



Electricity

What is the issue?

Ensuring that electrical wiring and equipment is installed, maintained and used correctly in the dairy.

Why is it an issue?

Poorly maintained installations and electrical equipment could result in fires or electrocution.

What are the consequences of ignoring it?

Death or serious injuries, including electric shock and burns, could result from poor electrical installations and damaged or unsafe equipment.

How safe is your dairy now?

Check your dairy's safety by identifying the following types of electrical hazards:

- electrical leads and power outlets in wet areas;
- buildings, equipment or machinery, including silos, portable augers and trucks (especially tipping grain feed trucks) that might come into contact with overhead power lines;
- overloaded switchboards;
- damaged electrical leads;
- repairs and installations that have been performed by unqualified people;
- poor maintenance; and
- permanently using extension leads.

What can be done right now?

Simple ways to reduce the electrical risks in your dairy, include:

- using droppers to keep power leads off the floor;
- not using coiled or rolled extension leads;
- not using leads in wet areas;
- always using properly earthed power tools and ensuring that the portable versions are double insulated;
- regularly checking electrical wiring, switching or any equipment for evidence of split insulation, or cracks or breaks in the switch or controller casings;
- visually checking power leads for damage or wear before using them;
- testing safety switches, i.e. Residual Current Devices (RCDs) before each job; and
- knowing where your underground power is located if you are planning excavation work.

What are the next steps?

Always use a licensed registered electrician to repair or alter electrical equipment or systems – *never* do it yourself!



Safety in the Dairy - Hazard sheet

It is also advisable to have an electrician or trained technician check and tag electrical appliances and extension leads at least once a year to ensure they are safe (it is compulsory for construction sites).

A number of design and structural control measures can be used in the meantime to control the hazards associated with electricity. For instance, replace:

- old and unsafe wiring with new and conduited wiring;
- blown fuses with the correct fuse wire; and
- extension leads with a hard-wired system, where practical.

Alternatively, you might install:

- easily accessible emergency stop buttons on electrically operated machinery;
- a circuit board with a RCD (also known as a safety switch) that covers all power outlets in the dairy (RCDs are also available for three-phase applications);
- protective guards on all lighting in work and outside areas;
- a lockout/tag procedure that clearly indicates when it is safe to undertake maintenance or repairs to machinery; and
- control panels with permanent and clear signs that indicate the purpose of each control switch.

In case an electrical fire does occur in the dairy, have a dry powder extinguisher near the main switchboard. Make sure all employees know where it is located and how to use it – there is no time to learn when a fire has already broken out.

Electrical safety is a vitally important part of any safety induction for new employees.

What you should consider in your longer term plans?

If building a new dairy or overhauling an existing one, have a qualified electrician design an electrical system specifically for your needs and building.

This type of design should locate power points in places that cannot be accessed by small children, and include weather- and water-proof switches. All the cabling should be conduited and the circuits fitted with safety switches, especially the power outlets.

The lighting in the vat room should be well away from vat openings, to avoid the chance of broken globes or tubes contaminating the milk.

Outside, make sure that overhead power lines are not near silos, moving augers or areas where large vehicles travel, such as milk tankers, livestock transporters and grain delivery trucks. Locate power underground in these work areas.

What actions are not optional?

You must use a licensed and registered electrician for all electrical fittings and maintenance. Since 2000, it has been mandatory for RCDs to be fitted to all new installations and alterations to existing systems in high-risk areas, such as dairies and farm workshops.

Where you can go for more information

Powercor Australia Dairy safety: hints on design and layout.	www.powercor.com.au
Office of the Chief Electrical Inspector Importance of isolating and making electrical equipment safe.	www.ocei.vic.gov.au
Safety switches (RCDs) where you should have them and how they work.	www.ocei.vic.gov.au