

set the public as strongly on their guard against it as they would be against the probable introduction of the Russian plague. All kinds of animal food are dangerous enough at their best, but when added to these dangers are those of introducing not only the germs of the tapeworm, trichina, and other parasites known to infest uncooked animal food, but also the poisons fatal and horrible, which are generated by the process of putrefaction, the preservation of the public health demands the prohibition of the manufacture of oleo-margarine, or of any similar compound, making its production a misdemeanor at all times, and a capital offence where fatal consequences are traced to its use.—*Am. Dairyman.*

Hop Culture.

In answer to an enquiry contained in the April number of the *Journal d'Agriculture* Mr. A. R. Jenner Fust has kindly sent us the following interesting paper:

DEAR SIR.—I send you a few notes on Hops. As I was born and brought up in the midst of the Hop district in Kent I may be supposed to know some thing about the cultivation of that fascinating but hazardous crop.

The only authority is "Lance's Hop Farmer." I don't know the Publisher, but a letter to "Mr. Jenkins, Secretary to the Royal Ag. Soc., Bouver square, London," would, doubtless, meet with a reply containing the necessary information.

Mr. Alderman Procter, McGill St. Montreal, buys largely of good Hops every year; but if they are dried in any way except in a regular kiln, technically 'oast' (quasi toast), and are not well and tightly trod into the bags, they will be *unsaleable* at any price.

The crop is most variable, from *nothing* to 1200 lbs per acre; worth, during the last two years, from 8c. to 10c. per pound. In fact Hop-growing is pure gambling, and only pays when, by some chance or other, the crop fails in other countries and succeeds here; as in 1868 when they sold for 50c. per lb.

Again the greedy wretch is sure, sooner or later, to absorb the whole of the manure of the Farm. The usual dressing in *England* is, yearly, 40 double loads of dung, spread over the whole acre, and 120 bushels of sprats (fish) put into the *hills* in the summer.

The exposure should be to the North, rather than to the South, to avoid the extremest of temperature, and on a slope. Bottom lands near rivers are, almost always, subject to blight. Shelter from the prevailing winds should be attended to.

The *hills* should be arranged in the "Quincunx" form, as in that way, there will be three paths for the horse-hoe instead of two. This implement should be kept at work all through the summer, as the more the ground in the 'alleys' is pulverised the more will the roots wander in search of food. The hills must be kept *clean* by hand-hoeing. The "Quincunx" fashion gives, at 6½ feet between the hills, 1194 against 1031 in the square.

Plants can be cuttings, placed 5 to a hill, to allow for failures, or, what is far better, "bedded sets;" that is to say, cuttings set out in a nursery bed a year before they are permanently transplanted. The latter will give a small crop the first season with very short poles—say six feet.

As Hops are dioecious every 12th hill should be set with the *male plant*—proof? The cones are always heaviest in the immediate neighbourhood of the male hills.

Useless to attempt to grow Hops without great attention. In fact there is not a day, from May to September, in which there is not something to be done in the garden.

Ellis of Barming who cultivated 300 acres of hops, for 35 years, died a bankrupt. Example to be avoided. A drying kiln, or Hop oast does not cost much. At Compton, or Lennoxville they may be seen in operation. I suppose, as long as Brewers are fools enough to prefer rankness to delicacy, sulphur will be used to disguise the colour of the Hops. I should never use it myself. In fact the best sample of Hops I ever saw grown in Canada was refused by every *practical* man as too brown—afraid they would darken the finer Ales! Bah! Sulphur only disguises the colour and hides the blemishes. Poles, as to length, should be suited to the sort of Hop grown, and for this reason; viz., if the poles are too long, the hop will keep on running, instead of turning down and coming into "Burr" i. e. flower.

As to heat in drying; a Thermometer thrust through the Hops and resting on the pierced floor (Hair cloth or haggling) should never indicate more than 120° F. Hops are sufficiently dried when the 'strig' (stalk) will break.

Sorts of Hops.—first and best, 'Golding's'—inventor's name R. Golding, of Maidstone.

These require 18 to 21 feet poles. Awful devourers of dung. Very delicate and sensitive to easterly winds.

Flemish—coarse, but very productive—14 and 16 feet poles.

Goldgate's, good—14 ft poles—latest sort in ripening.

Jones—productive—and 12 feet will do for the poles.

3 poles to the hill are, 1194 hills, equal to 3582 per Imperial acre.

Probable average yield, in this country, 700 lbs; which, at say 12c= \$84.00, but this is certainly *over* the mark.

Woolen rags, or waste from the cloth mills, are very good manures for this crop.

In conclusion I should recommend no one to meddle with Hop-growing, without passing at least one season in or near a Hop-garden; it is not a thing to be learned by study at home.

ARTHUR R. JENNER FUST.

Dear Sir.—As the Cheese season is about opening we think it would be advisable and timely if you would call the attention of the farmers to the good resolutions they have made during the winter, and enforce upon them the necessity of selling their goods when they are fit for market. You are no doubt aware that the Cheese market has opened very low, and that the make, up to the 15th May, was much smaller than last season; but, after this date, our information leads us to believe that the make will be quite as large as last season, unless some unforeseen event occurs to stop the flow of milk.

The farmers must face the facts as they are and meet the market. There is no prospect of things immediately improving, and they should be urged to sell when their goods are fresh and in a state to command the highest market price. The finest quality of Cheese is now selling at 7 to 7½c. on this market, and poorer qualities at from 3 to 6c.; finest factory made Butter 17½ to .8c. and dairy packed 10c. to 14c. There is a fair export enquiry at these rates.

Yours Truly,

A. A. AYER & CO.

Lucerne of the Province of Quebec.

Dear Sir.—We began cutting Lucerne on Monday last; it is now two feet, to two and a half high, and, up to Monday we have had no rain for four weeks. Last year, I cut it the *second* time on the 21st of June. We get four crops during the season. I fed five horses, two Bulls, and some calves with it for four months. The recent rains are doing much good.

5 June 1879.

R. H. STEPHENS.

Bee-Keeping.

In the beginning of July the first swarms will have almost all flown, and none but after-swarms will remain. As the latter left alone give but little profit, one of two things must be done: they must either be returned to the main swarm, or they should be united to other secondary swarms. Two of these being as strong as a main swarm. In the former case, secure the after-swarm and unite them the following morning by shaking out the bees in front of the main swarm, they will all enter without difficulty. When two after-swarms are to be united it may be done at once, if both swarms came out the same day. If not, it will be necessary to smoke the bees slightly and then to empty the new swarm into the hive of the older one. The smoke, by making all the bees smell alike, will make them unite without difficulty. In order to succeed in these various operations, a small instrument, called a *smoker*, is of great advantage. It is composed of three parts, viz: a tube in which the fuel is placed, the conductor and the bellows. Once lighted, it can be used for several hours, and it throws a very dense smoke. With this instrument, the bees can be entirely mastered; it is of incontestable benefit, Foundation, and it saves the bee-keeper a great deal of trouble.