

## Desert Research and Extension Center



research center that provides professional management, land, labor and facilities for agricultural and environmental studies and educational outreach activities. DREC comprises 250 acres and accommodates 50 research projects year-round, including research conducted in vegetable crop breeding and culture, irrigation management, soil salinity, improved varieties of grain and forage crops, emerging bio-energy crops, feedlot cattle studies and pest management.

### Irrigating a Desert

The Imperial Valley, home to the Desert Research and Extension Center, produces most of the nation's green vegetables during the winter months. This region receives about 3" of rain per year and is irrigated exclusively from the Colorado River. In fact, over 95% of the 500,000 acres of irrigated agriculture in the Imperial Valley experiences water loss by surface runoff or through leaching.

Desert REC researchers are addressing various methods to help growers conserve water by:

- Investigating crops that can use water efficiently
- Changing irrigation method from surface to subsurface drip
- Automating irrigation gates specific to Imperial Valley conditions and crop types
- Experimenting with deficit irrigation, i.e. not irrigating alfalfa in summer months
- Fallowing fields on alternate years

These different techniques can save up to 30% of applied water while improving water quality. Along with helping growers use water more wisely, Desert REC's practices were selected by the California State Water Resources Control Board as examples of success stories to reduce water pollution in the state.

### Irrigation research conducted by Khaled Bali



### Educational Outreach for Youth and Winter Visitors

FARM SMART is an education program at DREC to provide hands-on activities to educate youth about agricultural and natural resources. Established in 2001, FARM SMART has served over 100,000 youth and adults by the end of 2013. The hands-on program is organized over fall and winter and helps students discover relationships between agriculture and nutrition, starting with how food starts in a farm and how that food makes its way to your plate. Fall programs include “Alfalfa is Ice Cream in the Making,” linking cattle nutrition and comparing it to human nutrition.



The Fall Festival focuses on the harvest season of early Americans and stresses the importance of corn in our diets then and today.

The popular Winter Visitor program shares “Crops of the Valley” to explore the types of vegetables grown and water irrigation methods along with a hayride. It has proved enormously successful in teaching not just youth but also adults about what it takes to grow a head of lettuce in the arid region that is home to 95% of the nation’s winter leafy vegetables. FARM SMART is largely successful and popular to the Winter Visitors volunteers, whose service averages approximately 400 hours.

