

BEFORE THE HEARING COMMISSIONERS

IN THE MATTER of the Resource Management Act 1991
("the Act")

AND

IN THE MATTER of the Resource Management Act 1991
and the Environment Canterbury
(Temporary Commissioners and
Improved Water Management) Act 2010

**CASE STUDY EVIDENCE – ALLEN LIM
FOR HORTICULTURE NEW ZEALAND**

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INTRODUCTION AND OVERVIEW

My name is Allen Lim of Jade Gardens. I have included information on the nature of my business in the attached case study.

In general terms Jade Gardens is concerned to ensure that Variation 1 will apply in a manner that allows for good practices in horticulture to continue without imposing unnecessary compliance costs while achieving the overall outcomes for the Selwyn Te Waihora that the community as a whole has signalled is necessary.

APPENDIX 1 – CASE STUDY – ALLEN LIM

PURPOSE:

To describe the nature of vegetable production operations in Canterbury and demonstrate what we are doing in terms of managing potential leaching of nitrogen to inform the rule framework in the Plan.

1. BASE INFORMATION

Area of growing operation: 150 Acres (60Ha)

Number of properties/ sites that it is undertaken on: 4

Ownership of sites – owned/ leased/ shared: Roughly 4/5 of my land is leased

General location in Canterbury: Lincoln/Rolleston

Water zone location : Selwyn – Te Waihora

Number of staff employed. 12

2. ROTATION

Description:

Still establishing but on home block and long term lease block, generally brassica crop / leafy crop / spring onion/ pumpkin / wheat / some onions and odd ha. of sweetcorn.

On one lease block, I double crop broccoli for 1 year then hand it back to the farmer for grazing and wheat for 3 to 4 years before leasing back again. I get a new block the following year.

I also do land swap with neighbouring farmer to achieve rotations. Under this arrangement, I get new land every year for broccoli.

Length of rotation:

Still establishing but varies across my blocks from 2– 9 years.

I have no control over the management of the lease land when it is under use by the owner. I don't get any records from land owners other than being told what crop was in there previous. I always get

soil tested before going into new block. I will not go in if a brassica has been grown because of the risk of clubroot infections.

3. IRRIGATION

I have access to a gun, k-lines and a boom irrigator. The equipment is all mobile so I can move across my different blocks. To minimise the amount of watering I have to use, sometimes I only grow a crop for the winter. For example, I grow winter cabbages and a spring cauliflowers - both are transplanted and autumn, watered once and usually never water again. I also grow a crop of red onions and pumpkins which are not watered very much because I am not after the huge yeilds and the pumpkins are basically a cover crop. All the other crops get about 25 – 30 mm as a maximum application and between 75 & 250 mm over the season of growth with Brussels sprouts using the most water.

4. FERTILISER USE

Fertiliser is targeted at the crop being grown and I use mixes specially prepared for horticultural use and some are formulated specifically for a particular block of land. Mostly prills are used so that it releases slowly and spreads more evenly. The fertiliser is either banded, incorporated or side dressed depending on the nature of the crop and the needs of the crop at the time of application.

5. MANAGEMENT PRACTICES INCLUDING PRACTICES TO REDUCE POTENTIAL FOR LEACHING

The management practices including practices to reduce potential for leaching are:

- All fertiliser is applied according to soil tests and fertiliser recommendations
- Irrigator speeds are computer controlled so as to apply correct amount of water evenly and to ensure soil does not reaching saturation
- Prills are used instead of powder mixes (slower release and more accurate)
- Rotations are followed that maintain soil nutrition and minimise disease
- I seek to grow on deeper soils with at least 500mm cover of topsoil
- I incorporate residual matter and covercrop to retain soil organic matter

- Records are kept of practises followed

6. NZ GAP

I am a member of NZGAP and have been for approx 10 years.

7. OTHER CONCERNS

- Vegetable crops are not as robust as other crops.
- Roots system of vegetables not well developed and does not compete well with weeds.
- In keeping the crop weed-free, there is a lot of exposed soil at any given time which means we may be at a disadvantage simply because of the our crop/ farming system. We may have to change the farming system but need research to tell us how to change.
- All vegetables sold through the market system must meet certain quality specifications. These are set by the industry/ buyers and largely reflect consumer expectations, which cover size, shape, texture, colour and other defects.
- Talking to other growers, we agree that the relationship between reduction in fertilizer input and the reduction in yield will not be a linear relationship. The quality specification mentioned above will mean that an under-sized/ discoloured head of broccoli, artichoke or silver beet won't make it to the market because they are deemed unsalable - resulting in technical crop failure.