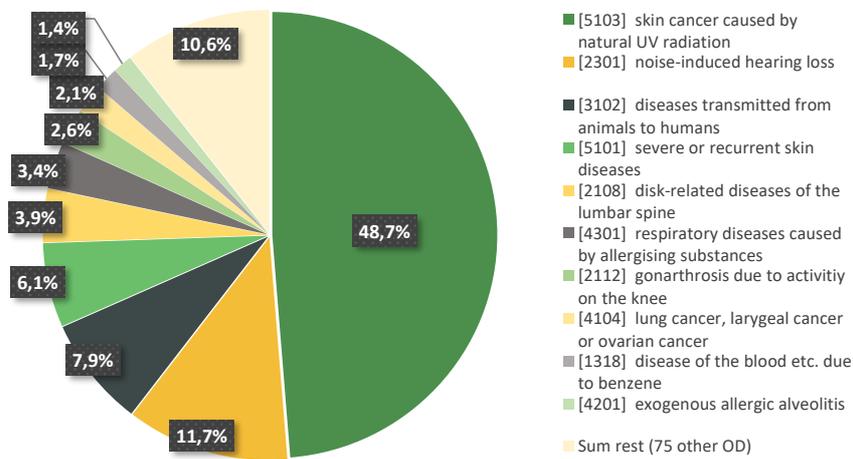


Figure 2. SVLFG Statistics, Top 10 of occupational diseases reported to the SVLFG 2019-2023 covers up to 90 % of the total reported cases (23.872) in that time period.

As can be seen from Figure 2, skin in the green sector is particularly at risk from sunlight. Skin cancer only occurs at an older age. It can therefore be assumed that the number of cases will continue to rise, particularly in agriculture. Farmers, especially winegrowers who work outdoors a lot, are among the high-risk groups for white skin cancer. A study shows: Almost one in two people over 65 is affected (Der Badische Winzer, 2017). If general skin diseases are also taken into account (5101), skin diseases account for around 55% of the current incidence of OD in the green sector.

At 11.7 per cent, the traditional noise hazard in agriculture ranks second in the list of OD. Noise damages hearing, especially when it accumulates over the course of a lifetime so that hearing loss usually only occurs in old age. The damaging effect of loud machines and very loud tools such as chainsaws is therefore underestimated. Not wearing hearing protection for a short period of time is a common situation that emphasises this. The effect of noise is largely underestimated (Technische Isolierung, 2024). Almost eight per cent of the reported diseases are diseases that can be transmitted from animals to humans, with borelliosis being the most common. Working in and with nature is the main reason for this. The OD numbers 2108 and 2112 stand for musculoskeletal disorders, which together account for six per cent. Around five per cent of the reports are illnesses related to the respiratory system (4301, 4201). Based on the incidence of occupational diseases, the following picture emerges, which is synonymous with the health risks prevalent in the green sector:

- Skin diseases
- Diseases of the auditory system
- Diseases transmissible from animals to humans
- Diseases of the spinal discs / ergonomics
- Diseases of the respiratory tract

For the new OD "Parkinson's syndrome caused by pesticides" issued on 20 March 2024, no data is currently available on the number and expenditure. The SVLFG is currently in the process of conducting an information campaign on this and also providing information by means of FAQs (Sozialversicherung für Landwirtschaft, Forsten und Gartenbau - FAQ-Parkinson, 2024).

In connection with occupational diseases and health hazards in agriculture in Germany, the most important challenges and topics will be outlined and explained in more detail below.

Material health hazards (physical, biogenic, chemical)

Skin Diseases

Skin diseases lead the SVLFG's OD statistics by a wide margin (Sozialversicherung für Landwirtschaft, Forsten und Gartenbau, 2022). Basically, two areas of exposure can be distinguished: natural UV exposure (sun) and contact, especially of the hands, with harmful substances (contact with water > 2 hours, cleaning agents and disinfectants). The mechanical strain on the hands is also particularly pronounced due to the manual work involved. Wear eczema (also known as wear dermatosis) is the most common occupational skin disease (Image 1). The statistics do not show this because the number of unreported cases is very high (John, 2018). Employees in the green sector suffer particularly frequently from skin diseases. These include, for example, white skin cancer, psoriasis and dermatitis.

Solution approach: Technical measures for shading mobile workstations. Cooling clothing and organisational measures to avoid heat peaks. UV protective clothing and awareness-raising measures. Campaign on wearing gloves and skin protection in general. The consistent wearing of modern Personal Protective Equipment (PPE) is a general area of development.



Image 1: Example of a clinical picture of wear. Photo by [SVLFG], used with permission.

Noise

Agricultural work processes are often associated with noise (Pulsar Instruments, 2019). Hearing loss in old age is a common condition among farmers. It is therefore particularly reassuring that very loud machines such as chainsaws become even louder (Höllerl, 2019). Based on initial research, there appears to be a discrepancy between the product standard (EN ISO 11681-1:2022-10, 2022) for chainsaws, which does not require noise reduction measures, and the European Machinery Directive (Regulation (EU) 2023/1230, 2023), which requires noise reduction measures. Irrespective of the technically unrealised potential for noise reduction, a common protective measure is personal hearing protection or PPE (Lärm- und Vibrations-Arbeitsschutzverordnung, 2021).

Solution approach: Technical noise reduction programmes for particularly loud machines and further development of standards. Promotion of modern intelligent hearing protection, campaigns and awareness-raising activities.

Diseases transmissible from animals to humans

Diseases transmitted from animals to humans, known as zoonoses, are the third most common OD in the green sector. Tick bites and the Lyme disease or TBE caused by them are at the top of the list. People in the green professions are particularly at risk. Other animals, such as the fox and its fox tapeworm, can also pose a risk to humans. Biogenic substances also play a role, such as giant hogweed, stinging insects or the hairs of the oak processionary moth. The German Ordinance on Biological Substances (Biotoffverordnung, 2021) regulates organisms and their classification according to protection levels in more detail.

Solution approach: Development of improved protective measures, including vaccinations and information/sensitisation with simple and understandable content for the target group.

Dust

Whether feeding, cleaning, composting or harvesting - numerous activities are associated with high dust exposure. The risk of contracting respiratory diseases is therefore particularly high in the green sector, especially particularly high in agricultural livestock farms. This is due to organic dusts, which can have irritating, toxic, sensitising or infectious effects. The most common diseases that occur are obstructive respiratory diseases, asthma, farmer's lung (exogenous allergic alveolitis) and inhalation fever (Sozialversicherung für Landwirtschaft, Forsten und Gartenbau – Broschüre Staub, 2021).

Solution approach: Technical measures to reduce dust, such as closed or low-dust processes, low-dust feed, modern PPE with high wearing comfort. Campaigns, training and information to raise awareness.

Ergonomics

Lifting, carrying and manipulating heavy loads is a common occurrence in agriculture. Problems with the musculoskeletal system, especially the back, are therefore also common. As the physical strain caused by lifting and carrying and the associated stress varies greatly from person to person, there are no clear limit values. However, loads heavier than 40 kg for men and 25 kg for women should always be categorised as a risk (Berufsgenossenschaft Nahrungsmittel und Gastgewerbe, 2024). The Load Handling Ordinance (Lastenhandhabungsverordnung, 2020) stipulates that the employer must ensure that manual load handling that jeopardises the health of employees is avoided. The Key Indicator Method (Leiterkmalmethoden, 2024) can be used to fulfil the requirements of the Load Handling Ordinance and to design the activities of employees in a humane manner.

Solution approach: Promotion and development of ergonomic work equipment and working methods. Advice and training on ergonomic working techniques. Further development of standards on the ergonomics of work equipment.

Psychomental health hazards - wellbeing

High-quality, productive work that is safe and efficient requires healthy people who can utilise all their senses. Mental health is fundamental to this as it is an essential prerequisite for our quality of life (Institut für Bildungscoaching, 2024). The increase in mental stress at work is widely reported and is also reflected in the resulting increase in sick days (Klößner et al., 2023).

The demands placed on companies in the agricultural sector are also becoming increasingly complex. Deadline pressure and workload have increased significantly. In addition to the professional and economic burdens, there are often family burdens: caring for relatives, an accident, a death or a serious illness. As studies show, farmers feel most stressed by agricultural policy, complex bureaucracy and the portrayal of farmers in the media. There were significant correlations between health problems and the severity of burnout. (Roth, 2021).

Solution approach: Low-threshold, job-specific support that is available at all times. Reporting system for help. Counselling on social and economic issues.

Concluding remarks from an occupational health and safety and prevention perspective

In practice, health hazards are usually countered by personal protective measures. This circumstance requires a certain categorisation under occupational health and safety law.

If the effectiveness of prevention measures is considered, personal measures such as PPE come off worst, as behaviour is crucial to their effectiveness. Not least for this reason, technical, self-effective protective measures should be sought if the hazard cannot be combated at its source. European occupational health and safety legislation therefore requires that technical followed by organisational occupational health and safety measures always take precedence over personal measures (European Agency for Safety and Health at Work, 2021).

Due to economic conditions and operational circumstances, the legal priority of technology is generally not given enough priority, especially in the green sector. Occupational health and safety is therefore equated with the wearing of PPE and extensive information on this is provided by the responsible bodies (Sozialversicherung für Landwirtschaft, Forsten und Gartenbau - Körperschutz, 2020). Ultimately, this is an example of the fact that, regardless of legal requirements, reality must be taken into account and the best must be made of it.

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