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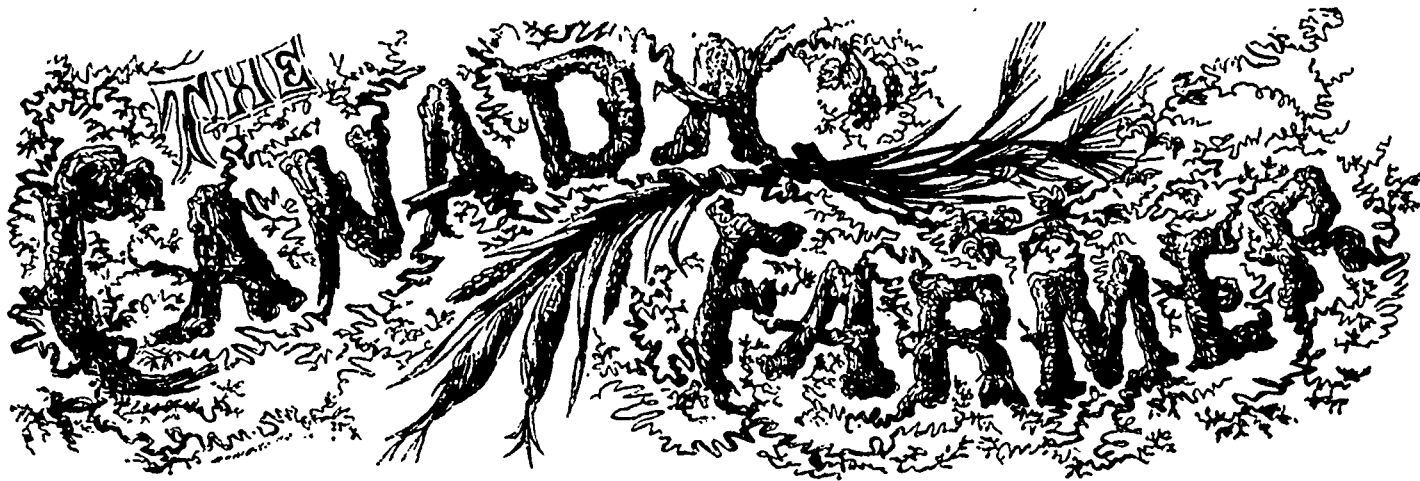
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The Field.

Time of Sowing Fall Wheat.

In order to success in raising fall wheat, much depends upon the time chosen for sowing. Early sowing exposes the crop to the danger of a visitation from the Hessian fly, which deposits its eggs on the young leaves early in autumn. Late sowing incurs the risk of damage from the midge, which attacks the wheat when in flower. To hit the happy mean between the two dangerous extremes is not so easy. As seasons vary somewhat, and localities differ in circumstances affecting all farming operations, it is difficult to fix an exact rule which shall be generally applicable. In this, as in many other matters, the farmer needs to cultivate habits of careful observation, and preserve the lessons of experience. No almanac can be constructed which shall say under a given date,—do this or that to-day; at least were such an almanac prepared, it would scarcely be of more value than those which profess to predict the state of the weather.

Nevertheless, it is well to caution our readers against the extremes of earliness and lateness—the Scylla and Charybdis of wheat culture, as matters now stand. A correspondent of the *Genesee Farmer*, who tills “a thoroughly under-drained and beautiful farm near Geneva, N. Y.,” wrote in reference to last season: “Early sown wheat looks bad owing to the ravages of the Hessian fly last fall; late sown wheat (not too late) looks excellent.” Another experienced farmer wrote as follows to the *Country Gentleman*:—“I wrote you last autumn that I thought my wheat was ruined by the so-called Hessian-fly; it is a total failure, and all owing to too early sowing. I sowed the 5th and 6th of September, and many sowed earlier. I have proof positive that if I had sown about the 20th of last September I would have had fine looking wheat now. By some imperfection in the drill, it missed dropping from one spout the whole length of the field for several times; these rows I had drilled over about the 20th, or a little later. Now these rows are as healthy looking wheat as any man can wish to see, while the other is worthless. It is folly sowing so early. I never knew one day difference of coming in ear, or of ripening, from that sowed on the 12th or 25th of September, if the condition of the land was equal; and I have no doubt if farmers generally will make notes of their sowing,

and the ripening of the different fields, they will find what I say is correct.”

Mr. Spearing, of Wallingford, England, in a lecture before the London Farmers' Club on the effect of the temperature of the soil on cultivation, lays down the principle that in England wheat should not be sown until the temperature of the soil is reduced to 50°. This rule would require that we should not sow until the last week in October. Obviously, therefore, it will not apply here. The climate of England and of Canada are so different that only general principles can be made to reach the case of both. Of the general principle that the temperature of the soil is an important means of deciding the time of sowing grain, there can be little doubt. Careful experiment, however, is needed to lay down a law for these latitudes. Until some such law is established, farmers must use their best judgment as guided by observation and experience.

Brush Firewood.

The editor of the *Genesee Farmer*, in “Walks and Talks” for August, discourses on this subject as follows:—

“Last spring I cut off some pretty large limbs from an old apple orchard, and drew them into a pile on the side of the fence. To-day a Dutchman from the city came along and gave me four dollars for it. A Yankee could not be hired to chop up such stuff for firewood. I hope the Germans will teach us to be more economical in the use of wood. We have too long regarded wood as an incumbrance on the land, to be got rid of in the most expeditious manner. Can we not afford to use brush? The undergrowth in the woods and the branches of trees make good fire-wood, if tied up in bundles and well-seasoned. This is all the wood that an English farmer uses. The wood from his old hedges is tied up into faggots with scrupulous care, and this in sections where the best coal costs less than \$2.00 per ton.”

Many a farmer will read the above and smile contemptuously at the idea of such “thrifty saving knowledge.” But it is worth while to think seriously over it, especially in this country where we have no coal-beds, and where it is desirable to economise our wood fuel, and make it last as long and go as far as we can. For winter fires perhaps brush need not be thought of except for setting them going, and there is no better kindling than a little dry brush. But for summer firing it would certainly answer a good purpose, and we are inclined to think that in the neighbourhood of towns and cities our farmers might pick up a few odd dollars now and then by drawing in a load or two of brush in bundles for firewood. Tied up with withes, and loaded on the hay-rack, a pretty large quantity could be carried at once. Lighter and more easily handled than cordwood, it might surely be teamed in for summer use to better advantage than logs of beech or slabs of body maple. A large proportion of the population of our towns and cities was accustomed to the use of “faggots” for firing in the old country, and would doubtless take to it again here, if the cue were only given.

Midge and Manure.

THAT veteran farmer, John Johnston, in a letter to the Editor of the *Genesee Farmer*, makes some interesting and suggestive statements about the effect of manure on the wheat crop in counteracting the ravages of the midge. He has been trying an experiment the present season, the result of which speaks volumes in favour of a better system of farming. He applied manure quite liberally on part of his wheat; another portion received a lighter dressing; while one acre was left without manure at all. Now for the result: The straw on the whole was abundant, rather too rank on the best manured part; but the midge has done comparatively little damage on this portion, a great deal more damage on that less manured, and far more on that not manured at all.

The reasons Mr. Johnston assigns for the effects above described are these:—“That heaviest manured stood the winter best, came earlier forward in spring, and came in ear earlier. That manured less was a week later, and the one acre without manure was quite behind.” He adds, “I can have Soules wheat early enough if I only had plenty of manure of the right kind.”

The editor of the *Genesee Farmer* remarks on the above experiment:—

“This is just what I have always contended. If we could sufficiently enrich our land with rich manure, (not rotted straw,) and if it was well drained and cultivated and sown at the right season, we should have no reason to apprehend much damage from the midge.”

We hope our readers will make a note of this. Many of them can testify as to the prevalence of midge upon insufficiently manured land, let them try the other portion of the experiment, and see how the wheat fares on ground thoroughly manured and deeply tilled. We are quite aware of the difficulty that stands in the way of putting this thing to a proper test. Manure is scarce. Our best farmers could advantageously use a great deal more than they can make. John Johnston, in the above extract, tells us what he could do if he only had plenty of manure, and in the same letter says he has contracted for eight tons of oil cake, to feed the coming winter, mainly for the sake of the rich manure it makes. The droppings of animals fed liberally with oil cake, peas, and beans make the best of manure. What with the poor feed too often given to stock, and the exposure to which their dung is subjected, there is but a small percentage of fertilizing matter in the barn-yard manure that actually finds its way to the land. Manure making must take a more prominent place among the operations of the farm. It may be an unpalatable opinion, but we cannot help thinking that many of the ills which agriculture is heir to, owe their parentage to poor systems of husbandry. A poverty-stricken soil can only produce plants of feeble constitution, so to speak. Their growth is slow, and they have not vigour enough to contend successfully against insect and other enemies.

Draining of Swamp Lands.

We extract the following correspondence from the "Journal of the N. Y. State Agricultural Society" as the experience of a Long Island farmer in draining swamp lands—

As but few experiments have been made in this favoured section in draining swamp lands—deemed by many almost worthless, and as what may have been accomplished has seldom met the eye of the farming interest, it will be my endeavour, in a brief way, to show that few investments will realize better, and that no lands can be rendered more highly productive. The careful farmer, though of a reflective turn of mind, is not usually inclined to experimenting, except on a limited scale; yet in the general, if I mistake not, it is only necessary to exhibit a fair probability of profit to enlist his prompt acquiescence in new enterprises; and it will be a source of great satisfaction if the following statements shall serve in any measure to awaken new interest in this important branch of agricultural operations.

The land of which I now propose to speak is situated in a valley declining to the west, consisting of about twenty acres, one third of which was black muck or peat, of various depths, the greatest being about seven feet; the remainder, a heavy slate-colored loam, bordering on clay. The substratum was hard-pan, occasionally met with in this region, of sufficient closeness to hold water. The tract sloped gently upward right and left from the centre, facilitating drainage. I commenced by opening a main canal from west to east from the lowest point of depression. As the adjacent land afforded but a slight fall, this opening was at first only about one foot deep by three feet wide at the top, increasing gradually to the highest point, where it reached the depth of four feet, this became necessary, as it took the water from the more elevated fields. This principal channel remains open from necessity, a portion of it which had been closed being forced open by pressure. It was ascertained that the water, which at times entirely submerged the swamp, was derived in part from springs, which were discovered while running the cross-drains. These drains were generally at distances of about two rods apart, being from two and a half to four feet deep by six inches wide at the bottom and eighteen inches at the surface. For one-third of the space I brought into use draining tile of the "horseshoe" pattern; for a part of the remainder I used small stones, and for the balance brush, to which I was obliged to resort in the absence of a firm bottom; and much to my surprise, after a test of five years, this latter work remains sound, and even more reliable than either of the others, discharging copiously, and as yet required no repairs. The result so far is highly encouraging, and with a few additional drains the whole plot will be reclaimed.

Those who were familiar with this swamp in by-gone years would now scarcely recognize the spot. A more forbidding spectacle could scarcely be imagined, the whole being densely covered with sumach, alders, and the usual vegetation incident to such localities, while the higher surfaces contiguous were thickly overrun with briars of like noxious growths. In fact, such was its condition, that portions of it were untroubled by the foot of man; in confirmation of which, it may be here stated, that while excavating the main channel, the remains of two farm cattle were discovered in such positions as to indicate that they had been entangled and mired, without any effort having been made for their recovery. The enterprise was attended at times with discouragements, and it was only by virtue of perseverance, as in all difficult undertakings, that success was eventually attained.

Now, the question may be asked, "why expend so much to recover waste lands, where for an equal outlay, improved lands could be obtained?" I have a ready answer, and first the land itself is of the highest value. This is no longer a problem,—I have produced corn of the best quality and largest quantity. One half the area was sown wheat last year, which was of rank growth and good yield, producing, so far as threshed, twenty bushels to the acre; and had it not been for the weevil, the result must have been nearly double. It grows celery four to five feet high; cabbages have been taken from it weighing twenty pounds to the head; mangel wurtzel and turnips from limited experience have resulted well. Of potatoes I cannot speak so favourably the exuberant growth of the vine reducing the size of the bulb. But as grass growing land I cannot say too much of it. It is true that hardly sufficient time had transpired to give full results; I can only conjecture what might be attained, when I state that, after removing the wheat crop, I drew late in the fall from four acres, ten large loads of grass and weeds, which were removed to guard the growing plant from injury. It will thus be seen from the figures that the

investment has proved beyond all peradventure a profitable one, placing the real value of this land far above the estimate fixed to the accompanying statements; and secondly, apart from the question of dollars and cents, other essential objects have been attained. The whole landscape, heretofore marred and unsightly, has been rendered pleasing to the eye, and an object of pleasurable contemplation to the admirers of the beautiful. The surrounding neighbourhood has been benefited by additional guarantee to health in the renovation of a fountain of miasma and disease; and lastly, it has furnished employment and support to men and families during the usually inactive season of winter—all the labour having been accomplished during that period and early spring.

I submit the following statistics. The cost may appear large, but it must be borne in mind that the entire tract had to be grubbed. The ashes were the product of roots, bushes, etc., gathered and burned upon the ground. I might add much more in detail, but fear I have already transcended my proper limit. I may hereafter take occasion to give further practical results.

The valuation of the land in its primitive state is placed at \$25 per acre.....	\$500 00
Total expense (without fence) during five seasons.....	1,633 16
	\$2 033 16
To the credit of which place 2,000 bushels of ashes, at 10c.....	\$200 00
926 cart loads of muck, at 25c.....	\$231 50
Less expense of hauling.....	115 50
	120 00
25 loads of wood, at \$4.....	100 00
20 acres of land, estimated value.....	4,000 00
	4,336 00
Showing a net gain of.....	\$2,302 84

Great Neck, L. I. THOMAS MESSENGER.

Here is another good article on the same subject: Thorough drainage with "deep ploughing and good tillage is manure." How does drainage deepen the soil? Every one who has grown deep rooted vegetables upon half-drained or wet land has observed that they would not extend downward their usual length. Parsnips and carrots on such land often grow large at the top, but divide into numerous small roots below the surface, and spread in different directions. No roots, except water plants, will grow in stagnant water. If it is of any advantage to have a deep rather than a shallow soil, it is necessary to lower the line of standing water at least to the extent to which the roots of our cultivated crops descend. A deep soil is better than a shallow one, because it furnishes more food and nourishment to plants which they search out and find in the subsoil (where it has been washed by the rains) as well as at the surface, if no obstacle opposes. By striking deep roots, the plants stand more firmly and are not so easily drawn out or shaken by the winds. Again, a wet soil cannot be pulverized. Ploughing clayey or loamy soils tends to press it together and renders it less pervious to rain and water.

The first effect of under-draining is to dry the surface soil, to draw out all the water that will run out of it, so that in early spring or autumn it may be worked with the plough as advantageously as undrained lands in midsummer.

Most land which is not in grass is liable to surface washing in spring and fall, if not drained; being already filled with water that rain cannot pass directly downward, but runs away on the surface, carrying with it much of the soil, and washing out the valuable elements of fertility. If the land is properly drained the rain water is absorbed and passes downwards, saturating the soil as it goes, and carrying soluble substances with it to the roots, and the surplus, if any, percolates through the drains below. The absorbent power of drained lands is so great at times after a drought, that all the water of a heavy shower will be held or drunk up by the soil, so that none will find its way into the drains for a day or two, nor run upon the surface. Again, it allows the farmer to start his team in the spring so much earlier, to prepare for oats, corn and potatoes, &c., to say nothing of the garden and early vegetable growers, where the season is often lengthened two weeks at each end, as a farmer once said to his neighbour, who planted his corn on a well drained field the day after a rain storm of two days, "to have planted mine at the same time, I should have to do it from a raft."

Many farmers have the same privileges of raising, where it would be profitable to spend some time in ditching before the spring rains set in and fill the springs to overflowing.

G. Yeomans, of New York, says, in a published statement, that on his drained lands "the ground becomes almost as dry in two or three days after the frost comes out in the spring, or after a heavy rain, as it would do in as many weeks without draining." The additional time gained for vegetation is important. One or two weeks often secures the corn crop against frost; a few days is often sufficient for the

grain to pass from the milky to the glazed state, before which a single frosty night may injure, if not ruin it. When the grain reaches this latter stage it is safe from cold, and twice the time alluded to is added by this removal of the surplus water.

Thorough draining of our wheat and grass fields prevents that difficulty of freezing out, which most of us, who have wet or stiff loam or clayey land, know. J. Johnston, of Seneca county, N. Y., who had been experimenting with tiles from 1835 to 1851, and had laid 16 miles of them on a few acres of his clayey land, raised the largest crop of Indian corn produced in that county, being 83 bushels of shelled corn per acre; he says, on this clayey soil, when laid down to grass, "not one square foot of clover froze out. But before, many acres of wheat were lost on the upland by freezing out, and none would grow on the lowlands. Now there is no loss from that cause."

It is on account of this water-killing or freezing out that farmers have such great difficulty in getting and keeping their fields in grass, particularly clover and some other grasses of similar growth, the soil being pulverized only a few inches in depth, unless we have ploughed deep, and then only to the depth of the plough. Below this there is a stratum of clay or tight loam nearly impervious to water. The fall rains saturate the surface soil, which holds it like a sponge if it has been well pulverized before seeding. The ground is suddenly frozen and crystallizes into ice, the soil being thrown up and the clover roots and wheat are drawn up with it, often appearing a little like honey-comb. A few such operations are sufficient to draw them out root and branch, and to our sorrow we see them laying dead on the surface of the field in the spring. Thorough draining, followed by subsoiling, or deep ploughing, lets down the water through the soil, leaving the roots so free from an excess of it that the ground is not "heaved up" at all; the plants retain their position, and when the warmth of the genial sun reaches them, are ready to strike root downward and spring upward with renewed vigour, refreshed by their winter's repose.—Rural Advertiser.

Tobacco as a Substitute for Wheat.

To the Editor of THE CANADA FARMER:

Sir,—The unparalleled failure of the wheat crop of this country this year compels us to cast about in our mind's eye for what will answer the purpose best as a substitute. We are told that we have in the country a sample of wheat which is called midge-proof: of that I have a sample by me, but as yet have little faith in it. It must have a fair and further trial before I will believe that anything protects it from that dreadful scourge other than the accident of blooming either before or after the midge-fly deposits its eggs.

Besides sowing this variety of wheat, we are strongly advised to sow flax, and very great efforts are now being made throughout the length and breadth of the land to induce a more general cultivation of that valuable plant. Mills are being put up in every direction for preparing it for market, others to manufacture it into linens, twine and thread, and last, though not least, an extensive establishment under the management of F. A. Whitney, Esq., of this city, will be ready to manufacture all the seed grown in U. Canada into linseed oil fit for home consumption, and affording to the feeder and breeder oil-cake at a fair price and near his own home.

My object in writing this letter is to bring before the farmers another and quite different kind of husbandry and cultivation, namely the growing of tobacco. I think I see some virtuous people hold up their hands and exclaim with indignation—"What a shame for a man of sense to endeavour to persuade the people of this country to grow such a noxious and pernicious weed." To such I can only say, let them enjoy their ignorance whilst I enjoy my pipe.

No very particular skill or knowledge is required in the management of this plant beyond that possessed by Canadian farmers generally, nor is more capital required than in grain growing. Just the same implements and tools are needed as are already in daily use upon a farm. The seed is cheap, and but little is required; the cultivation is simple; and the demand for the raw material unprecedented. Many factories are now in full operation in Toronto, and other towns and cities in the Province. Therefore this branch of husbandry has not to trust to accident or other contingency for a market; but, on the contrary, is in great demand, in consequence of the American war, which, in a great measure, cuts off

tobacco as well as cotton from the world at large, leaving to us in Canada the unrestricted privilege of growing our own tobacco at least, and flax as a substitute for cotton.

The Agricultural Association of Upper Canada has so far patronized tobacco as to offer in their premium list three prizes for the raw material and two for manufactured tobacco, in all amounting to thirteen dollars, and a volume of their "Transactions."

To prove that the soil and climate will answer, I grew a small quantity last year, which was very fine, and my neighbours grew many acres as fine as I ever saw growing in the United States.

Fifteen years ago I grew some, and found it answer well so far as its growth, but then there was no market for it; the price everywhere was low, and we had not a manufactory in the country. On the contrary, at that time wheat seldom or never failed to yield well, and brought a good price. I would not say a word in favour of tobacco now, much as I like to smoke, if it were not for the loss of our wheat, at least along the lakes; for I believe back ten or fifteen miles the midge has not yet appeared to any great extent. I have been informed that an acre of good tobacco, near Toronto, is worth \$100, and I don't believe that it costs one dollar more per acre to cultivate than Swede turnips. One grand feature about it is, that it does not require the farmer's attention until his whole crop is in the ground, even his turnips, except the preparation and sowing of a seed-bed, which should be done early in May. The planting out need not take place before the 1st July, and can be as easily done, as planting out a field of cabbages, requires no more trouble and care, and is not liable to be cut off with the grub.

If this letter should induce any one of our farmers to try the growing of tobacco, and you will allow me space in a future number, I will be happy to furnish the best information in my power in reference to the cultivation of the plant, the kind of soil best suited for its growth, quantity of seed or plants required per acre, and the best mode of preparing it for market.

RICH'D L. DENISON.

Dover Court, Aug. 3, 1864.

NOTE BY EDITOR CANADA FARMER.—We are much obliged to Mr. Denison for the foregoing communication, and shall be glad to afford him the "space in a future number" which he bespeaks, for a renewal of the subject. It is our impression, however, that the same difficulty stands in the way of the successful cultivation of tobacco, which interferes with the profitable growth of wheat. Our great staple fails us chiefly because of the exhaustion of those elements in the soil on which its perfection depends. In other words, we do not maintain the productiveness of our farms in a sufficiently high degree, to yield remunerative crops of wheat. A fertile soil gives the wheat plant a quicker, stronger growth, and does much to secure it immunity from its enemies. Now, tobacco requires if anything, a richer soil than wheat. The land must be prepared by a previous course of high culture, in order that the plant may do well. Fresh, or partially rotted dung, especially that of horses, imparts a rank, disagreeable flavour to the leaf, such as would quite unfit it for our correspondent's much loved pipe. For no crop in thorough preparation of the land more needed than for tobacco. Persistent endeavours to grow it without liberal manuring have transformed many once fertile lands of "the sunny South" into barren wastes. Assuming, then, that the same preparation of the ground will qualify it alike for wheat and tobacco, we confess that we should prefer to see our farmers raise the grain, rather than "the weed." We are not of the class referred to in the above letter, who are ready to cry "shame" on a grower or a smoker of tobacco, and yet other things being equal, we had rather that the farmers of Canada should produce the staff of life, than that their labour should end in smoke. Despite all the discouraging circumstances connected with wheat-growing, we see no reason why Canada should abdicate its high position as a wheat producing country.

Our correspondent seems to think the tobacco plant has no insect enemies. We have heard opponents of the pipe make capital of this idea, and denounce tobacco as a vile poison, which no animal but man would touch. However, unluckily for their eloquence, and for this part of our correspondent's argument, there is a "grub" that revels among the green fibres and fresh juices of the tobacco plant. Constant care is necessary to prevent the growing crop from being cut off by the tobacco worm—the only creature which naturally takes to this vegetable production. With man the taste is acquired.

Clover and Clover Hay.

BOTANISTS give the names of 59 sorts of clover (*trifolium*), yet only four or five are cultivated, and as generally understood, only two—the white and red. A kind called yellow clover is a weed pest. Until lately, clover has not been highly esteemed by American farmers. It is now considered excellent for all stock by many who have tested its value thoroughly. It has been cultivated in America about a hundred years. As a renovator of worn out soils, clover has no equal. As food for cows in a milk dairy, clover stands ten per cent. ahead of timothy. We may judge something of its value from Professor Way's comparative analysis, showing the following results:—

GREEN.	Water.	Fleshy Matter.	Fatty Matter
Timothy	57.21	4.86	1.60
June Grass	67.14	3.41	.36
Orchard Grass	70.00	4.67	.94
Red Clover	81.01	4.27	.69
White Clover	79.71	3.50	.89
DRY.			
Timothy		11.36	3.56
June Grass		10.35	2.63
Orchard Grass		13.53	3.14
Red Clover		22.55	3.67
White Clover		18.79	4.33

It will thus be seen that timothy is best when green and clover when dry.

One of the reasons why farmers have not grown clover for winter forage to a greater extent, is that it is considered difficult to cure. Part of this difficulty is purely imaginary. "The modes," says a writer upon the subject, "of curing clover hay widely differ in the same neighbourhood. Some let it go to seed before cutting, then dry and turn it till many of the leaves and blossoms are shaken off, and lastly cart the dry and bulky clover sticks. Others cut it when the blossoms commence to show, fork it the same day into small cocks, and then let it stand several days, either with or without hay caps, till dry enough to cart. Latterly it has been found safe to cart it the same day, or as soon as wilted, being careful only to avoid artificial moisture, and to fill up the bent or mow within three or four days, or before it begins to sweat. Hay is improved by sweating and changing colour, like tobacco. When it begins to sweat it should not be disturbed till the sweat is over. The moisture and steam will go to the top, no matter what the height, and the top is the only part in danger. A foot of straw on top absorbs the moisture and saves the hay.

"One farmer cut 12 to 14 tons of mixed timothy and clover, and carted as fast as cut, without regard to weather. Straw was placed on top to absorb moisture. The straw rotted but the hay turned out good. Another cut four or five acres of clover, raked and cocked it all in one day. Threatening rain caused its hurried cartage the following day. It occupied a bent and a half in the barn. The full bent came out bright and good, except about 18 inches of the top. The half bent was partially injured by adding other fodder, and thus keeping the steam in. Another knew of 30 to 40 tons of hay being cut and carted the same day. The mow smoked, sweat, and generated toad-stools, but only the top was spoiled. The balance was sweet and good, the blossoms were unchanged, and the cattle lapped it down like meal."

THE CHAIRMAN—I have lately conversed with a man who had just finished the cutting of 35 acres in Norwich, Con., and sold the crop at \$12 a ton, taken from the cock in the field. At that price would clover be a profitable crop? Several members said yes, if cured in the manner stated in the article just read.—

SOLON ROBINSON—*Proceedings of Am. Inst. Farmers' Club.*

DRILL AND BROADCAST SOWING OF WHEAT.—In the Department of Agriculture Report for April and May, the two practices of sowing wheat are spoken of as follows:—

"There is a marked difference in loss by freezing between the drilled and broadcast sown. The cause of the injury varied in different localities; in many it was by upheaval, in others the roots were killed by exposure to intense cold without any protection, and in others by being covered with water, which froze so intensely as to destroy the roots of the wheat. The most marked difference in favour of drill sowing was in the first of these causes. But these returns so connect themselves with the information communicated by letter, that we reserve further comment until the next report.

Of this the Commissioner, in his introductory remarks, says:—"With the fact before him that drill-sown wheat is much less injured than broadcast, how can any farmer reconcile it with his interest to continue broadcast, because he may have good crops by that method when there is no freezing out?"—*Maine Farmer.*

Curing Corn Fodder.

A CORRESPONDENT of the *Boston Cultivator*, who claims to have had considerable and successful experience in the matter, gives the following directions for curing corn fodder:—

"All that is requisite in curing Indian corn is, simply to get the water out of the leaves and stalks. It is the water, or sap, that causes it to mould and spoil in the stalk or mow. The stalks need not pass through any fermentation, any more than clothes, after they are washed, in order to dry them. The stalks need simply to be dried. That is all that is necessary. Now, if one has an abundance of barn room, let the stalks be bound in small bundles and carried to the barn as soon as practicable after being cut, and let the bundles be set up, all about the barn. In a few weeks they will be so thoroughly cured that they will not spoil if put in a solid mow.

To cure fodder corn in the field, set the bundles in long shocks, so that the sun may shine in the former part of the day on the east side, and on the west side in the latter part of the day. When a storm is approaching set them round in stooks, and bind the tops neatly, with several bands, and cover them with hay caps. Should there be prospects of fair weather for a few days, set them again in long shocks for a day or two. In about a month or so, they will dry enough to be moved or stacked. If one has any caps, the stalks may be cured in the field with very little labour, and without any loss.

To preserve meadows in their productiveness, it is necessary to harrow them every second autumn, amply top-dress and roll them.

NO WEEDS TO PULL.—Stir the ground often, and they will never get big enough to pull. A loose top-soil can be stirred up a half-dozen times with a hoe in the time required to go over it once in the pulling process.

STRUBBLE GROUND.—To destroy the seeds of weeds, harrow all stubble ground as soon as the harvest has been secured, or pigs have eaten all the gleanings—the first rain will then cause all seed to germinate, and the next ploughing will turn under the green crop as manure.

COMPOST FOR LIGHT SOILS.—On light sandy soil that is liable to suffer from drought, a compost of half muck and half barn-yard manure can be applied to great advantage. Now is the time to throw up the muck while the swamps are dry. Thirty loads of such a compost per acre will greatly improve such land, rendering it more retentive of moisture and promoting a more vigorous growth of vegetables.—*Genesee Farmer.*

SHRINKAGE OF FORAGE PLANTS IN CURING.—John Wells, of Dorchester, a distinguished agricultural writer of his time, said the loss of weight in drying green herbage will be found to vary essentially as compared with that of Scotland. It should be premised, that the time of cutting the several grasses, &c., in the following statement, was that usually practised by husbandmen in this commonwealth. Of 100 lbs of forage plants cured in 1822, the product was as follows:—

100 lbs. of green, white clover, gave of hay,.....	17½ lbs.
100 " red clover, " "	27½ " "
100 " herds grass, " "	40 " "
100 " fresh meadow, " "	38 " "
100 " salt grass, " "	39 " "
100 " mixed, 2d crop of rowen, "	18¾ " "
100 " corn stalks, "	25 " "
100 " " cut in milk with ear,.....	25 " "

It should be observed, that the weight will vary, from ripeness and other causes, such as wetness of the season, shade, thickness of growth, kind of soil, &c. The above statement will be read with interest at this time.—*Boston Cultivator.*

RELATIVE VALUE OF MANURES.—A correspondent in the neighbourhood who has lately been experimenting for the purpose of testing the relative value of different manures writes that he has used inch bones along with good cow-dung on seven different sorts of potatoes; the same mixture on cabbage, turnips, and oats; and also applied guano and cow-dung, bonemeal and cow-dung and ashes to other lots of the previously mentioned crops. He expects to see the crop raised by the bonemeal and cow-dung far beyond those raised with the admixture of Peruvian guano. On the 22nd inst. he found, on measurement of the cabbages raised by means of the bonemeal and dung, the following sizes:—64, 61, 58, 55, 49, and 45 inches from point of one leaf to the other, since which time they have grown considerably. The potatoes raised by the same manure have the strongest shaws he has ever seen, and the oats are equally strong and healthy. Tares raised in the same way are valued by competent judges at £15 to £17 per acre, and our correspondent is sure that they will be worth, when cut, £5 to £6 more.—*Ayrshire Express.*

The Breeder and Grazier.

The Sussex Cattle.

Is a former paper we described and illustrated that valuable and beautiful breed designated the Devon which inhabit the elevated district on the southern side of the British channel. In passing eastward to the calcareous soils of Dorset, Wilts, Berks, and Hants, this breed at least in its native purity, almost ceases to appear, and wherever the thorough-bred modern Devon is found it may be safely assumed that such animals have been derived from the West. This breed, however, reappears, with considerable modifications, in the county of Sussex, where it has existed for many centuries. It occupies a very singular geological formation, scientifically termed the Wealden a low but gently undulating country, consisting of alternate zones of clay and

of South Devon, being coarser and heavier than the North Devon. Although it may not have been preserved in equal purity, the Sussex has all the characteristic marks and qualities of a distinct breed, and is now recognized as such at all the great cattle shows and markets of the United Kingdom.

"The Sussex is to be ranked amongst the larger breeds of the country. The skins of the individuals are covered with short hair, but have not usually the same unctuous feel which so eminently characterises that of the true North Devons. The horns are larger, approaching in this respect to the character of the long-horned varieties of the central counties. Their shoulders are thick, and their legs, though moderately short, have not the firmness of bone which is distinctive of the North Devons, nor have they the same length of body and elegance of general form. The distinctive colour is red, but of a less florid shade than in the North Devons, occasionally mixed with white on the face and body."

that were good milkers. A cross with the Ayrshire or Alderney will wonderfully improve them for dairy purposes. Cows, as soon as they become dry, readily fatten on ordinary food.

On the heavy clay lands of the Weald of Kent and Sussex, the employment of oxen in farm labour is a practice that has come down from the earliest periods of history, and certainly no better cattle are to be found for such purposes than the Sussex. Powerful and hardy as they are, with a quick, firm step, and a shoulder admirably adapted to the yoke, they constitute an admirable team either for the waggon or the plough, and their perseverance and energy in work is one of their characteristic qualities. For deeply cultivating stiff soils by means of the grubber, or such like implements, the steady draught of the Sussex ox is superior to that of the horse. It is usual in Sussex to break in steers for work at three years old, and they are continued working till they arrive at six or seven years, when they are fattened for the



A SUSSEX STEER:

First Prize Animal of his Class, at the Smithfield Club Cattle Show, December, 1863.

sand of very varied chemical and mechanical properties. This peculiar district, both geologically and agriculturally, is a continuation of a similar belt of land in the adjoining county of Kent. During the Roman and Norman periods it was an almost unbroken forest, the clays producing the finest oak for shipbuilding during subsequent periods. In this tract of country, still abounding in trees and woods, where formerly the wild ox and boar roamed at pleasure, we might look for the preservation of ancient races of domestic animals; and, accordingly, it is found that the same race of cattle which exists in the mountains and valleys of North Devon yet survives in the Wealden.

This breed is usually denominated the Sussex, from its being chiefly reared in that county. In its general character, it obviously resembles the larger animals

It is proper to remark that of late years many breeders have paid special attention to the improvement of the Sussex cattle, with, when proper care and judgment have been exercised, the most encouraging results. The orthodox colour is now universally regarded as red, without any intermixture of white or any other colour. The animals have been much improved both in touch and symmetry, the body longer, with expanded chest and springing ribs. An earlier maturity and aptitude to fatten have been of late greatly promoted, and the former restlessness and wild expression of the eye have in great measure been superseded by quiet and docility. Although the Sussex breed of cows has always ranked low as dairy stock, yet something has been done of late to improve them in that respect, and we have seen quite a number of cows of the improved breed

butcher. The meat is of excellent quality, nicely mottled, and the animal, when well fed, yields a large amount of internal fat, well known and appreciated by the butcher as the "fifth quarter." The grain of the meat has of late years been much increased in fineness and improved in flavour; so that well fattened Sussex beasts are much sought after by the principal London butchers.

This breed is but little, if at all, known in Canada, nor perhaps in the United States. Whether it would flourish and become profitable here cannot possibly be decided apart from trial and experience. For its many valuable qualities, such as thrift and hardihood, great strength, agility, and efficiency and management in the yoke, it is certainly entitled to a fair trial. Such an enterprise might be most legitimately entered upon by agricultural societies, if not by pri-

vate individuals, and from our long practical acquaintance with the breed, we should certainly anticipate a satisfactory result.

The accompanying illustration of a well fattened Sussex ox bred and owned by Mr. Jo'm Shoosmith, of Berwick, Lewes, and obtaining a first premium at the last Smithfield exhibition, will afford the reader a correct idea of the present advanced state of this valuable breed, which is now being increasingly enquired after out of its hitherto comparatively restricted sphere.

Nut-fed Pork—Big Porkers—Potato-made Bacon.

To the Editor of THE CANADA FARMER.

Sir, It is something to have evoked discussion on a subject of great importance to the farmers of Canada, and one that they may easily improve. A little extra exertion would double the amount of bacon made in Canada. Permit me to thank my respondent, Mr. Nash, and his co-respondent, Mr. Davies, for their polite papers. Our object to some extent is mutual. They move in the interest of their trade. I should be rejoiced if, by our joint exertions, the farmers of Canada were benefitted. The interests are nearly identical.

Two words as to my former letter. Both gentlemen harp upon beech nuts. They cannot find the word in that letter. Borrowing the word "nuts" from Mr. Nash, I used it as a generic term for all that pigs find in woods. In England the beech-nut is the perquisite of the pheasant. The pig finds many other things, as acorns—acorns that helped to build the thick backbone of the ancient Briton. Heaven be praised, it is as sturdy as of yore. This primitive food gave rise to the expression—*hearts of oak*. What is clearer? Stomach full of acorns, heart of oak. I know that, applied to pigs, this is a hook on which cavillers may hang objections. I make them a present of it. I will only say that nature has her own processes of assimilation, and that pigs are very fond of acorns. In English woods, pigs also find hazel nuts and various kinds of fruit and other nice things. No doubt they do so here; butternuts, for example. Whatsoever they find, pigs do well in England during the autumn in the woods. Sows go out and are never seen until the want of food sends them home with fine litters of pigs at their heels.

Mr. Nash objects that a well bred pig, eighteen months old, must weigh more alive than 250, granted. The weight required for the English market, denied. *En passant*, is a big pig, *pro se*, a bad pig. Other qualities being equal, I would prefer a big pig. If a pig has not done growing, that is a cogent reason for letting him live. If you kill him before he be full grown, you never obtain your full profit, because his weight will increase much more rapidly after maturity than before. And now as to this question of the proper weight for the English market. Mr. Davies says Mr. Nash is a better judge than myself. Why? Because Mr. Nash has had 21 years' experience. Where? In America and Ireland. This is a travelling for education in the wrong direction. It is like looking to the west to see the sun rise.

What do these gentlemen mean by the English market? Certainly they do not include the working men of England. I am sure they do not include the keelmen of the Tyne, perhaps the strongest men and the greatest consumers of flesh in the world. The wife of one lowering a leg of mutton by a string from the bridge, so that he might catch it as his barge passed underneath, answered his hail of "All right" with an asseveration that that was the fifth that he had had that week. Men like that keelman don't object to a heavy pig. The miners of Northumberland and Durham, one of the best paid class of workmen, and, consequently, one of the greatest customers of the bacon factor, would not thank you for a "bit twible" of a pig. Do the Hamilton gentlemen mean to say that the millions of factory hands of Manchester and Leeds, and the Glasgow and Paisley bodies, prefer small bacon? Are the men who wield the sledge hammers of Birmingham and Wolverhampton and Sheffield fastidious as to the size of their pigs? Will large bacon not sell at Merthyr Tydvil or Midlestrough? The tens of thousands of hardy fishermen, and all the amphibious population of the coast of England and Scotland, don't seek little bacon. I

can answer for all these. What, then, do Messrs. Nash and Davies mean by the English market? They mean the Irish market. Some of the large provision houses of Ireland having also warehouses in Liverpool, buy American (including Canadian) bacon, sweat it, take out the shoulder blade, cut off the ham, roll the slice, tie it tight with a cord, and hang it up. It looks like a papoose, very neat and tidy; but all this manipulation will not make good bacon of ill-fed pigs nine months old. I should call the working men of England the chief consumers of bacon, and therefore they form the chief market for that article. They know better than to choose this nasty little bacon. I know they are sometimes compelled to do so. Their remarks, when they do so, would not be pleasant to Messrs. Nash and Davies. What the working man looks for, and ought always to have, is bacon that will come out of the pot larger than it went in, bacon, the fat of which has a cheerful, rosy, transparent look, and cuts almost as firmly as the lean. Such bacon is not to be made with potatoes. Mr. Nash and Mr. Davies both say that "pigs fed on potatoes, with or without meal, 9 months old, 220 lbs. live weight, command in the English market the highest price." I deny it. If the farmers of Canada act upon this, they will soon spoil their market. Looking to nothing but the immediate profits of their own branch of the business, the pork-packers may be wise in their generation. A man who feeds a pig on potatoes and sells him green, may be able to undersell the man who feeds his pig on grain. The consumer finds it out. The old proverb, "the proof of the pudding is in the eating," ought to be read, "the proof of the bacon," &c. Give the farm labourer in the south of England a piece of potato bacon, and he will say, "Run bacon that, marster." What's the matter with it? "Caint a found un." What do you mean? "Why, my Missus put a lump in the pot yesterday along w' some cabbage, and when I goed home to dinner, he wasn't there, couldn't get un no how—biled all away." True, Hodge. Potato bacon is only fit for the soap-grease man. Boil a square of the gammon, and when you take it out of the pot the bone will be protruding in a threatening manner—the fat will be of a ghastly pallor, so soft that you may serve it with a wooden spoon, tasteless to insipidity, and innutritious. In a word, potatoe bacon is all gammon.

To obtain a profitable result in pigs breeding is of as much consequence as feeding, and the two must go together. When I began this letter I meant to say something about both. I have made it already too long, and therefore I must refrain.

W. R. CARTER.

Goat Keeping Recommended.

To the Editor of THE CANADA FARMER.

Sir,—Before settling on the beautiful and fertile shores of Lake Kashagawigamog, in the township of Dysart, one of the townships of the English Land Company, in the County of Peterborough, I made a tolerably extensive tour through Canada prospecting for good land. I noticed everywhere the trouble experienced by the settler in keeping down the growth of underbrush in the odd corners of his clearings and fencing. Now, I had previously travelled much in the East, especially in Syria and in Mesopotamia, and I had observed there, particularly in the mountain ranges and valleys of the Lebanon, how the country had become utterly denuded of its forests. I need not remind you that at one time the Lebanon was as thickly covered with wood as any portion of Canada, and these woods and forests have all been destroyed by the simple agency of the goat. The inhabitants keep large numbers of goats, and these animals browsing on the tender shoots of young trees kill them before they attain sufficient strength to resist these attacks on their vital powers. The consequence has been that there have been no young trees to replace those consumed by the inhabitants or dying of decay, and in time the forests have utterly disappeared from the face of the land. It has, therefore, struck me that the goat might be bred with great advantage in Canada, and I believe so firmly that three or four goats on a farm would keep the adjoining woods clear of all underbrush that I mean to try them at my pretty place on the shores of "Kashagawigamog the Beautiful," a settlement which though the most northerly in the County of Peterborough, is not so far removed from civilization as to be beyond the influence of THE CANADA FARMER, an influence that I sincerely believe will be productive of much benefit to this locality. CHAS. SMITH.

Haliburton, Township of Dysart.

NOTE BY L. C. F.—We shall be glad to receive from our respected correspondent an account of the results of his intended experiment in goat-keeping.

How are Live Hogs to be Brought to Market?

To the Editor of THE CANADA FARMER:

SIR,—This question has been asked me lately in numerous letters from farmers, and the inquiry seems natural enough—How are we to get our live hogs to market? But any difficulty in the matter is more imaginary than real, as our farmers will, no doubt, find. Now, suppose Farmer A. has 5 hogs fit for market, B. has 7, and C. 10; by collecting a few different lots together, a car-load of about 60 hogs could in this way be made up without much trouble. Independently of this, there are to be found in every county of Upper Canada,—indeed, I might say in almost every township,—persons competent judges of the quality and weight of live hogs, and who would be willing to start in the business of buying, if it only paid them a moderate profit; and this plan, on the whole, would, I think, be more satisfactory than the other. The hogs should be carefully driven, not faster than a mile per hour, to the nearest railway station, and whips and clubs should be strictly prohibited, as regards their application to the hogs' backs, for nothing tends more to bruise and injure the pork. From those parts of the country which have no railroads, hogs might readily walk 30 or 40 miles, in short stages of seven to ten miles per day. In driving them along thus a little inconvenience uncomfortable to the pigs' feet may sometimes occur, but this would only be when the roads are frozen hard and uncovered with snow, in the depth of winter. A fat, lusty porker, is a much better traveller than many people would give him credit for. Twenty years ago, before railroads became so general in America, thousands of fat hogs used to be started on foot from the State of Ohio, and ferrying across the Ohio river, thence, still on foot, would wend their way, slowly but safely, over the Alleghany Mountains, capped often with ice and snow drifts, then pushing on, the incessant drover would only cry halt when his hogs reached Baltimore, making altogether a distance of from 300 to 400 miles, and the time taken to accomplish the journey was 30 to 45 days.

Farmers must remember that, for the English market, we are compelled to be particular as to the quality and weight of hogs. We like them fat and handsome, and pea or grain fed. Distillery or beech-nut fed will not answer at all. The weights required are 180 to 250 lbs. alive, but in order to facilitate the trade, a few hogs in each lot, say 10 per cent. to 15 per cent., either not exactly prime, or a little under or over the weights here specified, will be taken by us at ½ cent per lb. under the top price.

A steady and convenient market, with pens and scale for weighing hogs alive, has been established at Hamilton. The City Weigher has entire charge of this arrangement, which makes it equally satisfactory for both buyers and sellers. SAMUEL NASH.

Hamilton, August 2, 1864.

TRAINING HORSE TO STEP HIGH.—In Germany this is done by putting large magnifying spectacles upon the young horses, which magnify the size of pebbles and gets the horse in the habit of lifting his feet high, and the habit once fixed, continues, and this increases his value as a stately carriage horse for the London market.

PIGS AND PROFITS.—"If you ever catch me keeping pigs again, you may take out a commission of lunacy for me at once." So said an amateur farmer a few days since. It is not more than five years ago he thought pigs the most profitable stock on the farm. He built a handsome range of pig-pens, with boiler and other conveniences, at an expense of \$500, and went largely into breeding and feeding pigs. It has proved a losing business. Every dollar's worth of pork, he says, cost him ten shillings.

What he says is probably true. Pork has been low for a few years past, and it has been difficult for farmers in this section to compete with the West in fattening pigs. But now the tables are turned. Corn is nearly as high in the West as with us. Pork is higher than ever before known in this country—higher than beef—and those farmers are fortunate who have a good lot of thriving shoats on hand.

I have always contended that pigs, like poultry, can only be kept with profit so long as they are fed principally on food which would otherwise be wasted. It is a great mistake to be over-stocked, and equally unprofitable not to have any.—Genesee Farmer.



The Dairy.

Science in Cheese-Making.

(BY ANSON BARTLETT, GEARDA COUNTY, OHIO.)

The manufacture of cheese such cheese as is fit for food for human beings— is a most nice and delicate process, combining the most interesting intricate and delicate chemical decompositions and recompositions, with a mechanical manipulation which is at once very difficult and very particular; and still, until within a short time, this branch of production has been in the hands and under the care of those who carded and spun our flax and wool; who wove the cloth, and cut and made the garments for themselves, and their families: who did the washing, ironing, and mending, and knit the socks and hose, to say nothing of the baking, broiling, boiling, scrubbing and cleaning, and tended the babies, and taught the ideas of Young America how to shoot, into the bargain. But, thanks to necessity—the mother of invention—the introduction of machinery and the division of labour our mothers, wives, sisters, and daughters are relieved of a great portion of this immense load, and as another link in the chain, now comes associated dairies for the manufacture of milk into cheese.

The manufacture of cheese is, in my opinion, yet in its infancy, and but little understood, and is in fact a subject on which as yet the light of science has scarcely cast one single ray, and I think I see in the establishment of associated dairies an opportunity for the dissemination of knowledge, for the development of greater perfection in the process, and for the production of a more perfect article as well as a largely increased product from the same amount of raw material.

Here are a set of operatives, under the guidance of enlightened, energetic, and intelligent superintendents, whose very position depends upon the amount of skill and intelligence they possess, and whose future success is easily fore-shadowed by the quantity and quality of the article they are able to produce; who have every facility and possess every opportunity of bringing to the test of experience every idea of improvement which may come within their reach: besides which a wide field of enquiry and research is opened before them, and they have the strongest inducements to investigate the whole subject, and bring to bear all the light that science and chemistry can produce.

But the light of scientific research has not as yet been brought to bear upon the manufacture of cheese, and I do not know of a single cheese maker who can give positive and satisfactory answers to the following questions:—

1st. What per cent. of the weight of milk should be produced in cheese, as the maximum amount, of superior quality, at any given time of the year?

2nd. What proportion of the sugar of milk, if any, should be retained in the cheese?

3rd. How does the sugar of milk retained in the cheese affect the quality?

4th. What is it that gives to some cheese a bitter, acrid taste, when, perhaps, a large majority of the cheeses in the same dairy are sweet and mild?

5th. What is the remote and general, and what the immediate and local cause of a huffy and porous cheese? Does it always proceed from the same cause, or are there various causes?

6th. How great a per centage of water should the best cheese retain when cured, or say at six months old?

7th. It is a well known fact, (to factory cheese makers at least,) that milk which has been cooled, and has stood from ten to fifteen hours with a free exposure to the atmosphere, will make a softer, (that is more buttery in texture) firmer, and sweeter cheese than milk fresh from the cow, and the question is, what is the cause? Is it owing to something which the milk has lost by such exposure? Or is it by reason of something which the milk has acquired during that time? Or is it both? If the milk has lost something, what is it? If it has gained something, what is that?

8th. What proportion of the casein and butter, under the most skillful management, is it possible to retain in cheese, and how much will inevitably pass off in the whey?

9th. Is it possible and practicable to extract the sugar from the whey in an available form, if so, how?

This class of inquiries might be extended but enough are given above to demonstrate the importance of scientific research in the matter, as nearly every one of these questions are eminently proper for the chemist to solve and I venture to assert that the manufacture of cheese will not arrive at perfection until they are all satisfactorily explained.

The manufacture of cheese in the family of the farmer, conducted as it usually is, has long been felt to be a great burthen, and the farmer's wife or his daughter generally being the person upon whom it devolves to superintend the matter, in addition to the ordinary household affairs, it follows as a matter of course that either the household work, or the cheese making, must frequently suffer by neglect; for making cheese is a business which absolutely requires the undivided attention of those having it in charge, and if anything is mixed up with it, the result is, that disappointment and loss will be encountered.—Ohio Farmer.

Cheese Making in Small Dairies.

WITHOUT discussing the economy of making cheese from a very small number of cows, we merely now consider the method and results. The following process is usually adopted. The night's milk is set in shallow tin pans in a cool place. Butter being an object as well as cheese, the milk should not be more than two or three inches deep. In the morning, while the milking is going on, the night's milk is skimmed and warmed, in a brass kettle to the temperature of new milk. The new milk having been brought in, old and new are then mixed in a tub of suitable size. (If the weather is so cool that the milk will not sour, it may be kept over one day, and there will be three milkings of old and one of new milk.) When the milk is thus made ready the "cheese is set," that is, the rennet is added, and it is allowed to stand quietly for half an hour, for the "curd to come." Annatto also is added for colouring, if desired. The rennet consists of the salted and dried stomach of the calf. This is prepared for use by soaking in water or whey in the "rennet pot." The quantity of liquid required to "bring the curd" is fixed by trial, and more is added, if it does not coagulate in time. When the curd has "come," it is carefully cut across both ways with a one bladed wooden knife, or better with one of steel with four blades. It is then allowed to stand for the whey to separate, which is slowly dipped off, and the curd gently worked with the hand to favour the separation of the whey. To make the curd more firm, some of the whey is warmed in a kettle and poured upon the curd again. This is what is called "scalding the cheese," a misnomer to which must be charged more poor cheese than to any other cause, except perhaps the neglect to cleanse properly all the dairy utensils. The whey for "scalding" should be only slightly warm to the hand, that is, not much more than 100° F. The hotter the whey is, the less time is required for the operation, hence there is a temptation to employ hot whey instead of that moderately warm only, as just stated. When this process is completed, the curd is dipped into a strainer, spread in an open basket or box for salting. Then more whey drains out and salt is added, nearly one ounce to ten pounds of curd, and thoroughly mixed. It is now ready for the press, or it may be wrapped in the strainer, a weight placed upon it and kept to go with the next day's curd to make a "double curded cheese."

When this is desired, the curd thus prepared, and not salted is kept until the new curd is ready, and then it is cut very fine and mixed with it. Some prefer to take the curd when ready for scalding, and hang it up to drain in a strainer. This curd cut up fine is added to the new curd, when both are "scalded" and salted. A cap fitting the inside of the press-hoop, or a strainer cloth is used to hold the curd when it is put in the press for pressing. It is changed at the end of twelve or twenty-four hours, the edges if necessary are pared and again pressed. The pressure, either from a lever or screw, should be light at first, but afterwards very heavy. When the cheese comes from the press it should be capped with thin cotton cloth made for the purpose; or these caps are pressed in. Repeated turnings, greasings, and rubbings to keep the cheese from mould and from getting out of shape while curing complete the process. The temperature of the curing room has much influence on the cheese. A kitchen is rather too warm, and in a cold damp room they cure too slowly and are apt

to mould. Now in this way just as good cheese for eating is made in dairies from two to six cows as in those of greater pretensions; in fact, some of the best cheese the writer has ever eaten was made from the milk of two cows. Some of the most successful dairy women too, have been those who have taken up the business without previous training, but possessed of good sense and habits of neatness; they have mastered all the "mysteries of cheese making," so that a "huffy cheese" or a "cracked cheese," or a "sour cheese," or a "strong cheese," or a "white oak cheese" was unknown on their shelves.—American Agriculturist.

June Butter.

We yesterday visited our fruit woman in the country and we there tasted of butter over a year old, made in June the first half of the month. It was perfectly sweet and pure, and apparently as fresh as if made within a day. We would have been incredulous as to the time, but the woman's veracity was beyond suspicion.

The thing was new to us, that butter made in June should be so much better, for instance, than butter made in October or the latter part of summer.

"But," the old lady said, "Mrs. Elwood used to always pack down a keeler full of butter that was made in June. She did this for many years; and there's where I learned it."

Now, that the butter is good—that it is a year old—that it was made in June: are all facts. Why, then, is not June butter made for winter use? Is the fact not known that it is better? We have seen hints in the papers to that effect.

The truth is, June butter is the best made—that accounts for it. The feed, then, is just the thing for a full supply of milk. The grass is sweet and tender

the weather is pure and cool—there is no difficulty with cellars and water—the churning is done readily, so that the globules which form the butter are retained whole, which gives a more ready chance for the milk to drain off—in a word, the pure butter is there, and pure butter will keep. June butter, then, for winter and spring use.—F. G. in Valley Farmer.

Important Requisites in Cheese-making.

One of the means employed to give cheese a rich cream colour, is to expose the curd, before and after salting, to the air, instead of hurrying it into the hoop and press, as is usual with the majority of dairymen. Every cheese maker must have observed the fine golden colour, acquired by particles of curd that have accidentally remained out of the hoop, and been exposed during the day to the atmosphere. This is the precise colour desired by the dealers, and in warm weather, an exposure long enough for the desired colour is practicable, and the appearance of the curd can be materially changed for the better, by letting it remain in the vat, or tub, until it has acquired the proper temperature for the press. It is always preferable to cool the curd in this way, instead of using water or cold whey on the curd, as is sometimes done for this purpose, as these last have a tendency to impoverish the cheese by washing out a portion of its richness, besides injuring somewhat its flavour. Fine flavour, quality and the proper texture in cheese, are important requisites to ready sales and good prices, but all these may be present and yet the cheese sell low in market, from its bad appearance. The eye must be suited, as well as the taste, and it is difficult to make, the consumer believe that pale, white cheese is as rich as that which has a fine cream colour.

Again, many dairymen are troubled, more or less, in preserving a smooth, elastic rind—the rind checks, and deep cracks are found here and there in the cheese. This results often, and for the most part, from the air being allowed to blow on the young cheeses; cheese, when it comes from the press, and for several days after, or until the rind has a firm consistency, should be kept where the air may not blow directly upon it, and washing the cheese twice a week with hot sweet whey, will add much to its outward appearance.

Annatto is in general use during spring and fall for colouring milk for cheese-making, but as much of it is adulterated with poisonous materials, its use should be avoided in summer, when the desired colour to the cheese can be obtained, as described above.—X. A. W. in Country Gentleman.

Sheep Husbandry.

Cutting Grass Early and Feeding Sheep on Mowing Lands.

One of the best and cheapest methods of improving mowing lands is by feeding off the aftermath by sheep and folding them on them at night.

In order to do this satisfactorily, the farmer must of course look out that there shall be an aftermath to feed off, and to secure that, he must cut his first crop early. The advantages of early cutting are appreciated by our farmers more and more every year, and no one, who has ever tried it, will return to the old custom of postponing haying until "after the fourth."

Last year, by the 20th of June, all my rough, rocky pieces were mowed and the hay housed. I commenced on the 9th, with a piece of orchard grass in full blossom. On the 20th I began with the buckeye and cut as fast as six men, a tedder and a horse-rake could take care of it, and before the 4th of July more than half my hay was housed without a drop of rain, the rest being easily saved in the few bright days of that memorable rainy July.

Now, farmers, for the results:—1st. The rain which caused long faces to many of you on beholding your fields scattered over with drenched hay cocks, started up a rich aftermath on my mowings, gladdening my eyes with its promise, and before most of my neighbours had harvested their first crop, dead ripe, made in the fields before it was cut and afterwards, soaked with rain, my machine was again at work cutting a second crop nearly as heavy as the first, after which a good third crop sprang up to be fed off by sheep.

2nd. I had enough rowen to feed a flock of 114 sheep from the 1st of December until the middle of May, one colt, and one to three calving cows, and have one-half ton left.

3rd. The first crop, most of which I sold, weighed very heavily for its bulk. A fair sized load, to weigh a ton, always running over 100 to 200 lbs. It gave universal satisfaction to the buyer and brought a higher price per ton than the average market rates.

4th. My flock have not suffered as many have during the past winter from "grub in the head." I have not lost a sheep, and some of my ewes to-day, after yielding a heavy fleece, are worth \$14 per head for the butcher.

These, brother farmers, are not theories, but facts; they are facts, moreover, which touch our pockets, and such is the kind of facts which we want.

Now for the second part of my subject.

I am strongly in favour of keeping up mowing lands by top-dressing, and have found no method of top-dressing to answer so well as by folding sheep upon them during the fall of the year. I commenced last year the middle of August to fold my flock of 150, and continued until December, except rainy nights late in October and November, and in that time manured several acres. I used the moveable hook and eye fence, sufficient to enclose a space of 50 feet square, moving it to a fresh spot every day. The effect was wonderful. The first rain caused a rich growth to spring up, which was again fed off, and the present season these lands, which have been mowed for five years, look as though they were cut for the first time, and the white weed, which last year composed most of the crop, now scarcely shows its hoary head. The crop will be, without exaggeration, twice as heavy as on adjoining lands, previously in the same condition, but which had not the benefit of sheep-folding.

Nor is the effect of manure applied in this manner exhausted in one year. My first experiment was in the fall of 1862, when I folded on a piece of mowing which had scarcely paid for the cutting; in 1863 I took off two heavy crops, and the present crop promises to fully equal that of last year.

I have previously given my views on this subject in the Co. Genl., but I regard it as one of great importance and I trust this statement of facts will induce many to try the experiment for themselves the coming season. The cost is trifling and the profit large.—EDWARD R. ANDREWS, in *Country Gentleman*.

Teeth of the Sheep.

The sheep has thirty-two molar teeth—eight incisors in front of lower jaw, and six molars on each side in the upper and lower jaw. The lamb at birth has two incisor teeth visible, or pressing through the gums. Usually before it is a month old it has eight comparatively short, narrow ones. At about a year old, though sometimes not until the fourteenth or sixteenth month, the two central "lamb teeth" are shed and replaced by two "broad teeth," which gradually attain their full size. The sheep is then termed a yearling, or "yearling past." Two lamb teeth continue to be shed annually and replaced by broad teeth, until the sheep has eight incisors of second growth, when it is termed "full mouthed."

The teeth afford the most decisive test there is of the age of a sheep, until it is four years old, though there is sometimes a variation of a number of months, or even a year in their development. High kept and rapidly grown sheep acquire their second teeth earlier.

When perfect, the incisors are sharp and rounded on the edge, a little concave without and convex within (or gouge-shaped); and they project forward, so that with the firm, elastic pad on the upper jaw, with which they are brought into contact, they are capable of taking up the smallest body. They will not only crop the shortest grass, but scoop up its very roots. A sheep yarded on unpulled turnips, usually scoops out the centres of them so far as they are in the ground, leaving little more than the mere skin of the sides and bottoms, remaining like cups in the soil.

At six years old the incisors of the Merino begin to diminish in breadth and lose their fan-like shape and position. At seven they become long and narrow, stand about perpendicular with respect to each other, and have lost their rounded, cutting edges. At eight they are still narrower, and their outer ends begin to converge considerably towards the middle. At nine the convergency is still greater, the teeth are not thicker than very small straws, and are very long, particularly the middle ones. At ten these appearances have increased and the teeth are becoming quite loose. At about this period of life the teeth begin to drop out, though frequently all are retained until twelve. The sheep is then called "broken mouthed." In two or three years after beginning to lose them, all the incisors are usually gone but one or two. These should be pulled by a pair of nippers, as they prevent the sheep from cropping short grass. The gum of the lower jaw hardens after the removal, so that it becomes, in a measure, a substitute for the lost incisors, in separating their food. The molars, though shortened and worn, are never shed, so that mastication continues complete. Old breeding ewes often live, thrive, and raise good lambs three or four years after ceasing to have any front teeth.—*Prairie Farmer*.

Concussion as a Remedy for Grub in the Head.

ON page 151, No. 10 of THE CANADA FARMER, we inserted a letter from Mr. B. M. Clark, of Ernestown, in which knocking sheep on the head was recommended as a remedy for the grub. We thought it a severe and hazardous mode of treatment, and doubted its efficacy. We notice, however, a somewhat similar case to that detailed by Mr. Clark in the *Rural New Yorker*, of July 23, which we transfer to our columns as a confirmation of our correspondent's theory and practice, strange and harsh as it may appear at the first blush:—

"J. McDONALD GLENN & BRO., Noblestown, Alleghany Co., Pa., writes us.—'Grub in the head is now being a good deal written about. We knew of a ram which was thought hopelessly affected, and being so reduced that he was unable to stand, it was determined to put him out of his misery. He was struck two or three severe blows with a heavy stick on the forehead up near the horns. This dislodged 10 or 12 large grubs. This being observed he was let alone, and in two hours he got up, and his recovery commenced. Would it not be advisable for those having sheep thus affected, to place a bit of wood on the forehead and strike it smartly with a hammer to see if the concussion will not dislodge the worms? We think it worth the trial.'

Fine-woolled Sheep in Illinois.

THE *Prairie Farmer* asserts that as good fine-woolled sheep are to be found in Northern Illinois as in Vermont; and that the celebrated sheep which carried off the great prize at the Hamburg Exhibition, last year, have been outdone by the sheep raised by Mr. Kelly, of Wheaton, Du Page county, Illinois. These sheep were exhibited at the Illinois State Fair, last fall, where they took the first premium, as the best pair of ewe lambs. Their weights and weights of fleeces are given below:—

Three ewe lambs receiving 1st prize: weights respectively, 14½, 12½, and 14 lbs.

Three yearling ewes, 1st prize, 15, 15 and 13 lbs., the latter having raised a lamb.

Three old ewes, 1st prize: 14½, 15 and 12½ lbs.; the latter having raised twins.

The united weight of fleeces of the 9 ewes and 1 buck, taking the 1st prize in sweepstakes, was 139½ lbs. Included in this were the fleeces of 6 ewes (yearlings when awarded the prize) and shorn on the 18th day of June last year; hence their fleeces are the growth of but 10 months and 16 days. The 2nd prize in sweepstakes was also awarded to Mr. Kelly on older sheep which gave a larger average yield. This, compared with Mr. Campbell's sheep, which went to Hamburg (being only about 12 lbs. per head), certainly puts Illinois ahead of Vermont, and shows that the awards of the committee were well made at our last fair.

A WOOLLEY LAMB.—Last fall, Jos. W. Worcester, of Lorain, sold a June buck lamb to W. B. Asmun, of Summit, for \$30. This lamb was wintered along with a lot of other sheep, and in May, when the lamb was eleven months old, was shorn, and yielded ten and a half pounds of wool, the weight of carcass being at the same time just thirty-three pounds. This comes within the merest fraction of being thirty-three per cent. of wool. Last week Mr. Worcester sold a splendid young Nottingham ram to Geo. W. Knapp, of Norwalk.—*Ohio Farmer*.

A GOOD AVERAGE.—Mr. N. T. Sprague, Jr., of Brandon, Vt., writes us that his flock of "Spanish Infatado sheep," numbering 36 head, 27 of which are ewes, altogether sheared 459 lbs. of wool—an average of 12½ lbs. per head. One yearling buck named "Tom Sayers," weighed before he was shorn, 78 lbs., and the fleece taken from him weighed 17½ lbs. Mr. Sprague was offered for this lamb last fall \$1,000. Another, "Heenan" by name, weighed before shearing 97 lbs., and his fleece weighed 15½ lbs. Both had even, thick fleeces with long staple, and even the fore arm of the latter was filled under with wool.—*Co. Genl.*

THE WEALTH OF THE WOOL CROP.—The *Daily Wisconsin* says:—"The wool crop of the West this year will compensate many farmers for the loss of their wheat crop. This State will sell at least 4,500,000 pounds of wool at \$1 per pound. The wool crop of Michigan for the present season is estimated at twelve million pounds. The State has now about four and a half million of sheep. In ordinary years the crop of Wisconsin and Michigan did not command more than one-third the money it does at the present time. It can be seen at a glance that if the farmers receive four and one-half million dollars for their wool crop, and Michigan twelve millions, what a resource they have to compensate for their deficiencies in the harvest."

SHEEP IN OHIO.—The number of sheep in Ohio at the several periods is given in an article upon Ohio statistics:—In 1840, 2,028,400; in 1850, 3,942,928; in 1860, 3,368,174; in 1861, 3,934,763; in 1862, 4,448,227; in 1864, 4,800,000. In 1860 the number of sheep was 600,000 less than in 1850, the cause being the reduction of the tariff 1846-7, the full effect of which on agriculture did not take place till several years had elapsed. Between 1852 and 1860, sheep fell off \$00,000. The average product of wool per sheep, as deduced from the census, was:—In 1840, 3,685,315 lbs., average 1½ lbs.; in 1850, 10,196,371 lbs., average 2½ lbs.; in 1860, 10,649,161 lbs., average 3 1-10 lbs. It will be seen from this statement that the average product of wool per sheep had nearly doubled from 1840 to 1860. This is an extraordinary fact in agriculture, and is a demonstration of the superior productive value of blooded, or high-bred animals. There can be little doubt that the average fleece of Ohio in 1864 is fully four pounds, which would give at least nineteen millions of pounds of wool for the State.—*Prairie Farmer*.

Rural Architecture.

Warmth and Convenience in Barns.

To the Editor of THE CANADA FARMER:

Sir,—Perhaps there is no other subject as much neglected by the Canadian farmer as a well ventilated, warm stable for stock, and few things are of more consequence in this severe climate, more especially since the partial failure of the wheat crop in various parts of the Province, and the increasing demand for manure to renovate the worn-out farms caused by the over-cropping with wheat; hence the necessity of raising stock in the most profitable way.

Some forty odd years ago I settled nearer the north pole than any other farmer in Upper Canada, and had ample opportunity of observing the effect of extreme cold on stock of all kinds; and I have ever been under the impression since I read Leibniz's works that it was as expensive to feed stock in a cold place as for a family to live in a very cold house. With that idea I built a barn, a few years ago, on the side of a hill, 10 feet by 50, and some 42 feet high to the eaves,—the upper story is on a level with the farm, and is used as a barn for grain: the threshing floor is 24 feet wide, the half of which can be used for grain when the mows are full. The second story is for holding hay and straw, also six grain bins, with spouts to convey the grain from the threshing-mill to any of the bins, and trap doors for putting down either hay or straw.

The lower story is what I wish to draw attention to. It is built of stone, in four apartments on a level with the adjoining field. The front part is fitted up for horses and cattle, with proper separation; the back half is partitioned by stone walls in three divisions, two of which are frost-proof and devoted to holding roots, which are let down into different bins by spouts from the upper floor. The other apartment is lighted from the front stable and is found very useful to turn cows in when expected to calve. The height between floors is 11 feet, with ventilating holes which can be opened and shut at pleasure. The ventilation is perfect, yet the atmosphere is so warm that blankets are not used upon the horses. When the weather is severe all the stock are watered from a pump in the root-house, so that they suffer nothing from exposure, and come out in fine condition in spring on very indifferent feed.

The object in writing the above is to draw the attention of farmers who have not yet provided a comfortable place for their stock, as they lose much more than they are aware of by their animals eating extra food the want of growth in young cattle, and the loss of stock by poverty in spring. It often takes the best part of the summer to place those that live in as good condition as they were the previous fall. I look at the contrast. My horned stock had no hay and only roots up to Christmas. With the exception of the cows that were expected to calve in spring, their only food was wheat, oat, and pease straw, alternately; yet some of them were taken to Montreal in the month of May, along with some stall-fed animals for beef. Perhaps nature has provided few places so perfect for a barn, such as I have attempted to describe; yet where nature has not done so, surely human art can construct something that will give comfort to their animals and profit to themselves.

ANDREW DICKSON.

Fakenham, County of Lanark.

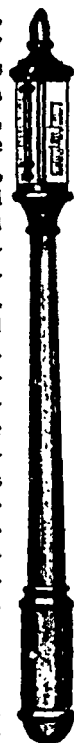
THE PROOF WASH FOR SHINGLES. The following simple application will no doubt prove of great value. We quote from the Albany Knickerbocker: "A wash composed of lime, salt and fine sand, or wood ashes, put on in the ordinary way of white-washing, renders the roof fifty-fold more safe against taking fire from falling cinders or otherwise, in cases of fire in the vicinity. It pays the expenses a hundred-fold in its preserving influence against the effect of the weather. The older and more weather-beaten the shingles, the more benefit derived. Such shingles generally become more or less warped, rough and cracked; the application of the wash, by wetting the upper surface, restores them at once to their original or first form, thereby closing the space between the shingles; and the lime and sand, by filling up all the cracks and pores in the shingle itself prevents it from warping for years, if not forever."

Correspondence.

The Barometer.



SEVERAL correspondents have, at various times, made enquiry of us where a good farmer's barometer could be had at a low price. In former issues, we mentioned, in reply to these queries, Kendall's Barometer, of which, however, we could give no information beyond the name, and Randall's Weather Indicator, which is, properly speaking, a hygrometer, and is highly recommended by many who have tried it. We are now enabled to introduce to our readers a barometer manufactured and for sale by Charles Wilder, of Peterboro', New Hampshire. It is Woodruff's Patent Portable Barometer, and is said to be a very accurate and durable instrument. The *Scientific American* and other public journals speak in very high terms of it, and a number of agricultural authorities in the United States recommend it strongly as the barometer for



farmers. It is cheap, the prices ranging from \$6 to \$25, according to size, finish, &c. In the present state of the money market, a Canadian farmer may possess himself of one of these useful instruments at a comparatively small outlay. The manufacturer has, we understand, authorized Mr. A. Christie, of this city, to act as his agent for their sale, and orders sent to him will be promptly filled. The accompanying cuts represent two of the styles of these instruments, made by Mr. Wilder, one at \$10, and the other at \$15, American money. We have seen these two styles of barometer, and can testify that they are well got up, nicely finished, and make, each of them, a beautiful and ornamental piece of furniture.

It may not be amiss to add a few words in reference to the practical value of a good barometer. By indicating the sort of weather that may be approaching when farming operations of a critical character are going on, much loss may often be prevented. When hay or grain is exposed, and the barometer foretells an approaching storm, forewarned the farmer is forearmed, and secures his crop in time. It has been computed that an annual saving of five per cent. on all crops might be effected by the intelligent use of an accurate barometer. The following narration, which we find in a recent number of the *Rural Advertiser* furnishes a striking proof of the value and utility of this instrument. A Pennsylvania correspondent of the journal just named, says:

"Having a small patch (1½ acres) of white rye of particularly large and fine growth, I was desirous to have it housed in good order for seed. It ripened in hay harvest, was cut down one day and left lying in swath. The next morning being bright and clear, all hands were engaged cutting hay with both machine and scythes. After mowing some time, it occurred to the writer that he had neglected looking at the barometer before leaving the house. The machine was stopped, and on recurring to the instrument, a slight observation satisfied me that a change in the weather would take place within the next twelve or twenty-four hours, although there was not then a cloud to be seen. It was with some reluctance the hands left their mowing and went to work to bind up the rye. By one o'clock clouds had begun to gather, additional help was secured, and a team commenced hauling in. By about four o'clock it was clouded over and very threatening, and as the last load of sheaves passed into the barn, near sun-down, the rain commenced falling and poured down heavily through a great part of the night. The crop was saved and produced nearly, if not quite, \$75; the straw being bright and clean, was sold principally to nurserymen, and the grain for seed."

Asparagus Beds.

"SIMPLEX" inquires whether a bed can be made out of old plants which he finds growing in hedges and ditches. This can be done by taking up the plants and removing from the root all the old and dead portions, preserving only the living crowns, which can be planted in a bed at suitable distances, and after the whole are planted out, should be covered with four or five inches of manure from the farm yard. This manure should be allowed to remain on the bed all winter, in the spring the coarser parts should be raked off, and the rest worked into the soil in the process of cultivation. These asparagus plants which appear to "Simplex" to be so unusually fine, will not continue to grow so luxuriantly when he has placed them in the bed, and cut them for use, unless well supplied with an abundance of fertilizers. The very best asparagus we have ever seen, was grown in a salt marsh near the sea shore, and received an annual top dressing of night soil. The plants were set in rows, four feet apart, and sixteen inches apart in the row. Thus each plant had plenty of room in which to develop its full proportions, by the rise and fall of the tide it was sufficiently watered, and the highly concentrated manure with which it was furnished, stimulated it into the most vigorous growth.

The cultivation of asparagus in the vicinity of large towns can be made very profitable. We have seen a statement of the products from seven acres and seven and a half rods of ground, in which the gardener stated that the crop was all put up in bunches four and a half inches in diameter, and sold in New York market at twenty cents per bunch. The greatest number of bunches sent to market in any one day, was four hundred and ninety-five. The total yield was ten thousand one hundred and twelve bunches. The cost of manuring, cultivating, harvesting, and marketing the crop was in round numbers seven hundred dollars, thus leaving him a profit on that year's crop of thirteen hundred dollars. The great secret of success in raising fine large asparagus that will command a good price, lies in giving the plants plenty of water and plenty of food.

A PREFERABLE REMEDY.—"John Mathews" says:—"Mr. John Snell, I should think, must have done an evil instead of good, in using vitriol to the udder of his sheep. The flower of the alder-bush, mixed with cream, made into a salve, will answer his purpose much better."

INDIA RUBBER BEE GLOVES.—"J. H. T." enquires:—"Can you inform me where India rubber bee gloves can be obtained, and the price, or where rubber gloves of any kind may be had?"

ANS.—We cannot; but perhaps some of our readers can.

HOEING CARROTS.—"A Subscriber" asks the following question:—"In hoeing carrots, how high should the earth be raised about them?"

ANS.—The earth does not require to be raised at all. Carrots should be cultivated on the level, all they require is to be kept clear of weeds, and to have the soil in a loose, friable condition about them.

ANOTHER CURE FOR GRUB IN THE HEAD IN SHEEP.—Robt. Richardson, of Wick, Brock, sends us the following receipt for the cure of this malady:—"1 oz. spirits of turpentine; 1 ounce spirits of hartshorn; ½ ounce camphor; mix together, and pour one teaspoonful into each nostril once or twice a day." He adds:—"I have cured thousands of sheep in Yorkshire, England, and in Canada, with the above, and have never known it to fail."

ILLEGIBLE.—A correspondent sends us a cure for ticks in sheep, which he says is "used by every farmer on the Cotswold Hills," but unfortunately we cannot decipher his writing, and to make a bad matter worse, he does not give his P. O. address, so that we cannot send his communication to be rewritten more legibly. We may add that it is no uncommon thing for us to receive letters which are useless from the same cause. In writing for the press great pains should be taken to write in a plain, distinct manner.

WEIGHT OF DRAIN TILES.—"E. R. M.," of Sidney, enquires the weight per thousand of drain tiles, in order to be able to estimate the cost of freight. Mr. Nightingale, of the Yorkville Brick and Tile Works, informs us that the 2 inch tiles weigh 3 lbs. each, or a ton and a half per 1000; the 3 inch tiles weigh 7 lbs. each, or 3½ tons per 1000; the 4 inch tiles, 9 lbs. each, or 4½ tons per 1000; and the 6 inch tiles 12 lbs. each, or 6 tons per 1000. A car load is about 10 tons.

CHANGES OF P. O. ADDRESS.—Subscribers wishing their papers changed from one Post Office to another, should notify us of the office from which they have been receiving their papers, as well as the new one to which they want them sent. As an illustrative example: "Joseph Forbes" informs us that a new post office named "Clapham," has been opened in his neighborhood, and desires his paper to be sent there. But he does not tell us the name of the office whence he has been getting his paper. Until he does this, we must either disappoint him, or send his papers to "Joseph Forbes" until the end of the year.

IMPORTATIONS OF STOCK.—On the 5th July, Mr. Simon Beattie shipped from Glasgow, in the ship *Pericles*, bound for Montreal, 40 sheep, 3 dogs, and a lot of poultry. The sheep consist of Cotswold, Leicester, Lincoln, Shropshire, and Oxford Downs. Among the poultry there are some new breeds never before imported into Canada. The sheep have been selected by Mr. Beattie from some of the best flocks in Britain. He expected to make additional purchases at the Royal Agricultural show, and designs returning in time to exhibit his choice animals at the Provincial Show, in September. We trust Mr. B. and his purchases will arrive in safety.

ARTIFICIAL BREEDING OF FISH.—On this subject "Angler" says:—"There are many fine trout streams and large springs in Canada—West that might, perhaps, conduce to the amusement and luxury, if not to the profit, of the owner. I think, Sir, you would oblige a number of your readers by inserting a short article in reference to the subject alluded to, mentioning any treatise or work from which information could be got concerning trout raising especially."

ANS.—The above communication ought to have appeared in our last issue, with a note calling attention to a brief article on the subject to which it refers, which is one of no little interest and importance. Originally, Canada was well stocked with fish. They are, however, rapidly disappearing; and means ought to be taken for their multiplication and preservation. There are two works on the subject of fish breeding which we may mention for the information of our correspondent, viz:—"Fish Culture," an American work, and "Frank Buckland's Manual of Salmon and Trout Hatching," an English publication, price 6d. sterling. We shall take the earliest opportunity of directing the attention of our readers more fully to this matter.

SPECKLED TROUT SPAWN.—A correspondent wishes to know where speckled trout spawn may be obtained, and if it is imported by any one?

ANS.—We do not know of any one in this country who is prepared to supply it to order, but should think it might be got by taking trout at the proper season for spawning, and proceeding as described in the article on Artificial Fish Breeding under the miscellaneous heading in our last issue.

HYDRAULIC POWER FOR STUMP MACHINES.—On this subject "Nota Bene" writes from Sydney, County Hastings, as follows:—"W. S.," of Woburn, explains that a child can raise hundreds of tons by the use of a hydraulic press. A child may also raise hundreds of tons without machinery when divided into small parcels, if sufficient time is given. Few people would use child-power while a force of tons may be at once obtained from a team of oxen or horses. Give these the advantage of some simple apparatus and your stump would be disposed of by the time your child was comfortably at work beneath his stump. It would, perhaps, be well for "W. S." to explain the relations of time to power in machinery. It would be interesting to know where the power originates, and whether or not it is inherent in the hydraulic press? For ordinary stumps a strong lever, 30' or 40' feet long, with a strong chain to hitch around the stump, makes a cheap machine. A team hitched to the end of this will twist most stumps instantly.

INSECTS FOR IDENTIFICATION.—"J. H. T." says: "I send you too small bugs—can you give me any information concerning them? It is a new and troublesome enemy of the honey bee. It gets in among the comb, causing the bees to cut it away rapidly. I have never seen it until this year, and I would like to know if any of your bee-keeping correspondents have seen it?"

ANS.—The two insects are Beetles (Coleoptera) but are so much crushed that we cannot decide to what species, or even genus to refer them. The antennae more resemble those of *Nitidula* than any other genus we are acquainted with, but we are not aware that any of this group ever infest beehives. We should be glad to have some more perfect specimens for examination. They would travel safely if packed in a quilt, the ends being stopped with a piece of cork or wood. Although at present we cannot give a name to these little beetles, we may mention that another beetle (*Clerus apiaris*) is frequently very destructive to bees; the female entering the hives, lays her eggs in the nest combs, and the grubs or larvae produced from these prey on the grubs of the bees, and do great mischief in this way. Correspondents sending insects for identification, would much facilitate the attainment of their object, if they packed them in such a way that they would not be crushed or otherwise injured in the carriage. It would be desirable also to send a greater number of specimens, and as detailed a description of their observed habits as possible.

Back Numbers.

We still receive an occasional letter of enquiry as to whether back numbers of "The Canada Farmer" can be had by new subscribers. Again, we reply, Yes: always. We keep a stock on hand to answer all calls, and as each issue is stereotyped, our correspondents need not fear that the supply will be exhausted.

The Canada Farmer.

TORONTO, UPPER CANADA, AUG. 15, 1861.

The Wheat Yield of Upper Canada.

An interesting discussion has been going on between the *Montreal Witness* and *Toronto Globe*, in reference to the style of farming in vogue in Upper Canada, and the agricultural productiveness of the Province in general—especially of the older townships and counties. The *Witness* refers to the diminished yield of wheat in many parts of the country, accounts for it from the exhaustion of the soil by injudicious cropping, and urges the necessity of a better system of cultivation, rotation of crops, stock-raising, &c. The *Globe*, regarding the strictures of the *Witness* as rather more severe than facts warrant, while admitting the importance and desirableness of improved methods of culture, appeals to the figures furnished by the census returns in proof of the assertions that the picture is overdrawn, and that the farmers of Upper Canada are not, after all, such unskilful cultivators of the soil as they are represented to be. At great length, and with much minuteness of detail, the calculations are given in respect to all the counties in Upper Canada; and it is certainly very gratifying to find that so good an exhibit can be made. It appears that, according to the census of 1852, there were in the previous year (1851.) 798,275 acres under wheat in Upper Canada, yielding a crop of 12,682,550 bushels, or 15.88 bushels to the acre. According to the census of 1861 there were, in the previous year (1860), no less than 1,383,316 acres under wheat, yielding 24,620,425 bushels—or 17.76 bushels per acre.

On going very carefully through the entire list, county by county, while we confess that the picture is more pleasing than we expected strict truth would

have warranted, there is, we think, good reason for believing that our best wheat lands are, in some degree, deteriorating; and though the country is far from being in a state of ruin and decay, it is very needful that our farmers should give their best attention to manuring, stock-raising, root-growing and a judicious rotation of crops, in order to maintain, and if possible increase, the fertility of their lands. The large breadth of newly-cleared land constantly coming into cultivation must have some effect in keeping up a good general average, while it must not be forgotten that our last census returns were made up during a year of unusual productiveness. Moreover, we apprehend that in order fairly to compare the past and present productiveness of the wheat lands of Upper Canada, we need to take in a longer period of time than is covered by the census returns above referred to. The nine years embraced in those returns represent but a very limited part of the history of the best wheat farms of Upper Canada. It is of course hazardous to generalize upon isolated cases, or to draw sweeping conclusions from circumstances of but limited operation. Individual impressions and recollections will not bear comparison with carefully prepared statistics, but unfortunately we have no trustworthy returns to enable us to compare 1864 with 1811 or 1834. In the absence of these, we have the testimony of experienced farmers, who have spent thirty and forty years upon their farms, going to prove that the wheat field is not what it once was in their experience. Indeed the conviction is very strong and very general among our best agriculturists, that from various causes, the wheat crop of Upper Canada has lost much of the character for reliability which it once had, and hence they are casting about for some other crop or crops to take its place. Some trace the comparative failure of wheat to changes in the climate of Canada, others to an enfeebled and degenerate condition of the plant, others to insect depredations, and others still, more correctly as we think, to an over-frequent raising of white crops, deficient manuring, want of under-draining, and the like. We earnestly hope our farmers will not think of giving up the wheat crop without at least trying the effect of higher culture, and of such precautions against its known enemies, as may have been proved to be efficient. There is, we think, very great encouragement in this direction to be derived from the facts which the census returns exhibit. If, notwithstanding all the unfavourable circumstances, so good an average is obtained, what may we not expect, with more intelligent and thorough husbandry? We should be sorry to see Canada lose her high reputation as a wheat growing country, and we believe the facts and figures which have been brought out abundantly prove, that there is no good reason why she should do so.

A New Kind of Spring Wheat.

It will be in the remembrance of many of our readers that the Canada Company, with that liberality which distinguishes their proceedings where agricultural matters are concerned, imported this Spring a quantity of Spring Wheat for seed. Twenty-five bushels of it were of the April red wheat, a kind well known and highly appreciated in Scotland, and a similar quantity was of a small grained Spring kind (name unknown), but which was obtained at great trouble and expense from Archangel on the White Sea, being the northernmost port from which wheat is shipped in Europe. It was obtained from thence in the hope that a hardy and early kind might be introduced to our Canadian farmers, which having been acclimated in the short and severe seasons of Northern Europe, might be likely to improve in Canada, and furnish a variety which would not only withstand our untimely frosts, but which would ripen so rapidly and in such short season, as to enable the farmer to sow it late and thus secure himself against

the ravages of the midge, and at the same time not be likely to suffer from rust. The sample of this wheat was most unpromising. It was small and looked more like tailings than good merchantable wheat.—but the Canada Company were assured by competent persons in London, England, that it was rather a favourite kind with the London millers, as the bran was exceedingly thin, and the yield and quality of the flour good also that it was preferred over the April red wheat, as not being so coarse and harsh in the quality.

Some of this wheat was sown in a piece of poor garden land in Toronto with seven other sorts, to test its quality and growth as compared with others, and a diary of its history has, so far, been kept, the substance of which we are enabled to lay before our readers.

The straw of the Archangel wheat is fine and short, the head of good size and well developed; the wheat is strongly bearded, and although sown amongst samples which were severely affected by the midge, that insect has appeared to shun it, and has not affected it to an injurious degree. It is clearly a new variety, and from its extraordinary rapidity of growth, bids fair to be a useful and valuable kind. At any rate, it merits a trial, for we are now come to that pass with regard to wheat growing in Canada, that any change must be looked upon with interest, and can hardly be for anything but the better.

It will be seen from the subjoined diary that this wheat was sown on the 5th May. It was fit to cut on 5th August, thus running its course in exactly three months from the date of sowing. It was sown at a dry time, and did not come up for some considerable period after it was sown. When threshed, we shall again call the attention of our readers towards it.

EXTRACT FROM DIARY, TORONTO, 1864

May 5, 1864.—Sowed the samples of the Canada Company's imported small-grain Russian wheat, called Archangel wheat, and April red wheat, with other samples. The soil was a poor, sandy loam, not manured, and the grain sown was intended as a mere index of operations on a larger scale elsewhere, and in order to afford an opportunity of watching the effects of season, midge and other casualties. The various samples progressed in the usual way, without noticeable variations. The season was very dry. On the 5th July, the small-grained Russian, or Archangel wheat, was in full flower, at least seven to ten days earlier than the rest. The early April wheat came into flower a week later. The wheat *aphis* appeared in very small numbers, sometimes disappearing almost entirely, but on the 15th July one head of the early April red wheat was considerably affected; from that it spread to one head of the Russian, but does not seem to spread so fast as in former years. Just before the wheat headed out, the midge and its attendant black flies and several other sorts, were about in thousands, but, apparently, they all left before the wheat came fully into ear.

The sorts of wheat sown were as follows:—On the 27th April—No 1 Russian wheat No 2 Russian spring wheat No 3 Russian hard wheat. [These were all imported by the Provincial Agricultural Association. They are believed to have been originally fall wheat, and came very late. They are all bearded wheats.] On the 5th May, the following were sown: No. 4. Blue-bearded wheat. The proper name of this is not known: it is very fine and shows well. No. 5 Barley-wheat so called from a peculiar circumstance; it is second only in earliness to the Russian small-grain, or Archangel wheat, and is a plump white spring wheat—a new variety. No 6 Small grained Russian or Archangel wheat, imported by the Canada Company. No. 7. Fyfe wheat. No. 8. The old Siberian wheat. No. 9. April red wheat; imported by the Canada Company. This is very fine looks like the Blue bearded wheat, but came into ear later.

18th July The *Aphis* has increased during the last two days, but not to any dangerous extent: they are preyed upon by several different kinds of insects

The small-grained Russian or Archangel wheat first beginning to turn colour.

29th July.—The Archangel wheat, decidedly yellow, will be fit to cut in less than a week; the grain quite out of the milk.

5th August.—The Archangel wheat and barley wheat dead ripe. The April red and blue bearded will be fit to cut in three or four days; the Fyfe and Siberian will be ready in about ten days: the Russian kinds, imported by the Agricultural Association, are much later, but are all filling well; the heads are too heavy for the straw.

We supposed that the midge would not affect any of this wheat, as the great bulk of the insects disappeared before it came into ear. We now find, however, that some few midge are in several of the varieties, but not to an extent seriously damaging them.

Dislike of Farming.

This is very common among farmers and their families, and often finds most emphatic expression. When the cause of it is enquired into, various answers are given, but perhaps the most frequent one is, that farming is such hard work. It cannot be denied that the farmer's vocation is a laborious one, especially at certain seasons of the year, nevertheless much may be said to mitigate the force of this objection. By judicious forethought and wise arrangement, resulting in a more even distribution of work, the farmer may lessen and lighten that toil which he cannot wholly escape. Too great haste to be rich, goods many farmers to undertake too much,—to commence work which they cannot finish,—to sow a breadth of land which they cannot properly tend and properly harvest, and in various ways to waste labour. Moreover many have a prejudice against labour-saving implements, and grudge a little outlay for these valuable ameliorators of the drudgery of farming. In like manner, contempt for book farming, and neglect of subscribing to and reading good agricultural periodicals, keep many plodding on in the old beaten roads of unintelligent labour, when a little use of the brain would vastly lessen the strain upon the muscles. Science and invention have done much to improve practical agriculture, but their career in this respect is only just begun; the day is not very far distant when brute force and steam power under the direction of the mind of man, and with only such exercise of body as is healthful without exhaustion, will greatly change this aspect of life on a farm. Even now, however, it is to be feared that discontent the evil genius which sets so many complaining of their earthly lot—and the mistaken idea that gentility consists in having soft, delicate hands, and immunity from work have a good deal to do in promoting that dislike of farming, the prevalence of which there is so much reason to deplore.

MONTREAL HORTICULTURAL SOCIETY.—We have received the Eighteenth Annual Report of this Society, which forms a neat pamphlet of nineteen pages. The Society appears to be well managed, and has an ample income for its present wants. The Prize List for 1864 seems very judicious, and the amount liberal, reaching in the aggregate \$1,000. The Grand Annual Exhibition, open to the whole Province, takes place in the Victoria Skating Rink, Montreal, on the 15th, 16th, and 17th September. In addition to prizes for Agriculture, Horticulture, Poultry, Birds, Painting, &c., &c., \$200 is offered as prizes for the best band and best solo performer on bugle, fife and drum. The Report speaks of gardening as one of the largest industrial interests on the Island of Montreal, which we have no doubt is correct. Few districts are better suited for market gardening than the Island of Montreal, and we believe it supplies Lower Canada chiefly with vegetables and fruits. Parties wishing to contribute to the Exhibition can apply to Mr. Pell, the Secretary, Montreal.

28th "A Wool Growers' Convention" will be held in Rochester, N. Y., on Wednesday, September 21st, during the State Fair.

LABEL ON THE FARMERS OF CANADA.—The *North British Agriculturist* says: "A Canadian farmer recently wanted his wife's funeral postponed on account of the non-arrival of a professional gentleman who was to extract several teeth from her containing twelve dollars worth of gold filling." We should like to know on what authority our respected contemporary makes the above statement, for although, doubtless, there are mean spirited men among us in this quarter of the globe, as there are among every class of people in all parts of the world, we don't believe there exists among the farmers of Canada a wretch capable of so low a descent into the abyss of meanness as the above story implies.

TURNIP MATCH.—The Agricultural Societies of North and South Wentworth will hold their Annual Turnip Match the coming autumn, when the following prizes will be awarded:—Piece of turnips, not less than four acres. 1st prize, \$12; 2nd prize, \$10; 3rd prize, \$8. Piece of turnips, not less than one acre and under four acres. 1st prize, \$10; 2nd prize, \$8; 3rd prize, \$6. Piece of mangold wurtzel, not less than one quarter of an acre. 1st prize, \$6; 2nd prize, \$4. Piece of carrots, not less than one quarter of an acre. 1st prize, \$6; 2nd prize, \$4. Parties are required to give the name of township, concession, and number of lot, also the mode of culture, in writing, when the entry is made. An entrance fee of \$2 will be charged. Examination to take place on and after Monday, the 17th day of October. Entries will be received by John Weir, jun., Secretary N. W. A. S., West Flamboro', and Wm. A. Cooley, Secretary S. W. A. S., Ancaster, till 1st September.

Veterinary Department.

Staggers in Horses.

During the months of June, July and August, horses are very liable to a disease arising from disorder of the stomach, and caused in a great measure by feeding on tough, indigestible food, or being fed continuously on ripe vetches, or clover, &c., causing indigestion. This disease is generally designated as Grass or Sleepy Staggers. The horse seems dull and inclines to hang his head, his appetite is lost, the visible mucous membranes are of a yellowish colour, the bowels constipated, the abdomen somewhat distended, and in many cases he moves with a sort of staggering gait. Such symptoms will continue for two or three days, and if not relieved, he begins to exhibit signs of abdominal pain, such as pawing with the fore-feet, looking round at his flanks; the pulse becomes gradually quickened, showing that inflammation of the bowels is likely to set in. In treating this disease the animal should have a large dose of purgative medicine as six drachms of Barbadoes aloes, with two drachms of calomel, combined with a diffusible stimulant. If the pulse continues slow, the stimulants ought to be continued at intervals of three or four hours, and the abdomen well rubbed with mustard, or fomented with hot water. Injections of soap and water, also of salt and water and tobacco smoke, should be given every four hours. If the bowels are got to move, the case may generally be looked on as safe. If the bowels remain constipated for two or three days, and the pulse becomes quickened with pains in the intestines, the case is likely to end fatally.

Another affection of the stomach is acute indigestion, or stomach staggers. This disease generally results from overloading of the stomach and intestines, and is often caused by overfeeding with green clover, oats, or vetches, especially after hard work and long fasting. The functions of the stomach being impaired, the food hastily taken is not digested, and therefore soon undergoes a chemical change, causing an evolution of gas. The stomach and bowels become distended, colicky pains come on, shown by the animal pawing violently, lying down, and rolling.

The body becomes covered with perspiration, the pulse quick, weak, and scarcely perceptible at the jaw, the mucous membranes, at first reddened, gradually become of a dark leaden coloured hue, the extremities cold, also the mouth cold and clammy. Death will often ensue in from three to five hours, either from rupture of the stomach or inflammation of the bowels. The treatment is similar to Grass Staggers. Give a large dose of purgative medicine along with opium and sulphuric ether. If there are signs of inflammation of the bowels coming on, stimulants must be withheld. Apply constantly to the abdomen cloths wrung out of hot water, also give clusters of soap and water every hour. After recovery the animal should be carefully fed for some time.

Enlarged Spleen in a Horse.

A communication in the *Veterinarian* for the month of April, 1863, by H. R. Perrins, Veterinary Surgeon, Worcester, describes the history of a horse from whom an enlarged spleen was removed, as follows:—The owner, riding seventeen stone, had hunted him for about twelve years, during which period his health continued apparently good, until last August, when his near fore-leg and shoulder became swollen. A dose of physic, however, soon reduced it. In November the near hind-leg was similarly affected, but it also soon subsided, and nothing more was noticed until the first week in December, when general emaciation set in, and the animal became very thin, refused all food, and would not lie down. This continued until about ten days before his death, when hemorrhage commenced from the near nostril, at first slightly and intermittent, but at last more profuse and continuous. The pulse ranged from 65 to 70, being very weak and irregular; the mucous membranes were very pallid, and about a fortnight before he was killed, the near flank was observed to be fuller than the off one. His food was four quarts oats, with a double handful of beans, and the usual quantity of hay, daily. His height was 15½ hands; his shape almost faultless, he being nearly thorough-bred. As he was a favourite and an old horse, being six or seven and twenty years old, he was not subjected to any treatment but destroyed. In the post-mortem examination all the internal organs were healthy with the exception of the spleen. Professor Varnell, of the London Veterinary College, in his remarks on the above case, says:—"We have had very many opportunities of examining diseased spleens, but have never seen one so large, or weighing so much as the one sent by Mr. Perrins. It weighed no less than seventy six pounds. About fifty-six pounds is the largest I have ever before seen." The size of this specimen is wonderful when we consider that in a normal condition its weight would not be more than from three to five pounds.

Strangles, or Horse Distemper.

[BY ZOIATRIST.]

This is a disease well known to every one who has any experience among horses. It is a disease more especially of young horses, and few, if any, escape, but it is also seen in the aged horse, when it is distinguished by the absurd appellation of Bastard Strangles. In the usual form, it is characterized by sore throat and cough, with a mucopurulent discharge from the nostrils; a low form of fever, with dullness and prostration of strength, and the formation of a hard inflammatory tumour under the jaw, which goes on to suppuration, and in about ten days bursts, and discharges for a few days. It then heals up, and the animal soon regains his strength. During some seasons, however, (and this summer, more particularly in this district), it assumed an irregular form, and the abscess, instead of forming and maturing under the jaw, as above described, appears in some other part of the body—as in the breast, flank, or in some of the internal organs. This form is known as Irregular Strangles. Several very interesting cases of this kind came under my notice of late, a few remarks on the symptoms of which may not be uninteresting to your readers.

Irregular Strangles generally follows those cases in which the abscess either forms very imperfectly under the jaw, or does not form there at all. Still we have the other symptoms—sore throat, cough, discharge from the nostrils, &c., &c., which soon disappear, and the animal seems to have recovered, but in a short time he is noticed to be unwell. In the stable he lies most of his time; at work he is languid

and easily sweated. He occasionally looks toward his flanks; the pulse is weak and hurried; if the lungs are involved, pain is evinced by pressing between the ribs. Auscultation and percussion of the chest, to a professional ear, afford conclusive evidence. If in the bowels or mesenteric glands, colicky pains are frequent, pain is evinced on pressure in the flank, and the appetite is weak and bowels costive. These cases are usually hopeless if the essential organs are involved. However, as we cannot tell the exact extent to which this may exist, treatment is always advisable.

Turn the animal into a loose box, feed well on bran mash, linseed tea, boiled barley, and give occasional drenches of warm beer, and frequent small doses of the iodide of iron or disulphate of quinine, and sulphuric acid. Keep the bowels open by laxative clusters, &c.

When it occurs on the outside of the abdominal or thoracic walls, as in the flank or neck, it must be treated by poultices, fomentations, or mild embrocations, &c., as in an ordinary case. When ripe, if deeply seated, open and wash the sac well out, when it will soon heal up. In opening these cases, care must be taken not to injure any of the important blood-vessels, as it frequently forms in their neighbourhood.

With this, as with all other diseases, "prevention is better than cure," and this in most instances can be accomplished by paying proper attention to the first signs of distemper, keeping the animal in an equable temperature, not exposing him to draught, and favouring the formation of the abscess under the jaw by poultices, &c.

Diarrhœa in Calves.

This complaint is one of the most troublesome with which the calf-breeder has to deal. Again and again, enquiries are inserted in the agricultural papers asking information on the subject, and the replies are as varied as the queries are uniform. Take a recent case from the columns of *Bell's Weekly Messenger*, where "An Old Subscriber" says,—"I have adopted all the means veterinary skill can suggest, but with no good result. Some of my calves begin to scour when not more than 24 hours old, and some from a week to ten days. They live wholly on new milk, always sucking from the cows. My cows have been living on hay cut into chaff, mixed with pulped mangold, at the rate of half a bushel per cow per day, and 2 lbs. of oil cake and 2 lbs. of meal. The cows have had no grass till this day. I lose about half my calves from this scouring. Any information will be thankfully received." One reply recommends the inquirer to "see that the cow be well milked before he allows the calf to suck, giving it a tablespoonful of castor oil, in new milk taken from a cow that has been calved some time. The first milk is too rich for the calf. I formerly lost several calves from the same complaint, but never one since I adopted this plan. Another says,—"Try a teaspoonful of rennet for the scour in calves, given just before they begin to suck, or a strong infusion of bramble leaves. Dry the leaves in a cool oven, rub them down, and infuse for 15 minutes." And again,—"If 'An Old Subscriber' will give his calves that scour (according to age and strength of the animal) from one-third to one-half of Cupiss' Constitution Horse and Cattle Balls, broken sufficiently fine to be given in cold gruel or water, he will find the medicine a remedy, and otherwise beneficial. It may be repeated if necessary. In hot weather it will be necessary to put the ball into cold water a few minutes, or it will not break for mixing." A fourth says,—"I should recommend him not to let his calves have more than three quarts of milk per day for the first four days, and not more than four quarts until they are a month old. I wean from 30 to 40 every year, and never lose one from scouring. If they show the least symptoms of scouring, I always give 'Day's Gaseous Fluid,' which is a certain cure if taken in time." While the next says,—"If 'An Old Subscriber' will discontinue feeding his cows on the mangolds, and give his calves one tablespoonful of bruised grains of paradise, and one tablespoonful of starch, simmered in a quart of new milk, and repeat it two or three times if necessary, I have no doubt the effect will be satisfactory." Another gentleman recommends food rather than medicine to be looked to:—"I would advise to double the quantity of cake and meal given to the cows, and withhold the mangold; on no occasion should this root be given to cows suckling young calves." "An Old Dairymaid," also, "who superintends the rearing of about 30 valuable calves yearly, seldom losing one of them, wishes to give 'An Old Subscriber' advice how to prevent scour in calves. As soon, then, as the calf is born, she recommends about a pint, or a pint and a half of beastings from the dam to be given it, by means of a small horn, out of which the calf will usually suck it. All the remaining beastings

which can be milked from the cow, should be drawn from her, as she will naturally retain quite enough, and often more than sufficient for the support of her offspring. As soon as the calf is strong enough to stand, it should be induced to suck, taking care that as small a quantity as possible be left in the bag.

"An Old Subscriber" should treat the animals the reverse of what he does, viz.—the calves should not be allowed their fill of milk till they are at least a week old; but should scouring take place about the time named, which is not at all unusual even with this treatment, it will make them disinclined to move about and to seek for the teat, and they are, no doubt, often lost for the want of a little milk being given to them. If, however, the scouring continues, about three large tablespoonfuls of linseed oil should be administered, and, if this does not have the desired effect, give milk from another cow, but by no means use drugs of any kind, as "An Old Dairymaid" considers the best remedy is good nursing, and that a want of proper attention to them while so very young is often the cause of scour in calves. We may be excused adding to the length of this note by giving the reply which we penned in answer to the same inquiry:—

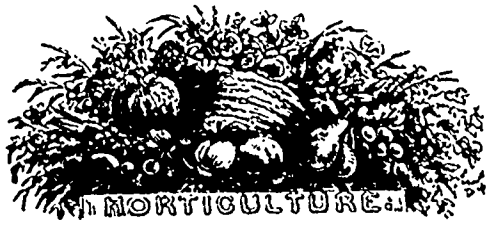
"Remedies for the above ailment are often local and empirical; it is far better to treat it constitutionally. In fact, 'remove the cause and the effect will cease.' But unfortunately several details are wanting from which to form a judgment, or make a profitable suggestion. Diarrhœa in calves may, and often does, arise from very diverse and, frequently, what may be called trivial causes; these causes, as operating upon the little animal, are either external or internal. If the former, we should be disposed closely to examine the feeding of the cows, and to put a few queries respecting the same. For instance, are the mangolds carefully cleaned? adhering soil tends to scour the cows in a moderate degree, and, of course, the action is much more serious on the calf. It so happens, that the complaint from which 'An Old Subscriber' suffers, has this season been particularly prevalent, from the very fact indicated. The small mangold roots of 1860, have been much more difficult to clean, and have consequently carried more soil with them to the feeding troughs than in the average of seasons. Their use should cease entirely with those cows that are suckling, unless this has been already done.

"Again: Is the cake a genuine article? How has it affected the fattening beasts? Is there no irritant contained in it? and what kind of meal is referred to—that of barley or beans? We should very heartily urge the use of the latter in preference to the former for nursing cows.

"Again: Do the calves suck their own mothers? A mistake is often committed in putting a young calf to a cow which has been some months in milk. This should not be done before the calf is a fortnight old, and even then with much caution.

"As to external causes of diarrhœa, a close, ill-ventilated, dirty, or damp calf-house may be reckoned the chief. The owner would do well to have the house carefully examined—wash it out, and then try the floor with a pocket level. If the fall is less than an inch to a yard, the bricklayer must be had to remedy the defect. Calves void a large quantity of urine in proportion to their size, ample provision must be made for carrying it off freely. Let them also be well littered down twice a day with wheat straw, the bolters cut through the middle, and the straw shaken up together. Encourage them to eat a little sweet green hay from the rack before them, and also a few sliced roots, as soon as they will take to them.

But for immediate action, if the scourge still continues. Watch the premonitory symptoms, viz., feverishness and refusal of food. Remove the affected animal to a warm place, and tie a cloth over the body, which will tend to keep up the vital powers. Give a dose of 2 oz. of castor oil, with half a teaspoonful of ground ginger and a whisked egg. This will remove the offending or irritating matter; and then follow up with the free use of 'Day's Gaseous Fluid,' according to directions on the bottle; or if castor oil is not at hand, give about 3 oz. of common salt, in a little wheaten flour gruel; and if the bowels still continue relaxed, and the evacuations too watery, the calf must be drenched twice a day with well boiled and thickened wheaten gruel; but do not continue its use longer than is needful. It is well that nature be allowed to help herself a little. Before returning the animal to the calf-house, let the house be well flushed out, and washed down with water containing an ounce to the gallon of chloride of lime. This will remove any offensive taint or smell—a precaution very essential for the well being of calves. In conclusion, be not persuaded to employ strong astringent medicines, and do not rest satisfied with rearing less than every calf which is in a sound healthy condition at birth.—*Bowick.*



Fine Gooseberries.

From all we can learn, the present season appears to have been very favourable to the gooseberry crop. We have heard but little complaint of mildew, and have seen finer specimens of this choice fruit than we ever beheld, except in England, where the gooseberry attains a size and flavour but rarely met with here. Mr. Fleming's trees have borne remarkably well, and the berries have been of large size. Passing a fruiterer's shop on Yonge Street in this city, we saw exposed for sale, several quarts of the Whitesmith variety, which struck us as remarkably fine samples. We purchased a quart for the sake of measuring the larger ones, and found some that were full 4 inches in circumference. We have also received from distant correspondents some excellent samples. Mr R J Oliver, of Orillia, forwarded us a few the best of which measured 1½ inches in length, 3½ inches in circumference and weighed 15 dwts each. Mr. J. Corbit, of Oshawa, sent us some mammoth specimens, which it would be hard to beat anywhere. The largest measured fully 4½ inches in circumference. Mr Corbit has forwarded us two samples, one of an early and the other a late variety. The earlier sort is the finer of the two, both in size and flavour. The late sort is a large red berry, which we should think from its peculiar acid would be especially valuable for preserving. In our next we shall give an engraving, life size, of some of these gooseberries, which we doubt not will astonish many of our readers, who have not had the opportunity of seeing really fine specimens of this desirable fruit.

The Nurseries of Rochester.

THESE nurseries are well known to be the most numerous and extensive in America, and embrace several thousand acres in the aggregate. Their sales are said to range between one and two millions of dollars annually. Each acre of well-managed nursery will average at least three hundred dollars annually—although such as are devoted exclusively to apple and other cheap trees, may be much less; while a large share of the smaller fruits may increase the amount to four hundred dollars. At this rate, every hundred acres of good nursery should sell thirty thousand dollars annually; and the thousand acres would sell about a million.

A correspondent gives in a late number of the *Rural New Yorker*, the names of all the principal nurserymen in the vicinity of Rochester, heading the list with Ellwanger & Barry, who have about 600 acres, and Frost & Co., who occupy about 300, and adding the following of less extent:

Samuel Moulson, 250 acres; C. J. Ryan & Co., 200 to 250 acres; Hooker, Farley & Co., Brighton, 200 acres; T. B. Yale & Co., Brighton, 200 acres; W. M. Hoyt, Brighton, 150 acres; Gould, Beckwith & Co., Brighton, 150 acres; Moore Brothers, Brighton, 150 acres; H. E. Hooker & Co., 130 acres; Robert Donnelly & Brother, Greece, 100 acres; C. S. Mills, & Co., 100 acres; Fellows & Co., Penfield, 80 to 100 acres; S. Boardman, Brighton, 75 acres; Wright & Davis, Irondequoit, 75 acres; Foster Hoyt—acres; Howe & Lewis, Brighton, 75 acres; D. McCarthy & Co., Brighton, 75 acres; G. G. McKinster, Irondequoit, 75 acres; C. W. Seelye, Central Nurseries, 75 acres; Thomas Hayward, Pittsford, 50 to 75 acres; Fish & Brother, Gates, 40 to 50 acres; A. C. Wheeler, Brighton, 50 acres; J. B. Norris, Brighton, 40 to 50 acres; Salter & Anthony, 40 to 50 acres; Pryer, Nash & Co., 50 acres; S. B. Kelly, Brighton, 35 acres; B. W. Fassett, Brighton 25 acres; B. Millard, Pittsford, — acres; Lyon & Fisk, — acres; Huntington & Co., — to 30 acres; Asa Anthony, Gates, 25 acres; J. Aentz, Brighton, 15 to 20 acres; Wm. King, — acres; Brooke & Co., 10 acres; Geo. Cooper, Irondequoit, 10 acres; C. F. Crozman, 10 acres; C. J. ...

Bouquets in England.

The following facetious extract is from a late number of the *Cottage Gardener* :—

"For a lady of rank prepared for a ball one of the requisites of the present day is a bouquet in the shape of a shield of Achilles, and nearly as large. This bouquet is made as symmetrical as if it were cast in a mould, and as stiff and formal as if it were formed of earthenware or cast iron. Its bulky proportions give quite sufficient employment to one hand to hold it; and though sometimes the courtesies of a partner may be agreeably called into play in holding it for a time, it nevertheless requires as much nursing as a baby. If laid on a seat it certainly may not occupy so much room as the lady herself, but will take up quite as much as her partner, and it is an endless source of concern and anxiety, and finally, perhaps, occasions some little disaster to the dress by being attached to the side for security; or perchance getting upon the floor, an accident of another kind is the result. All these and many others are of every day occurrence where huge hand bouquets form portions of ladies' ball equipments; and what compensation do they offer for the discomfort? The odour of the flowers may be urged in their favour; but very often such bouquets are made more for appearance than for the scent—in fact, that of some flowers so used is disagreeable rather than otherwise. That they are of gay colours is also urged as a recommendation, but so also are very often the dresses of the fair ones who carry them; and it rarely happens indeed that any regard is paid to the contrast between the dress and the bouquet so long as the latter is formed of rare and costly flowers."



The Double Daisy.

OUR engraving is from a photograph taken expressly for THE CANADA FARMER, and we know of nothing prettier in the flower garden than a bed of these lovely daisies. There are several varieties—some are pure white, others are red, pink, or light blush, and some are quilled. They are in bloom from April to August, and are quite showy when planted in masses. In those parts of the country where a covering of snow can be relied upon during winter, they will not need any other protection, but in other places it will be necessary to strew leaves over the bed at the approach of winter, and place some brush upon the leaves to keep them from blowing away. They thrive best in a cool, shady place, where they will be somewhat sheltered from the hot sun at mid-summer.

FLOWERS.—Thousands of acres of soil, are annually planted with flowers in France and Italy, for making perfume alone. A single grower in Southern France sells annually 60,000 pounds of rose flowers, 30,000 pounds each of jasmine and tuberose, 40,000 pounds of violet blossoms, besides thousands of pounds of mint, thyme, rosemary, &c., and he is but one of hundreds engaged in this branch of horticulture. The atmosphere of some of these towns is so filled with fragrance that a person is made aware of his approach to them by the odours which greet him miles away.

The Strawberry Crop of 1864.

To the Editor of THE CANADA FARMER.

"—The past spring was a very favourable one for Strawberry plants. All kinds stood the winter without injury to any extent. In the early part of the season the Strawberry crop looked very promising, but for want of frequent showers the crop was very much less than it would have been, and at the late part of the season the plants failed to mature the fruit that had set. The continued drought will very much injure the old stock of plants.

In giving a description of the fruit bearing qualities of my collection of over twenty kinds, I will only mention those worthy of general cultivation and of further trial, according to my experience:—

ALICE MARO.—Large, dark crimson, firm, sweet, hardy and productive; one of the best English varieties that I have tested.

ASPIN SHAKER.—Very large, orange scarlet; plant very vigorous, large broad foliage, strong runners; the most productive of any plant that I have seen; fruit very even in size, very sweet; stands on a strong fruit stalk; the best strawberry that I have tested.

BARTLETT.—Large, crimson, very firm and very sweet, sprightly flavour, early and productive.

BALTIMORE SCARLET.—Very early, medium, bright scarlet, very productive, the most hardy of all in my ground.

DOWNER'S PROLIFIC.—Rather large, even in size, bright scarlet, very firm, sweet and very productive; continues to bear a long time, very hardy; one of the best for field culture.

HOOVER.—Large, crimson, sweet and rich, flavour second to none.

LONGWORTHY'S PROLIFIC.—Rather large, light scarlet, vigorous and productive.

LA CONSTANTE.—Large, dark crimson, ripens late, failed with me on a dry loamy soil, where other kinds succeed well, does not stand the hot sun, worthy of further trial as a late bearer.

TRIUMPH DE GAND.—Very large, uneven in size, flesh firm and sweet but not rich, productive, not hardy, many plants late to fruit, does best in hills, continues to bear a long time.

WILSON'S ALBANY.—Large, irregular, dark crimson, very acid, hardy and productive.

It will be seen from the above description that there is a want of a large very early strawberry, as early as EARLY SCARLET, or earlier if possible. The Wilson is early but has too many faults for general cultivation. PRINCE FREDERICK WILLIAM is said to be very early. It is a very strong grower, but has not fruited yet with me. Can you, Mr. Editor, or some of our Western fruit growers, inform us on the subject? B. LOSEE.

Cobourg, Aug. 1st, 1864.

FRUIT CROP IN NEW YORK.—The apple crop of this section will be light, as compared with that of last year. Much of the fruit has fallen from the trees. There will be a fair crop of peaches.—*Genesee Farmer*.

TO PRESERVE CUTTINGS OF PLANTS.—The German mode of preserving or transmitting cuttings of plants to a distance is by means of cylindrical shaped strong glass bottles, with wide mouths, into which the cuttings are thrown just as they are taken from the plant. From a teaspoonful to a tablespoonful of water is put in the bottle, and the stopper hermetically sealed up. Cuttings kept in this way for a month, have grown most freely; and instances have occurred where they have sent out roots during a journey from Edinburgh to Vienna, and, being immediately potted on their arrival, have grown freely.

DEVONSHIRE STRAWBERRIES.—Last week we reported strawberries measuring 4½ inches round, and 2½ inches long, of superior and delicious flavour, gathered at Allsey Down, near Exeter. Since then we hear of 11 strawberries, each of them measuring 5 inches round, gathered in a garden near Exminster. Now we have to report still greater marvels in our own neighbourhood. We have just been favoured with the sight of a gigantic strawberry, picked in the garden of the Rev. Mr. Richey, of Loxbere, on Wednesday last. It measures no less than 6 inches round, and 3½ inches long. Another was picked on the same day, and at the same place, measuring 5½ inches round. This would not be so surprising but from the fact that the general average of the strawberries grown in Mr. Richey's garden is from 5 to 5½ inches. Surely the gardener, as well as the county, deserves some credit for these extraordinary productions.—*The Exeter Gazette*.

Entomology.



FIGURE 1. FIGURE 2.
The Tent Caterpillar.
[CLISIOCAMPA AMERICANA.]

We doubt whether there is an observing farmer in the Province who has not some acquaintance with this very troublesome caterpillar. Indeed, so common is it, and so generally spread over the country, that it is known by the name of *The Caterpillar*. Like most other insects, it is exceedingly abundant in a given locality for a few seasons, and then nearly disappears for a while, to return again in due time in great numbers. This year, for instance, they are very numerous in the county of Lincoln; their cobweb tents in neglected orchards are set up all over the trees, and the leafless branches give them the appearance of winter. Before the apple tree was planted in Canada, these caterpillars fed on the leaves of the wild cherry, and the planting of apple trees has just enlarged their feeding grounds. They make their appearance in May, coming out from the eggs in warm rainy weather. These eggs can easily be found before the leaves are expanded, fastened together in a broad band around some twig usually at a little distance from the end. Above we give an engraving showing the usual form and position of this belt of eggs. (Fig. 1.) It contains on an average some three hundred eggs, which are small cylindrical bodies set up on end, most of them perpendicular to the twig. The shell or covering of the egg is very tough, very like the best leather. These eggs are all covered with a thick gummy substance, which serves to protect the eggs from exposure, and to furnish food for the worms when they are first hatched. The moisture in damp or rainy weather has the effect to soften but not dissolve this gummy substance, so that the little worms on first coming forth are enabled to make their way through it, and for the first few days to feed upon it until they gain strength to go in search of the opening leaves.

At this time they are less than the tenth of an inch long, black and thinly covered with fine hairs. After having devoured the gummy covering of the eggs, they start off down the limb until they come to a fork in the branch,—there they stop and begin the



FIGURE 3.



FIGURE 3.

formation of their tent. This is made of very fine silken threads, and is at first very light, but by continued additions from day to day, becomes in a short time sufficiently substantial to protect them from the weather. The caterpillars cast their skins several times, and at each casting or moult some change is noticeable in their size and appearance. When

about half-an-inch long they are ornamented with a blue band running along the back, and a brighter blue line along each side. When full grown they are about two inches long, the head is black, and a pale line runs along the centre of the back bordered on each side by a band of irregular yellowish-brown lines upon a black ground, and below this on each side is a row of twelve irregular black spots upon a light blue ground broken by innumerable fine lines of black. The underside and the legs are black. It is covered with fine long yellowish brown hairs, most numerous along the sides just above the legs. When they are about to spin their cocoons they cease to live together, desert their tent, and wander about feeding upon whatever they find palatable until they select some secure retreat, where they spin their cocoons. Fig. 2 represents the full-grown caterpillar, and Fig. 3 the cocoon when completed. The cocoons are of a long oval form, light yellow colour, and the meshes filled with a fine yellowish powder resembling sulphur. Within this cocoon the caterpillar casts its skin and takes on the chrysalis form. Fig. 4 is a representation of the pupa or chrysalis. In about three weeks the moth breaks from the chrysalis and forces its way out through one end of the cocoon, forming a round opening in it by its passage. The moth is very plain, being of a brown drab colour, marked with two pale stripes running obliquely across the fore wings. The size and general appearance of the moths are shown in Figs. 5 and 6. Fig. 5 represents the male insect, Fig. 6 the female. They are most numerous during the first ten days in July, and in three or four days after they come forth, the females proceed to deposit their eggs upon the little twigs in the manner shown in Fig. 1.

The best methods of destroying this caterpillar are first to search for the eggs after the leaves have fallen



FIGURE 5.



FIGURE 6.

and before the worms have left them in the spring, and cut them off and burn them, and second, to destroy the worms when in their tents. The earlier in the season that the work of destroying the worms in their nests is undertaken the more likely to be efficacious, for they are then small and more readily destroyed. It is not sufficient to tear out the nest and throw it on the ground, for the caterpillars will find their way back; the only useful method is to crush every one of them.

We take this opportunity to acknowledge the receipt of a letter on the Tent Caterpillar from Mr. J. H. Rowe, of King, C. W., for which we are much obliged to him, but as this article covers the whole ground of his communication, it will hardly be advisable to insert it. We shall be happy to hear from him again.

A TRAP TO CATCH CATERPILLARS.—I often see in *The Field* requests to be informed how to rid fruit-trees, &c., of the caterpillars which so infest such trees; and this fact has led me to forward my experience in such matters, and it is most simple and satisfactory, as will be shown upon the first trial. I get a quantity of old pieces of white (no other will answer equally well) linen, any length, and about two inches wide; these pieces I tie on the trees or bushes, in liberal numbers, in all parts of the trees or bushes, setting my traps (as I call them) in the evening, taking care to pay them an early visit on the following morning, when the strips will be found covered with the caterpillars, which, as a matter of course, I at once dispatch by killing in the most merciful manner I can devise.—S. P. SAVILLE, in *The Field*.



The Apiary.

Propolis or Bee Glue.

To the Editor of THE CANADA FARMER :

SIR,—I am often asked the question, what is bee glue, and how made? I will, therefore, for the benefit of those who may be desirous to know, answer the question through your valuable paper. I know that I trample upon disputed ground in doing so. Miner, in his "Bee-Keeper's Manual," says that Huber considered propolis to be a genuine production of nature and not manufactured; but he does not think Huber's opinion sets the question at rest, for he adds:—"Neither he (Huber) nor any other person, it is probable, ever saw the bees in the act of gathering this substance, nor even when gathered by them on their return to their hives to deposit their burden." Again, he says:—"It is probable that propolis is an elaborated substance. And here the question must forever rest." "The bees produce it when it is required, but when they obtain it, or how they make it, must be a secret not for man to unfold. Huber's assertion to the contrary notwithstanding."

Now, that Huber is correct in saying that it is a genuine production of nature, I very well know, for I have not only seen them bringing it from the field, but have caught them and removed it from their legs, and both by taste and smell have been able to say what it was. It is nothing more nor less than gum or balsam which exudes from certain trees. In this section of country, at this time of the year, it is all pine turpentine, evaporated to a gummy consistence. In the spring, it is often a balsam obtained from balm of Gilead buds, and may easily be known by the smell. In fact, it is any gum or balsam which they are able to find. It is gathered on the legs in the same way as they gather pollen, though it does not lie so flat, but is round in form like the head of a pin. The bee that gathers it does not apply it, but passes through the crowd, and those bees occupied in glueing seize it and apply it to the spot desired. This may be seen by any bee-keeper at this time of the year, especially in colonies that are strong. Whoever will take the trouble to examine may satisfy himself that there is no mystery about bee glueing—that propolis is not an "elaborated substance," but a genuine natural production. I trust the day is not far distant when the mystery and superstition connected with bee-keeping will pass away.

Brooklin, C. W. J. H. THOMAS.

Analysis of the Excreta of Bees.

Various opinions are held respecting the composition of the excrement of bees. While most persons regard the contents of the rectum as composed of the indigestible remains of pollen, Dr. Alefield recently declared them to be uric acid. An analysis of the excreta has shown the following ingredients:—

1. *Remains of pollen.* I boiled the excrement in caustic potash lye, slightly diluted. After filtering, I washed the residuum in hot dilute muriatic acid. What was left after again filtering, could, from its insolubility, be only the remains of pollen. It appeared under the microscope like an indistinctly granular mass.

2. *Uric acid.* I immersed the excrement in concentrated sulphuric acid, in which uric acid remains undecomposed. After carefully decanting the liquid from the resulting carbonaceous mass, I added water; and then washed the precipitated matter in water. I now added one drop of *liquor ammoniaci* and one drop of muriatic acid. On heating, the mass assumed a purplish hue—the characteristic action of uric acid.

3. *Hippuric acid.* I boiled some excrement in caustic potash lye. After filtering, I added dilute muriatic acid, and obtained a precipitate which proved to be composed of uric and hippuric acid.

According to an approximate estimate, the excreta of bees consists of about one-third uric and hippuric acid, and the rest of indigestible portions of pollen.



Poultry Yard.

Domestic Ducks.

THERE is a prevalent belief among farmers that ducks are not profitable poultry. This arises naturally from several causes. The habits of indolence which some possess—the tendency not to hunt their food, but to depend on being fed and the scraps which they pick up about the house—lead farmers to contrast them unfavourably with the wandering turkeys, which find their living and rear their young often in the woods, depending only in winter upon the farmer for their food; and scarcely less favourable with dunghill fowls, which during the summer months require but little food except what they hunt for about the farm. The ducks, besides, though some kinds are excellent layers, are heedless birds, exposing themselves, their eggs and young to crows, rats, turtles, and other vermin, dropping their eggs about, shifting their place of laying if disturbed, inconstant as sitters, and chilling their young by taking them too soon, and too often to the water. Still all these objections may be obviated, in a measure, and ducks really pay very well both in flesh and eggs for the amount of food they consume.

The duck is an omnivorous animal eating almost everything vegetable and animal that comes in its way. Insects of all kinds, worms, pill-worms, fish shellfish (dead or alive,) meat, even that which is partly decomposed, and many green vegetables, grass, seeds, grain, etc. Withal, its appetite is voracious, hence it grows rapidly and fattens easily. The common tame duck is supposed to have descended from the wild Mallard duck, *Anas boschas*, common to this country and Europe. It breeds freely with this species, and also with several other species of wild duck; in some cases the progeny is capable of reproduction of its kind, in others male birds or "mongrels" result. The fact that a very different class of birds are produced where the Mallards are crossed with other species and where the common duck is so crossed, with other points of difference, throws some doubt on the assertion that the Mallard is the parent of our common ducks. Besides efforts to domesticate the Mallard have not been successful as a general thing. We have, however, many wild ducks capable of perfect domestication, and the experiment ought to be well tried with all, for thus our stock of domestic poultry may be essentially increased and improved.

The "Rouen" is a tribe of ducks of great beauty. This breed is the most highly esteemed of all domestic ducks, by many duck breeders. Its habits are quiet, and so it does not wander about and get lost, as ducks often do. It attains a great weight, and is unsurpassed as a layer. An English writer reports that he has frequently known a pair of young drakes nine or ten weeks old to weigh 12 lbs. Sundry writers report very remarkable laying performances of the Rouen ducks. One laid an egg a day for 85 days; three ducks from February to July laid 331 eggs, besides a few soft ones and five double eggs. One of these laid every morning for 92 days. The young ducks often lay in autumn a good clutch of eggs, and it not unfrequently occurs that a duck which is a first-rate layer will manifest no tendency to sit. This variety of ducks has in common with many other kinds great beauty of plumage, which varies somewhat in different individuals. The drakes are heavier than the ducks, but the difference is slight in comparison with the disparity between the sexes in most varieties. The beautiful green heads and necks of the drakes, iridescent with purple and copper hues, set off with a clean white collar and claret-coloured vest, give them a distinguished air which the various colours and distinct markings of the back and wings does not detract from. The females are brown, each feather being marked with black, which gives them a speckled look.

The only variety which really rivals the Rouen as a useful and economical bird is the Aylesbury. These, a purely white English variety, are beautiful birds, and highly esteemed in the markets of Great Britain, as also in the United States where they are known. They are good layers and nurses, not noisy, good feeders and by some decidedly preferred to the

Rouen. The eggs are white, sometimes inclining to blue while those of the Rouen duck are blue, with thick, strong shells; of the two the Rouen has the reputation of being the most hardy. Where ducks are raised for breeders, it is a practice—founded perhaps on prejudice—to set ducks upon their own eggs; but if the young are wanted for market simply, the eggs are put under hens. Hens will hatch a clutch of duck's eggs some two days quicker than ducks will, but it is thought that the young have not such good constitutions. Young ducks raised for market often get injured by being allowed to go freely to the water. They grow faster and stronger if they only have enough to drink, at least for several weeks.—*Am. Agriculturist.*

Value of Hen Manure.

We saw on the premises of a first-class farmer, the other day, a well constructed hen-house, though not at all complying with the conditions which hen-fanciers would impose. It was designed only for laying and roosting in, and it at first seemed strange to find, at mid day, with a cool atmosphere, turkeys and chickens occupying it. They had free egress and ingress, and were not fed or watered in it, yet the chickens always went there to lay.

The secret was revealed, however, when the proprietor informed us that he had it cleaned out every week. All the droppings of the fowls were scraped from the floor, which was an inclined plain, into a trough or receiver, from which they were shoveled and heaped up, and the place whitewashed once a week. This required but little over half an hour, and the manure from last season was estimated at one hundred and twenty dollars, and quite sufficient in quantity as an application to his entire crop of corn.

As a rule we do not think farmers pay as much attention to their hen houses and the manurial product, as their real importance demands. Here was a most valuable amount of fertilizing material, obtained with little labor, upon the premises, ready for use when needed, which would have cost a heavy sum to provide; besides, from the excellent arrangement of the house, which was by no means expensive, an increase of eggs was obtained, which more than covered all the additional expense in labor, &c.—*German Town Telegraph.*

ENGLAND imported a hundred million eggs in the last four months, against eighty million in the same time last year. In the single month of April she imported 12,650,000 eggs, while the number in April 1863, was 28,510,000 only.

A STRANGE BIRD.—The editor of the *Essex Journal* was shown last week a chicken having four legs and four wings and but one head. It was in the possession of Mr Alex. Ouellette who resides in the Grand Marais. It was quite a curiosity, and if it had lived, would have found its way to Barnum's Museum, New York. Mr Ouellette keeps it preserved in spirits.

A CAT HUNT. When a cat is seen to catch a chicken, tie it round her neck, and make her wear it for two or three days. Fasten it securely, for she will make incredible efforts to get rid of it. Be firm for that time and the cat is cured—she will never again deign to touch a bird. That is what we do with our own cats, and what we recommend to our neighbours; and when they try the experiment, they and their pets are secure from reproach and danger henceforth. Try it.—*N. E. Farmer.*

IMPORTANCE OF GRAVEL STONES FOR FOWLS. Reader did you ever dissect the gizzard of a hen, turkey, goose or duck? The gizzard and gravel stones in it, serve the purpose of teeth, in reducing the food to small particles, in order to facilitate digestion. The feed is swallowed in chunks, or the grain is received into the crop unbroken. Here all such substances are softened, and passed, a little at a time, through the gizzard, which is surrounded by strong muscles; and when food is passing through it it dilates and contracts similar to the motion of a bellows and the food, kernels of grain, coming in contact with the gravel stones is separated and torn to pieces. After the process is completed the food is digested. These little mill stones, as it were, do not remain long in the gizzard; they are carried out with the food, and a new set is brought along, from the crop, to be thus ground. Now if fowls are confined, as they often are, where they cannot have access to all the sharp gravel they need, their digestion must be imperfect and they cannot do well, especially if fed on whole grain. Fowls need sharp gravel stones within their reach to swallow every day, and if they do not have a range gravel should be kept by them in their inclosures.—*Boston Callator.*



The Household.

SCOURING KNIVES.—A subscriber to the *American Agriculturist* writes that the ashes of hard coal, un-mixed with any from wood, are a better article than Bath brick for scouring knives, forks, &c.

A SIMPLE Suet DRESSING. One pound flour, half a pound of chopped suet, a teaspoonful of salt, a quarter do. of pepper, moisten with water until a stiff paste, and use when required. They may be rolled in small balls, and may be used in savory pies, hash or stews.

A FRENCH paper says that by an accident charcoal has been discovered to be a sure cure for burns. By laying a piece of charcoal upon the burn the pain subsides immediately. The remedy is cheap and simple, and deserves a trial.

REMEDY FOR TOOTHACHE.—Oil sassafras and oil cloves, equal parts, is a simple, safe and effectual remedy for toothache that can be cured by any application—mix and apply frequently until the pain ceases, by rubbing upon the gums with the finger each side of the tooth. It will not make the mouth sore nor in any way hurt the teeth. J. H. T.

CEMENT FOR MENDING GLASS, MARBLE, CHINA, EARTHENWARE, &c.—White shellac, 1 oz., dissolved in 2 oz. of spirits of wine 10 grains of borax dissolved in 2 drachms of sulphuric ether. After the ingredients are dissolved, put them together.

Put it on the edges of the broken ware with a brush or feather; then burn it off with a spirit light. Put the pieces together, hold them until they set, and they will be as firm as they were before they were broken.

DEATH IN THE SWEET-MEAT JARS.—A child was recently poisoned in Pennsylvania so that death ensued, from eating apple-butter which had been kept in a glazed jar. This glazing contains an active poison—the oxide of lead—which is dissolved by fruit acids and is extremely dangerous to life. All such substances as apple-butter and the like should be kept in wood or glass vessels, so as to avoid the possibility of mischief. The above is not a solitary instance, as many similar ones have occurred.

CURE FOR POISON IVY.—I have twice cured myself, when poisoned with ivy, by immersing the poisoned parts in soft soap for thirty or forty minutes. The first time I tried this I merely put my feet in the soap, because it made them feel better; the second time, it being on my hands, I put them in soap to cure them, and it did it. Let every one so afflicted try this remedy, and I assure them they will be glad they took the *Genesee Farmer*, and feel their obligation to make known any similar discovery which they may make.—E. D. W., Pierpoint, Ohio, in *Genesee Farmer*.

RUSTIC PICTURE FRAMES.—Rustic work for this and other purposes, is in great favor now-a-days in the fashionable world, and many and beautiful are the imitations of bark, rough wood, leaves, vines upon bark and twigs of trees, etc. They are cast in bronze, zinc and iron, for picture frames and similar purposes. Papier-maché is also pressed into a multitude of rustic forms of great beauty, and the wood carvers exercise their skill in producing in oak, black walnut, and butternut, devices representing rural things.

With a little care in selection, and skill in handling tools, we may frame our photographs and engravings and crayons with rustic work as much more beautiful than the costly product of the bronze foundry, as nature is superior to art. Oak wood denuded of the bark, presents a beautifully corrugated surface, out of which the knife easily removes the few fibres which adhere, and it is ready for varnishing as soon as it is seasoned. The "season cracks," should they occur, may be filled with dark brown putty, and will even heighten the general effect. Pieces, of suitable diameter, sawed carefully in two, lengthwise, are very easily worked, matched at the corners, etc., and make strong durable frames. Wood having beautiful bark, not too rough, covered partly perhaps, by close clinging lichens, is very pretty, wrought into frames in the same way, and when one once begins to make such things, it is remarkable how many beautiful objects he will find ready to his hand.—*Scientific American.*

Miscellaneous.

Jottings by the Way.

To the Editor of THE CANADA FARMER :

SIR,—Having just completed a short agricultural tour, through parts of the counties of Durham, Northumberland, Victoria, and Peterborough, a few of my jottings may not be uninteresting to your readers.

At Port Hope I had the good fortune to fall in with Mr. Hume, who kindly drove me over to Mr. John Wade's, where we spent a few hours in very agreeable conversation on agricultural matters. Mr. Wade has recently been inspecting some of the cheese factories in the Mohawk valley, N. Y., and he is decidedly of opinion that the system can be profitably adopted in Canada, modified, of course, to meet local conditions and wants. He intends adopting it himself. There is no winter wheat along the front for many miles. Spring wheat is short, and in many places thin, affected more or less by the midge; the hay crop short, pastures dried up, and spring grain generally deficient in straw. Potatoes look healthy, but form tubers slowly. Mr. Hume, (who farms about half a dozen miles back,) cultivates rather extensively the choicer kinds of peas for seedmen, and says that these crops will be very short. Turnips, mangolds, &c., are much behind, in many places there is a want of plant, although re-sowing has been resorted to. The desolating effects of the severe and protracted drought are everywhere apparent. Upon dry, well formed land, where the crops could be got in early, the results are much more encouraging.

In Victoria and parts of Peterborough, the fall wheat was being harvested, and the crop, in many places, will not be much short of an average, and not being affected by the midge, it will be of good quality. Spring wheat, too, will not be so bad as was at one time expected. I observed many pieces of turnips; though late, they looked healthy and promising, and will produce fair crops, if favourable weather should now follow. Mr. Hopkins, of Lindsay, has tried *Gibbs' Improved Green-top Yellow Turnip*, with entire satisfaction. It bears late sowing, bulbs and keeps well, and gives little or no taste to milk and butter. This variety is but little, if at all known, in Canada. It is of Scottish origin, derived from the old Scotch yellow. It grows deeply in the ground, and therefore, perhaps, is not so well suited to clay soils; but its skin is remarkably smooth, and the internal part of the bulb very solid; it is exceedingly handsome in form, and is regarded by many as little, if at all, inferior to the Swede for feeding purposes. This variety is certainly deserving a more extensive trial in Canada.

I am indebted to Mr. John Thirkell, of Lindsay, for a very interesting drive through the townships of Ops and Mariposa. This is a fine section of country, the soil resting on limestone, is generally of first class, in many places well farmed, and considering the character of the present season, wheat, especially the winter, is good; the spring grain here, as elsewhere, has suffered the most. Mariposa, I should say, cannot be exceeded by any township in Canada. Mr. Thorndyke, of Oakwood, is erecting a suite of farm buildings of superior character; and the appearance of farms generally denotes thrift and progress. The town of Lindsay has astonishingly recovered from the disastrous fire with which it was visited three years since, and from its position and the surrounding fertile country, it is destined to become a place of considerable importance.

Having spent a most agreeable day in sailing round the lakes, in the steamer Ogemah, under its communicative and gentlemanly commander, Captain Wallace, I reached the pretty town of Peterborough in the evening. The route I took is one that must ultimately attract vast numbers of travellers, as it becomes better known. The crops in the township of Smith, must be considered comparatively good; varying of course with the character of the soil and the style of farming; the latter often affecting the result more than the former. I spent a few hours with Mr. Gilmour, who has a farm and nursery in the immediate vicinity of the town, in a delightfully picturesque position. I am indebted to Mr. Gilmour, sen., for a pleasant ride to Mr. John Walton's, where breeding and farming operations generally may be studied to advantage. Mr. Walton is an advocate for large fields, and has extensively practised under-draining, with stones procured from the farm. He raises turnips from the most weedy land, and by putting the drills wide apart, the ground becomes perfectly clean by repeated horse-hoings during the summer, and is in excellent condition for a spring crop. I afterwards spent a few days in East Northumberland, and attended a Convention of School

Teachers at Colborne, where I gave an address on the importance and practicability of teaching the elements of agricultural science in our public schools. After the subject had been discussed by several persons in a numerous meeting, it was carried in the affirmative by a unanimous vote. The interest which the teachers evinced in their work at this meeting, which lasted five days, favourably impressed me, and I may return to the matter hereafter.

GEO. BUCKLAND.

University College, Aug. 8, 1861.

Farming and Farm Life in Canada.

To the Editor of THE CANADA FARMER :

SIR,—I observe in your valuable paper, a letter from a gentleman in Somersetshire, respecting Canadian farming. I myself came from the lower part of Gloucestershire; I think I know the information he requires, and I will give him some of the results of my observation and experience, that he may judge for himself. The man who has best succeeded in this country, is the labourer, who went into the bush and worked out his independence. During the processes of chopping and first cropping, all went well with him. But how to farm it, now that his land is cleared he is at a loss, and begins to lose instead of gain. The usual process of farming here, is this: Three white straw crops in succession, a summer fallow and then three more white crops. The hay is allowed to stand until it is fit for seed, and then when made put into the barn. The barn in fact, is expected to cover all his 100 acre crops. The stock kept will average from six to twenty sheep, from one to six cows, a few young animals, and perhaps two span of horses. The horses eat all the best feed, the cows are allowed to run over the fallow and roads among thistles, which is the best crop here, in the summer, and eat the refuse of the horses in the winter. The sheep share the same fate. Cow cribs, hurdles, and sheep racks are unknown in most parts of Canada. The pigs, too, are allowed to go without rings, and the best pigs not cut. If you talk to the farmer about these modes of operation, he will tell you farming does not pay; if you put in grain the midge eats all up, &c. If you tell him better cultivation would cure the midge, he replies he has farmed for twenty or thirty years, as the case may be, and he guesses he knows as much about farming as the next man. The Somersetshire gentleman will thus see if he could make any improvement upon existing practices. The spring is short in Canada I admit, but I think the long autumn will out-balance it. The English gentleman who comes here will have to mingle with society he has not been used to; the roads, too, are not what he is accustomed to see in the neighbourhood of Bath and Frome; when he travels fast here he will expect his gig to be broken every moment, to say nothing of the severe shaking he will get himself. These things, however, will improve in time, but if he intends coming to Canada, he must make up his mind to give up all pleasure, for there is none to be had here, and work hard. Get money he can I am sure, as a stock and dairy man; skill and capital is what is really required here. He must not forget the nature of the roads, and the state of society, or he will be deceived. By all means let him buy cleared land, for I can assure him the very best of it would look poor indeed, compared with the beautiful fields of Somersetshire.

JOHN MATHERS.

Pine Grove, C. W.

NOTE BY ED. C. F.—That poor farming has done much to bring the profession of agriculture into disrepute, and to lower the estimate of Canada as an agricultural country, cannot be doubted for a moment. Our correspondent does not draw an exaggerated picture at all. We have observed such methods of farming as he describes, and have heard farmers talk in the style of which he gives us a sample. The almost entire disregard of the principles of rotation, neglect of stock keeping, manure making and the like, have made farming a poorly-paying business indeed. All slipshod, thriftless modes of working must be abandoned, and an intelligent system of doing things must be carried out, if our agriculture is to do us credit, and make us rich.

Our correspondent says in reference to the emigrating gentleman farmer, that he must "make up his mind to give up all pleasure, for there is none to be had here." By this we suppose he means such pleasure as fox hunting, &c. Surely he does not intend to say that life in Canada is wholly devoid of pleasure. That would be a queer argument in favour of emigration to this country.

Weather and Crop Items.

THE following communication ought to have appeared in our last issue. It is from a "A Canada Farmer," Derby, July 23, 1861:—"The haying is now nearly over in this vicinity, although there will be some to cut next week, some are waiting till as near harvest as it is safe for them to do, not to have them interfere with each other, alleging that the clover is still growing, and that timothy will not suffer, having been retarded in its growth by frost and drouth in June. I am afraid that those advocates of late hay-making, will lose in quality quite as much as they gain in quantity.

The weather is again exceedingly dry, with at present, no appearance of rain; the last two days have been rather cool for the season, and yesterday morning there was quite a severe frost, but owing to the drouth, I think the damage done is but slight.

We had a couple of fine showers about a fortnight ago, which have done an incalculable amount of good to the crops, this is the only rain that we have had since the latter end of seeding time. The haying season has been all that could be desired, and although the yield is certainly not more than one-third of last year's crop, the quality must be excellent, as the most careless could scarcely but have it in prime condition.

Harvest will be on in a few days here; fall wheat and barley are coming on rapidly, and by the time they are disposed off, peas, spring wheat, &c., will require to be attended too. With regard to the appearance of the crops, there is no real cause of complaint, for although the straw of all kinds of grain is much lighter than last year, I think from present appearances, that the yield of grain will be much better. There is as yet no appearance of the aphid, which I think has been the principal cause of our light yields of grain for the last two years."

MIDGE PROOF WHEAT.—"J. E. Courte," of Yarmouth, County of Elgin, writes:—"I see in your last number (July 15) an account of the midge proof wheat raised by one Mr. Stewart. I have got it and the Mediterranean wheat, the Soules wheat, and the white chaff Genesee wheat. It was all sown on a sandy gravel soil the 3rd of September. The midge proof is the worst wheat we have to stand the winter. There is a great deal sown in Yarmouth, but the most part of it was ploughed up this spring, and what is left will not yield, on an average, one-sixth of a crop. What we call the midge proof is a bald wheat, with red chaff and red berry. The straw does not rust, and grows short. The berry is plump, and it gets ripe about ten days earlier than the rest of the wheat raised free from midge. I send you herewith a sample of the midge proof, and should like to know if it is the same as Mr. Stewart's."

NOTE BY ED. C. F.—Not having a sample of Mr. Stewart's wheat at hand, we are unable to compare the two specimens. Our impression is, however, that they are not the same variety.

"B. M.," of Selkirk, writes in reference to the "midge proof wheat":—"We have thoroughly tested the matter in this section this year, and find it entirely satisfactory. I sowed one field to midge proof and Kentucky wheat, side by side, and at the same time. The midge proof is entirely free from midge, and the Kentucky is full of it. This is the experience of every person who has tried it. There is plenty of it in this neighborhood. One farmer has as much as 500 bushels."

CROPS IN MISSISSQUOI.—A correspondent of the Montreal Gazette writes:—"A couple of days in the county of Missisquoi have convinced me, as well from what I have seen as heard, that the crops in this part of the country will, on the whole, be excellent. Hay is now being cut, but there is a good deal yet standing. The quality is very good, and the quantity will be much greater than we of the city were led to expect from the doleful stories which reached us from all parts about the late drought, which has, undoubtedly, done immense damage to a large portion of this northern continent. I hear, too, there is a great deal of last season's hay over. Corn, peas, the coarse grains, and potatoes, are all looking well. Wheat in the west of this county, I hear, is unusually good."

Markets.

Toronto Markets.

'CANADA FARMER' Office, August 10, 1864.

Flour—Superfine, \$4 to \$4.60 per barrel; fancy, little doing at \$4.10 to \$4.25 per barrel, double extra, \$5 to \$5.25 per barrel. Fall Wheat at 90c to \$1, and \$1.05 asked, per bushel. Spring Wheat active at 90c to 94c per bushel. Barley nominal at 45c to 60c per bushel. Oats unsteady at 46c to 47c for Canadian, 40c to 41c for United States per bushel. Beans 60c per bushel. Rye 60c per bushel. Hay in good supply and demand at \$10 to \$13 per ton. Straw active at \$6 to \$6.50 per ton. Provisions—Butter—Fresh, wholesale, per lb., 10c to 11c, retail, per lb., 14c to 25c. Eggs—Wholesale, per dozen, 12 1/2c to 14c, retail, per dozen, 16c to 17c. Hams—Wholesale, per lb., 11c to 11 1/2c, retail, per lb., 12 1/2c. Pick Bacon—Wholesale, per lb., 8 1/2c to 9c, retail, per lb., 10c. Cheese—Wholesale, per lb., 11c to 11 1/2c, retail, per lb., 12 1/2c to 14c. Hops—Wholesale, 15c to 17c per lb. Lard—Wholesale, 11c per lb.; retail, 12 1/2c. Beef—Market poorly supplied—light consumption, with little activity—a fair export trade to Montreal and Quebec, inferior, \$3, per cwt.; second quality, \$3.50 to \$4, extra, \$4.50 to \$5. Sheep—Clipped, \$3 to \$3.50 by the car load. Lambs each \$2 to \$2.50 for good. Calves—Each \$3 to \$4. Hides (green) per 100 lbs., \$4 to \$5, trimmed do., \$6.25 to \$8.50. Calfskins per lb., 10c to 12c. Sheepskins \$1.90 to \$2 each. Lambskins, 90c to \$1. Sheep Pelts 25c to 35c each. Wool \$4 to \$4.75 per cord. Salt \$1.25 to \$1.60 per bbl. Water Lime \$1 to \$1.60 per bbl. Potatoes—New plentiful at \$1.25 to \$1.60. Coal Oil at 50c to 40c for Canada; 45c to 55c and 60c for Pennsylvania.

Montreal Markets, August 9, 1864.—Flour, per barrel of 106 lbs.—Superior extra, \$4.50 to \$5, extra, \$4.50 to \$4.65, fancy, \$4.45 to \$4.50, superfine from Canada wheat, (old ground) \$4.45 to \$4.50, do., fresh ground, \$4.50 to \$4.60, superfine from Western wheat, \$4.40 to \$4.50, Western States flour \$4.40 to \$4.45, superfine No. 2, \$4.40 to \$4.45, fine, \$4.10 to \$4.25, middlings, \$3.75 to \$3.85, pollards, \$3.25 to \$3.40; bag flour, \$2.45 to \$2.50 per 112 lbs. The Flour market was quiet this forenoon, the reported sales being almost entirely restricted to fresh ground superfine. A 700 barrel lot brought \$4.60 inspected and in shipping order, while 300 barrels were sold at \$4.55; 200 barrels at \$4.67 1/2; and 200 barrels at \$4.60—all as it lies. There were two exceptional sales of strong superfine at \$4.80 and \$4.85 for small lots of special brands, and some choice superior extra brought something over outside quotation. A 600-barrel lot of superfine from Western wheat was sold at \$4.45, four superfine brought \$3.75; middlings, \$3.85; pollards, \$3.35. Oatmeal, per barrel of 200 pounds—\$4.00 to \$5, according to quality. Wheat, per bushel of 60 lbs.—A few thousand bushels of Milwaukee spring were sold at 95c. Rye, per 100 lbs.—Sales of first Rye reported this forenoon at \$5.52 1/2 to \$5.65—a lot of First and Seconds bringing \$5.67 1/2. Rates for First Rye, \$6.10 to \$6.15. Lard, per lb.—Dull; kegs, 9 1/2c to 9 3/4c; barrels and tierces 8c to 8 1/2c. Cheese, per lb.—Good dairy about 8 1/2c to 8 3/4c; recent transactions at highest figure. Butter, per lb.—Scarce and inquired for; choice dairy, 14 1/2c to 16c; medium, 13c to 14 1/2c.

Detroit Markets, Aug. 8.—The tendency of the market is upward, and the grain trade is more active. Produce is a shade firmer. Flour—High extra \$9.50; extra \$9. Considerable in the market, but holders unwilling to sell. Wheat—Upward; \$2.25 offered for No. 1 white; No. 2 white \$2.18 offered, \$2.17 asked. No. 1 red \$2.13 offered; No. 2 red \$2.12 offered. There were sales of 1 car No. 1 white at \$2.25; 1 car do \$2.23; and 2 cars No. 2 white at \$2.16. Corn—Quiet at \$1.46. Oats down, 1 car sold at 76c. Provisions—Mess pork \$4.10 to \$4.11; heavy clear \$4.2. Lard 21c. Wool—Scarcely any coming in, quoted at 90c to 95c though these figures are nominal.—Tribune.

London Markets, Aug. 9.—There was a good deal of inferior Spring Wheat on the market to day, and quotations take a long range, from 75c to 83c, according to condition; but beyond this there is evidently a downward tendency in prices. Fall Wheat at 85c to 93c. Spring do. 75c to 83c. Oats, 40c to 42c. Barley, 67c. Peas, 45c. Flax Straw, with seeds, \$15 to \$18 per ton. Hay in fair supply, at \$9 to \$12 per ton.—Free Press.

Hamilton Markets, August 9.—There is little or no change to make in our market quotations. Very little coming in. Wheat is on the rise, possibly from the scarcity of supply. Provisions—Potatoes (new), per peck, 30c. Apples 90c to \$1.50 per bushel. Butter, per lb., 15c to 18c. Eggs scarce at 15c to 19c. Cheese, per lb., 10c to 12 1/2c. Hay \$10 to \$11 per ton. Straw \$2 to \$4 per load.—Spectator.

Guelph Markets, August 9.—Fall Wheat, per bushel, 85c to 90c. Spring Wheat, per bushel, 85c to 90c. Oats, per bushel, 45c to 51c. Pease per bushel, 50c. Barley, per bushel, 45c to 50c. Pork, per 100 lbs., \$5 to \$7. Hay, per ton, \$8 to \$10. Straw \$2 to \$2.50. Beef, per 100 lbs., \$8.50 to \$5.50. Potatoes, per bushel, 60c to 75c. Butter, per lb., 12 1/2c to 15c. Eggs, per dozen, 10c to 12 1/2c. Wool, per lb., 30c to 35c. Apples 30c to 50c.—Herald.

Chatham Markets, August 8.—Flour, per 100 lbs., \$2.60 to \$2.63. Wheat, No. 1 white, per bushel, 95c to \$1. No. 2 white 85c to 90c. Do. red, per bushel, 75c to 85c. Barley, per 100 lbs., \$1.75 to \$2. Oats 45c to 48c. Beans, per bushel, \$1 to \$1.25. Clover Seed, per bushel, \$4.60 to \$6. Corn 75c to 1.00. Potatoes \$1. Apples, per bushel, \$1. Pork, per cwt., \$5 to \$6. Mutton, per lb., 5c to 6c. Beef, per cwt., \$4 to \$5.50. Eggs, per dozen, 12c to 15c. Cheese, per lb., 6c to 8c. Hay, per ton, \$7 to \$10. Peas, per bushel, 50c to 60c. Wool 35c. Tobacco, per 100 lbs., 3 1/2c to 4 1/2c.—Plant.

Albany Markets, August 6.—Flour and Meal—There is a good healthy demand for flour, and a fair business doing for the supply of the local trade and the river towns at former rates. Corn Meal is steady. GRAIN—There is more doing in Wheat, but the market is not active; sales New Red State at \$1.65; 400 bushels Old Amber Michigan at \$2.78; 400 bushels do. White Western at \$2.85; and New Wet to Michigan at \$2.90. Rye steady, with sales of State at \$1.95. Corn steady, with an improved demand, sales at \$1.60 to \$1.82 1/2 for No. 2 Western mixed, soft; and \$1.60 for round

yellow, delivered in car lots at East Albany. Oats, in limited quantity, and the market still favors the buyers, sales of State at 60c at which Western is held without finding buyers.—Journal.

Detroit Wool Market.—Wool continues very quiet throughout this State, and there is little change in the market at the West. There are occasional sales of lots from second hands, most of which, as far as we can learn, have been made at prices ranging from 97 to 100 cents per pound. There may have been a few sales of choice lots at prices a little over \$1.00, but these are exceptional, and are generally kept quiet. The sale of wool from the hands of wool growers has almost stopped, owing in some measure to the necessity that attention must be given to the harvest work, and also to the disposition of the wool growers to hold their clips with a view to the future of the supply of wool. Prices continue unchanged, therefore, and agents of buyers are quiet, but pick up all lots of wool that come anywhere near the limits of their instructions.—Detroit Com. Advertiser.

Albany Live Stock Market, August 8.—Bees.—This has been as hard a market for drovers as we can recall for many months back. The heavy supply last week, the reaction in New York and Eastern markets, and the large receipts the present week, all tended to depress trade to a degree that was unexpected, and which is without parallel since last spring. Nearly all the New Yorkers who bought here last market day lost money, and so did the Eastern men, and, with the exception of a few leading dealers, none returned with the intention of speculating now, unless the receipts proved light. This not being the case—the supply being at least 1,000 head more than is needed—scarcely more than one-half have changed hands. Prime cow-cattle, however, continue comparatively scarce, and this description, for which there is a steady weekly demand, does not feel the full force of the depression. On extra and prime first quality, the decline is not more than 1/2c to 3/4c per lb., but thin, light, half ripe stock, such as is chiefly furnished by our own State and Michigan, have dropped 1/2c to 3/4c per lb., and some sellers think full one cent. Such cattle have not been sold as cheap for a year back, as on Saturday. Sheep and Lambs—Less come in this week, but to the fresh receipts are to be added several bunches which have been held out here a week or two, and makes the supply somewhat in excess of the demand. There is no demand for the Eastern markets, but there is a fair inquiry on Albany and New York account, without any noticeable change in prices since last week. Common to good sheep command 5 1/2c to 6 1/2c per lb., and lambs 7 1/2c to 8 1/2c per lb. Hogs.—The shipments at the West are remarkably light, and the receipts here at present do not keep pace with the demand. There is a fair inquiry on the part of Eastern packers, as well as for New York, and prices have advanced to 11 1/2c for good heavy Western and State. Shipped to New York, 2,250 for the week.—Journal.

Boston Markets, August 6.—Flour.—The market for low grades is rather firmer. Sales of Western Superfine at \$9.60 to \$9.70, common extra \$10.00 to \$10.25, medium do. \$10.60 to \$11.00, good and choice do. \$11.50 to \$14.00 per bbl. Oats—Corn is in moderate demand, sales of Western Mixed at \$1.71 to \$1.72, Southern Yellow \$1.73 to \$1.74 per bushel. Oats are in steady demand, sales of Northern and Canada at \$1.00 to \$1.10 per bushel. Rye is scarce at \$2.25 per bushel. Shorts are selling at \$4.00 to \$4.8, the feed \$5.00 to \$5.00 per ton. Provisions—Pork is unsettled, and prices are nominal. We quote prime at \$54.00 to \$55, mess \$37.00 to \$39.00, clear \$40.00 to \$43.00 per barrel, cash. Beef is in steady demand, sales of Eastern and Western mess and extra mess at \$29.00 to \$30.00 per barrel, cash. Lard is steady, sales in barrels at 21c to 22c per lb., cash. Hams are selling at 20c to 25c per lb., cash.—Advertiser.

Advertisements.

PROVINCIAL PLOUGHING MATCH.

PERSONS intending to compete at the Great Ploughing Match to take place in connection with the Provincial Exhibition at Hamilton, in September next, are requested to send in their names to the Secretary, in Toronto, on or before 1st September next.

The only entrance fee required is that of membership of the Association, viz., one dollar.

HUGH C. THOMSON, Secy. Bd. of Ag. 15th

Toronto, Aug. 15, 1864.

HORSE HAY FORKS.

ON EXHIBITION AND FOR SALE.

AT the AGRICULTURAL HALL, Corner of Yonge and Queen Streets

Toronto, Aug. 1, 1864. 14th

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Toronto, March 15, 1864. 5th

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Communications on Agricultural subjects are invited, addressed to "The Editor of the Canada Farmer," and all orders for the paper are to be sent to GEORGE BROWN, Proprietor and Publisher

Poetry.

The Woodman's Answer.

AIR—"Woodman, spare that tree— You bid me "spare that tree," Nor "touch a single bough," But then, sir, don't you see I'm out of wood just now You say "your father's hand" Had "placed it on that spot" But now I own the land, Because I bought the lot 'Tis beautiful, no doubt, But then it's in the way, And I will have it out, For beauty does not pay If I should let it stand, A fool I'd surely be For there's at least a cord Of firewood in that tree.

Seeds.

A WONDERFUL thing is a seed— The one thing deathless forever— The one thing changeless—utterly true— Forever old and forever new— And fickle and faithless never Plant blessings, and blessings will bloom, Plant hate and hate will grow, You can sow to-day—to-morrow shall bring The bloom that proves what sort of thing Is the seed, the seed that you sow