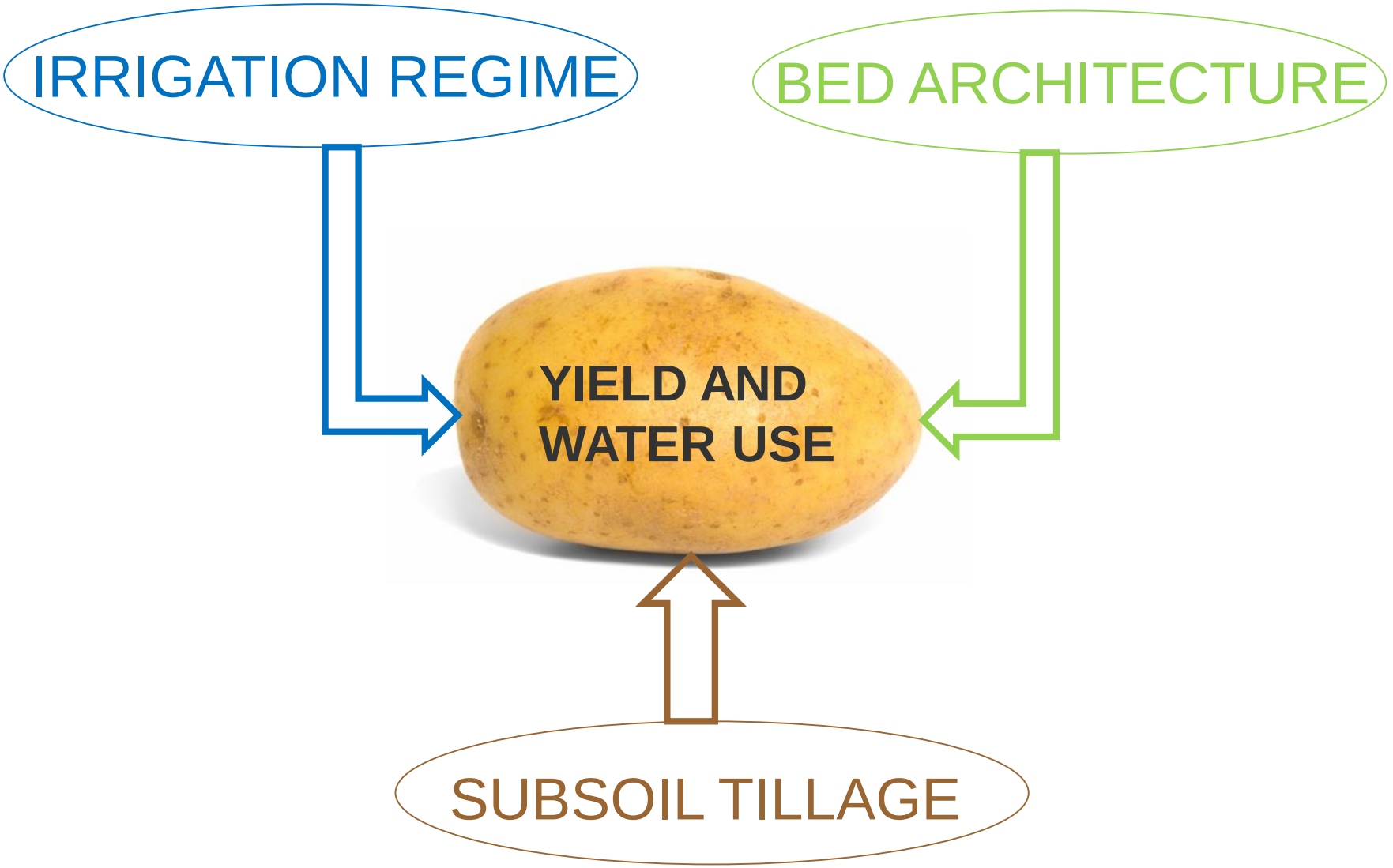


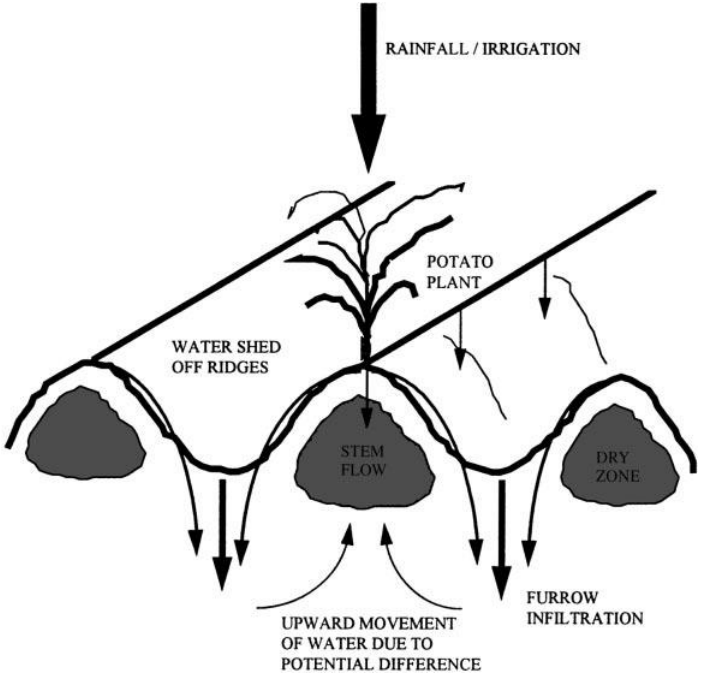
Alex Michel, Sarah Sinton, Steven Dellow, Esther Meenken, Shane Maley, Steve Thomas, Gina Clemens

Acknowledgments

Plant & Food RESEARCH
RANGAHAU AHUMARA KAI ®

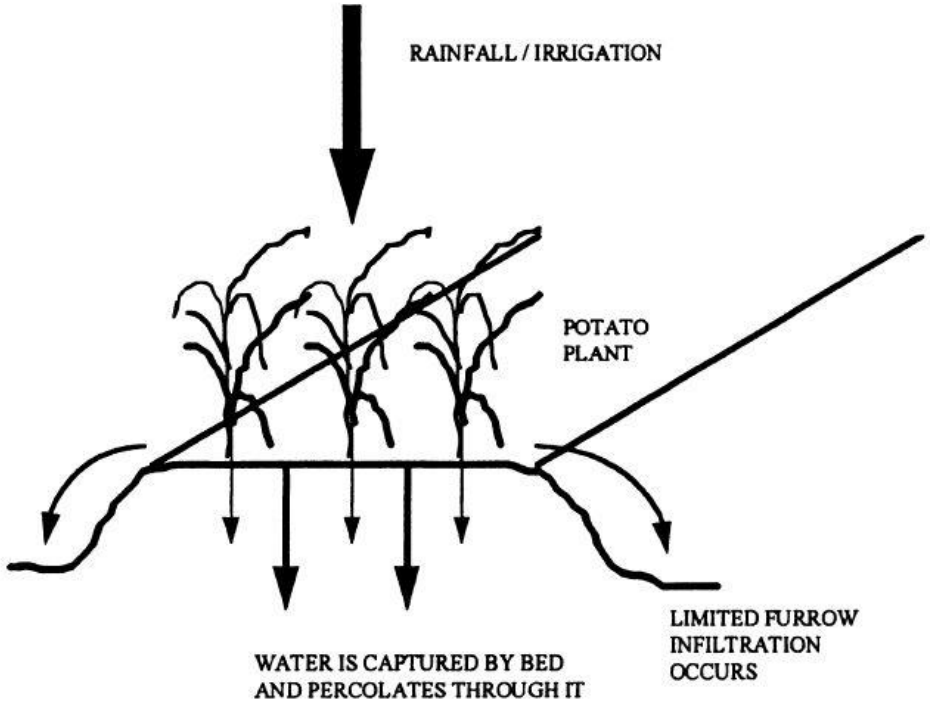
MAXIMISING THE VALUE OF IRRIGATION
Landcare Research & Plant & Food Research led Programme

Background and context



Robinson, D. 1999. A comparison of soil-water distribution under ridge and bed cultivated potatoes. *Agricultural Water Management* 42: 189-204.

Background and context



Robinson, D. 1999. A comparison of soil-water distribution under ridge and bed cultivated potatoes. *Agricultural Water Management* 42: 189-204.

Materials & Methods

- 190 mm/m WHC
- Dense subsoil layer between 250 and 650 mm depth

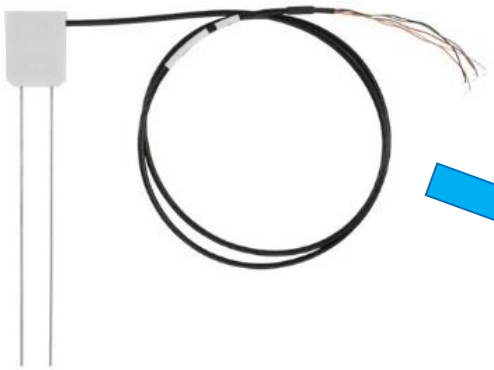
Materials & Methods

Subsoil tillage to 370 mm depth

“High” and “Low” irrigation regime

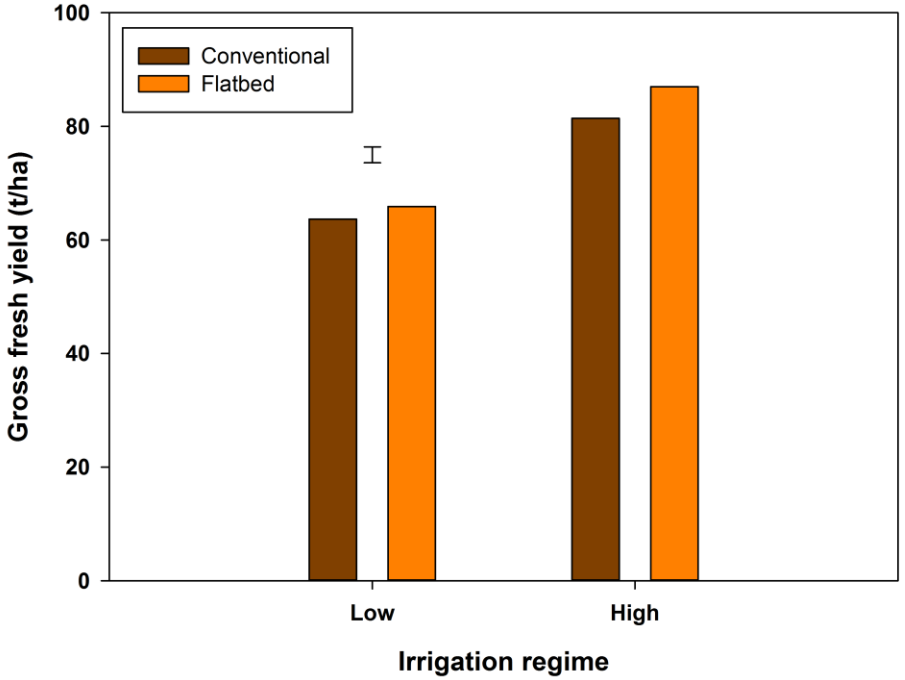
Materials & Methods

Materials & Methods



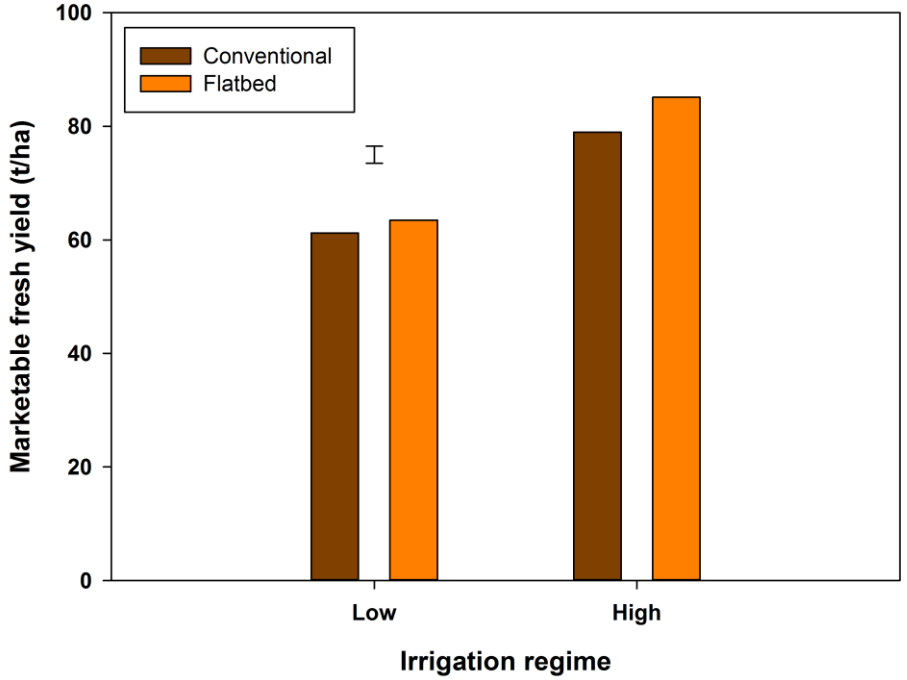
$$WU = \Delta VWC + I + R$$

Results

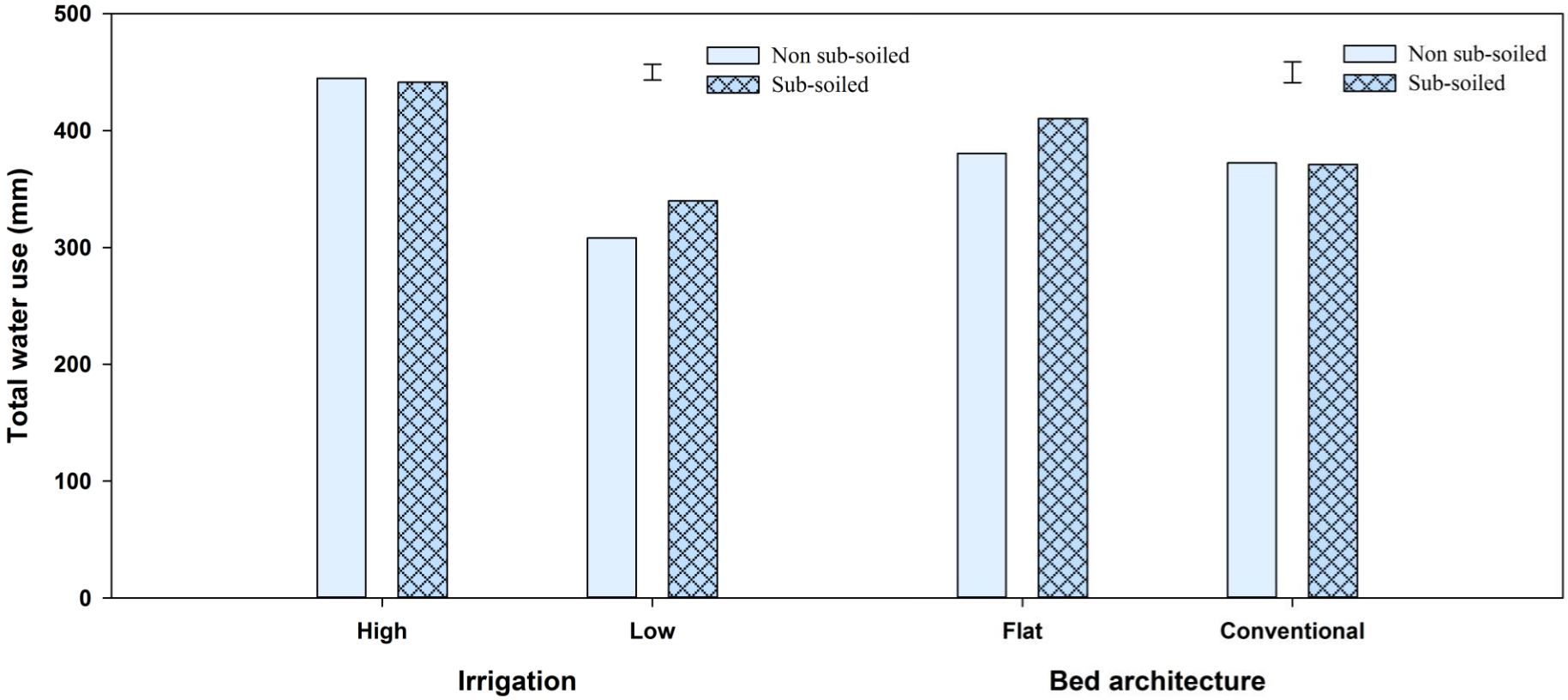


Gross tuber yield

Marketable tuber yield

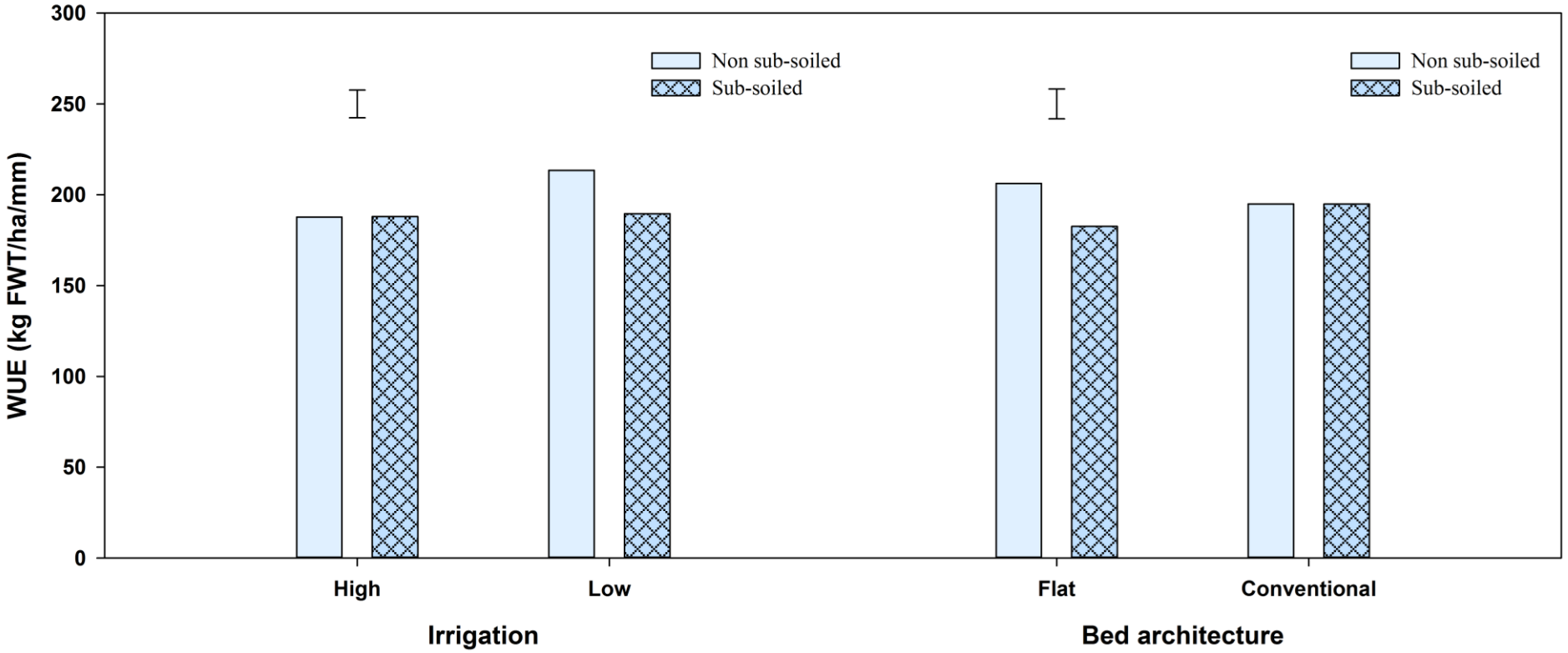


Results



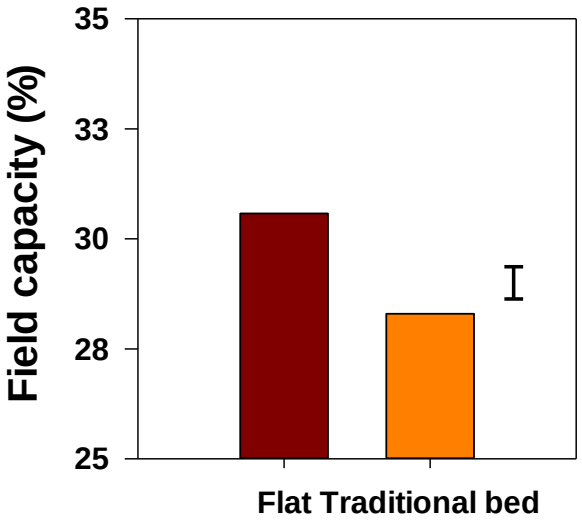
Total water use (2-way interactions)

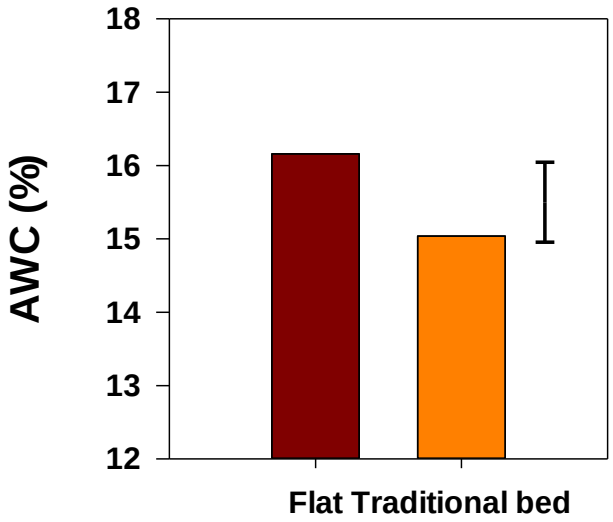
Results

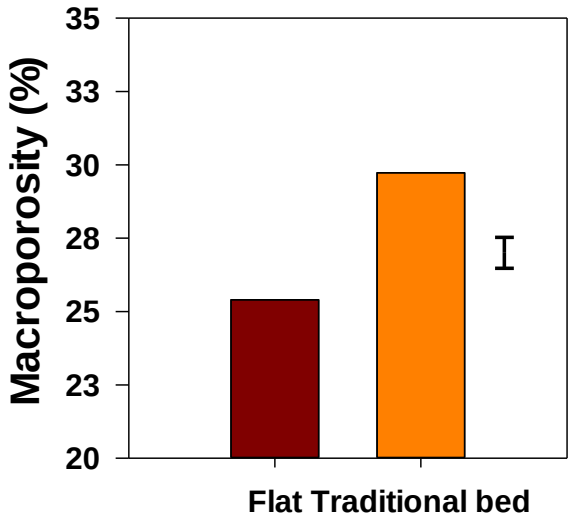


Water use efficiency (2-way interactions)

Results





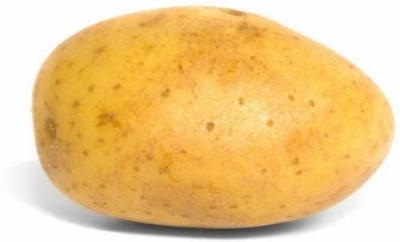


Field capacity, available water content (AWC), and macroporosity

Conclusion

! 1 year data, 1 soil type, 1 cultivar !

- Some evidence of yield increase using flatbed architecture
- Flatbed architecture had increased water storage capacity
- No evidence that subsoil tillage did increase yield or WUE



Thank you for your attention!