

member speaking of the crop as being one "fascinating to grow but hazardous," inasmuch as it could never be depended upon for ten days together; to day it would be flourishing, and a week or so afterward, the fly, or the blight, or the mould, would cast all hopes to the ground.

Again, hops, like the splendid potatoes at Little Môtis, arrogate to themselves a right to all the dung on the farm, to say nothing of 120 bushels of sprats or 6 cwt. of woollen rags to the acre, as a sort of *bonne bouche*, or appetiser. A propos of the Môtis potatoes, there hangs a tale. Talking with a lady recently arrived from that watering-place, we happened to ask how the visitors were supplied with vegetables this summer. "Oh!" replied our friend, "very well indeed; green-pease, French-beans, in abundance: the potatoes were superb in size and quality, and as when we left—September 7th,—they were not nearly ripe, there must be a large crop by the time they are fit to dig." "Glad to hear it," said we, "for when the fallow or hoed crop is good, the following grain- and hay crops are also likely to be good." "What do you mean? Following grain and hay-crops after potatoes, indeed! *Pas si bête!* they plant potatoes year after year on the same land, and as long as the farmers of the interior can afford to buy seed-potatoes from the *beach*, the crop is sure to be good." The lady knew what she was talking about.

Curious diseases they have in that queer county; for instance; Madame B.'s cow was ill; some badly disposed person had taken the rags out of the chinks in the stable into which they had been stuffed to keep the wind out, and that in one of the coldest nights of the winter. Cow got up, and seemed better in the morning. Madame went to milk her: nothing but pure water came from her; nothing, nothing, as clear as *l'eau de roche!* And droll medicines too, are exhibited by the country practitioners, another case: the same Madame B.'s horse was ill, very ill indeed. The local "cow leech" recommended a dose of chicken's blood. Quick, quick; kill all the chickens, all, all! However, one was killed and the blood saved and administered to the patient. But the horse died; it was too late to save it, alas!

It is generally supposed, by those competent to judge, that Madame B. is not such a simpleton as she makes herself out to be. Her imagination runs away with her. The English visitors are evidently "*bêtes du bon Dieu*," and her stories are worth an old dress or two. She is certainly very amusing.

Seriously, from what our friends tell us, the harvest in the Môtis district is still green, and the prospects for the winter appalling. The people seem to be disheartened at the failure of the crops, and to have resigned themselves to live upon what they can pick up from the summer visitors. If a family of five or six are content to live during the long winter upon the potatoes they grow and a couple of barrels of herrings, the utter pauperisation of the population is only a matter of a few years. Once let Môtis lose its *vogue* as a watering place, and the whole fabric falls to the ground.

But all this by the way; our subject is hops. Now the first act of the Council of the County of Kent, in connection with agriculture, was to try if by investigating the usual methods of growing hops some new processes could be discovered which being put into practice might improve

both in quantity and quality the yield of that important crop; and the experiments described below are a measure of the success of the investigation.

Some of the yields are phenomenal, and although they are not taken from the final adjudication by the scales, hop-growers in Kent are so skilled in judging yields by the eye, that they may be taken as being very near the mark. (1)

The yield of plot L, from 40 loads of dung an acre, and half a ton of plaster (gypsum), cost, for dressing alone £8. 17. 6, in round numbers, \$14.00. A perilous outlay, but 20 cwt. of hops at, say, only £3. 10 a hundred weight, would bring in the nice little sum of \$340.00, which, in spite of the costly hoeing, digging, washing, and sulphuring, must, one would think, leave some profit behind. What peculiar effect was caused by the plaster, we do not see, but as it was used in plots A and L, both of which seem to have been very prolific, we are bound to suppose it had some effect. However, we shall write to some of our old friends and get them to send us an unbiased description of the whole series of experiments as viewed by the eye of a tenant farmer who is a hop grower.

Altogether there are 17 experimental plots, the hops being the Fuggles variety, the soil Hastings sand, and the bine string trained. The plots are manured as follows:

A.—Nitrate of soda, 4 cwts. per acre; superphosphate, 4 cwts.; steamed bone flour, 10 cwts.; kainit, 3 cwts.; sulphate of magnesia, 2 cwts.; gypsum, 10 cwts.; cost per acre, £8 2s. 3d.

B.—Nitrate of soda, 4 cwts. per acre; superphosphate, 4 cwts.; steamed bone flour, 10 cwts.; sulphate of magnesia, 2 cwts.; gypsum, 10 cwts.; cost per acre, £7 14s. 6d.

C.—Dung, 20 loads at 4s. per load; nitrate of soda, 2 cwts. per acre; superphosphate, 2 cwts.; steamed bone flour, 6 cwts.; gypsum, 10 cwts.; cost per acre £3 1s. 3d.

D.—Fur waste, 12 cwts. per acre; nitrate of soda, 2 cwts.; steamed bone flour, 6 cwts.; superphosphate, 2 cwts.; kainit, 2 cwts.; gypsum, 10 cwts.; cost per acre, £3 4s. 5d.

E.—Nitrate of soda, 4 cwts. per acre; superphosphate, 4 cwts.; steamed bone flour, 10 cwts.; kainit, 3 cwts.; sulphate of magnesia, 2 cwts.; lime, 20 cwts.; cost per acre, £8 13s. 1d.

F.—Nitrate of soda, 4 cwts. per acre; superphosphate, 4 cwts.; steamed bone flour, 10 cwts.; sulphate of magnesia, 2 cwts.; lime, 20 cwts.; cost per acre, £8 5s. 4d.

G.—Dung, 20 loads at 4s. per load; nitrate of soda, 2 cwts. per acre; superphosphate, 2 cwts.; steamed bone flour, 6 cwts.; kainit, 2 cwts.; lime, 20 cwts.; cost per acre, £3 17s. 3d.

H.—Fur waste, 12 cwts. per acre; nitrate of soda, 2 cwts.; steamed bone flour, 6 cwts.; superphosphate, 2 cwts.; kainit, 2 cwts.; lime, 50 cwts.; cost per acre, £3 15s. 3d.

I.—No manure.

J.—Raw Ichaboo guano, 12 cwts. per acre; gypsum, 10 cwts.; cost per acre, £8 4s. 6d.

K.—Dung, 20 loads at 4s. per load; raw Ichaboo guano, 8 cwts. per acre; gypsum, 10 cwts.; cost per acre, £9 15s. 6d.

L.—Dung, 40 loads at 4s. per load; gypsum, 10 cwts.; per acre; cost per acre, £8 17s. 6d.

(1) Before the removal of the duty, the price on the probable yield of the year, not only among the farmers, exceed all belief.

M.—Dung, 20 loads at 4s. per load; No. 2 Ichaboo guano, 8 cwts. per acre; cost per acre, £8.

N.—No. 2 Ichaboo guano, 16 cwts. per acre; cost per acre, £8.

O.—Dung, 20 loads at 4s. per load; raw Ichaboo guano, 8 cwts. per acre; cost per acre, £8 18s.

P.—Dung, 20 loads at 4s. per load; rape dust, 20 cwts. per acre; cost per acre, £8 5s.

R.—Nitrate of soda, 4 cwts. per acre; superphosphate, 8 cwts.; steamed bone flour, 5 cwts.; kainit, 3 cwts.; sulphate of magnesia, 2 cwts.; lime, 20 cwts.; cost per acre, £7 5s. 1d.

S.—Nitrate of soda, 4 cwts. per acre; superphosphate, 4 cwts.; steamed bone flour, 10 cwts.; kainit, 3 cwts.; sulphate of magnesia, 2 cwts.; cost per acre, £7 6s.

Before proceeding to the experimental plots, the company's attention was directed to a very ingenious and useful appliance of Mr. Monson's for preventing the burning of hops when drying and enabling the better regulation of the temperature. It was an ordinary thermometer attached to an electric alarm which could be set for the bell to ring at any degree of temperature. For instance, if the temperature is required at, say 105, a platinum wire is adjusted to that degree and immediately the mercury comes in contact with the wire the alarm is set ringing, thus attracting the dryer's attention.

Upon arriving at the plots admiration was at once expressed at their excellence. Taking them altogether they were a splendid lot, and for cleanliness and quality would require a deal of beating. Perhaps the largest hops where those in plot A, on which the basis of the manure was gypsum, but on the other hand neither laterals nor hops were so numerous. They were, however, forward and of very fine quality. Plot B had not so heavy a crop and the quality was fair, but plot C was comparatively a failure both as to quantity and quality, while plot D, which was cultivated deeply at the end of the season, was of the ordinary run. The best piece of the whole was plot L, which will in all probability average at the rate of a ton an acre. Here the bine was very luxuriant and the hops hung beautifully in thick festoons, while as to cleanliness and quality no fault could be found. This plot was manured with 40 loads of dung a 4s. per load, and 10 cwts. of gypsum per acre at a cost of £8 17s. 6d. per acre. In direct contrast to this was plot I, marked "no manure," on which, although there were some very nice hops, yet there was a marked scarcity of bine and therefore scarcity of fruit. Speaking of the whole of the plots generally, washing and sulphuring has been done continuously, and they were very clean. An occasional hop with a slight touch of mould and redness might be found at very rare intervals, but in so infinitesimal a degree as to necessitate being purposely looked for. Various estimates were formed by those present as to the average crop of the plots altogether, the lowest being fifteen cwts. per acre and the highest eighteen cwts. One of the noticeable results of the manure, so far as could be seen up to the present, was that raw Guano had not done so well as number two, in which there is about four per cent. of potash; but all things considered—and amongst others the way in which some of the plots were improving under the influence of the kindly weather—it is somewhat premature to give fuller comparisons yet, and it will be better to await the results which will be published in these columns at later date. Very favourable

comment was passed upon the method of stringing the hops. Last year the strings were on the upright system, but the present year has seen what strikes one as being a great improvement in the way of giving access of light and air to the fruit. To each hill there are four strings running from the ground upwards for about five feet. At this height there is a band of string around the four, and from this the strings are taken up to the overhead permanent wires on either side at an angle of somewhere about 50 degrees. To the eye, the hops when in bearing and thus trained are picturesque in the highest degree, and the light and air thus admitted to the fruit-giving shoots must have beneficial results. Certain it is that the experiments are becoming more highly valued by practical growers who are acquainted with them, and it is very significant when a grower holding the position in the hop industry that Mr. Noakes does is seen carrying out in his other plantations the lessons learned in the experimental plots. To see that such information is worth having one had only to look over the hedge at a plantation of Bramblings of Mr. Noakes's. This garden was indeed a picture and many estimated it at a ton an acre. Upon returning from the plots an old garden with an attack of the weevil was passed and several growers mentioned that spent quassia chips put on the hills were effective, the winter's rain working it down into the earth and thus getting the remedy at the pest.

Lightning.—Some very erroneous notions are entertained about the effect of lightning. Many people think: that lightning never strikes twice in the same place; that the most exposed place is always struck; that a few inches of glass, or a few feet of air, will serve as a complete insulator to bar the progress of a flash that has forced its way through a thousand feet of air. If any one is struck by lightning, prompt and unremittent efforts should be used to restore consciousness, for authorities say that lightning often brings about suspended animation rather than *somatic* (1) death. One record of persons struck by lightning is known to exist, and in it out of 212 persons struck, 74 were killed. More risk in the country than in towns, as in towns the tin roofs, cornices, gutters, &c., afford so much protection that lightning-conductors are hardly needed. Of trees, the superstition in England is that the *ash* is the more frequently struck, and among the farm-laborers' class this idea will be accentuated by the fact that the five poor fellows who were killed at the R. A. S. of England's show at Darlington this year, 1895, had taken refuge from the storm under an *ash*. In the States, we hear that the *oak* is most frequently and the *beech* the least frequently struck; but whatever the tree most favoured by the "levin-bolt," we hope our readers will never take shelter under any tree in a thunder-storm.

Mulching.—Something more than the addition of organic matter to the soil is aimed at by mulching: it increases the water-holding and, consequently, the drought-resisting qualities of the soil.

In one of the bulletins sent out by the Minnesota experiment station, we see it stated that "the use of mulch may sometimes increase the amount of water in the upper 1 foot of soil on

(1) *Soma*—body: Greek.