

## CASE STUDY: RX PLASTICS G-SET

# Sprinkler technology allows for water efficiency

***Not all pasture irrigation needs be from a centre pivot. The G-Set is a technologically advanced Kiwi-designed and made sprinkler which results in water efficiency. It is particularly handy in areas not suited to pivots, which are not flat and straight.***

“The G-Set is perfect for slopes or hilly countryside and works in such a way that the absorption of water into the soil is very high,” says Phil Gatehouse at RX Plastics which manufactures the G-Set.

“Many irrigation systems apply water at a very high instantaneous application rate causing run off and pooling. That is not efficient use of water. The G-Set allows for a low-pressure, specific application of water that plants and soils can better absorb in a sensible way,” explains Phil.

“Because the water is applied at a slow rate, the soil is able to absorb it properly. It also prevents soil erosion which is one of the bigger contributors in generating phosphate run-off into water ways.”

The G-set runs off a 63mm polyethylene ring-main with units placed at no greater than 40m apart and no further than 40m to another unit in a triangular fashion. The G-Set ring can have up to 24 units per ring main (960m length) with one unit at a time operating per ring main. These G-Set units are able to be individually tailored to soil and climate conditions i.e. more application depth on higher wind and sun areas and lower application depth to areas of low wind and sun. The G-Set then operates in a fully variable rate method of irrigation maximising the precious water resource.

One of the great things about a G-Set is that each unit can be operated individually. So you might have a number dotted around a large area but you can individualise which part of the paddock receives water and when.

The units are powered by a solar panel or battery and each have a central processing unit – a mini-computer – which can be operated digitally from a central hub or computer.



“They are generally co-ordinated so that one goes on for half an hour applying only a small amount of water depth then switches off before the next one starts up. There is flexibility which gives you control on how and where you apply your water reducing waste,” says Phil.

The G-Set has been described as having a good design principals – a single nozzle, as low to the ground as possible for best distribution of water to the pasture, with low pressure.

The system has been around for about two years during which around 2000 sold so far. It is used and distributed by companies like WaterForce, Grafton Irrigation, Rainers Irrigation, Plains Irrigators and others.

“Pasture farmers are under pressure to manage their water efficiently and reduce their nutrient run off – the G-Set does both of those,” says Phil.

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IRRIGATION