

# Irrigation

## within the best practice sugarcane farming system

Irrigation is a central component of many sugarcane farming systems. The four components of best practice farming work together to maximise the value of applied water, which is often a limited and costly resource.

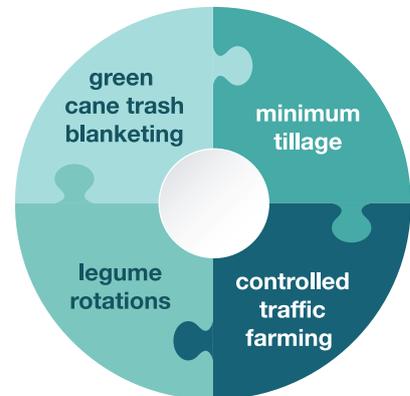
**Minimum tillage, green cane trash blanketing, controlled traffic farming and legume rotations all contribute to improved soil health, better water infiltration and storage, and reduced evaporation and run-off.**

The best irrigation system for your farm is one that enables you to fully implement the four key components of a sustainable sugarcane farming system. The overall aim of irrigation is to supply the crop's needs as they change during the growing season and in response to rainfall. This requires a detailed understanding of soil types on the farm, topography and crop water demand.

If you are considering installing a new irrigation system or changing your current system, it is worthwhile mapping the soils and landforms on the farm.

Soil type – particularly soil texture and top soil depth – will determine the water holding capacity of the soil. This is an inherent feature of the soil that is difficult to alter. The farming system can have a significant impact on the soil crumb structure and the movement of water in and out of the soil profile. The four components of best practice farming promote soil health and tilth, and is beneficial for all soil types.

Working with an irrigation design specialist and your Productivity Services officers will help work through the options that suit your farm and situation. To maximise the return on your investment, irrigation systems need to apply water evenly and in a timely manner. The system should also allow some flexibility so you can respond to rainfall events and the water requirements of rotation crops.



*Figure 1 Components of best practice farming*



### Next Steps

Assess your farming system to check that all four components of best practice are fully implemented. Has the soil responded with improved tilth and water infiltration?

If you do not have a detailed soil map of your farm, use your own knowledge of the farm to draw up a working map or contact your Productivity Services officer to access suitable maps.

Take a fresh look at the layout of the farm and consider problem areas, such as where water tends to lay for too long or where you have difficulty in applying sufficient water for the crop due to a change in soil type or slope.

List the pros and cons of your current irrigation system and assess its performance. Productivity Services officers can be a great resource for this planning phase.

## Resources

Productivity services team

Irrigation specialists