

**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

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**CASE STUDY EVIDENCE – DAVID HADFIELD  
FOR HORTICULTURE NEW ZEALAND**

**29 AUGUST 2014**

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**ATKINS | HOLM | MAJUREY**

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## **INTRODUCTION AND OVERVIEW**

1. My name is David Hadfield. The details of my business' operation are contained in the Appendix to this evidence.
2. One issue that I wish to hi-light is the difficulty with using OVERSEER due to number of updates and versions we are required to deal with. The input of data into OVERSEER is an extremely labour intensive and time consuming process because OVERSEER does not retain data from year to year and this makes the re-entry very frustrating. Many average farmers say that there are so many problems with simply entering the data. In our case it takes up to 2 days to enter our records for each year.
3. After being involved in this process for the last 4 years at a local level and 9 years with HortNZ in relation to OVERSEER it is clear that the results are still not accurate and are hard to correlate between versions.
4. I understand others are discussing version control issues associated with OVERSEER
5. We operate an average sized farm of around 380ha, most of which is leased. This leasing arrangement adds to the complexity to our operation as we have to consult with owners and supply them with information as well. We have found that in practice it is not clear as to who provides the information to Ecan - us or the landowner.
6. I am concerned with the way the baseline is to be assessed as I am not sure it will truly reflect the nature of our business – adding to the overall level of frustration and uncertainty. Related to this is a concern about workability. In the past 2 years we have lost the lease of 2 blocks as they were sold to a dairy farmer at the end of a lease period. For both properties we have not given any records as to cropping history or fertiliser use or practises used. Therefore, how can we, as the new owners, complete our 2009 to 2013 baselines?

**David Hadfield**

**29 August 2014**

## **APPENDIX 1 – CASE STUDY – DAVID HADFIELD**

### **PURPOSE:**

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

### **1. BASE INFORMATION**

**Area of growing operation:** 378 Ha

**Number of properties/ sites that it is undertaken on:** 8

**Ownership of sites – owned/ leased/ shared:** 20 Ha is owned, the rest is leased.

**General location in Canterbury:** In a Triangle between Sedgemere at south end of Lake Ellesmere, Greenpark in behind Lincoln and up to Courtney next to the Waimakariri River. 45 km between furthers to blocks.

**Water zone location:** See attached Map.

**Number of staff employed:** 4 staff permanent, 1 Part time, 1 Summer Uni Student, 4 contractors (Some of the Spreading, All Spraying, Windrowing, Some Drilling)

### **2. ROTATION**

#### **Description**

Our rotation varies but generally we try to do three crops every 2 years on each block of land. Generally, our operation would be in pastoral use third of the time although this varies. We grow a combination of arable crops, process vegetables and vegetable seeds.

#### **Crops grown**

Winter and spring barley, Broad beans (faba beans), Triticale, Oats, seed peas, blue peas for stock food and process peas, maize for grain and silage, grass seed (both perennial and annual plus Fescue, Turf Grass and Browntop) and grass as a crop for dairy grazing, linseed, process green beans, tick beans, white clover, wheat

(milling and feed wheat), radish seed, Lucerne for feed, coriander red beet and carrot for seed. Our rotations are subject to change on a regular basis to incorporate new crops and contracts we may obtain. We have also varied over time because we are constantly trying new things. Some work, some do not.

### **Length of rotation**

Quite variable really with the proviso that we tend to be third pastoral, two thirds cropping and we try to maintain three crops every 2 years. Particularly where short growing season spring/summer crops like process peas are in the rotation. Please see our attachment that describes the records for our operations on each of the properties we are leasing for the period of time we have been managing the property.

### **3. IRRIGATION**

Our irrigation management makes use of mobile plant to a large extent due to the fact that we lease most of our land. We irrigate using a range of mobile equipment including siderolls, hardhoses with gun or boom attached or Turborainers. None of the blocks have centre pivots or lateral irrigators on them.

### **Area under irrigation**

Around 100 hectares are never irrigated as we do not have consents to irrigate or because the water table is within ½ metre of the land surface. All the rest of the land is irrigated depending on crop requirements. We set the crops up to meet our target yields if water is cut off due to low flows we are more likely to have overfertilised as fertiliser is applied at earlier growth stages. Water tends to be restricted later in the season. Mostly during the pod or grain fill stages.

### **4. FERTILISER USE**

We tend to apply different fertilisers for each crop depending on the requirements so it is difficult to provide exact amounts we use. Some of the crops require none. Most times when we lease the only information we get is what we can see on the paddock. So we always do soil tests and then keep good records of our own. When we do apply fertiliser we apply at the beginning of the growth period and sometimes come back if it looks like more is required. As an alternative to winter fallow we are letting volunteer oat crops and

other plant species strike and then grazing or sow Italian ryegrass and oats to graze. If we owned the land we would probably incorporate more residues but cannot afford to do so with the leasing agreements we have. We sell the straw residue. When we look for land we try to go for a reasonably deep silt loam with few stones but we sometimes just have to take what is available.

## **5. MANAGEMENT PRACTICES INCLUDING PRACTICES TO REDUCE POTENTIAL FOR LEACHING**

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

- Because the land is leased we have very short periods of time between crops.
- We always fertilise based on recommendations and thorough soil testing (test 1/3 of land each year).
- We are always seeking to maximise our yields to absorb as much fert as possible.
- Our rotation is part of our fertiliser management.
- We irrigate to achieve our yields as much as our consents allow us to.
- We use all cultivation methods from full cultivation including ploughing through to direct drilling.

## **6. NZ GAP**

We are not NZGAP accredited. It is not a requirement of any of our contracts. (Most arable farmers are not accredited). However we do complete spray and fertiliser diaries for our process crops for Heinz Wattie.

## **7. ECONOMICS**

We were the winners of the 2000 and 2001 United Wheat Growers National Supreme Milling Wheat Competition. However, despite this, we no longer grow milling wheat as it is more profitable to grow feed wheat.

A large proportion of our cereal crop area is barley as we are not just selling it for \$385 / t but incorporate it into a stock food mix which increases its value to \$1,000 / t.

We double crop process peas and green beans on early land near Lake Ellesmere.

April to end July Green feed for ewe hogget's, August to December Process peas, January to April Process Green Beans. Gross Return per ha \$9,200 Net return per ha \$4,900.

Radish can be a very profitable crop but if the germination % is not achieved at harvest time can be a very expensive crop to grow. Good crop with good germination Net \$6,000/ha if the germination is not up to contract specification it could result in a loss of \$5,000/ha.

Overall cropping/vegetable growing operations are as profitable as dairying but our cashflow is a lot less even.