FARM AND FIELD.

WEEDS AND WEED KILLING.

The killing of weeds is an old story, but it is one that needs to be brought to mind very frequently. There is very little that is absolutely new in any business, and therefore the great bulk of the work of this year is the same as that done last year. The leading pests of the farmer or gardener are weeds and insects, and against these there must be a constant warfare waged throughout the whole growing season, if not during the entire year. The success of nearly all crops depends largely upon the attention given to them after the seed is sown. This fact is not so manifest with the common grains, such as oats, barley and wheat; but if we consider that it is the work of other crops to clean the land of weeds and prepare the soil for these quick-growing grains, the statement is not so far out of the way.

There is always a call for the best method of killing weeds as there is for the best way of disposing of any pest. We have frequently been asked to mention some substance that could be put on the soil, to either kill the weeds then growing or prevent others from starting. It should be kept in mind that weeds are simply plants that are not profitable. One authority has defined a weed as "a plant out of place," and it is an excellent definition. Common grass may be a weed when growing in a field of roots or corn. In the same way a rose bush, or a poppy; in fact any plant may be a weed under the conditions mentioned above; namely, when not in the proper place.

The use of some salt, it is evident, is out of the question where other plants are to grow. Common salt may be put upon a gravel walk to kill all weeds, but in such a place no plants are expected to grow. This using of some weed killer reminds us of a man who had a substance to put around the trunks of apple trees to prevent the coddling moth from getting into the apples. This compound would, as its compounder said, cleanse the soil from all sorts of vermin. There are cases where common salt has been used to destroy the vile Canada thistle. After the crops of this weed had been cut down, it has been found that salt sprinkled on the stubs or stumps of the thistles has had a good effect. One of the best methods of killing a plant is to cut it off close to the ground when in full flower, and it may be that there is more virtue in the time and method of cutting than the salt that was afterwards applied.

There are some general rules to be observed in weed killing. In the first place, it is much easier to kill a weed when it is small than at any later period of its growth. This fact is almost self-evident, and yet many farmers go on as if there was no truth in the statement. The quickest way to dispose of weeds is while they are still in the seed condition. In other words sow only pure seed, and separate and kill all foul seed, as it is termed. If many western farmers had been more careful with the seed of clover and various grains brought from the east they would to-day have far less work to keep their land clean. Some one found over forty kinds of weed seeds in a sample of clover seed.

If the weed seed is in the soil, the quickest way to get it out is to produce favourable conditions for germination and then kill the young plants so soon as they start. Some foul seed will remain alive for many years when buried in a soil so that they cannot grow.

It is not always possible to kill weeds when they are small, and the next best thing is to prevent them from forming seed. The number of seed or offspring formed by some kinds of weeds is very large. By careful estimate it has been found that a single pursley plant will form a million seeds, and do it without any apparent trouble. The methods which weed seeds have of being distributed are numerous. Some of them have hooks or barbs, by means of which they cling to the hair and wool of animals, while others are provided, like the Canada thistle, with balloons, by which they are carried far up into the atmosphere and across field and river.

Now is the time to kill the weeds, before they have even produced any flowers. The roadsides are the nurseries of foul plants. Many farmers throw all the screenings from the fanning mills into the roadway, where they are tracked and otherwise scattered far and wide. All weed seeds should be burned. We once saw a lane that was lined with dock on both sides, hanging full of their triangular seeds. All other parts of the farm were kept fairly clean, but the lanesides produced a large supply of seeds to continue the work of weed-killing from year to year.

The price of clean fields is eternal vigilance, and it pays to make the payment weekly, and not monthly or yearly.—*Farmer's Review.*

MANAGEMENT OF POULTRY MANURE.

In reply to an inquiry on the best method of preserving and preparing poultry manure, Mr. H. Stewart writes to the *Country Gentleman* as follows:

Poultry manure is the most valuable of our home-made fertilizers; but, like all other manures, it is not because it is made by fowls that it is so valuable, but because of the peculiarly rich feeding of the fowls. This should not be forgotten in regard to all kinds of manure, because we can make them rich or poor as we feed the animals well or ill. Poultry manure of the ordinary kind is more or less valuable, according to its condition, as is shown here: There are in 1,000 pounds f hen manure 560 pounds of water, 16.3 of nitrogen, 8.5 of potash, and 15.4 of phosphoric acid. In 1,000 pounds of guano there are 148 pounds of water, 130 of nitrogen, twenty-three of potash, and 180 of phosphoric acid.

But if we get rid of the excess of water in the poultry manure, we nearly double its proportionate value, and bring it so much nearer in quality to guano. Again, guano is reduced by decomposition to a very soluble condition, and its actual value is increased because of the immediate availability of its elements, If we can, then, so prepare hen manure as to make its potential value available at once, we further add to its actual value, and bring it still nearer in comparison to the value of the standard fertilizer, guano. Now this we can do, as suggested by my correspondent, by preparation. But this preparation must be such as will not waste any volatile element, which may be set loose in the decomposition, and that yet will produce the required decomposition. I have studied and experimented over this matter, and I think I have got this manure in its most available condition, because I have increased its solubility four times above that of its fresh condition. Farther, I have added to its fertilizing value by adding to the feed of my fowls bran and crushed fresh raw bones, which they consume with avidity, and with the best results as regards their health, production of eggs, and the certainty of hatching and producing strong chicks. But these are mentioned only by the way. In testing poultry manure with corn and melons, compared with stable manure and guano, I find a large handful of the former to be equal in every way to a heaping shovelful of the best stable manure, and a small handful (about one-fourth as much) of guano. The manure is prepared in the following manner. Every week the droppings are scraped up from the floor, which is of earth, and kept ready. The floor is then well dusted all over with earth dug from the yard outside and thrown in very easily through the window; air-slaked lime is then dusted over this until it is quite white. The droppings fall upon the lime, and when they are gathered they are scraped up with the lime and earth and put into the barrels. The barrels are kept out of doors, but covered to prevent exposure to rain. In three months the contents of a barrel become a brown soft powder, having but little appearance of the manure left, and as I have said, is four times as soluble as the fresh manure when it is taken out of the house—lime and earth mixed with it. Of the fresh manure, but two to three parts are soluble after drying it, while ten to twelve parts of compost, after three or four months, are soluble. I think manure made and prepared in this way is worth $20 a ton, or seven times the value, here, of the best stable manure, and one-fourth the value of Peruvian guano. A flock of twenty-two hens, kept in one house, has made since November last up to last week, five barrels, or about 1,000 pounds of the mixed compost, of which at least one-third is clear droppings. This quantity I am sure is worth $10. I choose air-slaked lime in preference to plaster, because of its useful effect in decomposing the manure, and the abundant organic matter—decaying sod—in the earth. The earth absorbs any ammonia which may be formed in the compost—is, in fact, one of those nitre beds which were once used to produce nitric acid by the nitrification of organic matter by the help of lime. The mixture is packed solidly in the barrels, and is kept moist enough by absorbtion from the air to effect the nitrification. No doubt longer keeping would add still more to the solubility of the manure, by more completely disorganizing the organic matter, and more thoroughly effecting the nitrification. Plaster will simply keep the elements in the manure inert, and would be like putting the talent in the napkin or burying it in the earth; it is safe, but it has made no usury. Lime effects the necessary decomposition, which plaster does not.

ROOT CULTURE.

Many reasons combine to prevent root crops assuming the important position in the agricultural economy of this country that they have long held in European farming. The great bulk of sugar consumed in France and Germany is made from the beet. Besides the sugar cane of our Southern States, American farmers have the sweet of the maple and the newly discovered amber sugar cane adapted to northern latitudes. We cannot make roots a main feeding crop, as does the English farmer, for with us labour is comparatively dear, and we can grow a better substitute in corn, either for the grain or fodder, more economically. Our hot, dry summers are admirably adapted to the corn crop, while they are comparatively as little fitted for successful root growing. We can never hope to rival moister climates in growing roots for stock. The ensilaging of corn, clover and other green herbage makes the growing of roots less important. For milk production ensilaged food is ordinarily more profitable than roots. We believe so thoroughly, however, in giving stock a variety in their diet, that on every farm where stock growing is an important interest, enough of turnips, beets, carrots and parsnips should be grown to give occasional feeding by way of change, even if the practice cannot be defended from the pecuniary standpoint above.

A common mistake in growing roots is sowing too early and aiming at large size rather than quality. A medium-sized root quickly grown is much better than one planted so early that before