

excelled. This part of the country does not yet occupy that high position in live stock and agricultural enterprise which the more naturally-favoured western portion has so long maintained.

I had a good opportunity of observing the state of hop-culture in this and the adjoining county of Prince Edward. The raising of hops has been considerably extended in this district within the last year or two, particularly in the vicinity of Brighton. The prospect for hops at present is, on the whole, somewhat discouraging. I never saw the hop ground in so bad a state of cultivation, particularly on the stronger soils, as at present. This unfavourable state of things is mainly owing to the extreme wetness of the spring and the subsequent dry weather. In some more favoured soils the surface, after much labour and expense, has been brought into pretty good till; while in others it mainly consists of coarse clods almost as hard and as impracticable to manage as stones. The speedy reduction of such surfaces, with deeper culture and more genial weather, may be safely assumed to be essential to any thing approaching a profitable crop. The worm, a small green caterpillar, is doing great mischief in some places, reducing the leaf to a perfect network, and consequently impairing the vital forces of the plant. The grub, too, in some situations, is doing underground mischief by eating the vines at or just below the surface. It is very noticeable that the weaker plants are the first to fall a prey to insect devastation; so the analogy holds good in the vegetable as it does in the animal kingdom. Another thing is obvious to careful observers—hops that were cut and picked last year before they were fully ripe, and the sap consequently declining, are, as a consequence, more weakly this season—a fact which I have repeatedly observed, both in Europe and America. It will hardly do in this country, where sufficient people for picking are difficult to obtain, to let a whole plantation get perfectly ripe before making a commencement. When the vines "bleed," as it is termed, profusely after being cut, it will be found advantageous to cut them sufficiently high to tie what remain into a knot, so as to keep them as far as possible in an erect position, a circumstance that will very much diminish the exudation of the sap, and prevent, or at least mitigate, "bleeding." The cultivation of hops on a moderate scale is likely to become more profitable in Canada than has hitherto been the case. The recent opening of the British ports to this article, free of import duty, will enable American growers to export their produce with increased chances of profit. Hop culture, however, should be cautiously gone into. It necessarily involves much labour, care and expense, and should never be attempted without sufficient practical knowledge of the art of growing them, and of curing them for market. It may be added that at best hop growing is a peculiarly uncertain business, and one is never certain of the final result, after much anxiety and labour, till he has got the money in his pocket.

I paid a hasty visit to Mr. Robert Werden, near Picton, County of Prince Edward. Mr. Werden is a native of this part of Canada, owns an extensive farm, combined with a nursery and flower garden of some twenty acres, the whole being the result of twenty-four years' labour, from the primeval forest. Some of the readers of THE FARMER will, doubtless, recollect the correspondence carried on in the *Canadian Agriculturist*, a year or two since, between Mr. Werden and Mr. Arnold, nurserymen, of Paris, C. W., on the subject of dwarf fruit trees, the former contending that many of the trees sold by nurserymen as dwarfs were no dwarfs at all, but in point of height and extent of top became, after a while, similar to standard trees. Mr. Werden pointed out to me several in this condition which he has growing in his own orchard. Mr. Arnold, however, one or two nurserymen in Rochester, and Mr. Beadle, of St. Catharines, have sent him several trees, both apple and pear, which those gentlemen guarantee as true dwarfs, and judging from appearance at present they seem to be the genuine article. Mr. W. will report progress in due course. He contends that the most advantageous way of raising apples and pears in Canada, at least in his own section, is not to adopt the high standard tree, but to graft low, and get a number of stems to ascend from a common stock near the surface. This condition of the tree, he affirms, is more favourable to its health and fruitfulness than when more exposed, either to the heat of summer or cold of winter, as it must be when growing as an ordinary standard. Mr. Werden's theory certainly receives favour from his own practice. In each corner of the zigzag fence that surrounds a portion of his grounds, he has a fine healthy tree, with stems rising near the surface, and which certainly compare favourably, both in point of health and fruit producing power, with the standard trees of the interior of the same grounds. This is a point to which it is desirable that our experienced fruit growers should devote proper attention.

There is another thing that particularly impressed me in the very hasty way my time allowed me to look over these premises, and that is the number of tender and half-hardy trees and shrubs which flourish in these grounds with little or no protection during winter. For instance, I observed a tulip tree, with a large, graceful top, some twenty feet high, coming into blossom, and which never received any artificial protection. Mr. Werden's situation is high, and the surface is considerably broken, and the soil I should not consider anything extraordinary. The principal cause of this security to comparatively tender trees and plants must be sought for in the shelter everywhere found, both on the farm and in the garden, by having belts of the original forest. In this way heat, cold and moisture become modified and better suited to the healthy condition of the vegetable kingdom. The farm and ornamental grounds look somewhat like a forest as one enters the premises. The snow remains longer in spring, serving as a natural protector to delicate plants, while a greater degree of moisture is to be found during the heats of summer, both in the soil and surrounding atmosphere. Mr. Werden is of opinion that to denude our forest lands of trees, as is so generally done by settlers, is already producing the worst effects on our soil and climate; and that in old settled districts, where a tree can only here and there be found, judicious planting is among the first things necessary to the restoration of the former certainty and productivity of crops. This is, indeed, a matter of grave moment in many parts of Canada, and I shall feel satisfied if in this incidental way only the readers of THE FARMER direct their attention in earnest to the subject, and favour each other with their thoughts and doings in relation thereto through the medium of your already widely extended journal. I saw only one field of winter wheat during the whole journey. Its cultivation has been almost abandoned for the last five years. Spring wheat is not extensively cultivated, and in many places looks but indifferently. Indian-corn will be raised to a large extent this year, and appears, where soil and situation are favourable, promising. The result of the coming harvest will be looked for by the public with much anxiety.

Yours, &c.

GEO. BUCKLAND.

University College, July 4, 1864.

Stump Machine.

To the Editor of THE CANADA FARMER:

SIR,—Your correspondent, "J. W.," of Beachburg, County of Renfrew, wishes to know where he can get the best and the cheapest Stump Machine. Billington & Forsyth, of Dundas, make the best and most powerful machine in Canada. I have used one of them the last three years. It is on the screw principle. The screw is made of four inch bar-iron, with three quarters worm; the screw works in a cap; at the top of the frame-work is a lever eighteen feet long; at the lower end of the lever the horse is hitched. The frame-work is white oak, and the wheels are made of white oak plank, fastened together with screw bolts. One yoke of good oxen can move the machine from one stump to another. The stumps on my farm are of the largest description; I have frequently had to put blocks under the axle to keep the broad wheels from sinking in the ground to the axle. The best and cheapest machine I consider is the one which will take up any stump. Such a machine is cheap compared with those which require half as much digging and grubbing as to grub up the stump entirely. The price I gave for mine was \$240, the manufacturer paying half the freight to Barrie station.

Vespra, Co. Simcoe, July 1, 1864.

We are informed that Mr. Hugh McLaren, of Lowville, manufactures a "good and cheap" Stump Extractor, which he delivers at Wellington Square Station, G. W. R., at \$80.

BIRDS AND INSECTS.—In a recent club debate about insects, Mr. Prince, one of the oldest and most extensive nurserymen in the vicinity of New York city, said that on his grounds they preserve all the birds and are not troubled with insects.

THE HARVEST.—Wheat will soon be ripe in this neighbourhood. We know of several farmers who intend commencing to their wheat during the next week, if the weather continues favourable until then. The due rain which fell last Friday has improved the appearance of the different crops very much.—*Ayr Observer.*

HAIL STORM IN ORANGEVILLE.—About three o'clock on Sunday, 26th ult., the village of Orangeville was visited by a severe hail storm. The hail descended for eight or nine minutes, falling in irregularly shaped pieces of solid ice of a very large size, some of which were two inches in diameter, and weighing an ounce and a half.—*Guelph Advertiser.*

GUELPH JULY FAIR.—Our monthly Cattle Fair on Wednesday was pretty large considering the season, but the stock was generally poor. A few very good steers and heifers were sold at good prices, but middling and poor beasts were at a discount. There were several working oxen, but there was little demand for them. Quite a number of milch cows were on the ground, some with calves at their feet. Good ones fetched fair prices. The prices paid ranged from \$2 75 to \$3 50 per 100 lbs live weight; about \$3 25 would be the average. There were a great many people in town, a large number no doubt attracted by the races as well as the fair. Business was good, and the merchants were quite busy all day.—*Guelph Mercury.*

HOW TO DISPOSE OF DEAD ANIMALS.—On almost every farm, one or more large animal—a horse, a cow, or a bullock—dies in the course of each year; and every farm loses pigs, calves or sheep in the same period. The disposition of the carcass is frequently a source of perplexity to the farmer. If a large stream is convenient, they are frequently thrown into it to offend the sense of sight and smell, as well as pollute the waters. Occasionally the defunct animal is buried; but more frequently it is dragged to the nearest woods, where it rots, impregnates the atmosphere with offensive smells, and furnishes a rich feast to the crows and buzzards. This is all wrong, and in these days of high prices, the manurial value of a dead horse or cow is too great to justify such waste. Many farmers will sell a worn out horse to the tanner boy for half a dollar, while the actual worth of the carcass, for manure, is ten times that amount. Every particle of it—hair, hide, hoofs, bones, flesh—will assist in adding to the value of crops. The easiest and most profitable method of disposing of a carcass is to cover it thickly with fresh soil, with which a portion of quicklime has been mixed. After thorough decomposition has taken place, the whole mass should be made into a compost, with fresh soil, after which it is ready for application to the soil. It is stated by Dr. Wilson "that every pound of animal flesh will impregnate ten pounds of vegetable mould; or, taking our soils as they usually occur, one pound of flesh, fish, blood, wool, horn, &c., can fertilize three hundred pounds of common loam." These are striking and well authenticated facts, and they appeal with powerful force to the farmer, who, hitherto, has permitted this valuable fertilizing material to go to waste.

Markets.

Toronto Markets.

"CANADA FARMER" Office, July 11, 1864.

Flour—firmer; Superfine, nominal at \$3 50 to \$3 75 per barrel, Extra \$4 20 to \$4 40, Fancy none in market, Superior \$4 75 to \$5 10; Bag Flour \$4 00 per 200 lbs.

Wheat—better demand, 80c to 83c for common to extra per bushel.

Spring Wheat 75c to 83c per bushel.

Barley nominal at 50c per bushel.

Oats in good supply at 35c to 38c per bushel, for common to good, 40c to 41c for good to extra; occasionally a load brings 45c to 50c.

Peas 45c to 50c per bushel for common to extra.

Hay \$3 00 to \$11 00 per ton. Straw \$5 to \$7 per ton.

Hides (green) at 5c per lb.; tanned, 5c to 6½c per lb.

Calf skins at 8c to 10c per lb. Sheep skins at \$1 90 to \$2; the latter for extra. Wool, 44c to 45c per lb.

Coal \$7 25 to \$9 per ton. Wood \$4 25 to \$4 50 per cord.

Provisions—Hams 10c to 11½c per lb. wholesale. Flitch Bacon 7½c to 9c per lb. wholesale, 8½c to 10c retail. Cheese, wholesale 11c to 11½c per lb.; retail 14c per lb.

Beef—inferior \$5 to \$5 50 per cwt.; extra, \$6 to \$6 50 per cwt. wholesale; 7c to 8c per lb. for ordinary, 10c to 13c for superior, retail.

Culves in better supply at \$4 50 to \$6, upwards.

Sheep clipped, \$3 to \$4 50. Lambs \$2 to \$3 00 each.

Butter—Fresh, wholesale, at 10c to 13c per lb.; retail 12½c to 15c per lb. Tub butter, dairy packed, 10c to 12½c according to quality, wholesale; retail, 10c to 16c.

Eggs—10c per dozen, wholesale; retail 12½c to 15c per doz.

Salt—\$1 25 to \$1 50 per barrel. Water Lime—\$1 per barrel.

Potatoes—25c to 50c per bushel, wholesale; 45c to 60c per bushel, retail.

Coal Oil—30c to 40c for Canada; 40c to 60c for Pennsylvania.

Montreal Markets.—July 8th—Flour—Superior extra, \$4 75 to \$5 00, nominal; extra, \$4 40 to \$4 50, fancy, \$4 25, nominal; superfine from Canada wheat, (old ground) \$3 85 to \$4, do., (fresh ground) \$4 06 to \$4 10; superfine from Western wheat, \$4 15 to \$4 25; superfine No. 2, \$3 70 to \$3 75; fine, \$3 50 to \$3 60; middlings, \$3 25 to \$3 45; pollards, \$2 80 to \$3; bag flour, \$2 20 to \$2 25 per 112 lbs. Market buoyant; sales yesterday p. m. at higher figures than were quoted on "Change"—1,000 barrels of old ground superfine bringing \$3 92½, and 2,600 barrels of superfine from Western wheat changing hands on p. t., understood to be at over \$4 20. The transactions reported this forenoon were at \$3 90 to \$4 for old-ground superfine—the latter price for 100-barrel lots. Holders of fresh-ground were demanding a further advance, and some lots of selected and choice extra brands, for local consumption, were sold at extreme prices, \$4 20 being paid in two instances, and \$4 40 for a favourite brand. Fancy nominal. Good extra was