

# Land & Water fact sheet

## On-farm energy use

### Introduction

Energy such as coal, gas, diesel and petrol generally comes from non-renewable sources. Costs of fuel and electricity are substantial for a horticultural business. There is potential for reasonable cost reductions through adopting practices which over the longer term can save energy.

Energy use around the farm:

- household
- packing shed and cold storage rooms
- irrigation
- application of pesticides and fertilisers
- cultivation
- harvesting
- transportation.

### How can it help me?

Saving energy means saving money. Energy costs will continue to rise into the future. The mechanisation of many on farm processes such as planting, harvesting and processing has vast implications for energy use.

The burning of fossil fuels releases greenhouse gases such as carbon dioxide and carbon monoxide into the air. Therefore reducing the use of fossil fuels is advantageous not only for profit margins, but also for the atmosphere and environment.

### Long term perspective

With energy the long term view is most important to focus on. To reduce your energy consumption around the farm you can start by doing simple things that make a difference. The following suggestions show you how savings can be made around the farm:

### Irrigation

Pumping water for irrigation is one of the main ways energy is used in horticultural production. Growers can use less energy and reduce costs by carefully planning, implementing and maintaining suitable irrigation systems. Pumping stations should be serviced and well maintained making certain motors, switches and control panels are operational.

### Vehicles and equipment

It is also important to maintain and service all vehicles regularly to ensure efficient operation. Well maintained equipment operates better, costs less to run and is also better for the environment. Keeping engines tuned can reduce greenhouse gas emissions by up to 15 per cent.

A scheduled maintenance program is essential for all equipment, machinery and vehicles used on your farm.

### Fuel

Keep track of fuel use and set targets for saving fuel. A good idea is to switch from diesel/petrol to LPG or compressed natural gas. This can cut greenhouse emissions by 10-15 per cent.

### Lighting

Lighting is a simple way to cut down your energy bill and reduce your impact on the environment. The new



## On-farm energy use continued

energy efficient fluorescent bulbs use about one quarter of the wattage and have up to eight times the life of standard incandescent bulbs. This saves energy and lowers maintenance costs. High pressure sodium lights in place of mercury vapour yard lights are also energy efficient and better for the environment.

### Cool rooms

Cool rooms should be properly designed and built so that minimal energy is wasted. This includes regularly checking temperature control devices to ensure they are properly calibrated.

Maintenance and service is very important. Regularly checking seals, doors, hinges and catches to maintain temperature requirements can reduce running costs.

The building/packing shed itself should be checked for damage to insulation, roof and walls. Keep a record of all services done so you can check back in the future.

Pre-cooling produce before placing it in the cool room can also reduce running costs. Automatic cool room doors, rapid rise curtains and plastic door strips can be used to keep the cool air in and the warm air out.

### Record keeping

By keeping useful and easy reference records of your energy consumption for different aspects of the farm you can easily see where improvements can be made.

Some useful records to keep are:

- cool room and machinery maintenance records
- thermometer or temperature monitoring device calibration records
- irrigation records
- internal energy audits.

### Summary

By keeping good records and having efficient practices in place, you can reduce your energy use, increase your profit margins and at the same time contribute to a healthier environment.

An energy audit from an expert could also advise you where energy savings can be made.

To find out more about Farm Management Systems contact Growcom on 07 3620 3863 or visit [www.growcom.com.au/knowledgeplant](http://www.growcom.com.au/knowledgeplant)

### References:

[www.sustainable-agriculture.org/start.html](http://www.sustainable-agriculture.org/start.html)

Horticulture 4 tomorrow guidelines

Farmcare Code of Practice – Chris Lindsay

Water for Profit Fact Sheets - Growcom



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