



# Update on Non-wetting forest gravels at Michael & Clare Webster's

Phillip Mackie, Project Officer, SCF

SCF is continuing investigations into the best methods of alleviating non-wetting issues in forest gravels. Results from Watterson's at Tenterden last year showed mechanical tillage (Plozza plough and Horsch Tiger Deep Ripper) in forest gravel provided no improvements to non-wetting.

This year on a similar soil type we are investigating the use of wetting agents. We created 11 different treatments covering different placements, rates and new chemistry. For the new BASF Divine products, a soil sample was taken and sent to CSBP for testing. Based on the test results, a ratio of Divine Agri and Divine Integrate was recommended and was applied behind the press wheel.

A list of treatments follows:

1. Untreated control
2. 2L/ha SE14 behind the press wheel (Webster's system)
3. 4L/ha SE14 behind the press wheel (Webster's system)
4. 2L/tonne SE14 directly on the canola seed
5. 4L/tonne SE14 directly on the canola seed
6. 2L/ha SE14 behind tyne (using temporary liquid kit on the bar) and 2L/ha SE14 behind press wheel (Websters system)
7. 1L/ha SE14 behind tyne (using temporary liquid kit on the bar) and 1L/ha SE14 behind press wheel (Websters system)
8. 2L/ha SE14 behind tyne (using temporary liquid kit on bar)
9. 4L/ha SE14 behind tyne (using temporary liquid kit on bar)
10. BASF Divine Agri 400mL/ha and Divine Integrate 1.6L/ha in 50L/ha water (Based on soil test results sent to CSBP) behind the press wheel (Webster's system)
11. 2L/tonne SE14 directly on canola seed and 1L/ha SE14 behind press wheel – Grower host control.

With the site being highly non-wetting, we were dry seeding the morning after an inch of rain on the 6th of May. Four weeks later initial plant counts were taken with varying results seen from patchy germination. The highest plant counts were from the 2L/ha behind the tyne treatment, which was significantly higher than all other treatments, except for 4L/ha behind the tyne. No other treatments were significantly different from the untreated control. However, the 4L/tonne directly on seed treatment had the lowest plant counts. As expected, due to the severity of non-wetting and poor early germination, a second lot of plant counts will be taken to see the effect of wetters with later germinating plants.

