

Update: A lysimeter experiment and field trial to determine options for the beneficial reuse of wastewater from Duvauchelle and Akaroa, Banks Peninsula (November 2014 – June 2017)



Maria Jesus Gutierrez-Gines, Juergen Esperschuetz, Cameron McIntyre, Jacqui Horswell, Henry Chau, Minakshi Mishra, Saloomeh Alikhani www.kiwiscience.com

brett.robinson@canterbury.ac.nz



Control (no irrigation) 440 mm/yr

825 mm/yr

1650 mm/yr

March 2016



November 2016



January 2017



June 2017

ANAPRO

March 2018

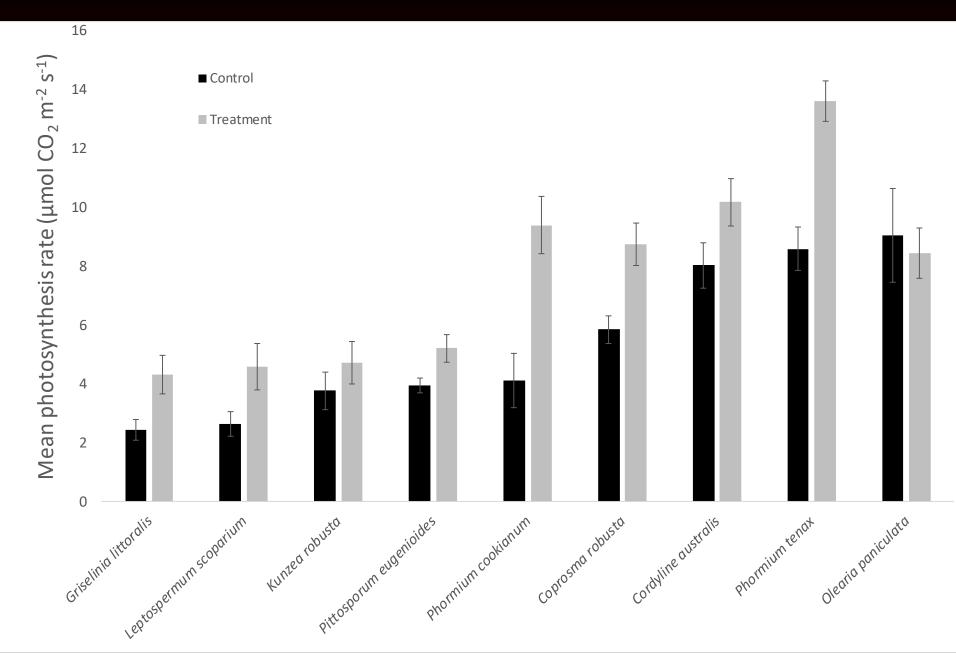
MUII

Re la

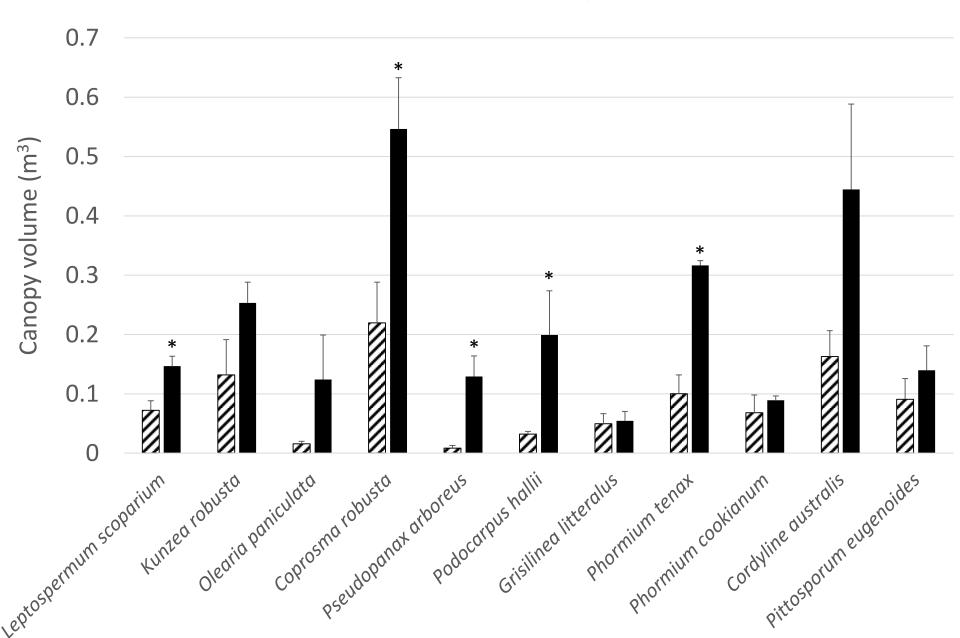




Effluent increases photosynthesis



Effluent increase growth





Willows receiving treated municipal effluent are used in Europe to produce bio-energy



Why would we apply effluent to native plants that would grow anyway?

• Increase growth for valuable native products

• Some native plants kill pathogens and reduce nutrient leaching and runoff to a greater extent than pasture.

• Less environmentally damaging than many alternative land uses









MANUKA

Add to skin care products

- Reduces appearance of blemishes
- Supports appearance of healthy-looking skin
- Similar to tea tree but warmer, richer, and milder