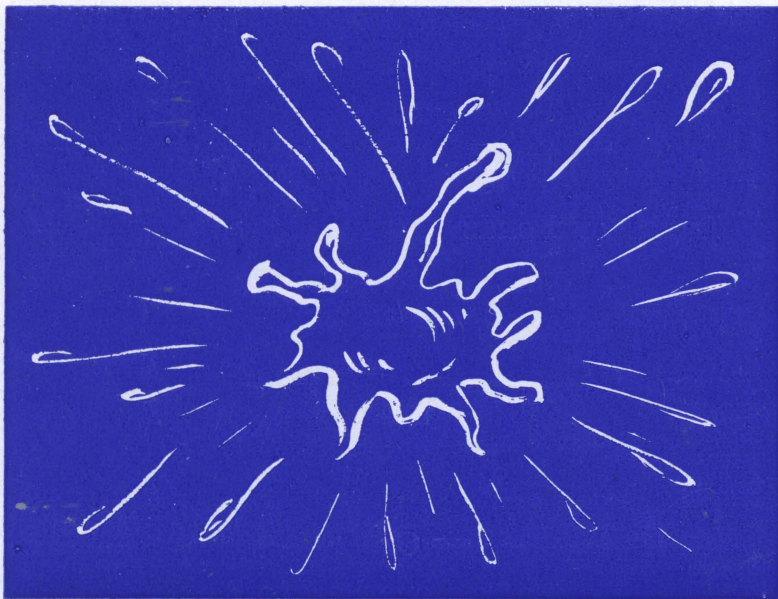


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Thinking of IRRIGATION?



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TEXAS AGRICULTURAL EXTENSION SERVICE
G. G. Gibson, Director, College Station, Texas



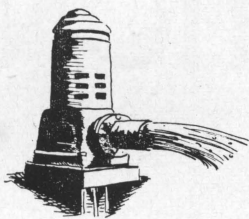
Thinking Of Irrigation?

ROBERT V. THURMOND
Extension Agricultural Engineer
Irrigation
Texas A. & M. College System

... Here Are Some Points To Consider ...

Water Supply

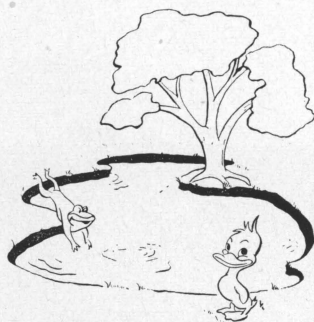
Possible Sources - - - -



Wells

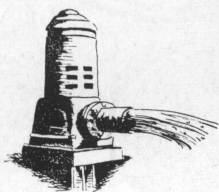


Streams and Rivers

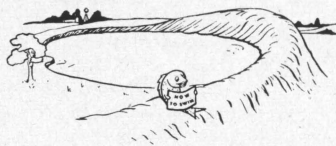


Lakes or Ponds

Quantity and Availability - - - -



Five to 10 gallons per minute per acre for supplies from wells, streams and rivers.

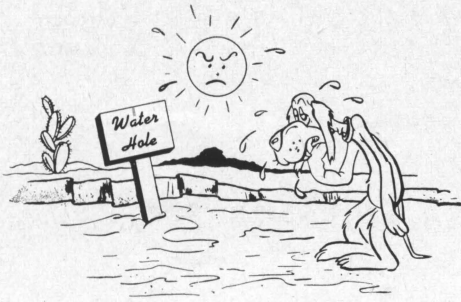


Or

One and one half to 2 acre-feet per acre in ponds and lakes.

One acre = 43,560 square feet. 450 gallons per minute continuous flow for 12 hours = 1 acre foot.





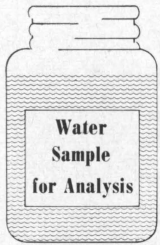
But Wait!

Availability of water in streams, rivers, lakes, and ponds may be low during dry periods.

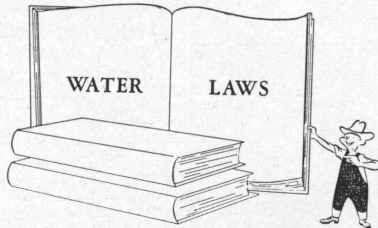
Quality - - - -

Be sure to take a representative sample. Have chemical an-

alysis to determine quality and suitability for irrigation use.



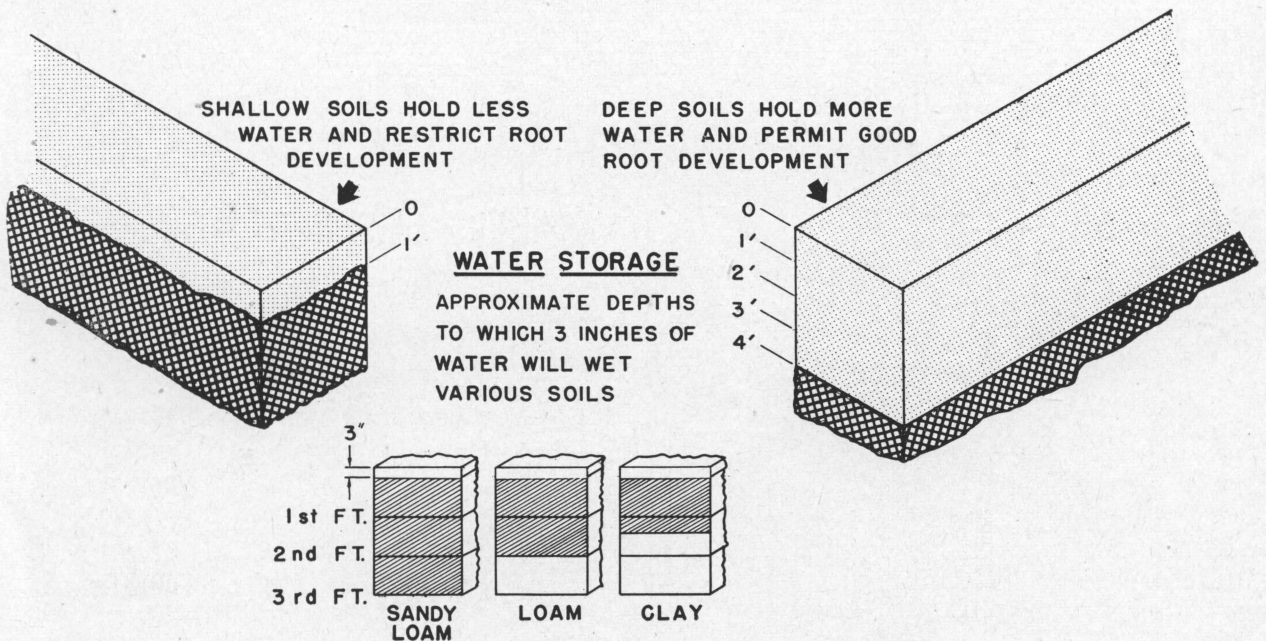
Right of Use - - - -



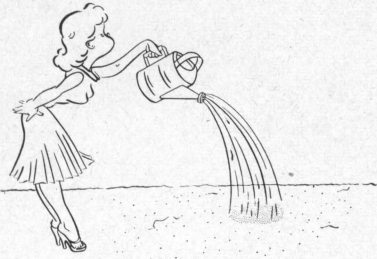
Check existing water laws.

Soils

Depth - - - -

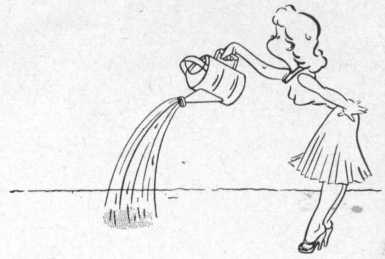


Water Intake Rate May Be - - - -

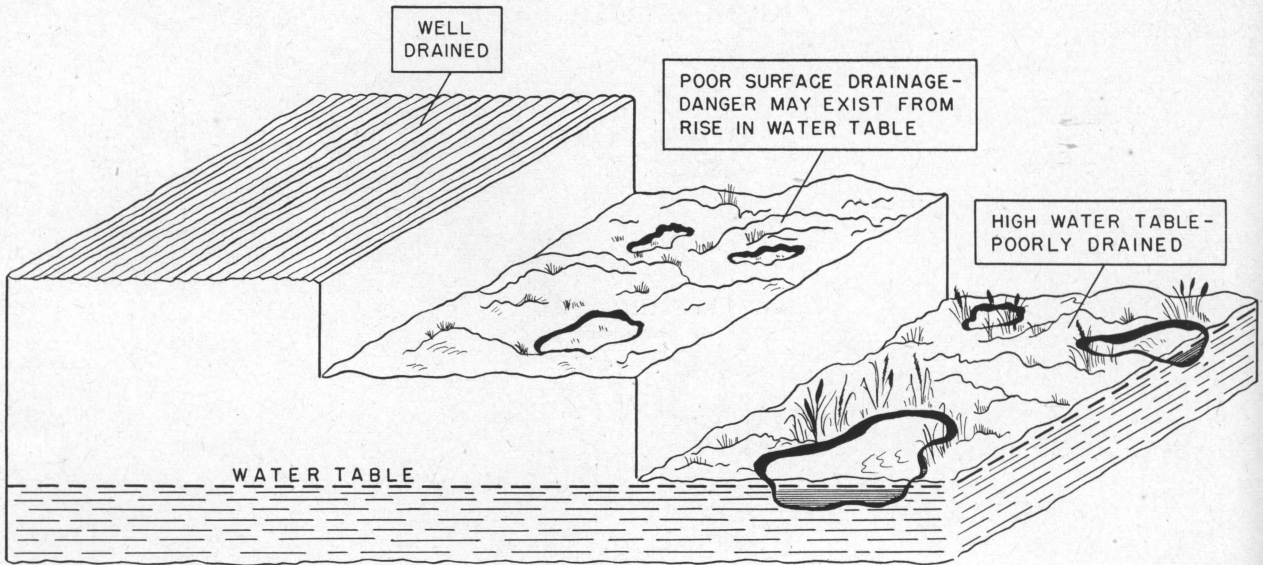


Large for
sands

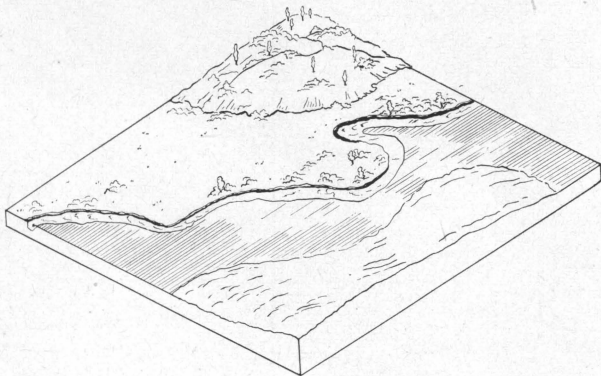
Small for
clays



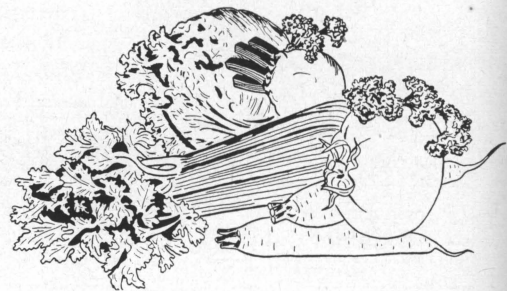
Adequate Drainage Is Necessary - - - -



Topography - - - -



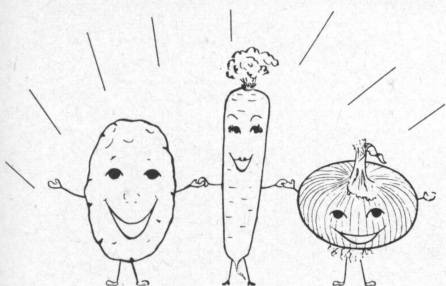
Ability of Soil To Produce - - - -



Crops

IRRIGATION MAY PROVIDE FOR . . .

Growing New, Adapted Crops of Fine Quality



OR

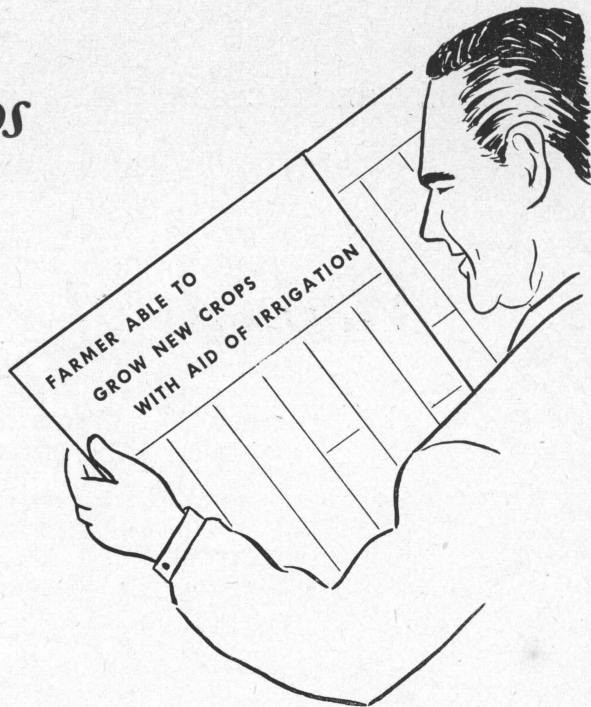


Irrigated



Nonirrigated

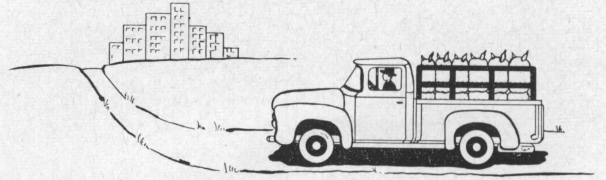
Increasing Yields of Present Crops



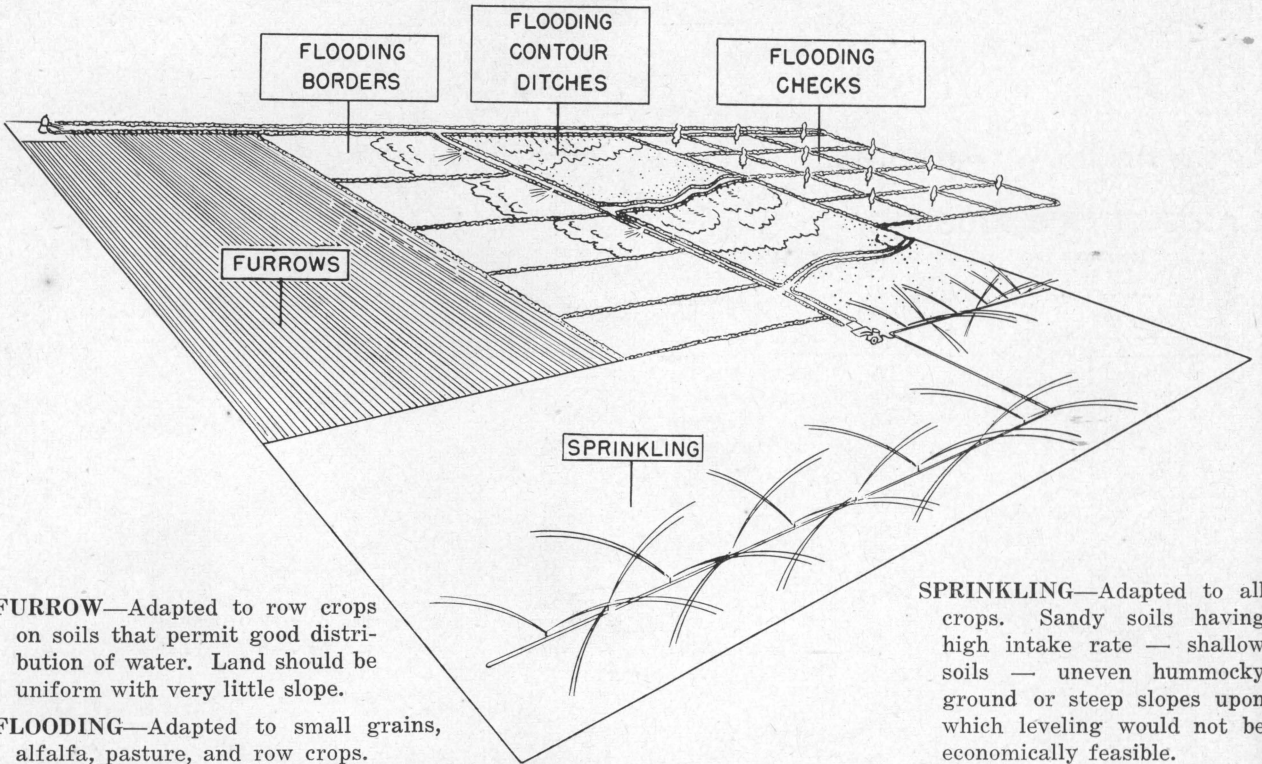
BUT -- Care Should Be Taken To Irrigate Only Those Crops Capable of Producing Economic Returns

FARM		RECORDS	
Crops	Acreage		Production Costs
Field Crops			Small Grains
Forage Crops			Oil Crops
Pasture			Vegetables
Legumes			Fruits

Availability and Access to
Good Markets Are Important



Methods of Applying Water



FURROW—Adapted to row crops on soils that permit good distribution of water. Land should be uniform with very little slope.

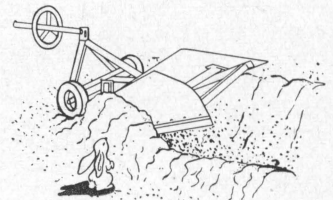
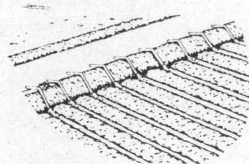
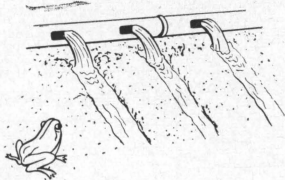
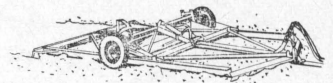
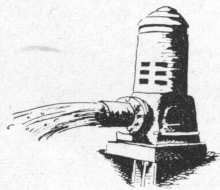
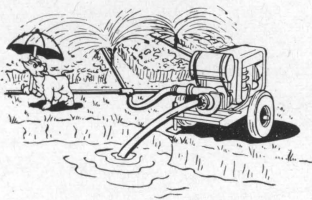
FLOODING—Adapted to small grains, alfalfa, pasture, and row crops.

SPRINKLING—Adapted to all crops. Sandy soils having high intake rate — shallow soils — uneven hummocky ground or steep slopes upon which leveling would not be economically feasible.

The best method of applying water depends on such things as topography, soil characteristics, available water supply, source of water, crops grown and availability of labor.

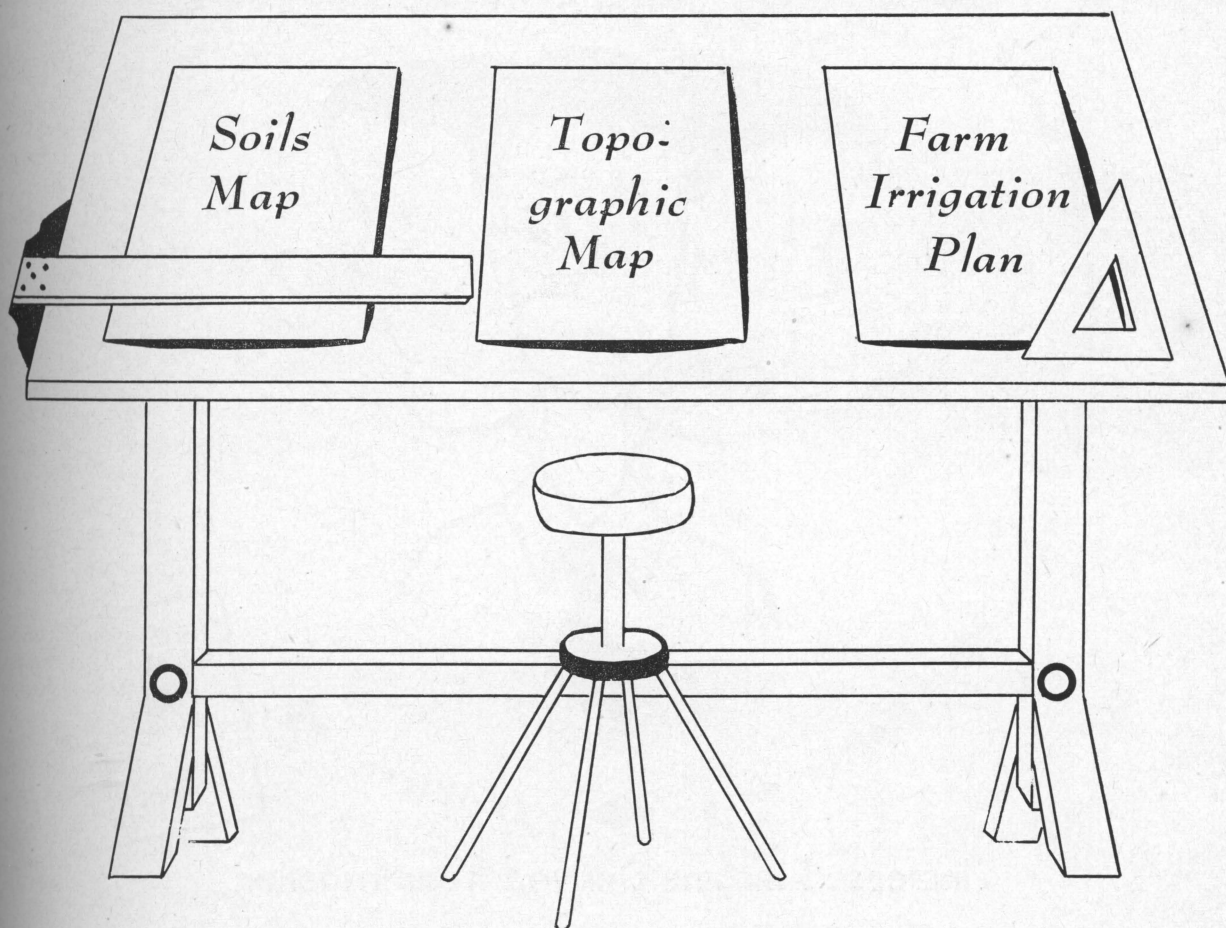
Equipment

Selection should be based on individual farm needs and requirements.



Planning and Design

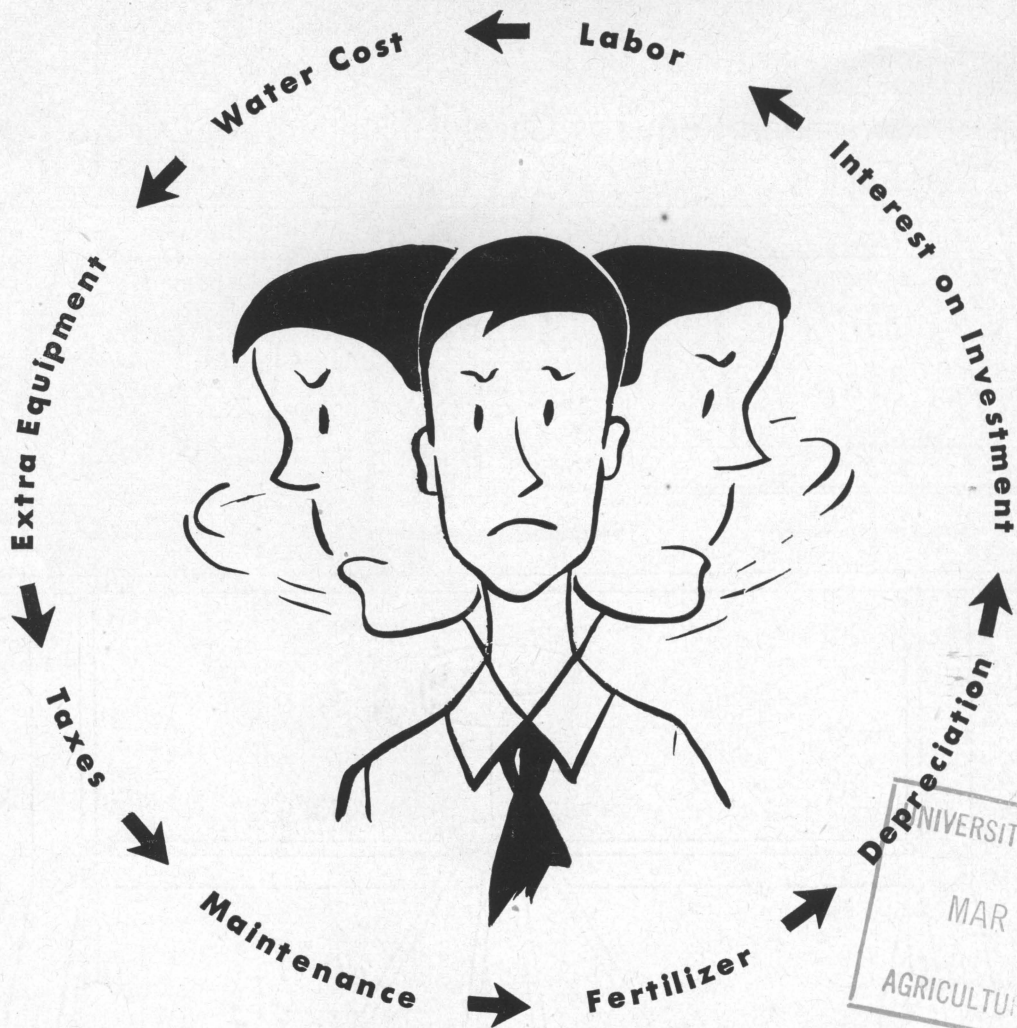
Successful Irrigation Requires Careful Planning and Good Design



For

- Developing A Dependable Water Supply
- Efficient Conveyance of Water to Fields
- Application of Water at Proper Time — in the Right Amount — With Least Possible Waste
- Proper Management of Labor and Other Crop Production Factors

Final Test



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Increased Income Derived from Irrigation

- - **Must Be MORE than** Increased Costs of Irrigation

