

## Agriculture.

## Agriculture in the Holy Land.

The land of promise is a land without fences. The traveler is glad that this is the case. The view is less interrupted, and in cases where the fields are cultivated, the broad expanse unbroken by a fence is especially pleasing. Occasionally a vineyard has a surrounding of stone, or the low tree known as the prickly pear; but otherwise fences are unknown. American farmers seem to have a rage for fences, for nearly every field is divided and subdivided by a fence oftentimes of a hideous pattern or else sadly out of repair. In England fences are used sparingly, and on the continent they are still less in use. With us it would be better for the general effect if we had fewer fences. They have a very unsocial look. In Palestine the open fields speak to us of the well-known hospitality of the people. A few stones, as in Bible times, serve as boundaries of the land, and these are sacredly regarded and never disturbed. The main reason, doubtless, for the absence of fences is due to the scarcity of timber. With the exception of the Cedars of Lebanon, there are no trees of a large growth in the Holy Land. Persons who have been in Eastern cities, or have seen pictures of them, have observed the dome-shaped roofs of the houses. These domes are not erected as a matter of fancy or taste, as many erroneously suppose. They are a pure necessity. Timber is so scarce in the East that beams long enough for a continuous flat or sloping roof cannot be had. A dome is substituted, for it can be made of short pieces of wood plastered over. Kindling wood for domestic purposes is an unknown luxury. The wood pile, so familiar on New England farms, never greets the eye in the East. The cooking is done with the twigs of trees and with hay. But the article most frequently used is dried manure. I have seen women heating an oven with this material, though I noticed more smoke than flame. This particular fuel has been used for ages, for the Bible speaks of it as being applied to this purpose.

In the way of enriching the earth, but little is done among Eastern husbandmen. The stubble of the fields is reduced to ashes, and the ashes plowed in. In Bible times the blood of animals was used as a fertilizer, though I have never seen it placed on land in these days. As to the plow, it is exactly the same kind spoken of in the Bible, and no improvement over those used centuries ago. It is scarcely more than a sharp stick with one handle, and turns up the ground but slightly indeed compared with the modern iron plow-share; it makes nothing more than a scratch on the surface of the earth. Even so simple an article as a whip has not invaded the Holy Land. I have often seen Arab husbandmen plowing with their oxen, and urging them on with an ox-goad, a long stick with a sharp point on the end. When the modern plow has gone nearly to the ends of the earth, why has it not found its way to Palestine? In answer it may be said that the people are extremely opposed to innovations, and perhaps superstitiously so. Another reason is that the soil is very light, and does not require the deep plowing needful elsewhere. In some cases the seed is scattered over the ground and then plowed in afterwards.

Sickles are familiar to the tillers of the soil in Palestine, but they are in ignorance as far as use is concerned of the modern reaping machines. In some quarters the old-time way is still adhered to of plucking the grain by the roots. When the sheaves are gathered they are taken to the threshing floor—a hard spot of earth where the sheaves are trampled upon by cattle. The threshing floor in all its simple appointments has not changed since the days of the patriarchs. The old way of winnowing prevails, that of throwing the chaff up against the wind, giving the chaff a chance to blow away. To make it thoroughly clean it is submitted a second time to the wind. As in ancient times, sheep raising is one of the chief occupations of Palestine and Syria, and the source of considerable profit to those thus engaged. Mutton is about the only meat used by the people during the winter season. They have a way of preserving it in pots, so that it can be taken upon long journeys. The fat from the sheep is converted into a pasty substance, and made by many a substitute for butter. The sheep are the broad-tailed breed common to the land. A flock of sheep, as they wander out for the food of the day, are always accompanied by a shepherd. He goes before them and they follow him. It is the custom to give names

to sheep, and by these they are called. "They know not the voice of a stranger." The rich valleys and hill-sides in the region of the Sea of Galilee are especially rich for sheep grazing.

As I saw in this locality the black tents of the shepherds and the sheep near by, I was reminded of Solomon's reference to the black tents of Kedar, and thought that even the color of the tents had not changed in this stereotyped land. How much longer the old customs of the East will remain unchanged it is difficult to say. Should the present war be decided against the Turks, and should they be driven from the Holy Land, great changes will doubtless take place, and many of the antique and biblical customs will naturally pass away. The day may be near when a railway will connect Joppa with Jerusalem, and Damascus with Beyrouth. The time may not be far off when the clanking of an American mowing machine may be heard on the fertile and fragrant plains of Sharon. For myself, I am thankful that I had the unspeakable pleasure of visiting the Holy Land at a time when I saw it as it must have appeared in its manners and customs, and at least in its general features, to the sacred characters of the Bible, who by their lives have consecrated it above all other lands on earth.—*Cor. Scientific Farmer.*

## What Clover Will Do.

EXPERIENCE OF A WISCONSIN FARMER.

Several years ago we became painfully conscious of a gradual decrease in the yield of our crops. To remedy matters, we commenced to feed stock—cattle, sheep and hogs. We not only fed all the grain and coarse feed the farm produced, but we bought a great deal of corn from our neighbors. After pursuing this policy for a few years we found it not altogether satisfactory. We could not depend upon buying corn that left no profit in feeding it, and what was worse, with all our feeding we could not get manure enough to keep our land up to the productive standard we wanted it. We next turned our attention to clover, and the result has more than equalled our most sanguine expectations.

In the spring of 1869 we sowed twenty acres to clover, sowing it with oats, putting ten pounds to the acre. After the grain was cut the clover made a remarkable growth; it headed nicely, and much of the seed matured sufficiently to grow. On the 15th of October following we commenced to turn the clover under; it took good teams and good plows to go through it. The next spring we planted to corn, and harvested sixty bushels per acre. The next spring we plowed the ground and sowed oats. This brought the seed plowed under in 1869 to the surface. The result was we had the ground nicely set to clover again. The oat crop was as good as we ever handled. The next season we cut two bouncing crops of hay, then plowed the ground in the fall. The two following years, 1873 and 1874, we produced large crops of corn. In 1875 we sowed to oats and again seeded to clover, sowing ten pounds of seed per acre, raising a heavy crop of oats and a good stand of clover. In 1876 we cut a heavy crop of hay the latter part of June; also secured four bushels of seed to the acre later in the season. We are all satisfied that that 20 acres is all right, and in condition to cut a hay and seed crop from next season.

On the first day of June, 1872, we turned eighty good young hogs, averaging 150 pounds, on fifteen acres of that clover that was sown the spring before. On the 15th day of September following, the hogs averaged a fraction over 250 pounds, a gain of 100 pounds each, or 600 pounds for each acre pastured.

On the 25th day of May, 1874, we turned 120 shoats (mostly small pigs) that averaged 100 pounds, on twenty acres of clover sown the spring before. On the 20th of September they weighed 194½ pounds each, or 567 pounds gain to the acre of clover.

June 1st, 1865, we turned 95 head of shoats, that averaged 126 pounds, on the same twenty acres of clover. On the 1st of October they averaged 250 pounds, a gain of 487½ pounds per acre. We then plowed up the pasture, and it was about as effectually dressed with hog manure as one could desire.

Last spring (1876) we planted to corn, commencing May 4th. It came up quick, and grew from the word "go," and produced the largest crop of corn, for a field crop, we ever grew in Wisconsin; as near as could be estimated, 82 bushels per acre.

In the spring of 1876 we turned 120 fair shoats on twenty acres of clover. The value of clover

had become so well established with us that we neglected to weigh them, consequently are not able to speak certainly as to definite results; but they would not differ materially from the preceding years. The hogs were never fed any grain from the time they were turned on the clover until taken off and weighed before feeding for market. Another thing that pleased us was the rapid gain of the hogs when put on feed. They seemed to be just in the right condition to eat heavily, digest properly and assimilate perfectly.

In 1871 we fed 45 days, and our hogs then weighed 365 pounds, having gained a fraction over 2½ pounds per day while eating corn.

In 1874 we fed 42 days, the hogs weighing 315 pounds at commencement, gaining three pounds per day.

In 1875 we fed 37 days. They weighed 326 pounds at commencement, and gained within a small fraction of three pounds per day.

In regard to plowing under green clover for a fertilizer, we prefer to pasture it off with hogs. Think the benefit to the land is as great or greater, and you will get paid for the clover; besides, would prefer to pasture the same land when possible two years in succession.

Our experience in this direction has not been so extensive as it has in feeding green. So far it has averaged as follows: An early crop of hay, cut by the 25th of June, worth \$10 per acre; three bushels of seed secured in the fall, at \$7; threshed straw, \$3; total \$34, from which deduct cost of harvesting and threshing, \$9, leaving \$25 net. We do not think the benefit to land nearly so great as when the land is pastured.

In conclusion we would say, if you want to clear your land of weeds, sow clover and sow it thick. If you want to grow big corn crops, grow clover and pasture off with hogs. Plow up the land the last of September or first of October, and the corn crop following will make you feel happy. If you want to make rich farms and make money, and not at the same time worry about railroad freights and railroad laws, grow clover, corn and hogs.—*From Wis. Ag'l Report.*

## Enriching the Farm.

There is probably not a farm which might not be regularly and thoroughly fertilized and renovated by a systematic use of the manures and other enriching material produced upon it. If there be a low swamp filled with decaying leaves and muck, it may be converted into a mine of wealth. Where the horses, cows and swine are stabled or penned, a little attention to their droppings will prevent ammonia from escaping, which ought to be intermingled with the soils. Haul leaves from the woods in large quantities in November, soon after the foliage has fallen from the trees, pack them in a bed, saturate them with stable and dung-heap drainings, suds from the wash-house, etc., and cover it with fresh manure. Mix them thoroughly after a time, always keeping them moist to facilitate decomposition. Quicklime deposited through the heap in moderate quantities will help much. Leaves of all the soft woods, so called, are good. Every pains should be taken to keep the fertilizing salts from escaping, and if you keep adding to your compost heap during the winter, you will have a "heap" of enriching substance in the spring to intermingle with your tilled land, which will be worth gold after harvest.

## Top-Dressing Grass Lands.

It is now generally conceded that the best time to apply a top-dressing to grass lands is just before the fall of the first winter snow, say in the latter part of November or first weeks of December. If snow comes on soon after the manure is spread, and remains on till spring, the soil will get the full benefit of the application. But if the snow fails to come on to cover the manure, or goes off and leaves it uncovered, much of it is wasted by evaporation; and for this reason the more strawy the manure the better. But in spring, before the grass begins to grow, the straw should be raked off the surface, and the rakings put in the pig-sty to be further pulverized and used as an absorbent. If the manure is not spread before the first snow, then it may be spread on the snow and let the next cover it. Or if the snow goes off in mid-winter it may be spread at that time with perfect safety and managed in the same manner as if spread in the fall.

The next best time to spread manure is late in April or the first week of May, when the grass is just starting and the roots ready to take in and