



# CTF for onions and potatoes

Story update

June 2010

A controlled traffic farming project being conducted by the Tasmanian Institute of Agricultural Research has had a field in fully integrated CTF for the past two years. Following potatoes grown in 2008/09, and then a winter green manure crop, onions were sown in September 2009.

Harvest of the onions was completed in March 2010 and assessments based on field samples indicated a yield increase of 13%. Because of the bonuses paid for specific size grades, a 16% increase in gross return per ha for the CTF crop is expected.

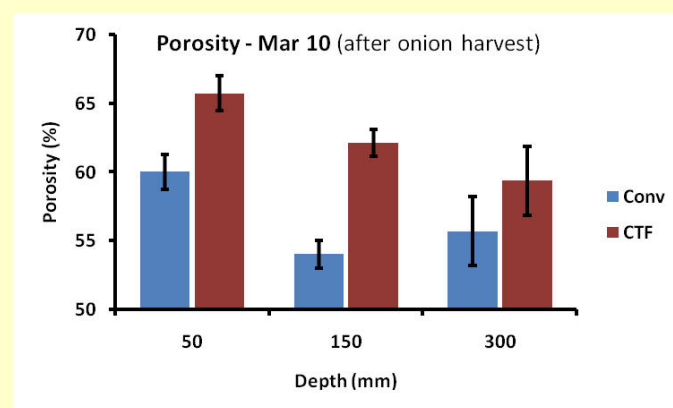
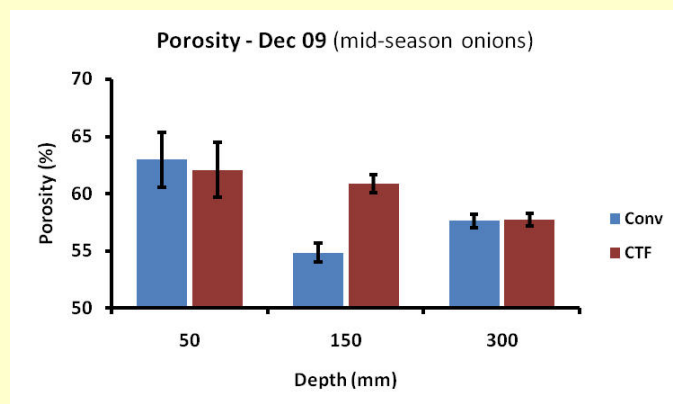
Many of the benefits of CTF arise from improved soil conditions, as a result of confining vehicle traffic to permanent wheel tracks, rather than having random traffic, as is the case in conventional farming systems. A number of soil properties respond favourably when the soil is not subject to wheel traffic.

One example is porosity, which is a measure of the volume of pore space in the soil. Porosity influences how much water can be stored, how well the soil drains when saturated, how roots explore the soil environment and how well air moves in the soil and around the root zone. Soil samples taken during the growth of the onion crop, and after harvest, show marked differences in soil porosity between CTF and conventional practices, even though the conventional area was cultivated to "manage" the effects of compaction from the previous harvest. During the growth of the crop, the differences were most apparent at 150 mm (6") depth. This probably reflects compaction in the conventionally farmed area as a result of bed-forming operations taking place over the top of previously deep loosened soil. After harvest, differences were observed at both 50 and 150 mm depths.

A small reduction in irrigation water use in the CTF area was indicated by rain gauge monitoring.

The site has now been planted to winter broccoli.

John McPhee, June 2010



Can we continue to treat soils like this in the future? Organic soils in particular are a finite resource and many are presently being squandered

Editor's note