

<b>Name:</b>	Market Garden fully automatic watering system
<b>Project Description:</b>	Replacement of manual flood irrigation, with a fully automatic dripper tape system that is significantly more water efficient and effective.
<b>Date of Report</b>	2 August 2007

## 1. Background

Karkana Support Services Inc. is a not for profit Non Government organisation formed in 1973 providing services for people with a disability. We currently employ 35 people in our Business Services which comprises a market garden, fruit and vegetable shop, vegetable processing division and commercial kitchen. We need to increase our productivity and in turn viability to afford the introduction of pro rata Award Based Wages which is a requirement under the Commonwealth Government Disability Reform Agenda.

Karkana Support Services Inc. has a 28 acre market garden and to help address the above issues we needed to dispense with the inefficient and ineffective manual watering system which was labour intensive in favour of a fully automatic watering system.

Another significant benefit of the fully automatic watering system was the move to exclusively use dripper tape dispensing with flood and furrow irrigation. The use of dripper tape significantly reduced water consumption.

## 2. Description of Project

The project scope was to install a new fully automatic watering system exclusively using surface and sub surface dripper tape.

The system was designed by Pratt Water of Melbourne and T-Systems of Mildura comprising 36 stations.

The dam bank was elevated and widened to accommodate 4 x 5000 gallon tanks enabling the system to use gravity feed or pump. Water from the Wimmera Mallee channel system is filtered before being pumped into the tanks.

## 3. Key Activities Completed

The project was divided into two stages for financial, manpower and season reasons.

Stage 1 was completed in December 2005 and Stage 2 was completed in June 2006.

Stage 1 covered approximately 80% of the market garden leaving the remaining 20% in Stage 11. Stage 11 comprised the section of market garden in the south east corner of the property including the orchard, asparagus patch and other small crops.

#### **4. Result Achieved**

Although only in use for six months we have already seen the improved results with a record 50 tonne crop of pumpkins. With experience learnt from the 2005/2006 summer crops we anticipate results from 2006/2007 will improve substantially. A significant benefit from the installation of dripper tape has been the move to liquid fertiliser which is a considerable time saver.

#### **5. Issues Arising**

As the fully automatic system was new to our staff we have learnt by 'trial and error'. Removal of dripper tape is time consuming and dripper tape blow offs are frustrating.

#### **6. Finance**

This project cost \$70,000 and was funded by the following donations/grants:

\$35,000	FRRR/Pratt Foundation
\$20,000	Smart Water Fund
\$15,000	Ian Potter Foundation

#### **7. Communication**

This project received considerable media attention and publicity:-

1. A sign has been erected (see photo enclosed)
2. 8,000 brochures have been distributed (see enclosed)
3. Horsham Rural City Council have visited our market garden
4. The project was featured in our Newsletter (see enclosed)
5. Numerous bus loads of people have visited our market garden.
6. Article from The Wimmera Mail-Times (see enclosed)
7. CEO interviews on ABC, Triple H and 3WM radio

#### **8. Conclusion**

The installation of the fully automatic watering system has begun delivering the benefits that were envisaged when the submission was lodged namely:

- Ability to increase acreage sown.





## KARKANA SUPPORT SERVICES MARKET GARDEN



### FULLY AUTOMATIC WATERING SYSTEM

Installed March 2006... Cost \$70,000

#### Funding

FRRR Pratt Foundation \$35,000

Smart Water Fund \$20,000

Ian Potter Foundation \$15,000

#### Design

T Systems

Pratt Water

#### Installation

Wimmera Aquatrail

Klemm Earthworks

GF & JD Coutts Pty Ltd



## \$70,000 Watering System

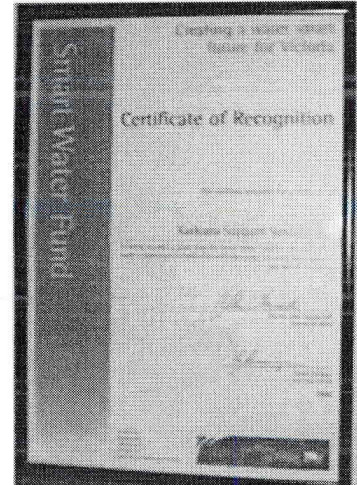
A fully automatic watering system has been installed on our market garden at a cost of \$70,000.

This project was funded by grants of \$35,000 from FRRR/Pratt Foundation, \$20,000 Victorian Smart Water Fund, \$15,000 Ian Potter Foundation.

The project was undertaken in two stages, the first stage being commissioned late last year and second stage will be completed within a few weeks.

The system was designed by T Systems and Pratt Water and installed by Wimmera Aquatrail and Klemm Earthworks

The watering system exclusively uses dripper tape which significantly reduces water consumption.



*Certificate of Recognition from Smart Water Fund*

## Bumper Pumpkin Crop

This year the market garden produced a bumper pumpkin crop—48 tonne—watered by dripper tapes.

The beauty of dripper tape is that crops can be fertilized through the tape using liquid fertilizer. This method of applying fertilizer is much easier and quicker than applying the traditional granular type.

