

Energy Efficiency

#3 FRUIT PRODUCTION - OFFICE

This farm is situated in South East Queensland, with about 600 avocados trees and other vine fruits. This business is a complex operation featuring grading lines, packing operations and supporting facilities. In addition to packing produce from this farm, the packing operation also takes produce from other growers.

As with many other similar businesses, the office space contains a range of electrical equipment and appliances necessary to keep it running effectively. The office area includes a photocopier, printer, a notebook computer, three desktop computers and a range of rarely-used kitchen appliances. The space is air conditioned and lit by 15 40W fluorescent lights.

Surprisingly, the biggest consumers of power in this office are the computers. The three desktops consume just over 4,000kWh per year. Including the notebook, the office computers use slightly more power than the smallest cold room in the business. The office is placed inside the packing shed which is in a sheltered and shaded area. As a result, the air conditioning requirements are minimal and the air conditioner only runs for relatively short periods.

As with all electrical appliances, computers should be switched off when not in use. Modern computer operating systems allow you to set power management options, such as turning off the display or putting the computer to sleep after a short period of inactivity to save energy. On Windows computers, these settings are in the Control Panel under Power Options. As a rule, notebook computers consume much less energy than desktops.

There are many other steps that can be taken to minimise energy usage and waste within the office.

Energy rating of appliances

When choosing new items of electrical equipment such as computers, printers, air conditioners and kitchen appliances, select those with higher energy efficiency ratings. All appliances should be turned off when not in use, and try not to leave items on standby for long periods.

In the case of air conditioners, you should match the size of the unit with the size of the room to ensure maximum efficiency. A retailer or installer will be able to advise you on the correct unit size.

Insulation

Thermal insulation in the office walls, ceiling and even the floor can massively reduce the amount of energy required for cooling and heating.

Windows and doors

Window and door openings can provide essential cross ventilation and cooling breezes, minimising the need for artificial cooling. However, if air conditioning or heating is necessary in some seasons or at some times of day, it's important that the window and door openings seal completely to avoid air movement and energy waste.

Fans

Fans can be an energy-efficient alternative to air conditioning in more temperate climates. Newer and larger diameter fans tend to be more efficient, and regular cleaning will ensure they stay that way.

Building design and orientation

Well-designed and placed windows and doors can provide natural light and ventilation to office spaces, minimising the need for artificial lighting and air conditioning. Windows should be oriented to allow for ventilation without direct light and heat entering the space. External shade, both trees and structures like shutters and shade sails, can help prevent direct heat on the building.

Action

The owners have minimised the energy required for air conditioning by placing the office space in a shaded and sheltered area. So far, no further action has been taken to increase energy efficiency in the office facilities.

More information

Further details are contained in Growcom Energy Efficiency factsheets, available from the Growcom website.

Disclaimer: The examples in this fact sheet are provided for general information and do not constitute financial advice. We encourage growers to seek specialist financial advice before making significant investments.

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