

The Irrigation Water Optimization Project (IWOP)

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Abstract. Water scarcity is at the forefront of scientific and political concern in the Western United States. Rapid urban growth, drought, ground water depletion, potential consequences of global climate change in a semi-arid environment are significantly altering agricultural activity in this region. Population growth creates competition for water resources, and agriculture is a primary supplier to increasing demands. Rural farms and communities, particularly in Colorado's South Platte Basin, face increased competition for water and are grappling with current and future losses of irrigated cropland that results when water is transferred. An alternative to large scale dry-ups may exist. The Irrigation Water Optimization Project (IWOP) is investigating cropping system options for meeting growing urban water needs while at the same time sustaining viable economic returns to rural communities. The primary purpose of this integrated proposal is to assist small and medium sized farms in identifying economically sustainable cropping strategies in the face of limited water resources, while recognizing the regional impacts of water reallocation. The initial results of the poster illustrate the importance of irrigated agriculture to the local economic base; yet, the economic activity is quite different based on the location. A major reason for the differences is the prevailing cropping patterns and the amount of product exported from the region. An innovative outreach and education program is a part of the project to assist small and medium sized farms when making water allocation and crop rotation decisions.