



Occupational Health Hazard of Farm Women in Agriculture with Special Reference to Animal Farming

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Introduction

Occupational health hazards of farm workers may be due to exposure to weather/climate, snakes, insect bites, sharp tools, use of farm equipment, physical labour, carrying loads, pesticides, dusts/ fumes/ gases/particulates, biological agents & vectors of diseases. In rural parts of the country, men and women, both are engaged in farm activities. Of both, women do the household work in addition to child bearing and nursing to old parents. Thus, their job in rural surrounding is more challenging than counter parts. Thus, there is every possible chance to face the hazards, which is something that can cause harm if not controlled. As per population statistics of our country, the female population in agriculture work force is increasing (20% in the year 1971 to 41.9% in the year 2007, based on estimate) and it is estimated that during 2025, it will reach to 60%. This statistic clearly indicates about more involvement of women in agriculture. Rural women perform most of the activities in their

own convenient posture like sitting, standing, bending or squatting without realizing the harmful effect on the body. Due to this ignorance, women might be suffering from various health hazards.

Meaning of Occupational Health Hazards

Occupational refers to relating or resulting from a particular occupation that involves the individual from a particular occupation. 'Health' refers to the condition of being sound in body and mind. 'Hazard' refers to a source of danger. By combining these three words, 'Occupational Health Hazards' means the possible dangers that might be caused to body or mind by being engaged in any occupation.

Most frequent hazards in agriculture

- Machinery such as tractors, trucks and harvesters and cutting and piercing tools
- Hazardous chemicals: pesticides, fertilizers, antibiotics & Toxic or allergenic agents: plants, flowers, dusts, animal waste, oils etc
- Carcinogenic substances or agents: certain pesticides such as arsenicals and phenoxyacetic herbicides, UV radiations, parasitic diseases such as fascioliasis
- Transmissible animal diseases: brucellosis, bovine tuberculosis, rabies, lyme disease
- Confined space such as pits, cellars and tanks and “Noise and vibration”
- Ergonomic hazards use of inadequate equipment and tools, unnatural body posture or prolonged static postures, carrying of heavy loads, repetitive work, excessive long hours
- Extreme temperatures due to weather conditions & Contact with wild and poisonous animals’ insects, spiders, scorpions, snakes, certain wild mammals

Workplace Hazards

The major workplace hazards are physical hazards, chemical hazards, biological hazards, ergonomically hazards, and psychosocial hazards.



Physical hazards: Physical factors in the workplace such as noise, vibration, extreme temperature, illumination, radiation can affect health adversely.

Types of Noise-Induced Hearing Loss

- Temporary loss of hearing acuity after exposure to loud noise. Recovery is within 16-48 hours and permanent Threshold Shift. Irreversible loss of hearing

Other Harmful Effects of Noise- Hypertension, Hyperacidity, Palpitations, Disturbs relaxation & sleep.

Vibration Types

Segmental vibration (Health Effects: hand arm vibration syndrome, pain, tingling, blanching fingers) & Whole-body vibration (Health Effects: fatigue, headache, disorders of the spine)

Extreme Temperature

Sources of heat stress: Natural Conditions, Hot work process related to furnaces, kilns, boilers & smelting. Prickly heat, Heat cramps, heat exhaustion, heat stroke is the disorders. Sources of Cold environment are ice plants and freezers in the food industry. The health effects are burning pain, numbness in fingers, toes, nose, and ears. Cramps and gangrene are the disorders.

Inadequate Illumination

Sufficient light is necessary at the workplace to have better and safe performance. For agricultural work in open space during day time, there is always sufficient light in normal working hours. During night, light is often poor & it may lead to accidents. It is important to maintain proper light intensity so as to have safe and efficient performance otherwise the workers may develop visual fatigue, double vision, headache, painful irritation, lacrimation.

Radiation

Radiation may be due to ionizing (x-rays, gamma rays) and non-ionizing (ultraviolet, infrared, laser) rays. The health effects are cancer, death, skin redness, premature skin aging and eye problem.

Chemical hazards

About 100 000 different chemical products are in use in modern environments and number is growing. Health effects include renal diseases, respiratory disease, and hematologic, cardiovascular, neurologic diseases, carcinogenic, teratogenic.

Biological hazards

Exposure to some 200 biological agents, viruses, bacteria, parasites, fungi, moulds and organic dusts occurs in selected occupational environments lead to chronic diseases among agricultural workers.

Ergonomically hazards

Ergonomics involve the environment, the tool, the workstation, the task, the organization. The goal is to reduce work-related musculoskeletal disorders (MSDs) developed by workers. MSDs are injuries and illness that affect muscles, nerves, tendons, ligaments, joints or spinal disks.

Psychosocial hazards

Occupational stress is one of the major problems from a gender perspective. Stress caused by time and work pressures has become more prevalent during the past decade. Monotonous work, work that requires constant concentration, irregular working hours, shift-work, and seasonal-work can also have adverse psychological effects.

Most frequent hazards in animal farming

On average, two people die every year in accidents involving animals on Ontario farms. Inadequate animal handling facilities and poor animal handling methods increase the likelihood that accidents will occur. Animals are also the source of some infectious diseases that can be spread to humans. Handlers must always be on guard when working with or around animals.

General Responsibilities

1. The employer shall provide information, instruction and supervision to a worker handling large farm animals and shall ensure



that the worker is competent to do so safely.

2. A worker coming into contact with an animal should wear appropriate personal protective equipment for the assigned work.
3. A worker coming into contact with an animal should be made aware of any transmittable diseases that the animal may carry and should be instructed on how to prevent transmission, to themselves and to other animals.

Animal Handling Hazards

Farm employers and workers handling large animals can be killed or injured in a number of ways, including being: stepped on, knocked down, kicked, bitten, pinned against a hard surface, or Exposed to a transmittable disease.

Factors to Consider When Handling Large Animals:

- The measures set out below are general factors that employers and workers should take into account to reduce the likelihood that an animal will behave in an unpredictable or aggressive way and thereby endanger either people or other animals nearby.

1. The employer should ensure that proper equipment and facilities are available for housing and handling the type of animals in the operation with attention to:
 - Good housekeeping practices ; equipment, fencing and gates that are able to restrain animals safely for general maintenance or health care;
 - Walking or working surfaces that are even and finished or constructed to prevent slipping under wet conditions; even and diffused lighting; and alleys and chutes that are wide enough for animals to pass but not to turn around.
2. When approaching an animal, handlers should announce their presence by voice or by being clearly visible and gently touching the animal on the front or side.

3. Handlers should be aware of and avoid an animal's kicking region.
4. Noise and yelling should be kept to a minimum when working with livestock to enable the animal to feel secure.
5. When handling livestock with young, allow them to remain as close to their offspring as possible.

Background--Animal Characteristics and Behaviour

The points below are provided for information purposes only and may help those handling large animals to understand why certain precautions are necessary.

Animal Vision

Workers should be aware of the limitations of vision of the particular animal that they are working with. Animals may have:

- Colour blindness & poor depth perception;
- Sensitivity to contrasts, which may cause them to balk or hesitate at sudden changes in lighting (shadows), colour or texture & Sensitivity to distractions or sudden movement because of wide angled vision;
- A natural tendency to move from dimly lit areas to lighter areas & Blind spots where they cannot see a worker.

Animal Hearing

Loud, abrupt noises can cause distress in livestock. Reduction of noise levels will have a calming effect on animals.

Maternal Instincts and Territorial Behaviours

Livestock with young exhibit a maternal instinct. They are usually more defensive and difficult to handle. Most animals have a strong territorial instinct and develop a very distinctive attachment to certain areas such as pastures, buildings, water troughs and worn paths. Forcible removal from familiar areas can cause animals to react unexpectedly. Similar problems occur when animals are moved



away from feed, separated from the herd or approached by an unfamiliar person.

Kicking and Biting

Each type of animal kicks differently. Some of the reasons animals kick include: Pain, injury, or inflammation, something in their blind spot & sudden noise.

Approaching Animals

Most animals, like humans, have a comfort zone. The illustration below is specific to cattle but the principles apply generally to other animals as well. A **comfort or flight zone** can be used to effectively move cattle and other animals. This works best when the handler works at the edge of the flight zone. Deep invasion into the flight zone may cause panic and confusion. Learning the principles of using the flight zone will allow a handler to move the herd safely.

CONCLUSION

The identification of occupational health hazards and development of systems to evaluate intervene and decrease musculoskeletal risk factors and resulting disorders is quite crucial for safety of farm women. There is a need to initiate women-oriented researches in agriculture. As woman has different ergonomically characteristics than man, design of women friendly tools and equipment is required. Work station should be adjustable to make it comfortable for women during performing agricultural activities. Stress is also often reported as a major problem among farmers. Integrating safety into quality systems and the planning of new production processes and buildings is a great challenge for all concerned – farmers, safety organisations, professional associations, extension services and administrations. However, this is a challenge that must be met in order to protect the most valuable asset that the agricultural industry has, namely its people.

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