

Drip to subsurface ?

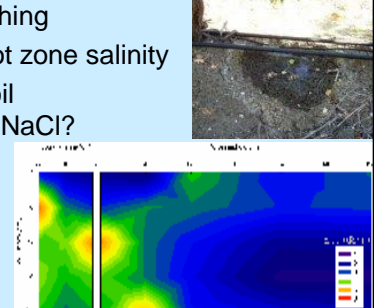
- ✓ Potential water savings
- ✓ Less weed competition
- ✗ Less evaporative cooling?
- ✗ Higher energy costs?

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WUE & Salinity trade-offs

- ✓ Drip & deficit irrigation ⇒ ⇒
High WUE
- ✗ Less salt leaching
- ✗ Increasing root zone salinity
- ✗ Impacts on soil structure/wine NaCl?

How do we now manage high WUE & rootzone salinity?

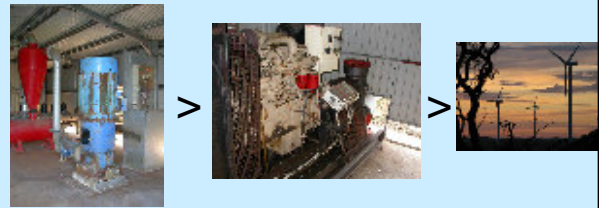


Rainfall trade-offs

- **Winter cover-cropping still widely used**
 - ✓ Belief it improves soil OM etc
 - ✗ But uses rainfall that may be needed to leach irrigation salt
- **Permanent swards**
 - ✓ Generally improve soil conditions
 - ✗ But moisture competitor during summer
- **Native species**
 - ✓ Encourages biodiversity
 - ✗ Opportunistic water users
 - ✗ Salt recycling?

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Energy source GHG emissions



Does cost per KwHr reflect the true environmental cost of each source?

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Reducing current on-farm energy consumption

- Variable speed pumps
- Pipe size design – initial cost vs. head loss?
- Double or single pumping
- Clean filters
- Submersible pumps vs. above ground
- What further WUE gains are possible?

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Low C footprint water

Thankyou

