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The Field.

Hop-Growing on Wires.

The *Farmer* (English) gives the following description of the wiring method of hop-culture, which is now being adopted by some growers of this crop in Britain:—

"Hearing that Mr. Sheldrake, proprietor of the *Aldershot Admiralty Gazette*, had a good breadth of hops under the wiring method of culture, we applied to that gentleman for permission to inspect and report upon it. He very courteously rendered us every assistance, and we are thus enabled to give the following particulars:—

Farnham and Aldershot are contiguous, and form the great hop-growing districts for which these adjoining corners of Hants and Sarrey are famous. The soil is of a deep, tenacious, loamy character, and an enormous quantity of hops are grown in the district.

Pole growing is the universal method adopted there, Mr. Sheldrake being the only example of wire growing. A close inspection of the two methods has resulted in the formation of the opinion that the wire system of culture is by far the best.

In pole planting the hills (i.e., plants) are generally planted 6 ft. by 6 ft., which gives 1,210 plants to the acre, and on an average there are three poles, varying from 10 ft. to 12 ft. high, according to the adaptability of the ground to vigorous growth, and two vines trained to each pole, and if only two poles are used, three vines are invariably trained to each. Others plant 6½ ft. by 6½ ft., which gives 1050 hills per acre. So far as the crop in this district can be judged at present, the yield will be from 9 to 10 cwt. per acre.

On the wire system and planting purposely for it, as Mr. Sheldrake did last year, he recommends planting 8 feet by 4 feet, which gives the same number of hills per acre, but has the advantage the saving of one-fourth in the expense of horizontal wires and posts, while this method of planting admits of cartage between the rows, for manure and tillage, as well as the accommodation of the pickers, and cartage to the kilns. This plantation of a year old will be wired next winter.

The plan of wiring is this. At each end of the rows are stout upright scaffold poles about 9 inches in diameter and about 12 ft. high, with a slanting support to keep each end pole upright and thoroughly firm, the slanting support resting on stone slabs set into the ground. In the rows, at intervals of 40 feet, are uprights with a cross piece at the top, as in a telegraph post, a single horizontal wire runs along the bottom, about 1 foot from the ground, and two horizontal wires run along the top, at each extremity of the cross piece, at a distance of about 36 inches apart. The wires, both at top and bottom, are strained tight, so that the whole structure is firm and durable. From each hill or plant, four vertical wires are fixed at the bottom, to each of which two vines are trained; and, of course, these vertical wires are fastened to the top horizontal wires at distances of 2½ feet to 3 feet each way.

One piece of wired hops consisting of rows each of 100 hills, each hill 6 feet apart in the rows, is just now a sight which, like William Paul's roses, should be seen once and dreamt of for ever. During our inspection, the afternoon's sun was full upon them, and the wire system of training presented an unbroken surface along the line, and we looked upon long wail-like masses of foliage, densely studded with golden-

tinted hops, with here and there branches which had caught an opposite wire, forming a festoon.

But how about picking? Well, this is a very easy matter, for light ladders are used, which rest against the horizontal wires, and a man easily pulls away the lateral branches, and throws them down to the pickers. The cost in picking is on the wire system a little in excess of the pole method of culture, inasmuch as three men are required for wires to two men on poles, in gathering and preparing hops for the pickers, but as this extra cost is only for a period of three weeks or so, the matter is of small moment compared with the advantages of the wire system.

First, as to the cost of the two methods. Under the pole system of culture, poles 14 feet high are delivered in the grounds at from 22s. to 25s. per 100, and taking the average of three poles per plant, the cost would run about £30 per acre. Then there is to be added the cost of labor in fixing, attention to, breakage of poles during the season, removal after, and pointing and pitching, as necessary, to say nothing of renewal of poles annually, and, greatest loss of all, the great check which the plant positively sustains in the premature pruning to within three feet of the ground, under the system of pole growing. Now this statement may appear problematical, and will be accepted as such by those who deliberately set their faces against the wire system of culture. But facts speak for themselves, and the proof is now to be found in Mr. Sheldrake's plantations.

Here, side by side, planted at the same time and undergoing precisely the same system of tillage, are those on poles and those on wires, and the difference in the estimated yield is—and, we think, a truthful one—of 15 cwt. to 18 cwt. per acre on the wires, as compared with 8 cwt. to 10 cwt. per acre on poles. Under this system there is uniformity of growth, a weak vine being the exception; for instead of cutting down in the growing season—for at the time of picking the hop plant has not finished growing—only the laterals are pulled away, and the sap action is not arrested and annihilated, as in the pole system of culture. An old hop grower the other day, on looking through Mr. Sheldrake's wires, observed, "Ha! I see it makes every hop a hop; and it does, for the system compels a free circulation of air and exposure to the light, and immunity from friction, giving size to the hops, as well as quality and color. The pole system will not assure this, for the vine is often blown close together, and the poles sometimes broken. Altogether the advantages of the wire system appear to be of so decided a character that we venture to affirm that only prejudice and the fear of first cost stands in the way of its adoption.

At present the wire system is a patent, registered by Mr. Farmer, of Kerby, near Worcester, and Mr. Sheldrake informs us that the cost of wiring an acre, planted 8 feet by 4 feet, with uprights, &c., complete, is about £75 per acre; but the first cost is the only one, as the wires last for a number of years, and there is a great saving of labor."

Rotating Manures

When we speak of rotating crops, almost every one is familiar with it, either practically or theoretically, but when the subject of rotating manures comes up, it is natural to ask what benefit may result from doing so.

That much might be gained by studying this matter of manuring to suit the soil and crops I fully believe, but yet am not entirely given up to special manuring on account of the expense, when but a small area is cultivated. And this rotation of manures comes more

into use and is more profitable on well cultivated, heavily manured lands than on lands which are naturally poor or have been made so by a system of over cropping and impoverishment.

No one denies that stable manure is very valuable, and, either while hot or after having undergone fermentation, produces good crops of almost all kinds; yet a change of even this valuable fertilizer for some good commercial fertilizer, say for one or two years, will be productive of good results, after which the use of stable manure can be resumed. Now there are several reasons for this, one of which is, that stable manure supplies a variable, though large quantity of vegetable matter, and constant manuring with it so fills up the soil with vegetable matter as to supply more than the crops actually require, and the consequence is the full amount of good is not yearly obtained from the manure supplied each season. Of course this does not refer to land which is poor and needs food, as do many of our worn-out farms, for on such land manure may be yearly used, and large quantities too, with the full assurance that you are getting all the good from it that there is in it—that all its virtues are quickly and eagerly sucked up by the hungry soil and converted into vegetation.

Now, all will admit the efficacy of Peruvian guano, when obtained in its purity, comparatively speaking, yet if you have been using this manure on any crop for a couple of years, on the same piece of ground, substitute some other good fertilizer for at least one year, and you will gain by the change.

A circumstance occurred with me which may not come amiss to mention. Some time since I grew garden vegetables largely for market, and there was a certain piece of ground on which I grew my early turnips, they following some other very large crop, of course rotating the very early crop, and using guano to force them. It worked very well all along, but the third year I did not have quite enough of it to finish the piece, and so finished up with Bower's complete manure. The piece manured with the latter proved to be the best that year. I marked the result and just reversed the operation the following year, and there was very little difference, for the rest given the guano made its effect more apparent the following year, while the application of the complete manure brought the other part of the piece up, I soon after gave up raising vegetables in such quantities for the large markets, raising only enough to supply local markets, so did not have an opportunity to test the matter much further with vegetables.

A plot of ground which had been well cultivated and regularly manured with stable manure, was ploughed up and put down to wheat. Part of the piece was again manured with good stable manure, while another part was treated to a good application of a standard fertilizer, to nearly the amount in money of the value of the stable manure. I watched the result carefully, and at harvest time the advantage was on the side of the stable manure.

I do not say that such would have been the result in every case, for many important points must be taken into consideration, and, as it would take considerable space to go into details at present, I will await the expression of opinions from other culturists. —*Cor. Ohio Farmer.*

ODESSA WHEAT IN WISCONSIN.—A correspondent of the *Western Rural* says that in Waupaca, Portage, and Washara counties, Wis., it is with very few exceptions a failure, and almost abandoned. Its faults are, it is the latest wheat, and suffers more from Chinch bugs than others.