

The following is a table of discharge for a 1-foot Cippolatti or trapezoidal weir. It may be used for longer weirs by multiplying the quantities given by the length of the weir in feet:—

TABLE OF DISCHARGE FOR A 1-FOOT TRAPEZOIDAL WEIR.

Depth of Water on Crest in Inches.	Cu. Ft. per Sec.	Meters' Inches.
1.....	0.08.....	2.9
2.....	0.23.....	8.2
3.....	0.42.....	15.0
4.....	0.65.....	23.1
5.....	0.91.....	32.3
6.....	1.19.....	42.5
7.....	1.50.....	53.5
8.....	1.83.....	65.0

In order to secure the most accurate results, the depth of water allowed to pass over a weir should not exceed one-third the length of the crest; the limit for a 12-inch crest being 4 inches; a 24-inch crest 8 inches, and 12 inches for a 3-foot crest.

AMOUNT OF LAND ONE MAN CAN IRRIGATE.

This is rather a difficult question to answer because of the variation found in different locations. The crop grown, soil, contour of the land, and ability of irrigator limit the amount handled by one man. If the orchard is in clean cultivation, one man should handle from 30 to 50 acres. This may seem a large area to some men, while to others it will appear very small. However, a small area well cared for is better than a large area neglected.

RELATION OF IRRIGATION TO TILLAGE.

In a previous paragraph mention was made of the importance of cultivation after irrigation. Since this is a very important point, the writer feels that it should be given special attention.

Tillage serves for two main purposes in its relation to irrigation. First, tillage prepares the land for the reception of the water and, second, for its conservation. It is plainly evident that loose soils will absorb more moisture than packed soil. Clay soil should be given deep cultivation previous to irrigation in order to make it more receptive to water, while sandy soil seldom needs much cultivation previous to irrigation because it does not cement together like clay soil.

After irrigation all soils should receive surface cultivation to a depth of 4 to 6 inches. This is done by means of a common harrow, and should be repeated at intervals of from ten days to two weeks and after every rain until the next irrigation, as indicated in a previous paragraph.

COSTS.

The question of vital importance to the man planning on placing his land under irrigation is: "How much will all this work cost?" This question cannot be answered offhand. Every farm is a problem in itself. Some land may be brought under for as little as \$4 or \$5 per acre, while other land often costs \$100 per acre. Estimates on the cost of grading and ditch-construction work may be secured from men who follow this work as a profession.