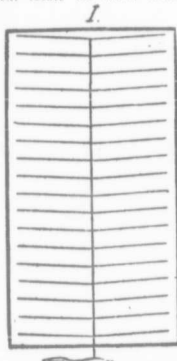


Laying Out Tile Drains

The majority of farmers in this country have to do a certain amount of tile draining in order to control the surface water on their farms. In laying out a system of drainage the first thing to do is to decide on the location of the outlet or outlets. This should always be at the lowest available point, so as to secure the greatest amount of fall. Just as few outlets should be had as possible, as they are always a source of trouble.

Next locate the main, having it



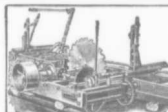
follow the line and direction of the lowest lying ground. This can be done by noticing the channel in which the greatest amount of surface water tends to run after a heavy rain. The main will thus be likely to have a location somewhere near the centre of the area drained rather than on one side of it. Of course, when this is done, the laterals entering from both sides drain a certain amount of ground already drained by the main, but as the main in this case is supposed to be in the lowest ground most needing drainage, the extra amount does no harm. On a comparatively flat piece of ground, where there are no particularly low-lying channels, it is better to locate the main at one end or side and place the laterals in parallel lines at nearly right angles to it. These two arrangements are shown in the cut.

In I 875 feet of four inch main and 8,100 feet of three-inch laterals are

required to drain ten and one-third acres with the lines fifty feet apart. In II the same total length of drains are required as in I, but only 475 feet of four-inch main is used. There is thus a saving of about \$6.50 in the cost of tile, and equally as good drainage obtained. It is seldom that any particular arrangement can be used entirely, as so much depends upon the slope and conformation of the land. It is always important, however, that some systematic arrangement of the drains is made, for thorough drainage in a haphazard way is difficult to obtain and is most expensive. Careful study of the land should first be made and then the drains laid out so as to secure the greatest fall, the least expense for tile, the minimum amount of digging and the most perfect drainage. If at all possible

lay all the lines of tile parallel, putting them in through the wettest places first. Then, if your faith and your purse are not strong enough to do thorough work in the beginning you will have your field in such shape that additional lines can be added in the future as your faith and money increases. Another important matter is to keep an accurate plan or plot of the drains on paper. This will show their exact location and will be valuable for future reference, especially if the land should come into the possession of other parties.

—F. W. T.



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