Harden Murrumburrah Landcare

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PRELIMINARY REPORT OF HARDEN MURRUMBURRAH LANDCARE WHEAT CROPPING DATABASE SURVEY

To date the database has 68 paddocks entered. This represents approximately 97% return on the anticipated number of forms we expected back and all contributors should be congratulated on the effort.

Whilst the drought was obviously the main limiting factor to crops this year there was still up to 200% difference between crops. If the rainfall effect is compensated for across all crops then yield differences of 150% occurred. That is a range of over 1t/ha or $250/ha.

The main factors to show up to cause this variation are 1. Sowing time, 2. Rotation, 3. Lime or pH level.

The survey showed that yields fell by 3.0kg/day for every day that sowing was delayed. It also showed that crops sown prior to the break in early June yielded 2.002t/ha as compared with 1.31t/ha for crops sown after the break. This, of course, concurs with much of the advise that many advisers are suggesting and is also in line with many other research trials.

The data also showed that crop rotation was the next most important factor with the average yields for various rotations as follows:-

Wheat after Canola	1.8t/ha	average yield
Wheat after Lupins	1.5t/ha	" "
Wheat after Oats	1.3t/ha	" "
Wheat after Wheat	1.3t/ha	" "

It is interesting that wheat after oats is not providing an adequate break crop. This result is consistent with data coming from other trials currently being conducted by CSIRO.

From the above rotational results it, at first, appears that canola maybe the best rotation. However, the data also showed that there was an average 0.5t/ha benefit from applying lime. As might be expected most of the wheat after canola crops were also on limed country. Thus, whilst the data showed the benefits of rotation it may not show which is the best break crop yet. Whilst the lime effect 0.5t/ha is appropriately the break even point for lime applications in one year.

The nitrogen story was also of interest because yields were so low a lot of nitrogen was not used. However, additional nitrogen didn't tend to hay-off crops as might be expected with high nitrogen crops being no worse than crops without added nitrogen.

Another result that stood out was that sowing rate had little effect on final yield. It was shown that rates from 50kg/ha to 100kg/ha were neither positive or negative to yield. Thus, higher rates can be used to obtain benefits in wet years without the fear of penalty in dry years.
For your general interest the average yield was 1.587 t/h, highest yield was 3.3 t/ha and lowest .36 t/ha.

One problem we had this year with the data was that most contributors gave us the data for their best paddocks. As a consequence the data doesn't have enough bad paddocks to properly analysise the reasons for crop failures. It would be of more use to the contributors to enter both good and bad paddocks in future so that more substantial results could be obtained.

This letter is only a preliminary report of the major findings to date. Questions such as different tillage practises or different nitrogen strategies etc. have not been answered to date. These questions will become clearer with a more normal season and a broader cross section of paddocks surveyed.

The data is also still be ing analysed by various people such as Dr. John Angus at CSIRO and as further results become available contributors will be informed. The data will also be presented in a formal report in about June of each year due to the time it takes to analyse the data and publish a report. Any contributor can also obtain a copy of the results on computer disk without names by talking to Louise and providing a disk. Other people will have to purchase the data if they require it.

Finally let me on behalf of the database committee thank all contributors and sponsors for their efforts in the first year and encourage them to continue next year. Dr. John Angus feels that the group has obtained an extensive set of high quality data which is the first data to be entered in the national CSIRO database which is collating data from various projects.

Holding

Peter Holding,
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