

# On-farm demonstration of controlled traffic farming for vegetables in north-west Tasmania

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**Key Words:** controlled traffic, on-farm demonstration, ferrosol soils

## Take home messages

- ❖ *Tracking stability on compacted wheel tracks and side slopes remains an issue to be addressed for the implementation of controlled traffic farming (CTF).*
- ❖ *Undulating topography creates challenges for tillage operations and drainage under CTF.*
- ❖ *Harvest traffic can cause soil compaction, even for summer harvested crops like poppies.*

## Introduction

Until the commencement of this project, controlled traffic farming (CTF) work in the Tasmanian vegetable industry had been confined to gently sloping land. This project was established on a site with complex topography, and aims to extend the developmental process that began with the CC NRM project at Gawler. This project operates a seasonal CTF system within the constraints of a commercial farming operation and equipment suite.

## Objectives

The objective is to monitor and demonstrate the application of CTF in vegetable production within the constraints of existing farm operations and logistics on the north-west coast.

## Methods

An 11 ha site, with four replications of CTF and conventional management, was established in August 2010. Tillage preparation for the first crop (poppies) was common across the site, with guidance used in the controlled traffic area, but not in the conventional area. Poppy harvest did not follow traffic lanes due to the unavailability of a compatible harvester at the time. The site has since grown broccoli and green beans, before being sown with a green manure crop, and then planted with leeks. Significant tracking issues have occurred on this site. Interviews were held with a number of growers and contractors to determine their views and understanding in relation to controlled traffic.

## Outcomes to date

Soil samples taken prior to poppies, and soil moisture monitoring during the poppy crop, showed no differences across the site. Soil sampling after poppy harvest showed a significant increase in bulk density, and loss of porosity, in the surface soil of the harvester wheel tracks. Improvements in soil conditions started to be more pronounced by harvest of the bean crop. Tracking stability on compacted wheel tracks and side slopes remains an issue for CTF in the vegetable industry. A number of factors contribute to the issue, including the need to keep wheel tracks as narrow as possible to maximise the area of the cropping bed. Potential solutions include the use of steerage discs and alternative sequences of field operations.

## Funding and project duration

Department of Primary Industries, Parks, Water and Environment  
– Sep 2010 – Sep 2013

## Technology transfer and publications

- Presentation to the McCain Community Task Force.
- Interviews with selected growers and contractors.
- 3 farm walks

## Additional collaborators

- Damian Darby (Highlees Harvesting)
- D. D. & J. Clark
- Premium Fresh



**Side slip on controlled traffic tracks and sloping topography**