Increasing water use efficiency for specialty crop production via water recapture and sprinkler performance evaluation

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Why specialty crop irrigation?

• Nursery and greenhouse industry - $16.2B/year (USDA Ag. Census 2017)
• Water use in the U.S. 2x worldwide average
  • Agriculture ~ 73% of US water footprint (Hoekstra and Chapagain, 2007)
• Increasing irrigation efficiency can reduce water use
• Helping growers and the public see & interact with technologies increases adoption (Lamm et al., 2017)
Infrastructure developed (5 yrs)

- Simulated ditches
- Recycling pond
- Slow sand filters
Recycling reservoir
Slow sand filters
Increasing infrastructure

• Pumphouse
  • 100 gpm variable frequency drive pump
  • Spinkleen low maintenance filters
  • Accutab chlorine injection

• Replicated production beds (6)

• Irrigation distribution lines for current and future projects
Future plans

• Complete pump-house
• Install filter, pump, & chlorination system components
• Test sprinkler heads
• Measure irrigation return flow from production areas
• EXTENSION OUTREACH & TRAINING!