yield materially, and cultivating such soil results in still greater injury.

Until the silking period the soil surface should be kept in a fine, loose condition, so that walking on it when dry it is felt to give under the feet and distinct footprints are made.

Shallow cultivations given even as late as silking time are often as valuable as earlier cultivations.

Weeds growing in the corn at silking time reduce the yields very materially, as has been conclusively proved by experiments conducted by the Office of Corn Investigations.

Under some conditions six or eight cultivations are advisable, while under other conditions three cultivations may be sufficient to keep the soil in proper condition, and would therefore prove more profitable than a greater number.

The Mission of Sweet Clover.

Legislators in many states have declared by their enactments that sweet clover is a weed, and that, therefore, its only mission is to die as quickly as possible by the hand of the exterminator. Such legislation has been hasty. It was made by men who did not know the good points of this valuable plant.

Which are those good points it may be asked? They are many. First, it will grow under hard conditions. These include sandy and gravelly soils, climatic conditions of short rainfall, and where so much alkali is in the soil that many other useful plants will not grow. It will also endure much heat and cold, and it is both a soil enricher and a supplier of humus to the soil. Moreover it has been found that in some areas live stock may be so accustomed to its use that they will thrive upon its pasture, and on the hay that may be produced from it. A plant possessed of so many good qualities should not be proscribed as a noxious weed, as it may, in several ways, be made to render substantial service to farmers.

It may be used in enriching the land. When grown on any soil it adds to the fertility. This would be of but little account if other legumes of higher economic value would do the same. But over these it has the great advantage that it will grow where these would fail. For instance, it will grow on millions of acres in the West where clover could not be grown, because of the dry conditions. It will also grow on lands so strongly impregnated with alkali that ordinary grain crops cannot be grown on these, and in its growth it tends more or less to remove the alkali. Moreover because of its rank growth it may be made to store the land with humus It is also thought that the bacteria for alfalfa are about the same as for sweet clover, and because of this, the growing of sweet clover may prepare the land for the successful growing of alfalfa.

In the Canadian West, this plant may be used in restoring to worn soils the nitrogen that has been taken from them by excessive cropping. How can this be managed? By sowing a few pounds of seed per acre on the spring grain. The clover would not harm the grain that season. The next spring it ought to make a most vigorous growth. As it makes growth early in the season, it may be buried in June, and when so buried a crop of millet may be grown. If the land is to be summer-fallowed it may be buried before the blooming stage. In addition to adding to the fertility of the land it will fill it with a mass of vegetable matter that will add to the humus supply, and that will add greatly to the moisture-holding power of the soil. The only added cost would be the cost of the seed.

It may be asked, how can this plant render service by inoculating the soil for alfalfa when the inoculating germs are supposed to be practically similar? It does it in this way. The sweet-clover plant is of stronger growth. It will make a good growth where alfalfa plants would not succeed at the first, because of the scarcity of the inoculating material. The growth of sweet clover on the land would lead to the rapid multiplication of the bacteria, and this would promote strong growth in the alfalfa at the outset.

That sweet clover will have an important mission as a pasture plant in the Canadian West is somewhat doubtful, as other pasture grasses can be grown that are better relished. It is different in the Southern States where such grasses will not grow so well. But there may be some places in the Canadian West where this plant may be grown for hay, as for instance on sandy lands low in fertility where alfalfa has not yet been established. But when grown for hay it ought to be cut at an early stage of growth to prevent the plants from becoming woody.

This plant should not prove troublesome as a weed. It is a biennial, hence if it is prevented from going to seed the self sowing of the crop will cease. Of course other plants may come up for a time, but persistent cutting will destroy them. The only way the plants can multiply is from the seed.—Prof. Thos. Shaw.

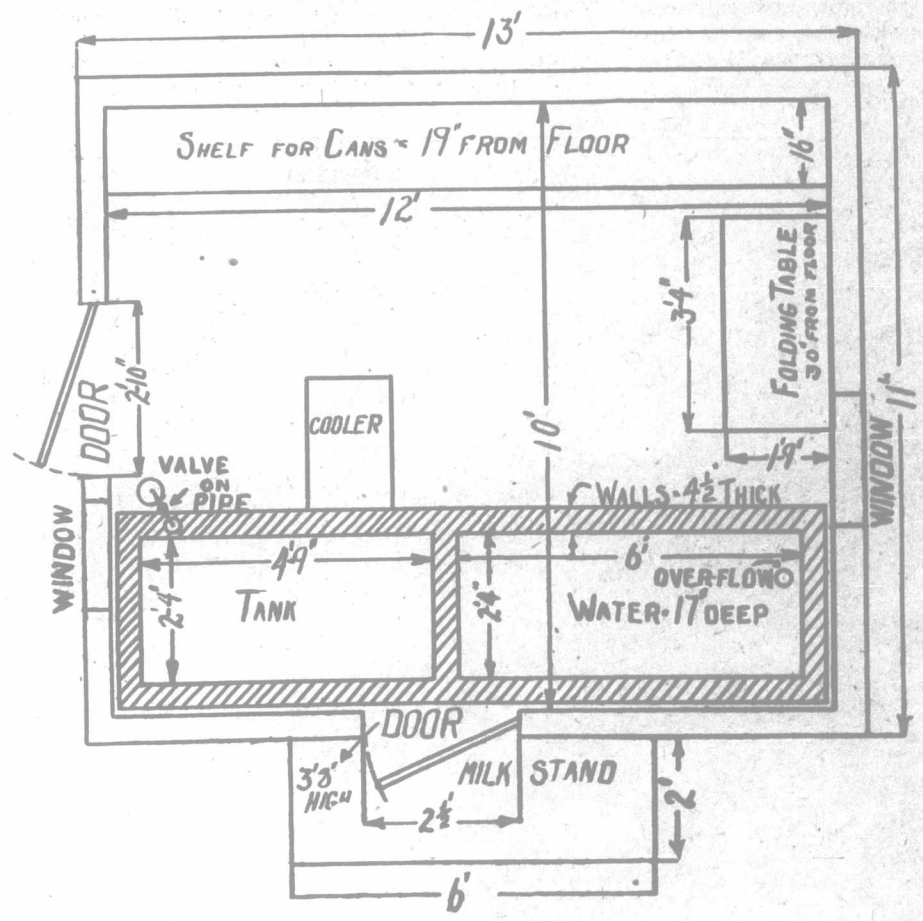
A Round Cement Water Tank.

In a recent issue I see a short article on Weldwood, in the course of which it states that you have built a round cement water tank. We are intending to build one and would like to get the benefit of your experience. What size is your tank diameter? What thickness is the wall, and is it better to have it double with an air space? Should the hole be dug below any chance of frost, or would a bottom a foot thick or so be all right set on top of the ground? I am getting silo rings to build mine and we are not sure how small they can be drawn in. Would 8 feet be too big across?

Mr. Bradt's Milk House and Milk Cooler.

Answer. Our round cement water tank is ten feet in diameter (inside) and nine feet deep with foundation walls two feet below floor level, which is about on the ground level. The wall is seven and a half inches thick at floor, tapering to five and a half inches at top, built of cement and gravel mixed about 1-5. It took seven loads of gravel @ $1.34 laid down, 12¾bbls. cement @ $1.75, and a yard of small stone and a lot of twisted strands of old barb wire of no value. took 145½ hours of men's time and 22 hours horse time getting and returning the curbs, making a total cost of $73.26, counting all labour.

Referring specifically to your questions would say that a hollow wall would be better, but would cost considerably more if made as strong.



Plan of Thos. Bradt's Dairy.

With a roof (which ours has not as yet) we think a solid-wall tank, properly built, will be safe enough in any ordinary location.

We would suggest a foundation wall at least two feet deep. The floor is all right on ground level, or above it if desired to secure a head. Eight feet across is not too large, unless you need to run the tank up high to secure pressure. In that case the greater diameter would give superfluous capacity and add unnecessarily to the cost. We fear that no silo builder will care to have his rings drawn to a diameter of less than eight feet. Our tank is for barn use only, is filled by a windmill, and supplies thirty to forty head of cattle and horses.

The profit of any particular crop depends not alone upon the cash balance on that crop itself in any particular year. An important point is the condition in which it leaves the land for subsequent cropping. An American author brings out this point forcefully in a bulletin on corn growing.

"Alfalfa, clover, and similar plants send their roots to a great depth, and are the best crops to turn under for the purpose of growing a very large corn crop. Their culture is the best and most economical way of subsoiling land. The deep-growing roots loosen the subsoil and keep it porous long after the crop is turned under. Without sufficient rainfall poor crops of corn may be obtained on alfalfa sod, the soil moisture having been exhausted to a great depth by the alfalfa roots. Subject to this exception, immense crops of corn usually follow alfalfa.

THE DAIRY.

A Convenient Milk House.

Editor "The Farmer's Advocate.":

Milk should be cooled as soon as possible after milking, and to as low a temperature as possible, and the best way to do this is to have a milk house and cooler. Nearly all the farmers in our neighbourhood have milk houses, and send their milk to the Aylmer milk-condensing factory. It is necessary to cool the milk to 58 degrees or lower for this factory.

The bacterial growth is what causes milk to spoil and low temperature will make this growth much slower.

A good sample of milk will have about 500 bacteria in a teaspoonful and this milk if left in a clean place at a temperature of 70 degrees for 24 hours will have 50 millions or more bacteria in a teaspoonful. You will see by this how important it is to cool the milk at once, as when the bacterial growth once forms the milk can never be made as good again, and the cheese factory or condensery cannot make as good an article with it.

We built our milk house ourselves, and it cost about $50, not including our labor. This is the second milk house we have built, and we helped a neighbor build one, but this is one of the most convenient I have seen at any price.

The cement tank is one inch from the wall. The middle wall in the tank has a one-inch hole level with the floor, and another about five inches from the top. These holes can be plugged and only one tank used when we haven't enough milk for both. The floor slopes slightly towards the overflow. The overflow is an upright pipe which screws into a union which is level with the floor. This upright pipe can be screwed out and all the water run out of the tanks. The water is 17 inches deep, and the tank 22 inches deep.

The water runs in the coil of pipe at the bottom and comes out at the top. The milk runs over the outside of the coil and starts at the top where the warmest water is and strikes the coldest water last. Our water is 50 degrees at the milk house and 47 at the well.

We got this cooler, 18 cans like those shown in the picture, a round milk strainer for straining direct in the cans in the winter, and a square strainer which fits in the feed tank on the cooler from the milk-condensing factory.

The milk is set in the water tank as soon as cooled and if the water gets warm on Sunday the engine is started and cold water pumped into the tank.

A water-supply tank is hung from the roof by