Water management strategies

**Reclaimed water**

Reclaimed water is water derived from sewerage systems and then treated to a level that is safe for use in agriculture. Reclaimed water is a potentially valuable resource for the agricultural sector. Properly used, reclaimed water is protective of the environment,

public and animal health, and food safety.

It may also have advantages over the use of potentially limited or costly traditional primary water sources in terms of reliability of supply and price.

Treated reclaimed water can be used to irrigate crops, as well as being the primary water supply for livestock such as sheep, cows and pigs. Depending on the intended use of reclaimed water, various levels of treatment are required to ensure that all items are safe for human consumption while also supporting the welfare of livestock.

Drip irrigation

The use of drip irrigation systems as opposed to high-pressure sprinkler systems is a significantly more sustainable approach to water use. Although drip irrigation systems are more costly to farmers to install, over time, they are a more economical approach as they can significantly reduce water usage bills. Using drip irrigation means that water is directed to the root system of crops and, as

it is shaded from direct sun exposure, much less water evaporates.

The fact that the root system is directly targeted also means that less water is used compared to sprinkler systems. Farmers can be confident that enough water is reaching the roots rather than unnecessarily watering the entire plant.

Reduce evaporation

*Adapted from ‘Reclaimed water use in livestock production’ and ‘Irrigation’, Department of Primary Industry,* [*www.dpi.vic.gov.au*](http://www.dpi.vic.gov.au/)*, accessed November 2010*

Evaporation is a leading cause of water wastage in the agricultural industry and contributes to unsustainable use of water. Irrigation practices like using high-pressure sprinkler systems, although commonly used for crop watering, waste significant amounts of water, particularly in wind prone areas.

Sprinkler systems spray the water from above and so it evaporates when it is sitting on exposed aerial parts of plants. Also, the root systems are not specifically targeted and water is wasted as it runs off plants rather than reaching the root systems.

Evaporation is also increased when watering occurs at the wrong time of day. Crops should be watered around dusk to minimise sun evaporation. Watering during the peak of the day when the sun is at its hottest results in greater amounts of evaporation and therefore higher rates of water usage in the long-term.

Rainwater

Collecting rainwater and run-off water can significantly reduce the amount of water used from public water storage facilities. Rainwater can be used to water livestock, agricultural crops and pastures where stock feed is grown.

Genetically modified seeds

Nowadays seeds can be developed to grow and produce high yields with minimal use of water. Genetic manipulation of certain plants has removed or modified the traits

that require them to receive high amounts of water to grow, so these plants can now grow in areas with low rainfall and require less watering through manual irrigation.