

International Hazard Datasheets on Occupation



Field Crop Worker

What is a Hazard Datasheet on Occupation?

This datasheet is one of the International Datasheets on Occupations. It is intended for those professionally concerned with health and safety at work: occupational physicians and nurses, safety engineers, hygienists, education and Information specialists, inspectors, employers' representatives, workers' representatives, safety officers and other competent persons.

This datasheet lists, in a standard format, different hazards to which field crop workers may be exposed in the course of their normal work. This datasheet is a source of information rather than advice. With the knowledge of what causes injuries and diseases, it is easier to design and implement suitable measures towards prevention.

This datasheet consists of four pages:

- Page 1: Information on the most relevant hazards related to the occupation.
- Page 2: A more detailed and systematized presentation on the **different hazards** related to the job with indicators for preventive measures (marked as numbered shields and explained on the third page).
- Page 3: Suggestions for **preventive measures** for selected hazards.
- Page 4: **Specialized information**, relevant primarily to occupational safety and health professionals and including information such as a brief job description, a list of tasks, notes and references.






Who is a field crop worker?

A worker whose main job is to drive and operate farm machinery to plant, cultivate, harvest and store various crops.

What is dangerous about this job?

- Field crop workers operate various machinery under changing conditions. They are subject to time pressure and long working hours especially at harvest time. Various distractions are common in field work causing increased accident risk.
- Safety of agricultural machinery is often inadequate due to potentially hazardous design and use of old and unreliable machinery.
- Field crop workers are exposed to various chemicals including organic and inorganic irritants.

Hazards related to this job

Accident hazards 	<ul style="list-style-type: none"> Risk of crushing injuries to head, chest and pelvic areas when a tractor without ROPS (rollover protection structure) turns over 	1
	<ul style="list-style-type: none"> Risk of limb amputation and crushing or shearing of limb or body as a result of entanglement to moving machine parts 	2
	<ul style="list-style-type: none"> Risk of limb or body crushing injuries as a result of carrying out various tasks eg. hitching and unhitching implements, reversing mounted equipment, folding and unfolding discs and harrows 	2 3 4
	<ul style="list-style-type: none"> Slips and falls when climbing into or climbing down from tractor cabin or when climbing on top of other farm machinery 	5
	<ul style="list-style-type: none"> Risk of acute poisoning by overexposure to pesticides 	6
	<ul style="list-style-type: none"> Risk of skin penetration or eye damage by high pressure hydraulic oil 	7
	<ul style="list-style-type: none"> Burns from heated surfaces or materials (exhaust pipes, engine blocks, fuel, oils, chemicals etc) 	8
	<ul style="list-style-type: none"> Traffic accidents when driving slow moving vehicles on public roads 	9
	<ul style="list-style-type: none"> Emptying manure pits may cause workers and animals to be exposed to high concentrations of poisonous gases (hydrogen sulfide H₂S), carbon dioxide (CO₂), ammonia (NH₃), methane (CH₄) 	6 8 10
	<ul style="list-style-type: none"> Low concentrations of oxygen (O₂) and high concentrations of nitrogen dioxide (NO₂) or carbon dioxide (CO₂) create risks of suffocation and poisoning when working in silos 	6 8 10
	<ul style="list-style-type: none"> Risk of suffocating in grain silos or grain trailers if worker gets caught under the falling grain 	6 8 10
<ul style="list-style-type: none"> Risk of various injuries when repairing machinery in workshops 	6 8	
Physical hazards 	<ul style="list-style-type: none"> Exposure to high noise levels from tractors, field machinery, combines, etc. 	6
	<ul style="list-style-type: none"> Exposure to vibration when driving tractors and harvesters Hot weather hazards such as sunburn, skin cancer, heat cramps, heat exhaustion and heat stroke 	
Chemical hazards 	<ul style="list-style-type: none"> Skin and eye irritation or blistering caused by pesticides 	6 8
	<ul style="list-style-type: none"> Risk of chronic poisoning caused by pesticides (see Note 2) 	6 8
	<ul style="list-style-type: none"> Risk of severe respiratory tract, eye and skin injuries when handling anhydrous ammonia (NH₃) 	6 8
	<ul style="list-style-type: none"> Eye irritation and respiratory tract irritation by silage additives (formic acid) 	6 8
	<ul style="list-style-type: none"> Dermatitis and respiratory tract irritation by handling of fertilizers 	6 8
Biological hazards 	<ul style="list-style-type: none"> Organic dust toxicity syndrome (ODTS), acute and chronic bronchitis, occupational asthma, eye irritation, dermatitis by exposure to organic respirable dusts (hay and grain dust) 	6 8 11
Ergonomic, psychosocial and organizational factors 	<ul style="list-style-type: none"> Back pain, neck-shoulder disorders and other musculoskeletal problems resulting from bad working postures, repetitive movements and forceful exertion when carrying out various tasks 	12
	<ul style="list-style-type: none"> Exposure to inorganic dusts during field work 	6 13
	<ul style="list-style-type: none"> Psychological stress due to working alone, unexpected events (machinery breakdown), fast paced work and long working hours during planting and harvest, and bad working conditions 	6 8 10 11 12 13

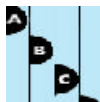
Preventive measures

- 1** Use a tractor equipped with rollover protection structure (ROPS) and safety belt
 - 2** Make sure that moving parts are adequately guarded. Always stop machinery before cleaning or servicing.
 - 3** Use quick-coupling devices
 - 4** Always support raised machinery parts when working underneath.
 - 5** Do not jump. Use provided accesses. Keep steps clean. Use non-slip footwear.
 - 6** Read and follow safety instructions supplied on product label. Use appropriate personal protective equipment.
 - 7** Use e.g. cardboard to check leaks, do not approach suspected leakage unprotected.
 - 8** Acquire sufficient skills for operation.
 - 9** Do not enter public roads with machinery which is not up to regulations.
 - 10** Do not work alone.
 - 11** To prevent mold dust, dry moist materials before storing.
 - 12** Physically exercise during breaks. Mechanize heavy phases of work.
 - 13** Use machinery with closed cabs, air filtration and climate control.
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Specialized information

Synonyms Farm worker, field crop; laborer, field crop

Definitions and/or description Drives and operates farm machinery to plant, cultivate, harvest and store one or more crops such as wheat and other cereals, forage crops, potatoes and sugar beet: Hitches farm implements, such as plow, disc, harrow, drill, planter and manure spreader to tractor, and drives tractor and operates implements in fields to till soil and plant, cultivate, and fertilize crops. Mixes chemical solutions, such as pesticides, herbicides, and fertilizers, and sprays crops. Tows harvesting equipment or drives and operates self-propelled harvester to harvest crop. Transports harvested crop using truck or tractor and trailer and unloads crop to store or dryer. Adjusts and maintains farm machinery. May irrigate crop.



Related and specific occupations Farm worker, cereal farmer

Tasks Adjusting; baling; cleaning (implements); cultivating; dicing; drilling; driving; fertilizing; harrowing; arvesting; hitching; irrigating; loading; maintaining (machinery); mixing (chemicals); mowing; operating (implements, tractors, towed or self-propelled harvesters); planting; plowing; spraying; tilling; towing; transporting; unhitching; unloading

Primary equipment used Tractor; plow; disc harrow; cultivator; drill planter; combine; towed and self-propelled harvesters; trailer; truck; manure spreader; sprayer; fertilizer spreader; mower; baler; augers and conveyors; front or back loader

Workplaces where the occupation is common Farms

- Notes**
1. Production, sale, and distribution of hazardous pesticides is strictly regulated in many industrialized countries. However, regulations vary from one country to another. Therefore, it is extremely important to follow the safety measures stated on the product label.
 2. Chronic poisoning may take a long time to emerge and is sometimes difficult to relate to pesticides. However, some organs of the body such as the liver, kidney, brain or nervous system could be damaged over a period of time. Also, exposure to pesticides could aggravate other illnesses the user already suffers. Therefore pesticides should be used with extreme care at all times.



References Brown, A., Lawler, D. 1994. Rural Safety. Machinery, Stock & General Hazards. Riverwood, NSW, Australia.



Murphy, D.J. 1992. Safety and Health for Production Agriculture. ASAE Textbook Number 5. Published by the American Soc. Of Agric. Engineers.

Safety and Health in the use of Agrochemicals: A Guide. ILO. Geneva 1991.
