



USDA-CSREES 2007 National Water Quality Conference

[Water Conservation Principles: Depletion, Diversion, and Value](#)

“Water conservation” means different things to different people and the principles of depletion and diversion are often confounded and misconstrued, particularly when the value of water and different accounting stances are involved. Many public policies and public and private investments have been implemented in the name of conserving water, particularly in irrigated agriculture. Unfortunately, many of these policies and investments cannot make additional water available to new users due to the nature of closed basin hydrology. The assumption that farmers are low-efficiency irrigators is used to justify transfer of income and wealth to agricultural water users and other interested parties through direct investments and cost sharing programs. Instead, these programs serve to sustain and increase consumptive use of water in agriculture. Deficit irrigation practices currently found in many arid climates result in high on-farm irrigation efficiencies and unsatisfied demand for water by agriculture. In this paper and presentation, the water conservation impacts of drip irrigation, irrigation scheduling, and canal lining are discussed in the context of the hydrological assumptions which are used to promote these technologies. The potential of drip irrigation, irrigation scheduling, and canal lining to sustain and increase crop evapotranspiration in deficit irrigation environments is illustrated. Given hydrologic conditions, the authors conclude that accurate accounting of water use, including equitable distribution based on existing legal entitlements would significantly contribute to water conservation efforts.

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