

## Appendix 1 Isbister B (2015) Within Paddock Management Zones, Facey Group Newsletter June 2015

### Facey Group Newsletter June 2015

#### introducing break crops

- Avoid using barley varieties that are susceptible to NFNB in disease-prone environments. Baudin<sup>(1)</sup>, Commander<sup>(1)</sup>, Fathom<sup>(1)</sup>, Litmus<sup>(1)</sup> and Mundah are (among others) shown as susceptible in the Department of Agriculture and Food WA's 2015 Barley Variety Guide for Western Australia
- Avoid the use of seed and foliar fungicides containing tebuconazole on barley
- If NFNB is the only disease present, use fungicide mixes that contain a quinone outside inhibitor (QoI)
- If a second treatment is needed, use a fungicide containing epoxiconazole, or a fungicide mixture such as a prothioconazole and tebuconazole, or propiconazole and cyproconazole
- Always use the recommended label dose
- Control measures should be diversified or augmented by the use of integrated pest management techniques that reduces the inoculum levels before the crop. For example stubble burning, burial or enhanced decomposition.

#### If you see fungicide resistance....

Send a sample to CCDM with current information about fungicide use history and crop variety type.

The group are interested in all cases of resistance, especially net blotches, tan spot and wheat powdery mildew. As well as Botrytis (grey mould) and Ascochyta in pulses, and Leptosphaeria (Blackleg) in canola.

For more information, advice or instructions on sampling, contact Alexandra Kay of the Fungicide Resistance Group on 9266 1204, [frg@curtin.edu.au](mailto:frg@curtin.edu.au)

Sign up to our newsletter for the latest research findings on fungicide resistance and crop disease research.

Visit <http://ccdm.com.au> and sign up on our front page!

### WITHIN - PADDOCK MANAGEMENT ZONES

Article [PrecisionAgriculture.com.au](http://PrecisionAgriculture.com.au) GRDC RCSN Fasttrack

Project title: Case studies to review methods for defining within-paddock management zones - Kwinana West zone.

#### What data is useful for paddock zoning in the Kwinana West zone?

The beauty of precision agriculture (PA) technologies is there is a huge range of information that can be collected to help make input management decisions, the challenge is knowing where to start!

This is the focus of a one year GRDC RCSN project that will use a case study approach to review the different types of spatial information on three farms in the Kwinana West zone.

The information will be evaluated for its suitability to measure paddock variation and cost effectiveness to determine management zones.

There are many types of spatial information available from low cost simple mud maps drawn from grower

knowledge; yield maps; satellite imagery (NDVI), to more costly electromagnetic induction (EM/EM38) and gamma radiometric surveys.

Production based information (i.e. yield maps, satellite and farmer knowledge) measure plant performance as a result of interaction with soil type, season and agronomy.

EM and gamma radiometric surveys can be used to map soil type and associated soil constraints such as subsoil acidity or salinity. They do not always reflect yield as these constraints or soil properties may not be the key driver of production variation due to other factors such as frost or waterlogging.

The use of soil zones versus production zones to define management zones is a longstanding debate between PA practitioners. There are now many examples of where either method has been used successfully in WA. There are also many examples where spatial information has been collected and then discarded as it looks nothing like what the grower knows of his paddocks performance.

PrecisionAgriculture.com.au will work together with the Facey Group and Corrigin Farm Improvement Group, three local farmers and their agronomists to evaluate the different types of information. The case study farms are located at Wickiepin, Popanyinning and Corrigin.

For more information contact Bindi Isbister mobile 0428213006 and email [bindi@precisionagriculture.com.au](mailto:bindi@precisionagriculture.com.au)



*Photo: Electromagnetic and gamma radiometric being collected at Wickiepin for the GRDC RSCN Kwinana West Project. (Source: Kieran Brennan)*

## ARE HERBICIDES HURTING MY SOILS?

### Are herbicides hurting my soils?

The move to conservation tillage and herbicide-tolerant crop cultivars means that many farmers are now relying on herbicides more than ever before. GRDC has recently co-funded a 3-year project (DAN00180) to

## Appendix 2 Isbister B (2015) Is your yield mapping ready for harvest, Facey Group Newsletter October 2015

### Facey Group Newsletter October 2015

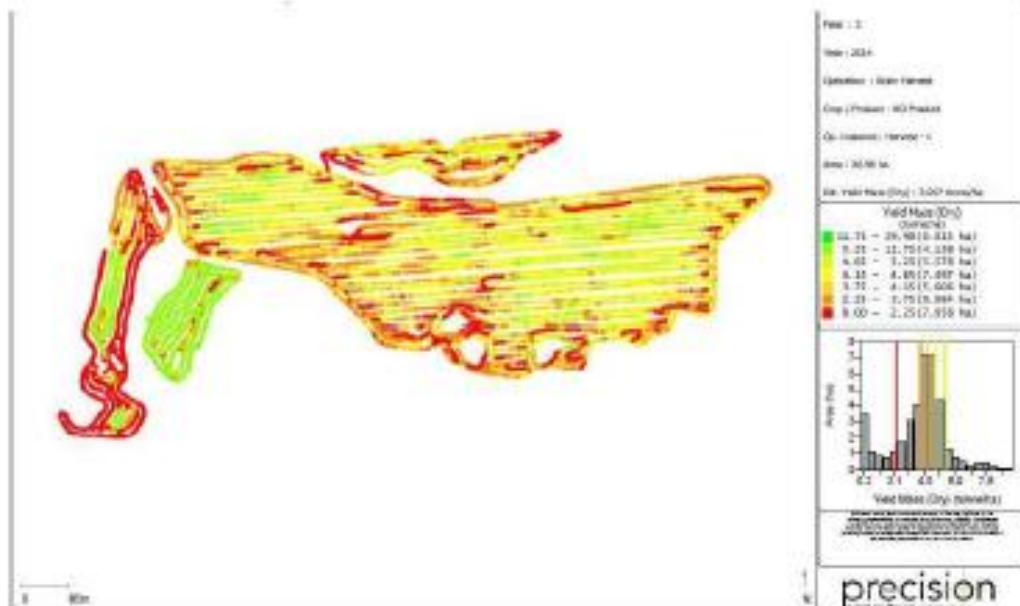
- Raise the header front at end of runs, to reduce amount of rubbish data & try to keep the comb full.
- When running numerous headers in the same paddock, try to harvest side by side as this assists post-harvest calibration.
- Check GPS is working properly at start of each day.

#### Data Management

- Backup (copy and paste entire card onto your computer) & download regularly during harvest (at least weekly) to yield monitoring software, especially at start of harvest to ensure everything is working well.
- Review quality of data and provide feedback to harvest operators if issues are arising.
- ALWAYS store raw data and keep a copy, before you manipulate or clean up data.

A common misconception is that you need 5 years of yield maps before they are useful. This is not so. One year can tell you a lot combined with your historical knowledge of the paddock and possibly some other types of information such as soil test results, biomass imagery or EM38. Maybe this is the year to start?!

For more information contact Bindi Isbister, [PrecisionAgriculture.com.au](http://PrecisionAgriculture.com.au), mobile 0428215006  
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*This is an example of yield data that is not accurate due to a problem with the sensor. Harvest started in left corner of the paddock the sensor read zero (red) then started reading a bit higher (green) as the day went on it started working. This problem has been rectified for 2015.*

## *IS YOUR YIELD MAPPING EQUIPMENT READY FOR HARVEST*

Is your yield mapping equipment ready for harvest?

Yield maps are your report card at the end of the season. They can help you identify which parts of the paddock are not performing to help strategically manage your inputs. You can turn them into a gross margin map, a phosphorus replacement map, fertiliser application map, or compare them to other data layers to create management zones. Just like a header needs a service so does the yield mapping equipment.

One of the lessons we have learnt reviewing different methods of zoning as part of the GRDC funded RCSN project FUT00001 is, if you would like to use your yield data in the future it's important to make sure it's working! It is very common for growers to think they have a few years of yield maps only find when they pull them out to use them the data isn't there.

The following are some tips to help collect quality yield data that you can use to refine your management in the future.

### **Before harvest**

Check Grain Flow Sensor for

- Wear on the deflector plate.
- Objects jammed behind the plate.
- Cables to sensor are not damaged (vermin).

Format the data card

- Start with a clean/formatted data card or USB each season.
- Use good quality memory cards such as SanDisk, not cheap cards. Some systems have maximum card size limits. If you have a little black USB stick commonly in CaseIH headers check you can read the data from the card. There was an issue with the batch of sticks that corrupts the files. If there is an error when you try open the .cn1 file ask your local dealer to check the serial number.
- Make sure files on computer are backed up to external storage device, in case computer crashes.
- Use the same paddock names each year, labelled as the harvest year ie 2015.
- You can usually load paddock names and crop types onto card prior to harvest.
- Guidance lines and paddock boundaries can be pre-loaded for some systems. Challenges still exist when trying to match guidance lines from different manufacturers.

Check Calibration Basics

- Height – mapping ceases when the comb is lifted – you need to set this height.
- Vibration – take into account, look at instructions with unit.
- Speed/distance – for transmission driven units. Not a problem for GPS units.
- Moisture - calibrate against hand-held moisture meter.

### **During harvest**

Harvest operation

- Calibrate header at start of paddock and do not alter settings half way through a paddock.
- Make sure you have entered the correct crop type for each paddock.
- Record grain weight totals for each paddock.