

patrons, and is growing in favor with every issue and is exceeding our most sanguine expectations. If the members of the order give it a right loyal and hearty support it will soon become a power for good in the land—what every good and true Patron should desire it to be. Patrons, remember your obligation with regard to promoting the goal of the order. I desire to notice in this connection the very timely and appropriate article from the pen of the worthy Secretary of the Dominion Grange as to eligibility. This is a very important matter, and should receive the attention its importance demands, as the future of the order largely depends upon sound discretion in this important matter. I would have enlarged upon this subject, but I feel I am monopolizing too much of your valuable space. It would afford me a pleasure, as I am sure it would all your readers, to hear from our daily friends of the order through the columns of this paper, either in the way of a Grange essay, or in an article upon any subject within the range of their large and varied sources of information; it would have a softening and refining as well as an elevating influence to your correspondence, and would add a charm and dignity to the paper, such as their high moral aims and fertility of resource could only supply.

JOHN T. GOULD.

The Order in Teeswater.

EDITOR GRANGER.—I have been taking your paper since its commencement and am highly pleased. As you invite the various Secretaries to send you information about the progress of the Order in the different localities, I will send you a few jottings.

On my first acquaintance with the Grange I did not know the meaning, or, in fact, its objects; after careful inquiry, I found out it was a grand organization of farmers. I immediately set to work to canvass the neighborhood in which I live, and took three days without any tangible results. Since that time I have succeeded in organizing a Grange six miles from us, and at present it is in a flourishing condition. Subsequently, our neighborhood has been awakened up to the necessity of the moment and we are a strong body now, and every successive meeting adds new members to our list. The movement is doing a great amount of good in letting farmers see what co-operation will do for them. We do a good deal of our business in Toronto, being in direct communication with there by the W. G. & B. R. Our local merchants do not like this too well, but we claim we have a right to buy and sell where we can do so to our greatest advantage, and take no notice of them.

Fraternally yours, TEESWATER.

Spare the Birds.

EDITOR GRANGER.—Not a sparrow falleth to the ground but "He knoweth." Surely such words appeal to all, and should stay the ruthless destruction of our feathered friends, friends that are created by an all-wise Providence to fulfil a special object in the sublime work of creation.

Should man arrogate to himself, and cry in his blindness, "I want them not, they work me harm!" Poor blind mole, where is now thy boasted wisdom?

Cannot he see if these birds were not required they would have been left uncreated.

God created all things for a wise purpose, and with an object. Who is it that heralds the advent of spring?—The birds. Glad season for all! After the long cold winter of this northern land, how the loud notes of the robin cheer one. Bright promise of summers to come, and although the snow may lay thickly on the land and bitter March winds howl, still the robin, light hearted and gay, sings his song, and hops from limb to limb.

Then, as the season advances, and the weather moderates, hosts of bright plumaged songsters arrive.

You can see them busy at work amongst the trees and shrubs, picking the larva of destructive insects, and doing that great work which has been ordained for them, and which they alone can perform.

Let us then protect our birds, and look upon them as our humble assistants, sent by God.

BLUE JAY.

Commendatory.

DEAR SIR.—The Grange is working well in our neighborhood. I believe your paper will be of use to the Order at large and our own Grange in particular. There were some good articles in the number which we received. I hope you will be supported by the Grangers, as I think it is worthy of their attention.

Yours truly,
T. H. STEPHENS,
Master Woodbine Grange,
No. 362.

L. D. F., G. and I. B. P. S.

Fish and game in season in April and May—
FISH.—Trout, speckled; salmon; bass—till the 15th May; pickerel and musk-mungo—close season from 15th April to 15th May.
GAME.—Snipe—till the 1st May.
It is particularly requested that any one knowing of any infringement of the game laws that they will report the same to the officers of the Protective Society in London.

Answers to Correspondents.

EDITOR GRANGER.—Can Subordinate Granges make separate constitutions or alter any portion of that issued by the Dominion Grange? Please answer.

A. D. O'BORNE, Grove Grange 353.

[All Granges must work under the same constitution. No authority but that of the Dominion Grange can alter it. They may have separate by-laws.—Ed.]

The above was unavoidably crowded out of our last issue.

TEESWATER.—Conferring more than one degree at a time is unconstitutional, and not in any case recommendable. One degree is as much as any ordinary individual can comprehend and retain at one time, and indeed he does well if he becomes in any way proficient there. A member may be bal-

loted for and initiated the same night; but application for membership must lie over one meeting. Special meetings recommendable. Boundaries of Division Granges are fixed. No Constitution Dominion Grange, Fourth Edition.

Bro. T. H. No. 391. Every issue of our paper is full of matter given, the hints you ask, for the management and conducting the Grange according to the principles laid down in our Constitution. The more mechanical part of carrying on Grange meetings properly, depends on a thorough acquaintance with the ritual and the secret work, which would be inadvisable in a paper; we have always contended, however, that sufficient time is not taken by parties organizing Granges to thoroughly post themselves in the ritual. It is impossible for any Grange to comprehend the working of the Order in the limited instructions given in one night; we have no doubt the want of harmonious working of Granges is due to this fact. Grangerism is a gradual process of developing a higher manhood and womanhood among the agricultural classes. Its teachings require to be carefully studied and digested, and not hurried over in a slipshod manner. We hope none of our brethren have so far forgotten the solemn and impressive obligation subscribed to by them, to be submissive to the powers that be, and conform to and abide by the rules and regulations of their respective Granges.

Veterinary.

Our Veterinary Department is under the charge of competent practitioners, who will answer all questions pertaining to diseases of horses and cattle. If you want any information write to the GRANGER.

Tympanitis, or Hoven.

Tympanitis, or Hoven, is a very common complaint among cattle, and requires speedy relief, or a rupture of the stomach, or some of the intestines, may be expected to take place, which generally soon terminates the animal's existence. It is attended with symptoms of the most distressing nature, and is the unnatural distension of the rumen or paunch with gaseous fluids, generally caused by the sudden change of food. Feeding on frozen grasses or roots, or an engorgement of the stomach with any kind of food when not properly masticated, fermentation takes place, and carbonic acid gas is eliminated. In the latter stages of the disease, hydrogen and its compounds takes its place; or it may be caused by choking. In some cases it is the sign of other diseases, and is apt to appear as a chronic affection, owing to the torpid state of the walls of the rumen, which are unable to contract properly on their contents, probably owing to their being overstretched.

Symptoms.—A swelling appears in the left flank, and signs of distress soon appear. The breathing becomes laborious. As the disease advances the swelling increases; the breathing becomes more labored, owing to the distended stomach pressing against the lungs. The animal makes a painful sound, resembling a moan or grunt; and, with an arched and stiffened back, is not to incline more. If no relief is given, the brain soon becomes affected, the eye becomes bloodshot and prominent; saliva drops from the mouth; suffocation is evident, blindness and insensibility come on, the creature staggers and falls to rise no more.

Treatment.—The great secret of success is the arresting of the process of fermentation, and promoting the proper function of the rumen. By means of the latter the gas is expelled in eruption, or through the intestines. The preparations of ammonia, chlorinated lime, the sulphates of soda, &c., act by neutralizing the acid fermentation of the stomach. If these do not prove effectual in removing the gas, then you will have to try mechanical means for its removal. This is done by the use of either the probang or the trocar and canula. The probang is a hollow, flexible tube, which is passed by the mouth into the stomach, allowing the gas to pass through the tube. The swelling is lessened and the animal obtains relief. Sometimes the regurgitations of the food towards the gullet obstructs the passage of gas through the probang, then it will be necessary to use the trocar and canula. The place chosen for the operation is midway between the projection of the hip, the last rib and the process of the lumbar vertebra. The instrument is then inserted through the tissue into the stomach, being careful not to wound the kidney, which is often done by parties operating that are not conversant with the anatomy of the part. The trocar is withdrawn, leaving the canula for the gas to escape through. Medicines may also be introduced through the tube into the stomach, for the purpose of hastening the removal of the contents of the rumen. It is a good practice to administer a brisk cathartic as soon as the acute symptoms are arrested, such as Epsom salts, followed up by stimulant, such as brandy, whiskey, beer, ether, &c., which will be of much service in restoring the functions of the organ.

WILSON & TENNENT,
Veterinary Surgeons,
April, 1876. London.

We beg to call the attention of our readers to the advertisement of the Agricultural Investment Society and Savings Bank, of this city, in to day's issue. We have satisfactory evidence of the stability of the Society, and know that it is rapidly growing in public confidence and favor. To borrowers we would say that that the Society will advance you all the money you can reasonably expect on your property at as low a rate of interest as any Society in Ontario, and we will vouch for your being fairly and honorably dealt with. To persons desiring a safe and remunerative investment, we can honestly recommend this Society's stock, now selling in the market at 7 to 7½ per cent. premium. Semi-annual dividends have so far been paid at 8 per cent. per annum, with every prospect of being increased. Depositors are getting from 5 to 6 per cent. per annum interest in the Saving Bank Branch, with the satisfaction of knowing that the security is undoubted, the funds of the institution being all invested in mortgages on first-class real estate. This being peculiarly a farmers' institution, we trust they will give it a generous support.

The Farm.

Large Yields of Potatoes.

The following number of pounds from one pound of seed have been raised:

EUREKA.	
Grower.	Pounds
J. L. Perkins, Little Sioux, Ia.	1,600
P. C. Wood, Esther, Ill.	1,403
A. Rose, Penn Yan, N. Y.	1,149
M. M. Rose	1,145
J. I. Salter, St. Cloud, Minn.	1,097
H. V. Rose, Penn Yan, N. Y.	1,066
SNOWFLAKE.	
P. C. Wood, Esther, Ill.	1,417
J. L. Perkins, Little Sioux, Ia.	1,304
F. H. Soller, Verona, N. J.	1,125
J. I. Salter, St. Cloud, Minn.	1,000
A. Rose, Penn Yan, N. Y.	1,080
H. V. Rose,	1,069

Had the crops of one yielded uniform results from the seed equal to the best, Mr. Perkins thinks he would have had over 6,000 pounds to show for the one pound he had buried. All the large yields were grown from very small sets. In some cases single eyes were divided into ten pieces, and in one instance 240 sets were made from one pound, nearly all of which grew well. The sets, with few exceptions, were planted singly, yet we find a product of 970 pounds raised from 62 hills, two sets to each, nearly 10 pounds per hill, and 677 bushels per acre.—Whether this large yield is due only to the very favorable soil they grow in—a rich, black loam, formerly used as a bog yard—and the immense quantity of ashes applied in the hills and as top-dressing, one peck to the hill, or to the two set system, does not appear. It is to be regretted that one part of the plot was not planted with one set to the hill, and the products weighed separately. The planting, in nearly all cases, was done between the 10th and 20th of May, and one-fourth of all competitors dropped the seed on the 10th of May, nearly a week earlier than former years. A comparison of the distances between the hills with the average yield per acre, gives a most interesting and valuable table, as follows: The sets planted at a distance of

2x3 feet	gave a yield of 378 bushels per acre.
2x4 feet	gave a yield of 462 bushels per acre.
3x3 feet	gave a yield of 651 bushels per acre.
3x3½ feet	gave a yield of 441 bushels per acre.
3x4 feet	gave a yield of 372 bushels per acre.
3½x4 feet	gave a yield of 342 bushels per acre.
4x4 feet	gave a yield of 332 bushels per acre.
4x8 feet	gave a yield of 88 bushels per acre.

It will be seen that, although the greatest yield from one pound grow from hills four feet apart, the largest crops per acre were raised at distances of three feet each way, and that as the distances between the hills are increased or decreased the yield diminishes in regular proportion. In the first case there remains waste in the ground which is not reached by the roots of the plants, and in the latter the roots are so crowded that they cannot obtain all the nourishment they are capable of consuming.

Brown Leghorns.

Leghorns stand second in importance and popularity to no breed of fowls, unless it is the Asiatics. They are far-famed as egg producers, and this is not exaggerated. They lay most remarkably—much better than any other known breed of fowls. Their average production is quite two hundred and fifty eggs per annum; they lay as large an egg as the average Asiatic; it has a pure white shell. They are splendid winter layers. The hens are non-setters, and hence some other hens must be kept to hatch their eggs. They mature very rapidly; cockerels begin to crow at six weeks old, and pullets lay at four months. They are remarkably hardy, and sure to live, with ordinary care. They will live and thrive where other fowls would perish, and bear confinement well.

Although only recently brought prominently before the public, they have attained a popularity excelled by no other variety. Well deserving are they of all that can be said in their favor; in beauty of plumage and form they are equalled by none; in economical merits they have no superior. They are not so widely known or so common as the white variety, and are much more difficult to breed true to feather. In breeding no variety is the adage "blood will tell" better illustrated.

The Application of Lime to Soils.

Soils rich in organic matter, even though they already contain it in considerable quantities, drained peat swamps, stiff clays, and coarse, heavy soils, and especially those destitute of it, are all benefited by an application of lime. Good results also follow its use on light soils after an incorporation of organic matter, as green manure, muck, or a thick sod or green crop plowed under. Sterile soils are rapidly rendered more sterile by its application. Wet lands show least effect from treatment with lime. Hence such lands must either be drained or receive an extra amount. Clays should also have organic matter applied in connection with lime. It acts most effectually near the surface. The apparent effect is greater the second season than the first, so the most satisfactory results are obtained by sowing broadcast in the early fall, with at most only a light harrowing or brushing. It should be applied in an air staked, fine mechanical condition. The most profitable quantity to apply depends much on the land; wet soils, those well filled with organic matter, and clays, taking most—from ten to forty bushels being recommended, according to the circumstances.

Trial of Onions.

A trial of 98 varieties of onions was made the past season at Chiswick, near London, the seeds of which were contributed by several of the large seedsmen of London, Paris, Erfurt, Boston, etc. Among the best, as reported in the Garden, whose account we condense, are the following.—White Spanish (known also by the name of Banbury, and ten other synonyms), is the one most generally cultivated, is of free growth, and ripens well, large, fair sized ones being four inches in diameter and 2 or 3 inches thick—light greenish yellow, keeps well. White Globe is similar, but is smaller and more globular. Trebons (French) is larger than the Spanish, not very solid, excellent in quality, a poor keeper but a valuable autumn sort. Yellow Danvers, very fine, distinct, pale green, and dark straw color, a fine grower, size medium, very regular, firm and solid, fine in quality, and a splendid keeper. Brown Globe, like White Globe, but darker, an excellent keeper, and much esteemed. Pear-shaped, an elongated globe, not highly recommended. Deptford, of free growth and very hardy, early, brown, flesh tinged red; an excellent keeper. It is known also as Strasburg, Brown Spanish and by several other names. The strongest flavored onion is the Blood Red, which is rather small, dull red; deep red inside; flesh white—very solid, the latest keeper. Wethersfield Red, growth robust, large, very regular, dull red outside, flesh white, firm, solid, mild, excellent, keeps well, "a remarkably fine and handsome onion from America—the finest type of red onion." Silver-skin, medium, apt to split open, flesh white, exceedingly firm and solid; keeps well. Queen, very small, extreme early, white.—Country Gentleman.

Hints About Work for April.

HARROW THE FALL WHEAT AND RYE.—This should be done as early as possible after the surface is dry. The stirring of the ground will start the weeds into growth, and a second harrowing in ten days afterwards will kill them by thousands. At this second harrowing the clover seed may be sown. We have found the best harrow for this purpose to be Thomas', the backward sloping teeth of which passes over the young wheat plants without injury, and help to cover with fresh soil those which have been heaved to the surface by the late frosts.

SOILING CLOVER SEED.—Something ought to have been learned by the frequent failures to get a catch of clover of late years. The seed takes best upon good soil, that has been harrowed and freshened up previously, and fails most frequently when sown upon poor soil, and on the bare, hard surface that has been packed by the winter's storms. This old careless way of soiling ought then to be abandoned, along with the hope of getting a stand upon soil too poor to grow anything else. We have never failed of a "catch," by sowing when the earth was full of little cracks made by a slight freezing; the thawing earth covers the seed. Clover is a good thing with which to seed and restore a soil with, but land can easily get past recovery in this way.

SPRING GRAINS.—All the spring grains are best to be sown early, but what "early" is, depends greatly upon the character and condition of the soil. There are early soils, light, warm, and naturally well drained; on these barley and oats may be sown several days sooner than on cold, heavy clays. As a rule our earlier-sown crops have been the best, even upon our heaviest fields, and to have the work well forward is a temptation to hurry the seed into the ground as soon as the soil is in proper condition for it, but not sooner.

BARLEY OR OATS can be sown upon a fall-plowed oat stubble as soon as the surface is dry, and thus, by plowing the ground in the fall, a gain of valuable time is made in the spring. Those farmers who are now forced to wait for the ground to dry before it can be plowed, may learn a hint for the next season. Make a note of this.

PEAS.—For this crop, in the northern states, Canada-grown seed should be procured, as this is free from the pea-weevil, which bores into much of the seed and injures it. Very few of the seed are destroyed by the weevil, but in sowing infested seed we sow the enemy along with it, and perpetuate its existence. Stirring the seed in scalding water for a minute or two, pouring off the water and drying, a great many of the pupa of the weevils may be destroyed. It is therefore wisest and best to procure seed free from weevil. Peas should be sown with a drill.

FODDER CROPS.—For fodder crops, the following may be sown: 2½ bushels of oats, with 1½ bushel of peas, mixed together, or 2 bushels of barley, and 1½ bushels of tares, together. Spring wheat and rye are not worth sowing when oats or barley can be obtained, as they are deficient in leaf, and make a light yield. These crops may be sown in succession every 10 days, for soiling or for dry fodder, any time through this month.

POTATOES have paid best with the writer on fall-plowed and winter-manured land, and next on a top-dressed clover or grass sod. The seed and labor for a crop of 300 bushels cost no more except some little extra in harvesting (but the latter not at all in proportion to the excess of crop), than a crop of 75 bushels. At this time of low prices it is incumbent upon us that we consider this fact well, and act accordingly. None but perfectly sound seed should be planted.

CARRIOTS.—This is a crop that deserves more attention than it receives, for its value as a healthful food for all kinds of stock. A prejudice exists against it, on account of its slow germination, which enables weeds to get the start of it, the length of the roots and the need for clean culture. By sowing some radish seed in the drill with it, and having the soil deeply plowed and mellowed, and rich, and procuring