

Irrigation for Texas

by

Robert V. Thurmond, Associate County Agent-Irrigation
Texas A. & M. College System

The drouth experienced in Texas during the past two years has created great interest in irrigation. Many farmers have established irrigation systems during the past few years and many more are directing their thinking toward artificially applying water to land as crop insurance against insufficient rainfall during the crop growing season.

Irrigation for the dry land farmer may require rather large capital expenditures for equipment, land preparation and other items. Irrigation will also require additional expenditures for labor.

For the farmer contemplating irrigation, consideration given to the following may prove helpful in making decisions on such an undertaking:

1. *Availability of water supply.* Sources of water for irrigation may be available from streams, rivers, lakes, ponds, or wells. A supply of at least 5 gallons per minute per acre or sufficient amounts stored to apply one to three acre feet per acre will be needed to irrigate most crops. Often during dry periods when water is needed the most, water supplies in streams, rivers, lakes, and ponds may be low.
2. *If water is available, can it legally be used for irrigation?* Percolating ground water pumped from wells has been declared property of the land owner. Before water is taken from streams, or rivers, the land owner should check with the Texas Board of Water Engineers and obtain a permit of use.
3. *Quality of Water - -* The quality of water available should be suitable for production of desired crops. Tests to determine the quality of water for irrigation are made by the State Chemist, Texas A. and M. College. See your local county agricultural agent for further information.
4. *Topography of the field to be irrigated - -* The topography of the field will determine the method of irrigation best suited. Land that is fairly level, having uniform slopes, or can be economically leveled, may be irrigated by surface methods. Steep or rolling land not suitable for surface methods may require the sprinkler method.
5. *Soil Characteristics - -* Some of the more desirable characteristics to have in irrigated soils are those having sufficient depth for storage of water and fertility, proper texture and structure to absorb water, good surface and subsurface drainage, and ability to produce good yields.

6. *Cost and returns* - - If irrigation is to be profitable increased yields resulting from irrigation must be sufficient to pay more than annual irrigation cost. Annual irrigation costs are dependent on the amount of equipment needed, land preparation, expense for operating equipment, and labor expense. An assured water supply for irrigation may provide for obtaining increased yield of crops now grown or for growing of more expensive crops that could not be grown successfully in the area without supplemental water.

If you are thinking of establishing an irrigation system on your farm consult your local county agent.

Issued by
The Agricultural Extension Service
The Texas A. & M. College System and
The United States Department of Agriculture
G. G. Gibson, Director, College Station, Texas.

Cooperative Extension Work in Agriculture and Home Economics, The Texas A. and M. College System and the United States Department of Agriculture Cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.