

Health and Safety for Swine Workers

Information Sheet

Information from the Teagasc National Farm Survey suggests that nearly one in ten farm workers can develop work related illnesses of which one third are respiratory in origin. Recent research sponsored by the Health and Safety Authority (HSA) suggests that swine confinement workers are potentially exposed to workplace contaminants at levels above recommended health limits. This information sheet provides useful information for anyone who works in such an environment.

The air within swine confinement buildings contains many contaminants that are hazardous to human health. These hazards include gases, swine confinement dusts and microorganisms or their components. The dust generated within indoor swine buildings may contain many types of particles including: animal dander; faecal material and urine of both pigs and rodents; feed components; bedding materials; absorbed gases and chemicals. Importantly, this dust also contains microorganisms such as viruses, bacteria, yeasts, moulds and their by-products. Some 70%-90% of swine dust is thought to be biologically active in its effects.

Hazards other than Gases, Dusts and Microorganisms

Although this guidance is aimed at reducing exposure to gases, dusts and microorganisms, it is important to stress that many other hazards exist that should be considered as part of an overall Risk Assessment and resulting Safe System of Work.

These include, amongst others:

- Manual handling issues
- Noise - e.g. levels can exceed 100dB at feeding time
- Animal handling
- Lone working
- Hazardous chemicals
- Confined spaces
- Asbestos cement roofing (fragile roofs) & other asbestos products
- Farm equipment - e.g. PTOs

Important Measures to Reduce Risk to Swine Workers

1. Dust Control

- All housing units should be regularly and thoroughly cleaned, e.g. farrowing units every 4 weeks, fattening units every 8 to 10 weeks.



- Reduce dust from feed by adding oil to the dry rations.
- Mix gestation rations with water.
- Add lignin to straw.
- Undertake appropriate and regular maintenance of feeding equipment.
- Sprinkle vegetable oil in very small amounts inside buildings to reduce dust, odour and gases.
- Ensure work in swine houses is done at a calm pace to avoid exciting the pigs and reduce dust concentrations.
- Air filtration: A well designed and managed ventilation system will control the level of gases, dusts and vapours in swine confinement buildings. Mechanical exhaust ventilation is the most common type of system used and consists of three basic components - properly sized fans, properly sized and distributed fresh air inlets and controls.

2. Nitrogen Concentration

- Reducing the nitrogen concentration of swine diets reduces ammonia concentrations.

3. Personal Protective Equipment

- Appropriate disposable filtering facepiece respirators or orinasal masks will significantly reduce the risk of respiratory illness occurring where airborne contaminants cannot be reduced to safe levels by other means, e.g. ventilation. Appropriate training is critical to their effective use.
- Disposable and orinasal masks must be of correct fit. It is also imperative that reusable masks are maintained and stored correctly. A CE marked filtering facepiece FFP2 or orinasal mask with P2 filter is appropriate.

Note: These filter types provide no protection against toxic gases, thus an alternative range of equipment is required. Only a self-contained breathing apparatus should be worn when entering a manure pit or other confined space on the farm.

- Appropriate use of personal protective equipment (PPE) includes following appropriate donning, removal and disposal procedures.
- Overalls should be cleaned after use and stored separately from regular clothing.
- Workers should be provided with and advised to use handwashing facilities after leaving the swine housing area and must be encouraged to not touch their nose/face until after their hands have been thoroughly cleaned.

For further information visit www.hsa.ie or phone **1890 289389**.

