


James Deany

THE MONTHLY FARMERS' ADVOCATE



Vol. 4] DEVOTED TO THE BEST INTERESTS OF THE COUNTRY. [No. 4

WILLIAM WELD,
Editor & Proprietor.

London, April, 1869.

Postage Prepaid.
Office—Richmond St., op. City Hall

SEED REPORT.

Wheat Received at the Emporium During the Present Month.

Australian Wheat, good sample; not suitable for dissemination until tried. Dean Wheat, from Scotland; it appears too fine; do not think it will answer with us, but will supply it in small quantities for trial. Not a single sample of Canadian grown wheat received that we can commend. Our own stock is so reduced that we will only supply it in small quantities. We do not commend any kind, but have most faith in the Quebec wheat, which we will now only supply in four pound packages and smaller parcels. If any man in Canada has any kind that is fit for seed, let us know about it. We shall not pretend to commend any kind as Midge Proof, without being better satisfied.

OATS.—A great hue and cry is got up about various kinds of oats. We have paid over \$10 per bushel, but cannot say go and do likewise. We have received some from Scotland, good oats and of excellent color; also from the States, but have just as good, and believe the best kinds are the Westwell oats. They are black, require good land and are a little longer ripening than the Tartar or Maine oat, but we do not think they will be beat for yield or quality, by any oat grown. The Emporium oats are white, are great croppers, as heavy as any you hear of, ripen early, and do not require such rich land as some other varieties. New Brunswick oats are a grey or brown oat, said to be great croppers. Our best Westwell and Emporium oats, will now only be sold per peck or packages; second and third qualities at lower rates. We have received two samples of Norway oats, the best from G. A. Deitz, of Chambersburg, Pa. The price of those oats are \$10 per bushel; his sample sent to us, are really good, but the other sample from another party is good for nothing. We shall supply them only in small packages; if you require large quantities you should try the Express

Custom House and Postal Regulations, and find how they encourage you to improve.

PEAS.—Our own growth of Crown peas are now nearly all disposed of, and we have to supply from other persons growing. They are more plentiful, consequently much cheaper; best quality that we can procure are to be had at 75cts. per peck, second quality at \$1.50 per bushel, third quality at \$1.00 per bushel. They require strong, well cultivated land and will yield the largest crop of any pea we have yet raised, and can be cut with a mowing machine.

We have received a new kind of pea called the Excelsior pea. We have not yet raised any of them, but from sources on which we can rely, we ascertain this information about them. They are a smooth, white pea of medium size, first-rate quality, yield large crops on any kind of soil, and very strong in the straw; on poor soil they will yield a larger crop than any other variety. They are highly prized where they are raised, and we have but a few of them and can procure no more, and wish to save them. They are a fine sample, and we believe will be a great acquisition. Price two dollars per peck.

BARLEY.—We have received a small quantity of imported Chevelier Barley, very plump; deserves trial. Also some Russian Barley. This kind does not malt with other barley; it is clear, plump and heavy, and is not affected by the midge. Some of it has been raised in Canada, and it is found to make good bread. It yields large crops and it may be of much advantage to us when it becomes known.

BEANS.—The White Marrowfat field bean is the best we have heard of. We think you will take them if you try them. The English field bean may be tried here. Mr. Irving, on Mr. Logan's farm in Montreal, informs us that he raises from two to three acres a year, and finds advantage in them.

CORN.—The New Jersey corn has taken the premium, where ever exhibited and is deserving of trial. It gave us satisfaction last year.

BATES' EARLY (BROWN) CORN.—Mr. Bates, of

Kingston, Mass., who has spent twenty years in producing valuable varieties of corn, has produced this variety from a cross between the Smutty white and Early Canada. It is a rapid growing, early maturing corn of low growth, small stalks, ears growing very near the ground, cob small, corn large and well-filled, color brown, or blending of yellow and white with slight trace of red. It is very productive, yielding large crops even on poor soil; it is a dwarf, averaging from root to top of spindle from four to five feet; it is highly recommended for all latitudes, particularly the northern, on account of its early maturity, large yield of grain and small stocks.

By years of labor, we now obtain
A corn with fodder small, but large in grain;
Long slim cap with eight full rows around;
Top very low, earing near the ground,
Thus filling the crib and not the mow,
Having more corn for horse than tops for cow.

We extract the above from Washburn's seed catalogue. Washburn is the great, Boston seedsman, from whom we procure a supply, as all new seeds of importance cost a large price at first. This is also expensive; however, we shall supply in small packages.

POTATOES.—The Early Rose, by all accounts as yet, appears to maintain its reputation in regard to early maturity. The Early Goodrich appears more plentiful; the Harrison appears to be yielding the largest return per acre, and are pronounced a No. 1 potato. Numerous other varieties have their respective merits, and nothing on the farm is more generally neglected than the change of seed potatoes, and much loss arises from the neglect.

VINES.—We know of no hardier variety than the Clinton; the Delaware surpasses it for superiority of flavor of fruit. The Hartford prolific surpasses them both in size of fruit.

A sheep, which dressed, weighed 320 lbs. bred and fed by Mr. Francis Scott of Scarborough, was recently exhibited at a meat market in Marquette, and was considered by the local papers, hard to beat.

THE PREMIUM SANFORD CORN.—From its history and testimonials from those who have tested it the past season. East, West, North, and South endorse it as being the best field Corn. It ripens early and yields largely. Has taken highest premium at Suffolk County (N.Y.) Ag. Fair for three successive years, also in Canada.

WORCESTER, OR REILLY POTATO.—This valuable variety has not been well-known until the past season, when Mr. B. Harrington of Lexington (who had grown it for a number of years), induced by his high opinion of its value, and the united testimony of all who had ever grown or eaten it, challenged a trial in quality with any seedling, old or new, from any State in the Union. Last September, at the Annual Dinner of the Committee of the Massachusetts Horticultural Society, a trial took place at the Parker House, Boston. There were present many distinguished horticulturists: among them Col. M. P. Wilder, Charles Downing, Esq., Hovey Breck, President Hyde, B. K. Bliss, Albert Bress (originator of the famous Early Rose), besides all the various Committee, numbering about 40 present. Among those offered for trial was the Early Rose and several other varieties, considered by their respective friends the best. But it was the unanimous decision that the Worcester was the best table potato offered. It proved to be very mealy, dry, and of the most delicate flavor; free from any earthy taste; fair size; form inclined to roundish; color light pink; flesh very white; skin thin; eyes deep; and of superior baking quality. Another characteristic of this variety is, that it will be found dry and mealy when but two thirds grown. For twenty years it has stood the test of disease much better than other varieties. They mature in ninety days from planting.

PERSIAN WATER MELON.—New Watermelon introduced by the celebrated traveler Bayard Taylor, brought by him from the Caspian Sea, and heretofore entirely unknown in this country. It is globular and elliptical in form, of pale green color, with dark stripes; flesh crimson, and remarkably firm texture, with only half an inch of rind; a peculiarity of this melon is, that it can be taken off the vine to ripen, and will keep till winter. It grows to a very large size.

THE ALTON LARGE NUTMEG.—This melon is said to combine more desirable qualities than any now before the public. Its great productiveness, beauty, size, and firmness of flesh, made it unequalled as a shipping variety; while its delicious flavor and long-bearing season render it worthy a place in every garden. Melons of this variety sold the past season in the Chicago market for double any other variety.

EXCHANGES.

We have to acknowledge the receipt (as one of our exchanges) of the Canadian News published at 11 Clements Lane, Lombard St., London, England. The enterprising proprietor F. Algar, Esq., has long been known as using every effort to bring forward anything that will conduce to the interests of Canada. It is full of useful, entertaining matter, and should be in the hands of all who contemplate coming here, as from its sources of getting the best authenticated information, its reliability and integrity is unsurpassed. It is a weekly publication, at three pence per copy, including postage.

The "Clinton Era" comes to hand with its

usual amount of good, solid, practical information, full of details of the doings of the important section of the country it is located in. We always welcome its receipt with pleasure.

The "Clinton Expositor" is another test of the enterprise of the press in the foregoing locality, full of useful entertaining matter which must make it welcome wherever it puts in an appearance.

We have not shipped many of our orders yet, as we have been very busy in making arrangements and moving to our new office, which is much more spacious and better situated than the old office. It is now on Richmond Street, and any of our readers that come to the city by the G. W. R. R. will be sure to pass by or enter our office. Manufacturers of Machinery that have any superior article for sale might now find a space for it in our wareroom. This is the place for farmers to receive a price for good seed. We will pay \$1 50 per bushel for good, pure, clean Main or Tartar oats, raised in Canada.

IMPLEMENTS.

We hear such good accounts of Mr. Sells Churns that we will allow any reliable persons to take and try them, and if they are not satisfied they may return them. We shall have a large stock of them, as we believe they will give satisfaction, as they have already done to those trying them. His washing machine is also giving satisfaction to all that we have heard from, and may also be supplied on trial. We will not undertake the sale of any implement that we do not think will give satisfaction. Send your orders early, if for Cultivators, Reaping Machines, Seed Drills or Threshing Machines, Hay Forks, patent Bee houses, and patent smoke-houses.

Officers of the Ingersoll N. & W. Oxford Agricultural Society.

Adam Oliver, M. P. P., Esq., President, Wellington Davis, Esq., Vice President, and Wm. H. Gane, Sr., Secretary and Treasurer.

Error in Agricultural Officers List in last No.—Should read Richard Coates of Aldboro, President, Mr. McKillop, Vice President.

Continued and increased approvals of our undertaking are continually coming to our office. We quote the following from the Seaforth Expositor. "The 'Farmer's Advocate' puts in its regular appearance. We prize it for its real practical information. It deals in no abstruse theories, that cannot be reduced to practice in every day life. We are pleased to learn that its circulation is largely on the increase."

NOTICE.—All new subscribers that send \$1 will be presented with any one of the 25ct. packages of seeds. All that get up a club of four subscribers, may have two 25ct packages of seeds. For larger clubs, the Threshing Machine, \$105, the Seed Drill, \$65 and a cash prize of \$20 are open, and numerous others from \$2 to \$5 for clubs of fifteen or more.

PRICE LIST FOR IMPLEMENTS.

The best Field Seed Drills.....	\$65 to \$80
Feed Mills.....	\$30 to \$40
Cultivators (one horse).....	\$12
Sells' Washing Machine.....	\$10
Baker's do do.....	\$10
Darvel's Corn Sheller.....	\$10
Newell's Little Giant Corn Sheller.....	\$4
Hammond's Horse Hay Fork.....	\$5
Thomas' Smoke House.....	\$8
Thomas' Patent Bee Hives.....	\$6 to \$5
Little Giant Threshing Machine.....	\$105
Farm Bells, ten dollars and upwards.....	
Sells' Patent Churn.....	\$5
Young's Patent Sheep Marks, \$3 per 100.....	

NOTICE.—Requiring more space and room than we have at present, we have made arrangements and have taken a premises on Richmond St., opposite City Hall, London, Ont., where we shall be located on and after the 1st. of April, and shall be glad to see our friends and patrons.

PRIZES AWARDED.

J. Irving, Wingham.....	\$5 Cash.
M. London.....	Prang's Chromo.
C. Gubbins, Troy.....	Hay Fork.
W. Harvey, Elmvalle.....	Corn Sheller.

Numerous prizes of seeds have been gained last month, and will be sent on the 6th of this month.

NOTICE.—For the future our Land Register for the sale of Farms will be conducted by Mr. Wm. Bawden, Auctioneer, Talbot St., London, where our old office used to be. We have upwards of 30,000 acres for sale at prices varying from \$2 to \$70 an acre. All applications either for the sale, or those wishing to purchase should be addressed as above, with stamp enclosed for reply.

POTATOES AND THEIR ORIGIN.

Long may we remember with gratitude the great and rare discovery of Sir Frances Drake, who claims to have discovered in the wilds of South America the potato. This was seven years prior to Sir Walter Raleigh's expedition. He (Sir Walter) is believed to have planted at Yonghall in July, 1587, the first potatoes ever grown in the British Empire, and from these few the country was furnished with seed. The patent passed the great seal in 1754. A scientific gentleman named Hercot, who was also one of the explorers, describes under the head of roots those called in Virginia open ark. The potato when first discovered was diminutive in comparison to the present growth; and as the handful of fragments that fed the vast multitude, so the few scattered roots gathered by lone explorers have increased till millions now banquet. Well may we herald His name with gratitude and bless the Hand that led ambitious wanderers to the distant wilds where lay hidden such rare treasures—such great blessings. We acknowledge the potato superior to all the root kingdom. They are harmless, nutritious and wholesome. Active as a medicine, healing to the afflicted, indispensable to the cook, fragrant and tempting to the epicure, and can be shaped into almost every dish. They are inviting, from the most dainty preparation, down to their original selves, wrapped in their ragged coats.—RURAL GENT.

Mr. Archer of Newbury, has now a potato of excellent quality, surpassing any of the varieties tried by him; color, light red; large, excellent croppers, and excellent for the table; they are in great demand in his neighborhood. We can only procure one bushel and a half and will sell per packet this season.

THE EXCELSIOR PEA.

We now introduce to you a Pea that is destined to take a prominent position in our country. The Golden vine has been our main pea, and an excellent variety it has proved to be; but the closest observers now inform us that they notice that it is beginning to fail in regard to quality, and you all know that every kind of grain requires a change with us, after a few years cultivation. We thought the Crown pea was the coming pea, which is an excellent variety, and has many advantages over the Golden vine; but for poor soil and poor cultivation it is not profitable, while on good soil and with good cultivation, it far surpasses the golden vine. The Excelsior, we name it, having but recently discovered it, and no seedsman that we know of can give us a name for it. This pea has now been most successfully raised in Canada. It has been tried on a variety of soils, on rich clay or on loam soil, it answers well, and on poor soils it will yield more than any other pea. It is a smooth, white, plump pea of fair average size, grows as long in the straw as the Golden Vine, is stronger in the straw, and longer in the pod. The pods are curled in form like a pruning-knife; the peas are of first quality for milling. They are an early pea, ripening ten days earlier than the Golden vine, and may be sown early or late. We have now procured the entire stock from the producer, and have but a small quantity to spare.

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INGERSOLL PROGRESS.—The Agricultural Society have purchased 15 acres of land for agricultural purposes, and are about purchasing 10 acres for a pasture.

EGYPTIAN WHEAT.—Near Morlaix, in France, a field being divided, one half was sown with Egyptian grain, the other with the common, under precisely similar circumstances. The former yielded upwards of sixty to one, the latter fifteen to one. The origin of this remarkable produce was five grains of wheat found in an Egyptian tomb, where it must have lain many centuries.

FAST WALKING HORSES.—The best gait a horse has, is the fast walk. A slow walking horse is an abomination.—Who has patience with such a horse? If you ride or drive him, he exhausts your patience. If he is used to plow, or harrow, or to go on the road, he mopes along at a snail's pace. He does only about half the work of the rapid walker. If time is money, you make money, because you save time, by having a horse that walks fast.

Breeders should pay attention to this matter. In selecting a stallion to breed from, by all means select one that can walk fast. A slow walking stallion will be likely to get slow walking colts; while the stallion that has a long, rapid, spirited stride, will be likely to beget colts with a similar action.

VERY CHOICE PEARS.—Of the two thousand and more varieties of pears, described and known to those who make pomology a study, only about seventy or eighty are counted as truly valuable and profitable to grow, when season, size, productiveness, and hardihood of the tree are all taken into account.

The Springfield, Ohio, Republican settles the vexed question of how to make fence posts last. It advises the making all the rest of the fence first, when the posts must be made last. There is no good reason why we should not have agricultural jokes, and we think the above is not bad.

EARLY PLANTS.—Every farmer ought to have one or more boxes ready in which he can raise early plants, such as cabbage, tomatoes and early salads. By having a bed 18 inches high, (the size of an old window sash that can be had for a small amount,) and making a bed of fresh long manure 18 to 20 inches, and setting the box on this manure with one end six inches higher than the other, and filling with six inches of wood mould mixed with some rich, loamy soil.—Early cabbage, tomato and other plants will repay you handsomely for a small outlay.

CURE FOR SCRATCHES.

EDITORS COUNTRY GENTLEMAN—Wash part affected with castile soap, and when dry rub on pretty freely any soft grease—then put on a woollen bandage—an old knit sash is the best—fasten it securely—let it remain for about two days—then remove the bandage and grease it again—then put on the bandage again, and in a week your horse will be cured of scratches. I have tried all the nostrums of the day, but none of them are equal to this simple remedy.

AN OLD FARMER.

CULTURE OF MANGEL WURTZEL.

From 900 to 1,200 bushels of this variety of beet may be grown on rich soils. A writer describes his method as follows:

"After thoroughly plowing, sub-soiling and harrowing the ground, run furrows two feet apart for the rows, in which strew well-rotted manure with a liberal hand; cover this by plowing a couple of shallow furrows towards it—thus making a slight ridge. Level slightly and pulverize these ridges with a bush or back of a light harrow. On this ridge, directly over the manure, drop the seeds by hand, one to every ten inches. (A seed drill, as far as we have tried, drops it too thick, or else unevenly.) Weed and cultivate like any other crop, till the leaves make such growth as to cover the ground. We found using a subsoil plow, (drawn by one horse) occasionally between the rows, a decided benefit.—RURAL AMERICAN.

FUNGI OR SMUT.—Remarking on smut in grain the Journal of Chemistry says:—"Doubtless the reader, if familiar with farm work and keensighted observer, has often seen a kind of ethereal smoke or evaporation proceeding from the diseased heads of grain, when moved by a single breeze. This apparent vapor is formed of the millions upon millions of the seeds of the fungi, which, proceeding from the ruptured vessels, float like an airy cloud of gossamer veil whither the winds may drive them. The atmosphere is loaded with these germs of the latter days of summer; and, if it were not for a wise provision connected with their fructification and growth, fungus or mildew would spread over the vegetable world like a pall of death. Nothing but fire or strong acids seems competent to destroy the seeds, so tenacious are they of vitality. Summer's heat or winter's frost cannot kill, nor water drown them."

A sale of thorough-bred stock, owned by Mr. John Thompson, took place at Rosehill, County Waterloo, on Wednesday. The prices obtained were, bull calf, \$78; do \$51; do \$52; heifer, two years old, \$110; heifer, do do \$125; heifer, \$75; cow, \$180; heifer ten months old, \$100. The best cow and and bull calf, and one heifer were bought by Mr. Strickland, to go to New York State. The prices realized were considered good; the eleven head sold bringing altogether \$1,000.

The Des Moines Register says the grasshoppers recently ate up half an acre of tobacco for a man near that place, and when the owner went out to look at it, they sat on the fence and squirted tobacco juice in his face.

LONDON MARKETS, LONDON, March. 26th, 1869.

Fall Wheat, per bushel.....	\$1 00	to	\$1 10
Spring Wheat do	85	to	50
Barley do	1 25	to	1 30
Oats do	45	to	47
Peas do	70	to	77
Corn do	65	to	70
Beans do	1.00	to	1 50
Clover do	6.00	to	6 25
Timothy do	2.25	to	2 50
Rye do	75	to	80
Hay, per ton.....	10.00	to	12 00
Butter, prime, per lb.....	22	to	25
Eggs, per dozen	18	to	20
Potatoes, per bushel.....	75	to	80
Apples	75	to	1 00
Flour, per 100 lbs.....	2.25	to	3 00
Mutton, per lb., by quarter.....	5	to	6
Beef, per pound (on foot).....	6	to	7
Pork	9 00	to	9 50
Wool, per lb.....	25	to	30

For the Farmers' Advocate.

POTATO CULTURE.

CAUSES OF DISEASE—PALLIATIVES OF DISEASE,
&C. WITH NOTES ON NEW VARIETIES OF SEED
POTATOES, RECENTLY PRODUCED FROM THE
SEED BALL, BY GOODERICH, HEFFSON, BREEZE
AND OTHERS.

In preparing this article for the "press," I don't aim at perfection, but am content to reproduce the opinions of the best of modern writers on this subject, such as Johnson, Dawson and others, whose authority has never been questioned. The cause and palliatives of the Potato Disease are known to but very few of the more enlightened farmers at the present day.

PREPARING THE SOIL.

The soil best suited for Potato Culture, is a rich, sandy loam; but every one cannot have that choice, and will often have to plant on heavy clay soils. When this is the case, it should be thoroughly underdrained, if possible, as potatoes grown on wet soils are more subject to disease, and the flavor is also much inferior than when grown on a dry, warm soil. The soil should be broken to a good depth, and made fine and mellow. A liberal supply of old manure should be used when it is at all attainable. On rich pasture lands, the decaying sod answers sufficiently well for a year or two, in place of manure. Ashes are very valuable, and as the supply is generally small, they may be applied alone or mixed with plaster in the proportion of one bushel of plaster to four or five of ashes, dropping a handful on each hill after the potatoes are up and have made a few inches growth. And I have succeeded well in cultivating potatoes, by dropping a handful of ashes in each hill at the time of planting the potatoes, and I approve of both plans being adopted.

PREPARING SEED.

There has been considerable discussion concerning the relative merits of planting whole or cut potatoes but as yet undecided which is the best way. I have planted potatoes cut in one, two, or more pieces, down to a single eye. Usually I get the best results from potatoes cut into two or three eyes, when well cultivated. The only good objection to cutting seed so small, is that the plants don't grow as luxuriantly when small, especially if the weather is cold and wet, as if the sets were larger; but if they get a good start and are properly cultivated, I find no difficulty in growing a heavy crop of large, sound potatoes. When whole potatoes are planted, I would select those of a medium size, not very small, neither the largest ones and plant one in a hill. Whole potatoes grow very luxuriantly and yield well, but there will be a great many small tubers.

The best yield I have ever seen, was in 1868, from potatoes cut into small eyes and two pieces put into each hill; with ordinary cultivation 810 bushels per acre was produced. The potatoes that produced this large yield, was the "Harrison."

The following is my plan of cultivating the potato, which I have found to produce good results. If the land is in good condition I plow as soon as it is in good working order, usually about the last of April, and harrow until the surface is fine and mellow. Some soils will be in much better condition if

plowed in the fall, allowing the frost to mellow the hard lumps and kill the roots of perennial weeds, and cross-plow and harrow in the spring.

If potatoes are to be cultivated in hills, I strike furrows about two feet eight inches apart, both ways, dropping two sets or one whole potato in each hill. If cultivated in drills, I strike the furrows a little farther apart and the sets from twelve to fifteen inches apart, according to the vigor of the kind. If the soil is mellow, the seed may be covered with a one-horse plow, covering about four inches deep. As soon as the first sprouts break through the soil, go over the field with a light harrow, turn top side down or with the top of a small tree, dragging it across the rows. This operation destroys nearly all the young weeds, and leaves the ground in excellent condition for the cultivator, which should be set to work in a few days after harrowing, and no matter if the potatoes are not all up, run the cultivator through the rows every few days, till the potatoes have a good start. If weeds are allowed to cover the ground, they are very difficult to kill and will greatly injure the crop thereby. Continue to plow until the vines have covered the ground or until they have done blossoming, but do not run the plow very deep towards the last as it will injure the roots. The old way of hilling up potatoes is worse than labor lost, as I have found by experience.

If any weeds appear after the last plowing, they must be hoed or pulled up, as the crop will be greatly injured, besides most of them will go to seed and will fill the ground and make trouble in future.

It is probably the best to procure new seed potatoes as often as practicable, as I find that seed potatoes procured at a distance will always produce the best results for the first few years. Still I think by good culture and the selection of the best seed, a variety may be kept perfect and often make a decided improvement in the quality, at least, if not in the quantity.

VARIETIES—EARLY GOODRICH.

The late Rev. C. E. Goodrich, of Utica, N. Y., raised over 16,000 different seedlings, and this, in the opinion of competent judges, is best of all. It was raised from the seed of the Cuzco, which is itself a seedling of the wild Peruvian potato.

It has been thoroughly tested, and all bear unvarying testimony in describing it as one of the earliest, most productive and equal in quality to any variety in cultivation. It is a large, white, oblong, smooth potato, yielding at the rate of 250 to 300 bushels per acre, with good cultivation. With me, this variety kept perfectly sound, when all the old varieties rotted badly, and I find it vastly superior to the White Sprout in earliness, good quality and productiveness.

HARRISON.

This was raised from the same seed ball as the Early Goodrich. It is a large, white, oblong, full potato of excellent quality and very productive, yielding at the rate of 350 bushels to the acre under good cultivation. It is the most solid of the large potatoes, keeps well, and like the Early Goodrich, is free from disease.

Mr. Editor, the Harrison yielded far better with me than it did with the correspondent of the "American Farmer," as quoted above. With me, the Harrison, last season, 1868, yielded at the rate of 614 bushels to the acre, and with my brother it yielded at

the rate of 810 bushels to the acre, and in both cases without extra cultivation. I also saw an account of a yield of the Harrison, by a correspondent of the "Rural New Yorker," in Minnesota, which was at the rate of 839 bushels to the acre.

CALICO.

White, with irregular splashes of red, rather long, flat and smooth. It is of good quality, a strong grower, very productive, yielding at the rate of 300 bushels per acre. It should be planted farther apart than the early varieties.

AMERICAN PEACHBLOW.

A variety extensively grown for market, but there is hardly a doubt but that it will be superceded by the Harrison and Early Goodrich, just as soon as these varieties get plenty enough for general cultivation.

GLEASON.

This potato is a Goodrich seedling, recently introduced and promises to be valuable. It is a long, smooth potato, somewhat rusty, with pink eyes and of good quality. Yield, 250 bushels to the acre.

JACKSON WHITE.

A comparatively new variety of first quality; large, yellowish white, and well flavored.

CUZCO.

A large, long, white potato, with deep eyes and of second quality. Yield, about 300 bushels per acre.

GARNET CHILI.

A large, red, round potato with deep eyes and of fair quality, yielding about 250 bushels per acre.

SHAKER FANCY.

A large, white, nearly round potato, of good quality, early and productive.

But from what I know of the above varieties I prefer the Harrison as a late potato; it excels all other varieties in productiveness, and the Early Goodrich as an early potato.

I don't fancy too many varieties of potatoes; have decided for the present, at least, not to cultivate more than three varieties, viz: Early Goodrich, Harrison, and Early Rose. These varieties combine productiveness, earliness and good quality, free from disease. Now this is all that can be desired.

EARLY ROSE.

A seedling of the Garnet Chili, originated in 1861, by Albert Breeze, an intelligent farmer of Vermont, who, being convinced of its decided superiority over all other varieties placed the entire stock in the hands of D. S. Heffson, Esq. the well-known disseminator of the Goodrich seedling potatoes, and is described as follows; skin, thin, tough and of a dull bluish color; flesh white, solid and brittle, boils through quickly, and is very meshy. It is claimed to be superior to the Early Goodrich. Dawson says the potato contains in its tuber, a larger proportion of nutriment than the turnip or carrot, chiefly in the form of starch with a little albumen. It requires the presence in the soil, of potash and lime, in considerable quantity. Much more than one-half of the Ash of the stem of the potato, consists of these substances, and potash forms nearly one-half of the ashes of the root or tuber. Potash is contained in the stable manure usually applied to the potato, and on soils containing lime it thrives well and is less liable to disease than in others. Some persons suppose that the application of lime and wood ashes, causes the potato to be scabbed. This, I

believe, is a mistake, but salt and door manure seem to produce this effect.

Though the potato will thrive when otherwise in a healthy state, with raw stable manure in contact with its roots, yet there can be no question that it grows better with *rotted manure mixed through the soil*. It is probable that much of the efficacy of seaweed, which is much used as a manure for potatoes on the sea coast, depends on the Soda which it contains, supplying the place of potash. The sea manure is thus very useful on the slaty and granite soils, which contain much potash. The lime afforded by the sea-weed is probably of more importance than the soda.

Animal manures, affording nitrogen, are also very important to the vigorous growth of the potato, as to most other cultivated plants.

As in the present state of the potato, the rot or blight is the most important subject of enquiry. We may devote some time to its consideration, and may begin by stating the leading facts as to its mode of occurrence.

1st. The general diffusion and simultaneous occurrence of the disease over extensive regions, is a remarkable fact, and the exceptions arising from the differences of soil and other causes, are also very instructive in suggesting remedial measures. Some of these exceptions will be considered subsequently.

2nd. The disease has usually attacked the crop at that stage of the growth when the tops are fully formed, and the formation and filling up of the underground tubers are most rapidly proceeding. Yet early potatoes often pass this critical period in safety, while those which are late are attacked, showing that the weather or temperature acts with or against the predisposition at this particular stage of growth, and modifies its influence.

3rd. The disease has usually first made its appearance in the leaves, and descends from these to the stems or roots. In the leaves and stems, it appears in the form of death and decay of the tissues, very similar to that which results from frost or the application of any poisonous substance.

In the tuber, its progress can be distinctly observed, and is somewhat curious. The tuber consists of a vast number of little cells or bags, filled with a fluid containing vegetable albumen and other substances in solution, and having small grains of starch floating on it. There are usually several of these starch grains in each cell. Through this cellular tissue, pass bundles of vessels or tubes communicating with the eyes or buds on the surface of the potato. The disease usually commences at the surface immediately under the skin, and usually near the eyes and penetrates inward along the bundles or vessels. Under the microscope it is seen to be accompanied by the growth of a minute parasitic fungus, analogous to that which causes mildew in wheat, though it has not been certainly ascertained whether this fungus originates the disease, or whether its growth is merely a consequence of the change of tissues. It is perhaps most probable that the development of the fungus is favored by the disease previously commenced, and it seems certain, that in some cases the disease exists without the fungus. From these it spreads to the walls of the cells, and the fluid they contain becomes decomposed and blackened, and after all the rest has been reduced to a brown, putrescent mass, the starch-grains still remain entire. It has been

observed in some instances, that in proceeding from the stem to the roots, the disease appeared first in the tubers nearest to the stem. The best general view that can be given of such a disease is, that it is a mortification of the tissues of the plant, proceeding from something which has diminished its vital energies, in such a manner as to allow those changes to go on which ordinarily would take place only after the death of the plant.

As to causes, two important truths deducible from the facts already stated, at once meet us.

1st. A disease so general and wide spread, probably primarily depends on some great, and generally operating pre-disposing cause.

2nd. Notwithstanding this, it is locally induced or prevented by the action of a great number of secondary causes, which favor or arrest its developments and which yet cannot be considered as the primary causes of its appearance. Let us inquire first into

THE INDUCING AND SECONDARY CAUSES OF THE DISEASE, AND REMEDIES OR PALLIATIVES FORMED ON THEIR STUDY.

Most of these causes it will be necessary merely to name, as the greater number of practical men are well acquainted with them. The principal are wet and undrained soils, wet seasons, wet weather, often warm and dry weather when the tops are fully grown; chilly nights succeeding hot days, rank manure in contact with the roots, want of attention to keep the crop well tilled and free from weeds; RUN-OUT SEED, long cultivated on the same farm. These and similar causes have evidently had an important influence in locally developing the disease, but none of them can be its general cause, since the disease often appears where all are absent and these causes were quite as general as now, in former times, without producing any such consequence as the potato blight. Some valuable hints, however, as to the best palliatives or temporary remedies for disease, can be derived from these causes in connection with the experience of farmers. Of these, the following are very important temporary remedies or palliatives.

1. Early planting, and planting early sorts, because this gives greater probability of avoiding the effects of autumnal chills and rains. This remedy has been found very effectual in Nova Scotia.

2. CHANGE OF SEED, ESPECIALLY FROM POOR LOCALITIES, to richer and milder situations. The Scottish, low country, farmers have obtained excellent results by importing seed potatoes from the bleak and poor highland districts.

3. Selecting those varieties which have proved least liable to disease, and these will generally be found to be such as have been recently introduced, or lately procured from the seed.

4. Planting in dry soils and under-draining more moist soils, if necessary, to plant in them. The dry, sandy uplands of some districts have almost entirely escaped the disease, when the crop has been put in early.

5. Applying well-rotted manure and plowing it in, instead of putting it with the seed in the drills.

GUANO and composts, made with liquid manure, have proved themselves better than stable manure. This and the two last remedial agents, act by giving the plants a greater degree of healthy, general vigor, than they could derive from run-out seed, in a wet soil or in contact with rank manure.

6. Planting in new soil and disuse of mineral manures. It is generally observed, that the potato has been most healthy when planted in new, virgin soil, before the unskillful agriculturist has extracted from it, the stores of alkaline and other mineral manures remaining in it from the ashes of the forest. The composition of the ash of the potato at once explains the reason of this, as the following table taken from Johnston will show:

Ashes in 10,000 lbs. of the roots and stems of the potato.

	Roots.	Tops.
Potash,	40.28	84.9
Soda,	23.34	0.9
Lime,	3.31	129.7
Magnesia,	3.24	17.0
Allumina,	0.50	0.4
Oxide of Iron	0.32	0.2
Silicic acid,	0.84	49.4
Sulphuric Acid,	5.40	4.2
Phosphoric do.	4.01	19.7
Chlorine,	1.60	5.0
	82.84	308.4

Here we have very large proportions of lime and potash, the latter forming nearly 50 per cent of the ashes of the roots. Now these substances, potash especially, are plentifully supplied to the soil by the ashes of the woods, and are usually deficient in exhausted lands. Hence, if we apply to run-out or long cultivated soil, lime, wood ashes, gypsum, (sulphate of lime) common salt, chloride of sodium, bone dust, phosphate of lime, we supply it with some or all of the more important substances in the above table, and thus assimilate it to the virgin soil in which experience proves that the potato thrives best. I have found by experience that healthy potatoes, (though not a large crop,) could be obtained by planting with no other manure than a pint of wood ashes, unbleached, in each hill, in seasons when potatoes planted with ordinary manures were blighted.

Storing in dry cellars is of the first importance, when the crop is infected. I have found that potatoes in which brown spots of disease were already formed, had the progress of the change arrested by being kept dry, and that the diseased spots dried up and lost their putrescent character.

If the disease is observed in the stalks, the potatoes should be dug at once, and if that cannot be done the stalks should be pulled out of the ground.

It is now about 250 years since Sir Walter Raleigh introduced potatoes into England, and they have been constantly cultivated during this period, as an individual plant, and have we any right to expect that such plants should be healthy? We may not know the minute changes which bring about the debility of age, but we know that such debility does overtake plants as well as animals.

Grafting and budding of fruit trees is but continuing the lives of individuals, and grafts from very aged trees of old varieties, show the debility of the parent. Hence, most of the finest fruits of a century or two ago, have degenerated and become less worthy of cultivation and have been replaced by new varieties from the seed. This seems to be one of the great laws of vegetable life. Taking this view of the matter, we should rather wonder that the potato has lasted so long than that it now fails.

We can, in truth, account for its long duration, only by taking into consideration the variety of soils and climates in which it has been cultivated, the frequent changes of seed, and the occasional raising of new varieties from the ball.

Mr. Editor, I fear that this letter is getting too lengthy and will therefore close it.

Yours truly,

J. H. P.

Albury, Feb. 27th, 1869.

DOMESTIC ECONOMY.

Under this head, we purpose from time to time to give receipts of value. The gastronomical art has become a subject of study and experiment. Professor Blot and a host of others, challenge our admiration for culinary skill, and schools are being formed for instruction. Cook-books are found in every house, and are studied by the "coming housewives." Spain it appears has the honor of precedence in the publication of a cookery book about the year 1623; France followed in 1692, but England had been in advance of her; and had, as early as 1660, put forth a volume entitled the "Treasure of Hidden Scents or Good Housewife's Closet," and was followed in 1662, by the "Queen's Closet Opened." Since then, book after book has been thrown on the market, and purchased by thousands. It would be difficult to overestimate their worth. The beginner in them finds a guide. There is with some a wrong idea entertained, that a variety of dishes imply increased expenditure. This is wrong, in fact; and the good housekeeper is enabled through the medium of receipts, to produce a tasteful change as cheaply as the one who has a standard list that does duty every day in the year. We ask our lady subscribers to give us the result of their experience, and we will endeavor to impart it to our readers. This page is devoted to your interests, and with your co-operation we can render it attractive. It is not alone new dishes we want, but information concerning tested ones adapted to our garden and field productions. We also desire to publish such receipts bearing on general household management as will prove beneficial to our readers.

PRESERVATION OF EGGS.

As this produce is not only considered desirable, but an almost essential element in perfecting many of our dishes in domestic cookery, there is a constant daily consumption and demand for fresh eggs, but as these are only to be obtained readily at certain seasons of the year, numerous and varied have been the recipes given for keeping this useful and nutritive article of food in a good state of preservation. The largest proportion of these recipes have failed, or only partially accomplished the object. Dealers and housekeepers have often been sadly annoyed, after many attempts, to find them perfect failures. The want felt, promises now to be supplied. Mr. G. J. Reynolds, of this city, a gentleman who, among other things, deals largely in this commodity, some two years ago became deeply interested in the means of discovering some process by which eggs could be retained good for an indefinite period. He therefore commenced a series of experiments, resulting most satisfactorily. His enquiries have enabled him to prepare a chemical solution, which not only preserves the egg but adds growth or increase to the thickness of the shell, rendering it completely impervious to destructive influences. It must have been frequently noticed

that the shells of some pickled eggs were exceedingly tender and thin; in such cases the deleterious composition used, has partially consumed the shell, and interfered with the life principle of the egg. This might be observed in whisking up eggs for custards, trifles or such like dishes, when it is found impossible to work them into such a consistency as is wanted. Now, in such cases, supposing the dish and whisk is completely free from grease, the error arises from the mode or material used in preserving them. The life principle has been killed out, and the more you try to raise a froth, the further you are from it. Mr. Reynolds' method not only preserves them thoroughly, but also protects this life principle so entirely that one of the eggs, after remaining for a length of time in this solution, may, by the ordinary process, be hatched. The solution is capable of keeping the egg for years in the best condition of preservation. The article prepared by the inventor is excessively cheap, twenty-five cents' worth being sufficient for the preservation of from sixty to seventy dozen. We have used some thus preserved lately which were put down in July, not one of which seemed different to fresh eggs, and besides, when opened, were as full and complete as fresh-laid eggs. Mr. Reynolds' place of business is on Richmond street, nearly opposite the Music Hall.—FREE PRESS.

CHEAP COFFEE.—Wash and cut fine, parsnips; bake a nice brown; a small bit of fat or butter put in while browning. It is the best substitute for coffee I have found, and when you hear I live back in the bush, you will know I have tried many a plan. I have used peas, beans, carrots, bran, wheat, and other things, but the parsnip is the best, ground or unground.

RINGWORM.—This disagreeable disfigurement can be readily cured by the following simple process. Burn a bit of linen rag on the bright portion of an ax blade; on blowing away the ashes there will remain a small quantity of thick oily fluid, one or two applications of which will effectually end the ringworm.

Miscellaneous.

LICE ON CATTLE.

In answer to inquiries how to get rid of lice on cattle, perhaps a little experience would be of service to Mr. H. and others. My trouble has been mostly with early winter calves, which must be kept in a warm place, and before spring they are often troubled. Whale oil will kill them, but if the hair is greased they suffer with cold—remedy worse than the disease. Carbolic acid in a weak form was not very effectual; if strong, it is severe on the skin. All poisons are more or less dangerous.

Anthracite coal ashes, sifted through a fine sieve into the hair, is effectual; lay the calves on their backs and sift it all over them; let them scatter the ashes over the floor. It seldom requires more than two applications, and does not injure them. Wood ashes in smaller quantities might answer, but there might be danger if they went in the rain or wet.—[Country Gentleman.]

A correspondent wishes to know what kind of an agricultural product horse races are—they being the chief thing exhibited at agricultural fairs.

FOOT-ROT IN SHEEP.

"Office of Chief Inspector of Sheep,"

BRISBANE, 8th June, 1868.

SIR:—As many inquiries have lately been made of me as to the efficacy of carbolic acid in the cure of foot-rot in sheep, I have the honor to report that I placed myself in communication with the Chief Inspector of Sheep for Victoria on the subject, and find that it had been reported to him as an efficacious remedy for this disease. The mode of applying it is by mixing it with an adherent and greasy substance, capable of forming a plaster, which can be made to adhere to the animal's foot for two or three days, preventing the contact of the air and allowing time for the application to produce its effect. But as the flocks affected with foot-rot, are, in most instances, too numerous to admit of dressing each individual sheep separately in this way, a more speedy mode of application is by using a shallow trough, similar to that used in the application of arsenic for the same purpose. This is filled with the medicated mixture, and the sheep (after their feet have been carefully pared) are made to pass through it. Their feet are thus impregnated with the required substance. I have the honor to be, sir, your most obedient servant,

P. R. GORDON, Chief Inspector of Sheep.

"The Hon. the Minister for Public Lands."

—[Brisbane Courier.]

SHEARING SHEEP BY STEAM.—The Melbourne Correspondent of the Alexander Courier contributes the following item: "I saw a machine at work the other day which is likely to cause a great change in the sheep farming interest; it is no less than a machine to shear sheep by steam, and from what I saw of it, it is likely to be a complete success. The machine is made of brass, something in the shape of a small trowel; the motion is got up by a turbine wheel about three inches in diameter, and this is geared into another wheel on which is fixed a cutter; in front is a comb which serves as a guide and against cutting the skin of the sheep. The steam is conveyed from the boiler by a tube of India rubber; this tube or pipe is double, having one inside the other; the inner one is the injection and the space between the two is the ejection. The machine can be handled quite easily, and will be used just in the same fashion as the shears, but will cut much quicker and far cleaner, without the least danger of injuring the fleece or the sheep.

SHEEP IN THE BRITISH EMPIRE.—We learn from the recently issued Agricultural Returns for last year that the total numbers of sheep are 20,930,779 in England, 2,668,505 in Wales, 7,112,112 in Scotland, 4,822,444 in Ireland, and 73,972 in the Isle of Man and Channel Islands—making a total of 35,607,812 sheep in the United Kingdom. Australia had nearly the same number at the latest returns; New Zealand, 8,418,572; the Cape and Natal, 10,078,642. In the whole British empire the number of sheep is probably about 100,000,000.

"The only way to exterminate the Canada thistle is to plant it for a crop, and propose to make money out of it. Then worms will gnaw it, bugs will bite it, beetles will bore it, aphides will suck it, birds will peck it, heat will scorch it, rains will drown it, mildew and blight will ride it. All nature helps weeds and runs down crops." We have not the least doubt in the world but that, if the same system of culture, as is generally given on fruit crops, was given the Canada thistle, it would die out in two seasons.—[Ext.]

THE ONTARIO POULTRY ASSOCIATION.

The regular monthly meeting of this Society was held on Thursday evening in the Agricultural Hall, the President James Graham Esq., in the chair. Several new members were elected, and a large amount of general business connected with the Association was transacted. The subject of a spring show was then taken up and fully discussed, and it was unanimously resolved to hold an exhibition. To carry out the desire of the meeting in this respect, a committee was appointed with full power delegated to it, to consummate all the details relating thereto. A strong feeling was manifested that the intended exhibition should not only equal, but surpass anything of the kind yet held under the auspices of the Association. It is fully admitted that since the inauguration of the Society great progress has been made in this branch of domestic culture, and as several amateurs have, within the last year, freely imported new specimens of the rare breeds; and several more are ordered and expected shortly to arrive, we may expect not only a larger display of birds of a better class than heretofore shown, but a much keener competition for prizes than has taken place at any previous exhibition.

ONIONS FOR POULTRY.—It seems strange that this esculent is so little appreciated, not only for use by the human family, but for poultry. Its curative properties do not seem to be understood, or else are much under rated. And as a preventative also, it has no superior. A few raw onions, chopped up fine and mixed with the feed of young chickens act like a tonic, and are equally good for old fowls. The tops, too, are good. We remember, long years ago, seeing an old maiden aunt chopping up onion tops and sives for the young turkeys, deeming it a certain specific against gapes, pip or other ills that fowldom is heir to. Three times a week is not too often to give them a taste—not merely a taste, but a good bite also. Were the use of green food more common among poultry raisers, we should hear of less cases of cholera, croup, gapes, pip, &c., &c. If sameness of food will engender distaste and disease in man, why not in fowls? Feed your fowls as you do yourself. Give them change and variety, and give them onions.—RURAL NEW YORKER.

FEEDING FOWLS.—Never feed your fowls in haste, throwing down the corn and running. Watch the peculiarities of your flock. One fowl may starve while the others are fattening. Fowls have their likes and dislikes, as well as people, and their tastes must be studied, and no kind of feed that they dislike should be forced upon them. If you do, your fowls will suffer both in condition and plumage.

CHEESE MAKING.

At the recent session of the Massachusetts Board of Agriculture, held in Springfield, among the valuable and instructive essays read before the Society, was one from the pen of Mr. Goodale, Secretary of the Maine State Agricultural Society, on the subject of cheese and cheese making. The following is a brief abstract:

He said that a milch cow furnished the best and cheapest method of getting human food. The feed necessary to make a pound of meat, will make at least twenty-five pounds of milk. Eight and a half pounds of milk, on an average, make a pound of cheese. In Herkimer county, N. Y., the cows average sixty pounds of cheese a month

per annum. A cow that will make less than her dressed weight of cheese, in Scotland, is, or should be sent to the butcher. England is our great cheese market: for the English eat more cheese than Americans; 200,000 cows are kept in the single county of Cheshire, England. Herkimer county, N. Y., first taught the English to use the American cheese, and now ship them more than 40,000,000 pounds a year. Cheese factories are modern labor-saving inventions. They require the milk of at least 500 cows to make one of them profitable, and five or six persons to do the work. There are more than thirty such factories in Oneida county, N. Y., and the cheese thus made commands a higher price than that made in families. Carrying milk from one to five miles in a wagon, improves it for cheese as much as it hurts it for butter. There is little difference between the labor for making a pound of cheese or a pound of butter, and the milk necessary for a pound of the latter, will make two and half pounds of the former. Cheese made from cows fed on hay is less valuable than made from grass.

CHESTER WHITE PIGS.—The genuine Chester White Pig has a short snout, broad head, thin ear, drooping slightly at the tip, broad shoulders and hams, very deep, wide chest, straight back, small cone, fine hair and skin, always very quiet and healthy, and attains a great weight with but reasonable care and attention. The ordinary weight is from three hundred to seven hundred pounds after dressing, at ages varying from nine to eighteen months. We have known them to attain the weight of 1,050 pounds.—EX.

MANAGEMENT OF SOWS.—The American Stock Journal says:—"As the time for her farrowing approaches, a sow should be well supplied with food, especially if she be a young sow, and this her first litter, and also carefully watched, in order to prevent her devouring the after-birth, and thus engendering a morbid appetite which will induce her to fall upon her own young. A sow that has once done this can never afterwards be depended upon. Hunger, thirst, or irritation of any kind often induces this unnatural conduct."

Youth's Department.

THE WORLD WE LIVE IN.

BY R. T. B.

- What is earth, Greybeard?
A place to grow old;
- What is earth, miser?
A place to dig gold.
- What is earth, schoolboy?
A place for my play;
- What is earth, maiden?
A place to be gay.
- What is earth, seamstress?
A place where I weep;
- What is earth, sluggard?
A good place to sleep.
- What is earth, soldier?
A place for battle;
- What is earth, herdsman?
A place to raise cattle.
- What is earth, widow?
A place for true sorrow.
- What is earth, tradesman?
I'll tell you to-morrow.

- What is earth, sickman?
'Tis nothing to me;
- What is earth, sailor?
My home is the sea;
- What is earth, statesman?
A place to win fame;
- What is earth, author?
I'll write there my name;
- What is earth, monarch?
For my realm 'tis given;
- What is earth, christian?
The gateway to heaven.

RIDDLE.

There is a word of plural number,
A foe to peace and human slumber,
How many words you chance to take,
By adding s you plural make;
But if you add an s to this,
How strange the metamorphosis?
Plural is plural then no more,
And sweet what bitter was before.

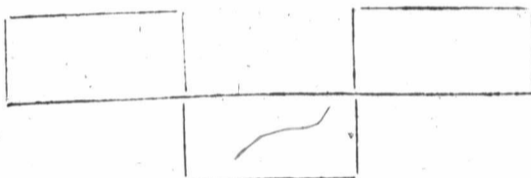
ANCEL D. CARLEY.

King, Ontario.

Answers to Puzzles in last No.

FIVE SQUARE PUZZLE.

The answer to this Puzzle may be found by rubbing out the middle top line, and the two lines to the right corner thus:



The following persons sent correct answers: X. Y. Z.; Wm. Housen, Campden P. O.; Jane Hunter, West Gwillimbury; Chas. C. Badgeley, St. Catherines; Saml. Dunlop, Penetanguishene, and Banford McKindray, Osgoode. All others are wrong.

CHARADE.

ANSWER "RAINBOW."

Correct answers from Jane Hunter, West Gwillimbury; Robert Waddell, Orono; C. C. Badgeley, St. Catherines; Philander S. Trickey, Mallorytown; S. M. Honsler, Campden; George Hunter, Exeter; H. F. Ayerst, Wyandott; W. A. Ayerst, Wyandott; B. Arthur, Brighton; X. Y. Z. West Oxford; A. D. King; Banford McKindray; Wm. Parkin, St. Vincent, and James Ross, Nissouri.

ENIGMA.

ANSWER "FARMING IMPLEMENTS."

Correct answers from James D. Wharley, Geo. Hunter, Exeter; James McDonnell, Westminster; Lizzie Smith, Penetanguishene; James Flett, Bury's Green; H. F. Ayerst, Wyandott; W. A. Ayerst, do. Jane Hunter, West Gwillimbury; David Waddell, Orono; Philander S. Trickey, Mallorytown; Chas. S. Badgeley, St. Catherines; B. Arthur, Brighton, and Wm. Parkin, St. Vincent.

PUZZLE PICTURE.

A DONKEY WITHIN A DONKEY'S HEAD.

Correct answers from Philander S. Trickey, Mallorytown; Jane Hunter, West Gwillimbury; W. A. Ayerst, Wyandott; H. F. Ayerst, do. A. Day, Thamesford; Lizzie Smith, Penetanguishene, and Banford McKindray, Osgoode.

Fruit Department.

THE STRAWBERRY.

The strawberry is not only the most wholesome and delicious of all our small fruits, but is, more easily, and on that account more universally grown than any other, and has been one of the most profitable, but is not yet cultivated to half the extent that it ought to be.

It belongs properly to northern latitudes, and though very little known in the southern hemisphere, is found in the temperate latitudes of both Europe, Asia, and America.

The soil best adapted for growing fine strawberries, is a deep rich loam rather approaching to clay than otherwise, thoroughly and deeply worked and enriched with plenty of strong manure. Sun and light should also have free access

to wherever strawberries are grown, for whenever under the influence of shade, whether occasioned by surrounding objects, or by being too closely crowded together themselves, it will be found, that the fruit is much more acid than it would be if grown under more favorable circumstances.

The finest, both plant and fruit, as a whole I think that I ever saw, were grown on a very stiff piece of land, deeply trenched and thrown up into ridges in the fall, allowed to remain so all winter subject to the action of the frost, then levelled down in the spring and a coating of manure dug in; nothing could be finer than their appearance when I saw them the following summer.

The strawberry is best and most easily cultivated in rows two feet apart, and from 18 inches to two feet apart in the rows, thus allowing plenty of space for the roots to feed in, and also, a sufficiency of light and air for the leaves and fruit. A crop of early york cabbages which do not occupy much space might be grown the first year after planting between the rows—that is of course only necessary where it is an object to make most of the ground. The runners should be

kept off by chopping them out, three or four times a year, and every fall dig in some short manure between the rows, and until the plants get thoroughly established, cover every winter with a slight covering of either leaves or litter. The object of this covering is principally to prevent the plants being heaved out of the ground in the spring, when the frost is leaving. Preparations ought to be made every four years, at the furthest, for removing the bed or field, which ever it may be, and that could be done by allowing the plants the last year to throw out some runners, and cutting off all except those immediately up the centre of the space between the rows; then the following spring thin them out to the proper distance, and dig or plough the old plants under. Cleanliness and thorough cultivation of the soil are the most essential requisites to ensure success in growing strawberries. By keeping these ends in view, and by having a due regard to the kinds

planted, no one can well fail of being amply repaid for any labor they may bestow on this grateful and luscious fruit. It would be folly for me to attempt to enumerate the many kinds of strawberries grown, their name is legion, and each one of them has its advocates. For market gardening, the Wilson Albany is preferred. It is hardy, prolific, firm, and bears carriage well. There are numerous varieties having much finer flavors, and some growing to a much larger size. The Nicanor, Drhicine, Napoleon III, Juconda, and Triomphe de Gaud, are among the leading varieties.

It is pretty generally conceded I believe, that the American seedlings are better adapted to our climate than the varieties which originate in Europe. They are all of course propagated by runners, except the bush Alpines, which are increased by division of the roots.

ALEX. PONTY.

produced. The fruit is uniform, moderately large in size, roundish and conical, bright scarlet, quality good. It begins to ripen with the earliest, and continues a long time. There are none of this variety in this section of the country. It is the price that has prevented their introduction. They now sell at 25c per plant.

How Much Seed—Several Useful Tables.

AVERAGE QUANTITY OF SEED SOWN TO AN ACRE.

IN DRILLS.

Dwarf Beans 1½ bush.	Beets 4 to 5 pounds.
Early Peas... 1½ "	Carrots 2 to 3 "
Marrowfat Peas 1½ "	Onions 5 to 6 "
Potatoes (cutt tubers) 10 "	Parsnips 4 to 5 "

Radish, 6 to 8 "
Ruta Baga, . . . 1 to 1½ "
Spinach, 10 to 12 "
Salsify, 10 to 12 "
Turnip, 1 to 1½ "

IN HILLS.

Pole Beans 10 to 12 qts.
Corn 8 to 10 "
Cucumbers, . . . 1 to 2 "
Musk Melon, 2 to 3 "
Water Melon, 4 to 5 "
Pumpkin 5 to 6 "
Squash, 4 to 5 "

QUANTITY SEED REQUIRED

For a given length of Drill.

Asparagus, 1 oz. to 60 ft. drill
Beet, 1 oz. to 50 "
Beans, dwf. 1 qt. to 100 "
Carrot, . . . 1 oz. to 150 "
Endive, 1 oz. to 150 "
Okra, 1 oz. to 40 "
Onion, 1 oz. to 100 "
Onion Sets, 1 qt. to 20 "
Parsley, 1 oz. to 150 "
Parsnip, 1 oz. to 200 "
Peas, 1 qt. to 100 "
Radish, 1 oz. to 100 "
Salsify, 1 oz. to 70 "
Spinach, 1 oz. to 100 "
Turnip, 1 oz. to 150 "

QUANTITY SEED REQUIRED

For a given number of Hills.

Pole Beans, 1 qt. to 150 hills
Corn, 1 qt. to 200 "
Cucumber, 1 oz. to 150 "
Wat. Melon 1 oz. to 40 to 60
Musk do. 1 oz. to 75 to 100
Pumpkins 1 oz. to 60 to 80
Squash, 1 oz. to 60 to 80

ONE OUNCE OF SEED WILL

Produce of

Asparagus, about 500 plants
Broccoli, " 3000 "
Cabbage, " 3000 "
Cauliflower, " 3000 "
Celery, " 4000 "

Egg Plant, about 3000 "
Endive, " 4000 "
Kale, " 3000 "
Lettuce, " 4000 "
Leek, " 3000 "
Pepper, " 3000 "
Tomato, " 3000 "

THE NUMBER OF PLANTS, ETC., REQUIRED TO SET AN ACRE.

Distance.	Number.
1 ft. by 1 ft.,	43,560
1½ ft. by 1½ ft.,	19,360
2 ft. by 2 ft.,	10,890
2½ ft. by 2½ ft.,	6,970
3 ft. by 1 ft.,	14,520
3 ft. by 3 ft.,	7,260
3 ft. by 3 ft.,	4,840
4 ft. by 4 ft.,	2,722
5 ft. by 5 ft.,	1,742



NICANOR.

As planting time is now at hand, we furnish you with the representation of some of the small fruits, as they have not yet come into as extensive cultivation as they deserve. We have in a previous number shown what large profits have been made from the cultivation of the Strawberry and raspberry. The above cut represents the Nicanor of which Messrs. Elwanger & Barry, of Rochester, who are the leading Nurserymen in Canada, say, that having fruited this variety for six years, and the last two years grown it extensively for market, we feel no hesitation in recommending it as one of the most hardy, vigorous and productive berry that has yet been in-

Distance.	Number.
6 ft. by 6 ft.....	1,210
9 ft. by 9 ft.....	537
12 ft. by 12 ft.....	302
15 ft. by 15 ft.....	194
18 ft. by 18 ft.....	134
20 ft. by 20 ft.....	130
25 ft. by 25 ft.....	70
30 ft. by 30 ft.....	40
40 ft. by 40 ft.....	27

CURRENTS.

An idea seems to prevail among cultivators that the currant will thrive in any soil, in any position, and with any cultivation. Our experience satisfies us well that the currant will not grow upon any or all of the above hypotheses.

The soil best adapted for the successful cultivation of the currant must be deep, rich, and somewhat heavy, but always moist. We have never yet succeeded in growing them successfully on light loam or sandy soil; they will not bear excessive heat. It is possible that in warm climates they may be grown for a year or two by the aid of mulching or planting in a cool situation or on the shady side of the fence, but we feel sure that after the third year the cultivator will find little comfort or produce sufficient to warrant their occupying necessary room. In New England, where the currant succeeds to perfection in almost any spot where it may be placed, the idea of soil would seem somewhat trifling to discuss, but out of New-England, both soil and climate must be considered. It is useless to attempt growing currants on a light soil, with a climate where very hot suns are constant.

The currant-bush of itself does not generally require any supports; yet we have seen it recommended and we think the plan is a good one, to stretch a single wire along the rows; this will allow of spreading out the plants fan-form; and when spread out in this shape, the sun and air are more readily admitted, and the fruit will reach much greater perfection.

Seth Boyden, of New Jersey, promises in twenty years, to raise strawberries as large as pine-apples, with all the original flavor. We'll take a box, Mr. Boyden.

FRUIT TREES MOST SUITABLE FOR PLANTING.

Concerning the proper ages of fruit trees for planting, an experienced horticulturist says that peaches should always be transplanted at one year from the bud; plums, cherries or dwarf pears at two years from the bud or graft; for standard apples and pears,

good thrifty plants, five or six feet high and not over two or three years of age. The best seasons for transplanting are from the first of October until December, and from the first of March until May. Older trees, especially if they are taken up carefully and planted in well prepared soil, may do well, but on the whole, the ages above mentioned are the best suited for planting.

For fruit trees, the soil should be dry, either naturally, or made so by thorough drainage, as they will not live or thrive on a soil constantly saturated with stagnant moisture.

to raise them ourselves, because we have far too many kinds of grain to take our attention, beside attending to the different classes of stock, and issuing this paper, small and insignificant as it may appear to many. All our time is taken up as communications on different subjects, are continually to be attended to, besides orders and shipments of seeds, stock and implements, and up to the present time are bringing the Emporium plan into better operation, and this without any government aid, and all we ask of the govern-

ment is not to raise a tax or legislate or expend one cent more money against this enterprise; and we promise you, our readers and supporters, to do you more good in an agricultural point of view, than has been done by the Old Board for the past five years.

YOUNG TREES IN OLD ORCHARDS.—It is always a bad practice to reset young trees in an orchard or in the same holes from which old, decayed fruit trees have been taken away. The reason is this: the rotting and decaying of the trunk and roots produce a fungus exceedingly injurious, tainting the soil. If any one will examine the land, he will find it full of a network of decayed wood, and the only way to plant the ground successfully is to grub out the old roots and burn them, apply lime and cultivate well. Young trees may then do well.

Mr. Wilson C. Flagg, who had extensive orchards at Alton, Ill., replanted several hundred young trees in the same holes from which the old ones had been grubbed out. For vigor of growth and healthfulness of foliage, they were equal to any grown on new land; but the reason for this success was the burning of the old trees in the holes. Mr. Flagg attributes his success as much to the power of the heat on the soil as to the ashes.

NUTMEGS.—Nutmegs are the fruit of a beautiful tree which grows in the Molucca Islands, and in other parts of the east. All the parts of the tree are aromatic, but only those portions of the fruit called mace and nutmegs are marketable. The entire fruit is of an

oval form about the size of a peach. The nutmeg is the innermost kernel. It is surrounded by a skin, which peeled off, constitutes the mace of commerce. The tree yields annually three crops. The first one, which is gathered in April, is the best. The others are gathered in August and December. Good nutmegs should be dense and heavy and free from worm-holes. An attempt has been made to cultivate nutmegs in the West Indies, but without success.



NEW ROCHELLE OR LAWTON BLACKBERRY.

The above cut represents one of the leading varieties of blackberry. They are cultivated as the raspberry, and good accounts are reported of them. But from reliable sources of persons that have tried them, we understand the Black cap berry is superior to them, as being more hardy and more productive. We have not yet attempted

TO MEASURE HAY IN THE STACK OR MOW.

If it be a square or oblong stack, with pitched roof, measure the height in feet from the base to the eaves, add to this half the height from the eaves to the ridge, to find the mean height, multiply the height by the breadth, and the product by the length. Divide the gross product by twenty-seven, and the quotient will be the number of cubic yards in the stack. The estimate of the total weight must depend upon the supposed weight of a cubic yard; this will necessarily vary according to the time allowed for the stack to settle. In an old stack the hay is much more compact than in one recently built. A pretty correct estimate will be gained by allowing 85 pounds to the cubic yard in the new stack, one hundred pounds in one that has stood a few months, and one hundred and twelve pounds if it has stood more than a year. To ascertain the weight of hay in the stack, multiply the number of cubic yards by the number of pounds allowed and the product will give the contents of the stack in pounds; divide by two thousand and the quotient will give the number of tons. To ascertain the weight of hay in a round stack with a conical top, find the height of the eaves and add one-third of the remainder to obtain the mean height of the whole. Measure the girth; square this dimension, (that is multiply it by itself) and multiply the product by the decimal 1.0795. This will give the area of the base. Multiply the area by the mean height and the product will be the contents of the stack, in cubic feet; divide by twenty-seven and we obtain the number of cubic yards. Multiply this as before, by the number of pounds allowed to the yard, and the product will give the gross weight in pounds. To estimate the contents of a mow where the top surface of the hay is level, the process is the same as with the square stack, or rick, omitting the allowance to the sloping roof.

The hare lives ten years, the cat ten, the goat three, the donkey twenty, the sheep ten, the dog from fourteen to twenty, the ox twenty, the sow twenty-five, the pigeon eight, the turtle dove twenty-five, the partridge twenty-five, the raven one hundred, the eagle one hundred, and the goose one hundred and fifty years.

Correspondence.

COWS CALVING AND THEIR MANAGEMENT.

The time of the year is approaching when cows begin to calve, and under the circumstances, we think it advisable to give to our contributors a few plain directions respecting the management and treatment of those useful and valuable animals. The period known as gestation with the cow, is about nine months, and she rarely produces more than one calf at a time, although instances have occurred of two, and even three being brought forth; but the latter case is exceedingly rare. The time at which the cow takes the bull should be carefully noted, that she may be dried off in proper time before calving. She should also be allowed as much rest as she will take some time previous to calving. Her food should be of good quality, and rather nutritious than otherwise. By pressing the hand on the left side of the belly in an early stage of pregnancy, the calf can be felt. It may be well for the information of those who only keep one or two milch cows, to know that by proper attention to their food, the animal can be continued in milk

without detriment to the cow or the calf, till nearly the time of calving. This has been satisfactorily proved, that permitting the cows to go dry for two months previous to calving, that no good results were found to arise from it. In wild and severe weather in the winter, when cows are in calf, they must be taken into the house during the night, and even in the day time, when stormy. This is more especially to be attended to for a couple of weeks before calving, as should the cow drop the calf in a cold, wet field, there is a possibility that both may perish. Even in the finest weather it will be prudent to take the cow and calf into the house at night for a week or two, as nothing is more dangerous than the dews, especially if of a hoary or frosty nature. If the time of calving be rather late in the season, it will be judicious to turn them out to a fresh and rich pasturage for a month or six weeks previous to calving, but when their parturition is to happen early, then they must be fed with good hay, and turned out in the barnyard for an hour or two during the day, for the benefit of air, and if it can be had, green food should be given along with the hay. During the time of gestation, cows are liable to several complaints, such as costiveness, and stranguary, or a difficulty in voiding urine. These must be carefully attended to, otherwise they may cause the cow to slip the calf. Stranguary will be known by the animal making frequent painful attempts to stale, and by her voiding only a small quantity of urine at a time, and frequently none at all. The following should be administered twice a day until the complaint is removed: Camphor powdered 2 drachms, Nitre 1 1/2 ounce, spirit of nitrous æther 1/2 ounce, laudenum 1/2 ounce, oatmeal gruel warm 1 pint. When stranguary is accompanied by costiveness, which is often the case, immediate recourse should be had to laxatives. A pound of epsom salts, dissolved in 1/2 a gallon of warm gruel may be given, and the discharge assisted by administering clysters at the same time, consisting of 4 ounces linseed oil, and a quart of warm gruel, with half an ounce of salt of tartar to make them incorporate. If an evacuation does not speedily take place, the clyster must be repeated in half an hour afterwards, and continued every 20 minutes, until it has the desired effect. It will be injudicious to feed a cow too much before calving, as in that event, they may be attacked with what is termed the milk fever, or in other words, inflammation in the womb. If it is found that cows have too great a tendency to fatten previous to calving, they must be removed to a less nutritious pasture, or stinted in the diet, which is much more safe than by reducing them by the aid of medicine. But if they cannot be reduced, and the time of parturition be close at hand, then it will be necessary to have recourse to bleeding. Cows are very liable to abortion, or as it has been termed, slipping the calf in the early stages of gestation. A peculiar state of the atmosphere sometimes induces this, and hence it becomes epidemical. When this condition of the atmosphere takes place, the animals are rendered debilitated to a certain extent, consequently if they leap fences and ditches or are strained or frightened, they are liable to slip the calf; even the smell of carrion is said to induce abortion. Some have supposed that sympathy will produce it, and in consequence have recommended that when cows do slip their calves, they should be removed from others. When cows have been rendered abortive, from whatever cause, they must be nursed for some time afterwards, and have mashes given to them. Swelling of the udder is a complaint cows are liable to about the time of calving. The symptoms are considerable distortion of the udder, accompanied by inflammation, which not unfrequently causes an abscess. The remedies, whenever the swelling become apparent bleeding must be resorted to, and from three to four quarts taken. This must be followed by the following laxative: epsom salts 1 pound, castor or linseed oil 2 ounces, warm gruel 1 quart. Fomentation of the udder is indispensably necessary. Let decoctions of elder, hemlock, or mallows, be

made, into which large woollen cloths should be dipped while the liquor is hot, and after wringing them, they should cover the entire udder, and the cloths kept in their place by means of cords. This must be repeated every three or four hours, until the inflammation has subsided. If there still remains any hardness, let the parts be rubbed with the following liniment, three or four times a day, which will have the effect of reducing it. Linseed oil 4 ounces, spirit of turpentine 1 ounce, hartshorn or liquid ammonia 1/2 ounce. When inflammation of the udder is caused by the animal taking cold, or what is termed a *chill*, stinging of the coat and loss of appetite will follow, accompanied by a quickened breathing. It is then certain the animal is laboring under a degree of fever. In this event, bleeding is the first remedy, and afterwards give the following stimulative laxative: warm common salt 6 ounces, linseed oil 6 ounces, mustard 1 ounce, salt of tartar 1/2 ounce, thin linseed gruel 1 quart. The cow must be kept warm and dry, and under a cover; her food should consist of warm mashes of malt bran. The former is preferable; let the water given as drink, be warmed, and an ounce of nitre, finely powdered put in it, morning and night.

For the Farmer's Advocate.

THE VETERINARY PROFESSION.

North Street, London.

Mr. Editor:—I trust you will not object to allowing me a small space in the columns of your valuable paper, valuable, as a conductor of theoretical and practical information to the larger class of intellectual farmers and amateurs, who have the rearing and breeding of stock as their occupation.

The Veterinary Profession is the subject that I am about to make a few remarks upon. It has not as yet reached its climax; in fact it is a profession that is not by any means supported, but still, with all, the days of the groom and farrier are on the decline, and the day is fast approaching when city medical science will assert supreme sway over the groom, the farrier and Bill Hanger.

Can disease be treated by he who is ignorant of anatomy, physiology or *Materia Medica*? No I answer in the affirmative, how is it possible? The first great difficulty which presents itself to such persons, is to form a correct diagnosis of disease; then lastly is the demonstration of medicinal agents, which is very frequently contraindicated in the very disease such individuals may be treating. One of the most eminent authors that this profession ever had, and one of whom every qualified Veterinary Surgeon speaks of with gratitude, makes a very true remark. He says we hear of wonderful cures being performed by persons having no pretensions whatever—indeed possessing none—to veterinary medical science, and in this hit or miss manner of proceeding, it cannot be denied that some valuable discoveries have been made. Could we, however, but set against the discoveries, brilliant as some of them may have turned out to be, a true catalogue of the failures attendant upon the experiments in which they had their origin, we are sorely afraid that the picture would exhibit a sorry complexion, which even the discoveries themselves could not regard without mingled dissatisfaction and remorse.

There is one disease affecting *thoracic visura* or chest of the horse, and on that disease I wish to make a few observations.

I allude to that insidious disease, pleuritis. By pleuritis, we mean inflammation of the pleura, or that fine, delicate, membrane covering the lung, or the costal pleura unaccompanied with inflammation of the substance, or par in chyma of the lung. This disease may be divided into acute and chronic. The larger class of horses that have come under my own immediate observation, to be treated for pleuritis, were between the ages of five and seven years old.

CAUSES.—Any sudden exertion or atmospheric changes, copious draughts of water when the animal is heated, a blow upon the side, injuries of the chest as also the introduction of stimulating or other matters into the chest.

SYMPTOMS.—The horse will begin by showing great uneasiness, and as the disease takes its course, evincing frequent pain, heaving at the flanks, puffing and blowing, looking round towards his flanks, pawing with his fore feet occasionally, laying down and getting up again; but the grand symptom is that on pressure being applied to the intercostal spaces, he commonly elicits a peculiar grunt with attempts to bite; cough is occasionally present, accompanied with a firm, wiry pulse; mouth hot and dry, and conjunctival membranes highly infected.

The progress of acute pleuritis is very rapid. Should no change take place within twenty-four hours after the disease has made its appearance, very few hours will run over that horse before the disease becomes manifest, either in the acute symptoms subsiding, or the primary symptoms of Hydrothorax or effusion is taking place within one or both sides of the chest.

The juninations of this disease are from
1st. Resolution or a return to a normal or healthy condition.

2nd. Effusion or the throwing out of lymph or serum in the cantres of the chest, the usual result of inflammation of a serous membrane which the pleura is.

3rd. Suppuration, or the formation of or secretion of puss or matter.

4. Gangrene or privation of life or death of an organized substance, in other words the first stage of mortification.

The treatment of pleuritis must be active and prompt. Bleed by general abstraction, that is from the left jugular vein, to be followed up with laxative medicine, such as four Aloes Barb is three drachms; Zigeris, one drachm; Aeps Simples, five drachms; to be made into a ball and given; apply hot mustard poultices to the sides; bandage all the legs and blanket the horse; do not have the stable too hot, but about 50° or 60° Fahrenheit, and not forgetting that most important part of the treatment, a good bed of clean straw, and upon coming in or going out of the stable, let it be done as quietly as possible, and allow no blustering or loud-spoken person to go near the animal, for by doing so he will necessarily excite the nervous and circulatory systems, thereby adding fuel to the fire.

Give oz. Spiritus Nitr, Aeth opt, two ounces, Tinct. opii, 2st night and morning. If there is no change in the symptoms for the better, give a ball composed of 1 oz. calomel, two scruples Digitalis, two scruples antimony polass, tart, one drachm, Tinct. opii, one drachm, camphor half drachm; to be made into a ball with a little lard, and given night and morning. A very good mode of administering calomel, is to place about three grains on the horse's tongue, every two hours, until the mouth becomes tender or the breath affected, as calomel, in this disease, is the sheet anchor in the treatment of it. A very serviceable counter-irritant can be applied to the chest in this disease, after all acids, liniments and blisters have failed, namely; antimony polas tart, four drachms; Oil of turpentine four ozs. dissolved.

And if the symptoms indicate that resolution is about to take place, follow up with tonic and diuretic treatment.

Give for a tonic ball, Ferri Sulph, two drachms, Pulv. Ginger, one drachm Pulv. Gentian Rad, one drachm, to be mixed with a little lard and given every second day.

Before closing this letter, I must here remark that to my own certain knowledge, this disease has often been treated for spasmodic colic, or oftener for a disease called Peritonitis, when in reality no such disease or its symptoms were present. In the early stages of pleuritis, the symptoms much resemble colic, causing no little trouble to the non-professional or Emperic to properly diagnose.

I shall close this letter for the present, hoping, Mr. Editor, that I have not trespassed too much on your columns. In my next I will make a few casual remarks upon a disease closely allied to the above named, as also anything Veterinary or appertaining thereto, that may come under my notice in town or county practice.

JOHN L. POETT,
Veterinary Surgeon,

Fellow of Edinburgh Veterinary Medical Society.

For the Farmer's Advocate

Drilling Versus Broadcasting.

The farmers of Canada have of late years made rapid strides in the improvement of Implements of agriculture of all kinds, and for lightness, strength, and adaptability to the work they are intended for, most of our implements are equal to any in the world; but in the use of the drill, we are lamentably behind the times. Drill husbandry is no longer an experiment, but has proved itself so far superior to the old method of broadcasting, that its use is general wherever it has once been fairly tried, and the old system is fast becoming a thing of the past.

The great consideration with farmers, whose dependence for their living is on their crops, is whether drill cultivation will pay them better, and not whether it will look tidier or more finished. To this there can be but one answer, but that every one may form his own opinion on the subject, let us look at some of the advantages it possesses over broadcasting, especially applying to Canada.

1st. Saving of labor and time in the busiest season of the year.

2nd. A reduction of from $\frac{1}{4}$ to $\frac{1}{2}$ in the quantity of seed used.

3rd. The placing of the seed out of reach of birds.

4th. Uniformity of depth and evenness of distribution.

5th. The facility with which the land can be cleaned during the growth of the crop.

6th. The immunity of fall crops from winter killing.

We will proceed to investigate these reasons for preferring the drill with regard to expense. Let us suppose the land is fit for sowing, and the farmer has to decide which he will do, drill or broadcast; we will enumerate the necessary steps to be taken, and every man can price his own labor, if he sows broadcast he has to count the cost of sowing, 3 times harrowing, and say 2½ bushels of seed. If he drills he will first save half his seed, which will pay for drilling, he requires only two harrowings, one before and one after the drill, so that he gains the price of once harrowing, and hand sowing, and what is most important in Spring crops he saves a vast deal of valuable time, as he can fall plough his land at his leisure, and these in the Spring once cultivating and once harrowing, will procure a better seed bed for drilled grain than ploughing would do for broadcast grain. The reduction of the seed does not reduce the yield, as all the good seed will grow; the condition necessary for its germinating being fulfilled by depositing it at a proper depth in the soil. Not the least important consideration is that the seed is placed out of reach of birds, which are often attracted by what remains on the surface to reach for more when that is consumed.

Uniformity of depth in sowing is necessary to insure the simultaneous sprouting and ripening of all grain, but particularly of peas,

and this condition cannot be fulfilled when some of the seed falls to the bottom of the furrow, while others lie scarcely buried and sprout at once, even when sown by a skillful sower; but when the sower is not up to his work, the grain not only lies at all manner of depths but also in lumps, some places being bare and others crowded. Some of the deep sown will be unable to grow for want of warmth and air, and some of the shallow sown will waste from being too exposed to get sufficient moisture, others sown at a proper depth will sprout at once, and the consequence will be a serious diminution in the yield.

The clearing of the land by horse hoeing, harrowing, or hand-hoeing, is one of the greatest advantages of this mode of culture. We are too much afraid of using the harrows on growing crops, one reason being that with a broadcast crop, the harrows must necessarily tear up some of the grain, whereas the roots standing in a continuous line on the drilled land, offer such resistance to the teeth of the harrow, that they throw them into the spaces between the rows, where they cut up the weeds. Horse hoeing although practiced in Britain, is not to be recommended here until we have hoes made suitable for the work; but hand hoeing can not be too highly praised. In the first place it destroys the weeds, and how can a man expect a crop of grain, when a large portion of the strength of his land is consumed to supply the nourishment for the growth of the weeds. But another most important function performed by hand-hoeing is the loosening of the soil round the young plants, enabling the roots to spread and promoting evaporation, and therefore keeping the roots cool. The prevention of winter-killing, in fall crops is particularly desirable in this country, when the wheat plant lies with its roots on the surface. A warm sun in winter or early in spring will thaw it out, and very soon it is frozen again, and this perhaps is repeated several times. This is what kills it, every one knows that. It is not because the ground is frozen that the wheat is killed, for then we should always lose it, but because the plant is exposed to alternate freezing and thawing in the light and air. The drill puts the seed at such a depth, that no ordinary thaw will affect it, but if the weather should be so mild as to thaw beneath the roots, the covering of earth prevents the evil effects of it, just as turnips frozen in a pit will thaw without injury if they are only allowed to remain covered.

There is no means within our reach of increasing the yield of our land of such importance as drilling. In the States they see the importance of its use, and in the vicinity of Paris, and in some of the most advanced sections of the country it is used for grain, and also for grass-seeds, and it is quite time we followed their example in that which so nearly concerns our own interests.

C. F. C.

To the Editor of the Farmer's Advocate.

RECIPE FOR SPAVINS.

2 ounces of Spirits of Turpentine, 2 ounces of Vitriol, and $\frac{1}{2}$ pint of Tanner's Oil.

Directions.—Mix Tanner's Oil, Spirits of Turpentine, and the Oil of Vitriol, not over a tablespoonful at a time. Apply until it blisters; then rub fresh butter and lard.

JAMES MITCHELL.

Mariposa, Jan. 14th.

For the Farmer's Advocate

AGRICULTURAL EDUCATION.

For some months past, the Rev. Dr. Ryerson has been on a tour through Ontario, explaining the provisions of his School Bill. The Superintendent has met with some opposition, and the leading educationalists have not hesitated to express their opinion of the proposed change. I am well aware that your columns are not open for subjects such as these, being strictly devoted to the discussion of purely agricultural questions. In this sense I design calling the attention of your readers to this subject. We look in vain through the sections of the New School Bill, for some provision for Agricultural Education. Is it ignored from its unimportance? Is agricultural science in such a crude state, that no principles can be compiled worthy of being mastered? Have so many thousand crops been sown and harvested, without some one recording their varied phenomena? The fruits of the earth, the flocks of the field, and the food and raiment of mankind, to a great extent, depend on our knowledge of the experience of others. Agricultural economy embraces all the varied and important questions which arise in connection with the production and distribution of agricultural wealth. A knowledge of the arts which increase this produce, have a most direct bearing on all the political and social relations of man. Especially is this true in Ontario. Our future prosperity is based on the development of our agricultural wealth. It is not alone enough to level the forest and bring acres under the plow, but we must study how to preserve their riches, yea more, increase their fertility. We do not believe that our fisheries or mines will ever bear any comparison with our farming interest. If this be so, is it not plainly our duty to improve ourselves in those branches of learning that will assist in fostering our main interest?

Many of the leading scientific minds have devoted their powers to agriculture. Chemistry has become a valuable adjunct to the labors of the husbandman. Soils are analyzed and while their constituents are proclaimed, science prescribes artificial manures to repair the exhausted waste of harvested vegetation. Meteorological societies are studying important atmospheric phenomena, to discover the physical laws that must even influence a variable climate. The rain fall is carefully noted, and must have influence on agricultural development. Nor is agriculture without a literature of its own; one to be justly proud of for its careful compilation, abounding in statistical love and practical science. We believe this science should be imparted to our youth in connection with our school system of education; agricultural chemistry should be taught in every school; teach children what they will use when they become men; think of the vast number of farmers

who are ignorant of the simplest principles of the science, and yet that science sustains most intimate relations with his progress in attaining the end sought. Other countries are alive to the importance of the necessity of agricultural education. On the continent, almost every government has made provision for this object; so anxious are they to impart practical knowledge that every department is represented. At Tharand, in Saxony, in the agricultural school, there are two professors solely occupied in giving instruction in the art of forest culture. Even Russia has established agricultural schools, while those of Belgium are world-known. The United States has lately appropriated several million dollars to establish agricultural schools, that cannot fail to influence the development of the country.

That we cannot afford to neglect the teachings of science, as to the means of economizing and increasing our field yield will be admitted. It remains for our generation to show a wise comprehension of the duty of associating science and industry. The natural wealth of our soil has been squandered in the past, and it remains for science, to a great extent, to repair the loss. The principles of this science should be taught in our common schools. At them, the mass of our countrymen are educated. We regard any system of education that neglects this branch as imperfect. It is a subject worthy of government aid and encouragement.

To the Editor of the Farmer's Advocate.

RUST.

SIR:—Rust presents us with another form of parasites which prey upon plants of larger growth. Rust is a fungus, (a minute vegetable) of exceeding rapid growth and fruitful character. It is not confined to cultivated, grain-producing crops. No vegetable, indeed, is altogether free from liability to its attacks, or to the destructive growth of other microscopic plants on their flowers, leaves or stems. The general appearance of rust on wheat, is dependent upon the state of the atmosphere. The seeds of rust, like those of smut, are held in the air and carried about by the winds, and every shower of rain or snow brings them down, and they pass into the system of plants. There are many species of rust, the most common of which are the orange and red. When found to a large extent on wheat, they absorb the nourishment of the plants, and frequently destroy the most promising crops.

Air can only contain a certain quantity of moisture dependent upon its temperature. When there is but little difference between the warmth of the air in the day and night times, in the damp, sultry weather in June, July and August, the air remains for some hours saturated with moisture, evaporation ceases as long as the state of saturation continues, and the temperature favors the germination and growth of the seeds of rust. Rust is most frequent upon rank and luxuriant crops, as might be expected from their great evaporating surface.

Since the prevalence of rust is dependent upon the condition of the atmosphere and the more or less luxuriant growth of the vegetable, the attention of the farmer must be directed to two circumstances, in order to lessen the effects liable to be produced by these destructive fungi.

1st. To the period of the season in which the occurrence of damp and sultry weather is to be looked for.

2nd. To the habit of the plant.

If rust strike the plant before the seed begins to form, the most disastrous effects may be produced; if after the seed has been formed, yet before it is ripe, little apprehension need be entertained for the safety of the crop. Now, experience shows that in the climate of Canada, the condition of the atmosphere as regards saturation with moisture concurrently with a high temperature, is very seldom—such as to favor the germination of the seed of rust—before the last week in June. If therefore, at that period, the wheat plant is so far advanced as to be beyond the influence of rust upon the formation of the grain, the danger is provided for.

The precautions to be taken against rust, happily constitute a necessary step in good husbandry. They are draining, liming and the selection of early varieties of wheat; both of these mechanical operations accelerate the growth and ripening of the vegetable and increase the strength of the straw, besides producing the evaporating surface of the leaf. There is no question that by a judicious introduction of these artifices, the destructive effects of rust on wheat would be very much diminished, if not, in many seasons, entirely prevented.

CHARLES MANLEY.

St. Catharines.

To the Editor of the Farmer's Advocate.

POTATOES.

MR WELD—Dear Sir:—In the March No. of the "Farmer's Advocate," 1869, I observe an error in printing my report of the Early Rose potatoes. It should read *one hundred and sixty-one pounds* were produced from *one pound of seed*, instead of 16lbs from one pound of seed, as reported in the "Advocate."

Yours, &c.,

To the Editor of the Farmer's Advocate.

PEAS.

Dear Sir:—I have just read the second number, vol. four of your paper, which you have sent to my address. I am well pleased with it and the position you take to advocate the farmers' interest in bringing before them, and within their reach, the kinds of seeds which you feel safe in recommending. The reading matter is all, and even more than I expected.

I shall send you a sample of my Dan O'Rourke peas; I sowed, last spring, ten bushels of them and harvested one hundred and forty bushels, which is the best yield this county (Prince Edward) produced this year. I also sowed thirty six bushels of the Golden Vine, and harvested seventy. The dry weather and heat was too great for the tender vine to withstand, after its rapid growth the first of the season. The pea crop was nearly a failure in this county; many fields were not harvested at all. I never grew the Dan O'Rourke before, yet I am of the opinion that every farmer should grow more or less of them. Every farmer has new or rich soil that would grow wheat or barley for a succession of years, but as every successful farmer wishes to grow rotation of crops, he must grow other grains besides wheat and barley. My Dan O'Rourkes were ripe about the time that my barley was, which gave me an opportunity to plough the ground twice after the peas were harvested, which leaves the soil in a fine condition for wheat next year. The Dan O'Rourke does not grow only about two-thirds as much straw as the Golden Vine, and therefore requires stronger soil. Another advantage the Dan O'Rourke has over the Golden Vine, is, it commands in market, more than twice as much per bushel than the common field pea, it being a garden pea, and is readily bought up by seedsmen. This one point of procuring new seeds from reliable sources, seems to be too much neglected by us as farmers.

POTATOES.—The seed of which I had considerable trouble in procuring, (part of which I have grown for two years) has given me every satisfaction, and a yield that was much greater than I expected. The drought was too long and severe for my Early Rose and Early Goodrich, and the yield was not equal to many publications that I saw, yet my sample is good. My Calico, Gleason, Cunco, Shaker, Russet, Harrison, Garnet Chili, Fluke and American Peach Blow, were all that any man could expect. I shall require some new seeds this year which I see on your list, and shall send you my order in time to prevent any disappointment.

Your very obd't. servant,

WM. R. DEMPSEY

Albury P. O., Co. Prince Edward.

**CALCOTT'S PATENT
SCREW RAISING, METALLIC, POST GATE.**

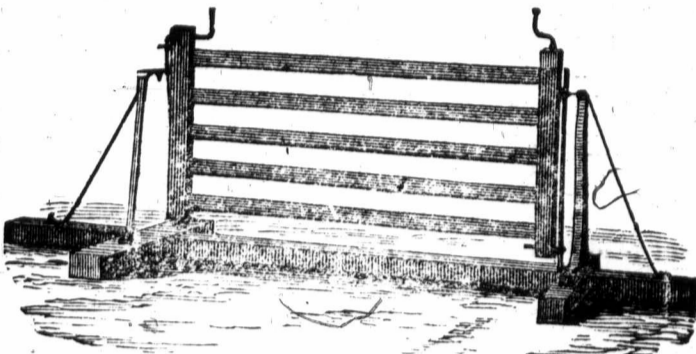
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THIS is the best method of hanging and raising Gates, as they swing either way and are easily raised, by means of a screw, above the obstruction of snow. They are cheap, durable, strong and simple in construction; the frost cannot move the posts as in the old system. Farmers would do well to examine this patent, if they wish to erect a really good, cheap and efficient gate, as any blacksmith can make them if they have the patent.

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THEIR Paris Drill has taken six First Prizes and six Diplomas at the Provincial Exhibition. Their Empire Drill took the first prize at the last Provincial Exhibition, and their Paris Drill took the second. They cannot choke, sow evenly and give entire satisfaction; they are cheap, well made, and warranted to do their work efficiently. Terms of payment are easy. If you want a drill, purchase the best. All orders promptly attended to at the Emporium, and all implements sold at the manufacturers prices. The Empire Drill has a Land Measurer and Grass Sowing Attachment. May be seen at the Emporium.

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FARMER'S ADVOCATE**

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N.B.—All letters must be prepaid to this office, and should contain stamp if answer is required.

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China Tea.....	20c		
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Michigan.....	20c		
Fife & Club.....	20c		
Smooth White Chaff.....	25c		
Walghast, imported & Fenton, imp'd.....	25c		\$1 35
Mammoth Bearded, (imported).....	25c		
Taunton Dean.....	25c		\$1 50
Crown Peas.....	25c	50	\$2 00
Crown Peas, Second Quality.....	25c	34	\$1 00
Excelstor Peas.....	30c	42	\$6 00
Emporium Oats.....	25c	62½	\$2 00
Emporium Oats, Second Quality.....	25c		\$1 00
Westwell Oats.....	25c	62½	\$2 00
Surprise Oats.....	25c		
Norway.....	25c		
Black Tartar (imported).....	25c		
Chevellier Barley (imported).....	25c	62½	
Russian do.....	25c		
English Field Beans.....	25c		
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Early Rose Potatoes.....	25c		
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Early Goodrich do.....	25c	65	\$1 50
Harrison.....	25c	50	
Cusco.....	25c	50	
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:O:O:

G	W	R	Sarnia Line	GTR	L & PSR
WEST	EAST		A.M.	A.M.	Leave Lon-
2 55	A.M.		6 00	6 35	don
6 25	6 00		P.M.	11 25	7 30
7 20	8 55		3 30		A.M.
A.M.	P.M.				3 00
12 40	1 40				
5 55	4 10				
P.M.	1 30				

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EARLY Goodrich, Calico, Cuzco, Gleason, Harrison and other varieties; price two dollars per bushel, or five dollars per barrel.
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A number nearly as large as all the other

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Manufacturers of Mess and Prime Pork,

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ARE the cheapest, most durable and best toned. One thousand of our make are now in use in different parts of this Dominion, and are giving entire satisfaction. There is a lower-priced bell manufactured in the States, but our bells are found to be the cheapest, when compared in quality, durability and tone. We warrant them for one year.

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Matures crops from ten to twenty days earlier, and increases the yield one hundred per cent. It gives Wheat, Rye, Barley, Oats, &c., a firm stalk, and produces a large head and plump kernel. To Tobacco growers it is invaluable, giving a large, well-developed leaf, and protecting it from the worm. Pushing Onions into vigorous growth increases the yield and prevents the attack of the maggot, so injurious to this plant.

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