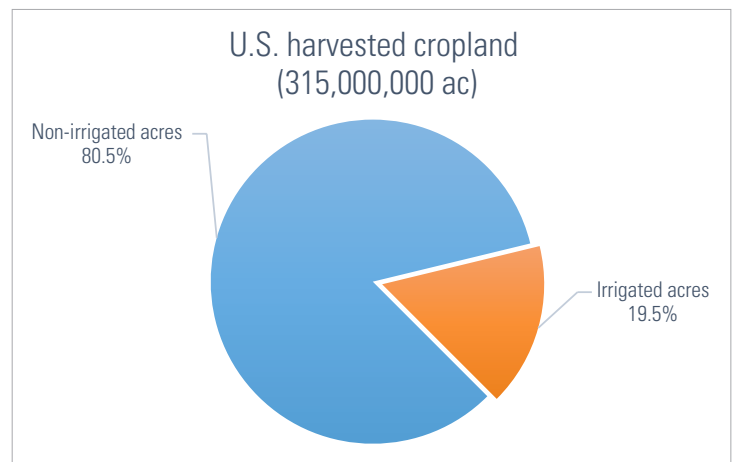


Summary – Principles of Efficient Agricultural Irrigation

According to the 2012 Census of Agriculture, there are 2.1 million farms with about 915 million acres of land — or about 40 percent of all land area in the United States is farmland. Of that, 315 million acres are harvested cropland. The 2013 Farm and Ranch Irrigation Survey reveals that there are 229,237 farms (11 percent of all farms) using irrigation. Based on the various irrigation methods being used, more than 61 million acres are irrigated.

According to the Economic Research Service of the United States Department of Agriculture in a report updated in October 2016, irrigated agriculture accounts for the largest share of the nation's consumptive water use and makes a significant contribution to the value of U.S. agricultural production. In 2012, irrigated farms accounted for roughly half of the total value of crop sales on just 17 percent of U.S. cropland. The ERS/USDA report also states that, "The future of irrigated agriculture will depend in part on producers' ability to improve on-farm water management for crop production. Upgrades in irrigation system technologies and improved water-management practices can enhance on-farm water-use efficiency."



Source: 2012 Census of Agriculture, 2013 Farm and Ranch Irrigation Survey

The *Principles of Efficient Agricultural Irrigation* identifies the key concepts that a grower or producer should follow to attain the most efficient use of water. The following are principles for efficient agricultural irrigation:

1. Use qualified professionals to plan and help manage irrigation systems.
2. Know and protect the water supply and the environment.
3. Identify the soil type and its soil water characteristics to manage the water supply.
4. Understand crop water needs to know when and how much water should be applied.
5. Select appropriate irrigation methods that will efficiently deliver water to the crop.
6. Plan and implement irrigation scheduling to use water efficiently.
7. Adopt and apply innovative technology to improve water management.
8. Maintain accurate records to facilitate better decisions on crop inputs.
9. Anticipate water shortages and have planned strategies to respond.

The Irrigation Association recognizes that there are many experts who have devoted their careers to improving agricultural crop production. While adequate water applied at the correct time is necessary to produce significant yields, irrigation is just one part of all that a grower must take into account. The principles for irrigation efficiency must work in harmony with other best practices for growing plants, including soil, nutrient and pest management.