Agricultural Resiliency Study

Bart Leeflang, P.E. CENTRAL UTAH WATER CONSERVANCY DISTRICT Assistant General Manager December 5, 2024





Can water be freed up AND production maintained?







Crop Growth Cycle Duration





MODIFIED PRACTICE (optimized)





1. Change of Irrigation Application Method

2. Change of Crop

Depletion vs Diversion

- Compact Beneficial Consumptive Use
- Water Rights Downstream Impairment



























From	То	New Depletion Change (%)
Surface:	Pivot/MESA	+24%
Basin/border	Pivot/LEPA	+23%
	Pivot/LESA	+19%
	SDI	+3%
Sprinkler:	Pivot/LEPA	NA
Pivot/MESA	Pivot/LESA	NA
	SDI	-19%



	From	То	Applied Constraint	New Depletion Change (%)
E	Surface: Basin/border	Pivot/MESA	No Corners	+0%
		Pivot/LEPA	No Corners	-2%
		Pivot/LESA	No Corners	-5%
		SDI	Flat Production	-18%
	Sprinkler:	Pivot/LEPA	No Changes	-1%
	Pivot/MESA	Pivot/LESA	No Changes	-4%
		SDI	Flat Production	-29%
X				

Takeaways

Reduce Depletion and Maintain Production by Eliminating Evaporative Losses Conversion to Sprinkler Application Increases Depletion

Pilot Projects IN UTAH are necessary to corroborate findings

