

Tuesday 8th February 2005

Making the Most of Final Year Projects

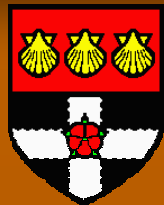


Dan Halliday

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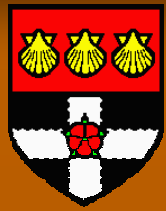
The University of Reading



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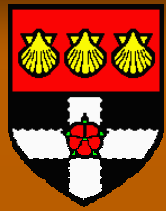


- Farming Family – Connection
- Leicester: Farm Experience – Pierce Contracting
- Oxfordshire: Lockinge Estate
- University of Reading (UOR) 1998-2001
- Graduated 2001 BSc (Hons) Agriculture Class 2i
3rd Year Option – Systems and Management
- Currently in AFIT; Undertaking the Farm Business Survey based at UOR, Covering Herefordshire



Dissertation – The Build Up!

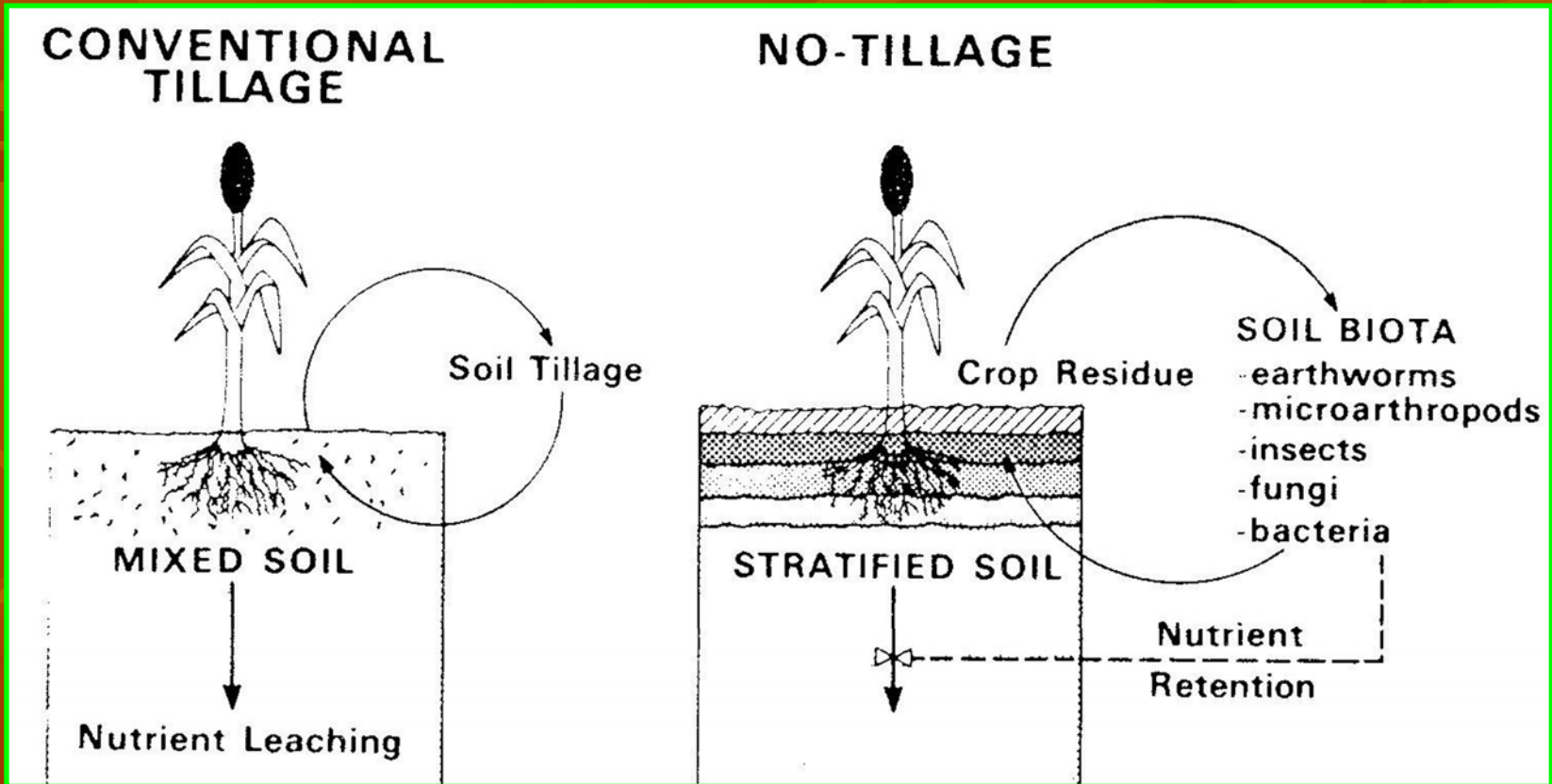
- Free choice of subject
- Management Systems Emphasis
- From Part 2 Subjects – Interests in Mechanisation + Tillage Systems
- Working On Large Estates – Practically undertaking these tillage methods
- What were the implications?
- The Idea was born...

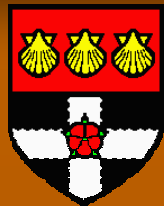


Tillage Systems

- Outlined that there were 3 Main Tillage Types...
 - 1) Traditional Tillage
 - Plough/Press, Power Harrow, Drill
 - 2) Reduced Tillage
 - Disc, Cultivate, Drill
 - 3) Minimum Tillage
 - Direct Drill
- ...Adv./Disadv. Ploughing/Soil Inversion?
- ...Adv./Disadv. Reduced/Min-Till?

Conventional / Min-Till





Harvesting Machinery

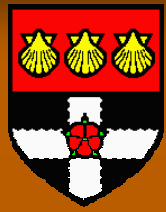


- Tillage system impact on following crop?
 - Straw incorporation of particular importance...
 - Behind big modern combines – not homogenous spreading of chopped straw and chaff...
Implications?

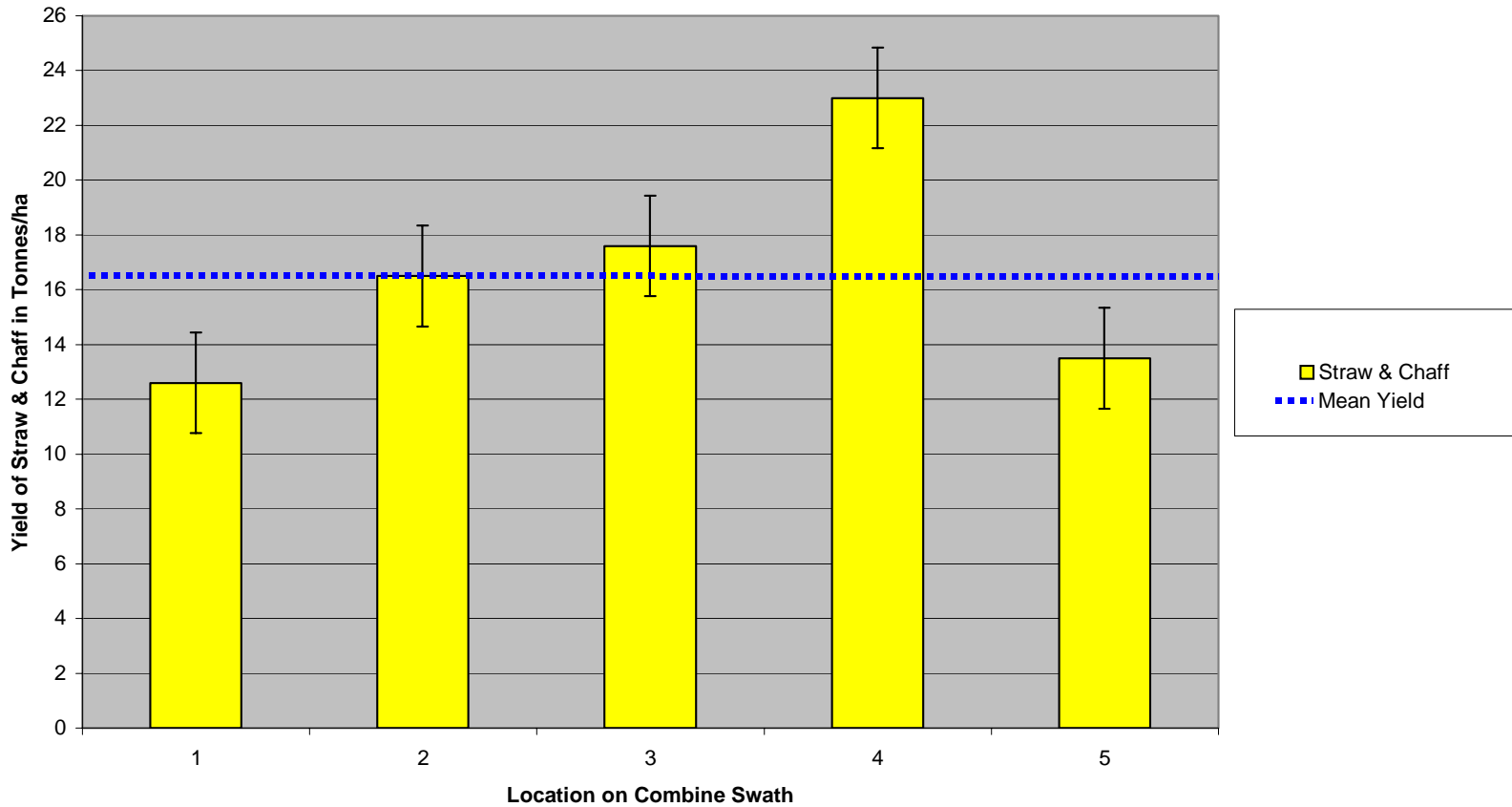


Dan's Dissertation 2000/01

- An investigation into the effect of straw incorporation within minimum tillage systems on wheat (*Triticum aestivum* L.) establishment and growth in the U.K.
- Wanted to investigate the chopped straw spread behind a Lexion 470 convention combine – with straw walkers (25ft. Header) – and look at the effect of that on the following crop...Establishment, growth and residual N.



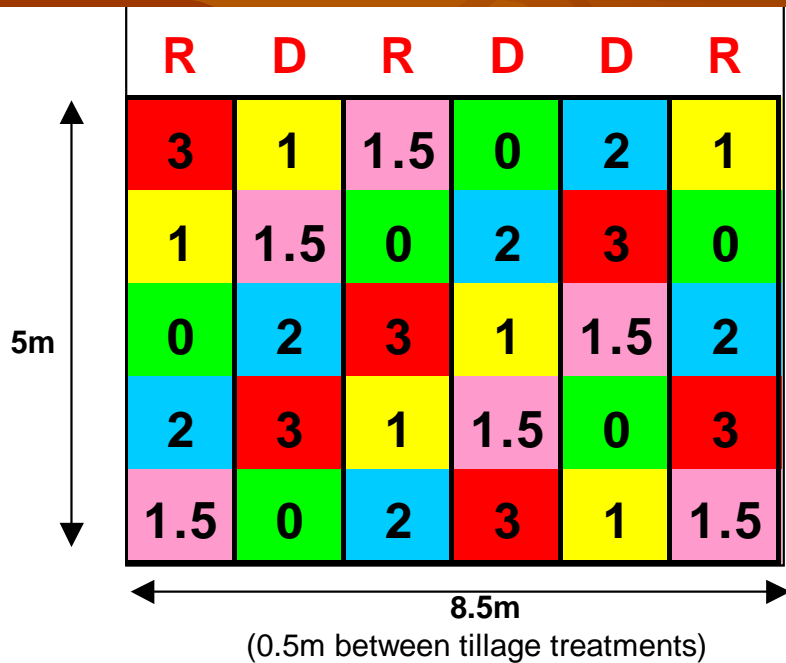
Straw/Chaff Spread across 25ft





The Trial Plots

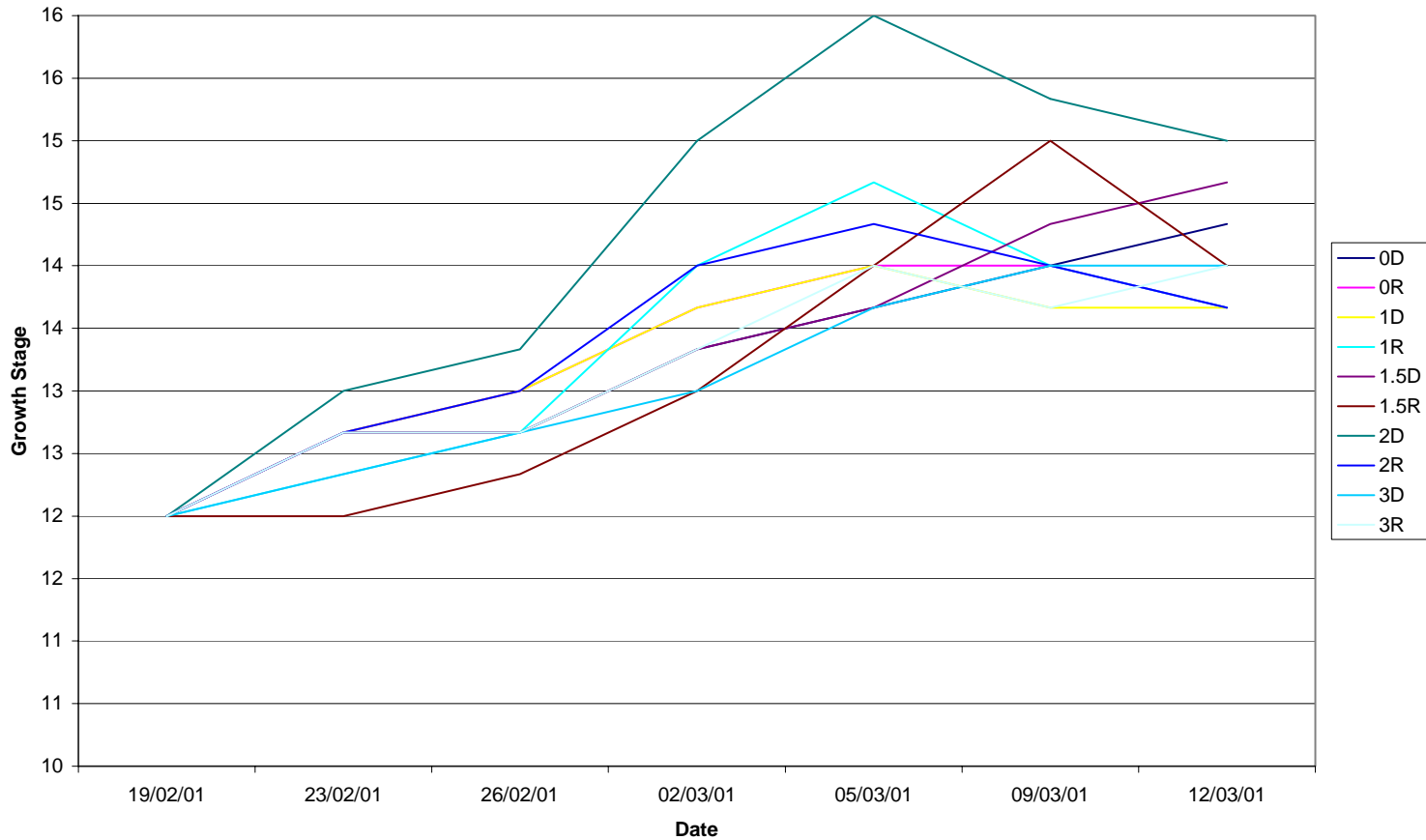
Experimental Design



- R = Direct Drilled into Rotavated Soil + Stubble
- D = Direct Drilled into stubble
- 0-4 = Amount of Straw (kg/m^2) applied to the 1m^2 Plot

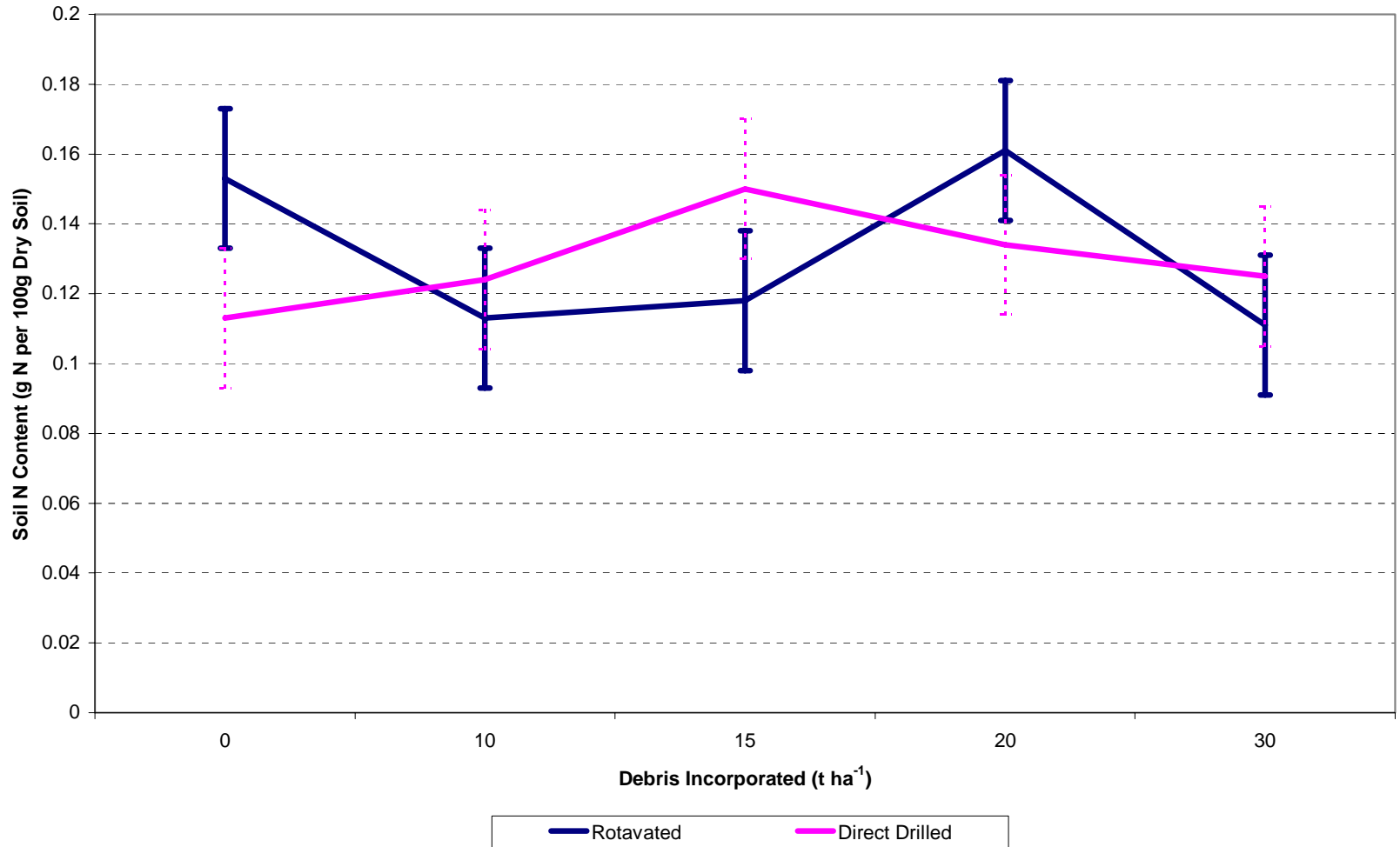


Growth of Tagged Plants





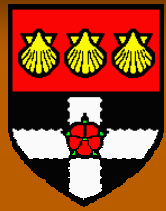
Residual Nitrogen?





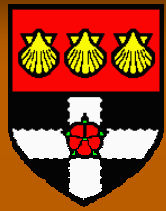
Dissertation Conclusions...

- Increased densities of straw do not have a negative effect on crop establishment. Disease?
- Tillage treatment had no significant effect on crop establishment. Weeds?
- No straw incorporation, greater amount of residual nitrogen where cultivation includes rotavating compared to direct drilling
- When straw incorporated, very little difference between residual nitrogen levels in each tillage treatment



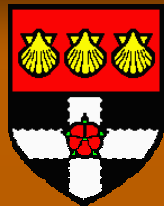
Research Skills Obtained

- Planning – Research Process, All Stages
- Team Management – Helpers!
- TIME management Summer '00-Easter '01
- Statistical Skills – Neighbouring Effects on residuals!
- Communication Skills – Farmers + Academics
- Public Speaking Skills – Dissertation Presentation + YFC



Its Use In The Workplace...?

- Knowledge gained through Degree, Dissertation and YFC
- On-farm use of communication skills
- Analysing large data sets...practical statistical experience
- Tight Deadlines...with supervisor
- Working with difficult people!



Moving On...

- After 3 Years carrying out the Farm Business Survey am now moving to Sales
- Communication skills
- Most of all my dissertation, its planning and undertaking taught me to not always keep thoughts within the box...
“LOOK OUTSIDE THE BOX OF COMMON THOUGHT...”
- This is a massive skill to have...the appreciation of other variables, not always considered