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Agriculture.

Charlotte County Agricultural Society.

The Annual Meeting of the members of the Charlotte Co. Agricultural Society, was held in Paul's Hall, St. Andrews, on Thursday 28th inst. The Chair was taken at three o'clock p. m. by the President, Robert Stevenson, Esq., the Secretary read the records of the past year, and also submitted the Annual Report, together with the Report of the Treasurer. Messrs. J. R. Bradford and Thomas Hipwell, were appointed Auditors, and the Treasurer's accounts were submitted to them. The Secretary then read the Annual Report as follows:—

To the Members of the Charlotte County Agricultural Society. GENTLEMEN,—In accordance with our Annual custom, we now lay before you the accounts of the Treasurer, together with a tabulated statement of the financial position of the Society, which we are sure must prove satisfactory, and will now in this our Annual Report, briefly refer to a few matters, which we think may be of interest to you, and profitable to us all. In compliance with, as your committee of management thought, the wishes of a majority of the members of the society, the hour for commencing the ploughing match, was changed from the forenoon to the afternoon; the change appeared to work very well.

The Committee of Management met as frequently during the past year, as the interests of the Society required; they always embrace any opportunity that presents itself in the direction of the improvements of stock, when it is at all within the means of the Society; they therefore took advantage of the Government's importations of pure bred sheep, to secure a ram, which was selected and purchased for the Society by M. J. C. Andrews, Esq. The ram is a very handsome one, and reflects credit upon Mr. Andrews' judgement, the price paid was fifty-five dollars. In compliance with the regulations of the Department for Agriculture, the ram was, after having been duly advertised, offered for sale at public auction, and knocked down to James Russell, Esq. of the Parish of St. Croix for twenty-one dollars. We are quite sure that the ram could have fallen into better hands, for the intelligent interest taken by Mr. Russell in the improvement of stock, and in agricultural pursuits generally, is well known, and further the central location of his farm, will make it very convenient for those in the district who may require the services of the ram for their flocks. If the result of the introduction of this animal, and prove as satisfactory, as did that of the pure bred, neat cattle previously introduced by the Society, it will have reason to feel more than compensated for the loss sustained in its funds.

The past season, in the early part thereof, was remarkably dry and free from rain, as a result thereof, the Turnip Crop, which in this section of the country, is a very important one, was delayed in growth, and the yield to a very appreciable extent diminished. Very early in the season the potatoes were struck with the rust, and a crop that previous to this promised such good results, at digging time turned out at least thirty three per cent. less quantity than had at one time been reckoned upon. However the loss has to some extent been cured, by the ready sale, and good prices obtained this fall, in consequence of the unusual demand for potatoes in the United States market, prices at one time reaching two dollars per bushel. It is to be feared, that induced by the high prices, some parties have sold themselves short, and that next spring, a scarcity of seed will prevail. The wheat crop, has proven to be a good and profitable one. The action of the Provincial Government in importing seed wheat, gave a great impetus to the raising of this cereal, for it is unquestionably true, the farmers could not have sown such a large acreage as they did. It is estimated that almost enough wheat has been raised in the Parish of St. Croix to bread the residents thereof. The yield per acre was not behind that of the much wanted western wheat growing districts twenty five bushels to the acre being commonly the result; the average quantity of seed to the acre was two bushels. It seems now to be demonstrated, that with a proper preparation of the soil, and with the selection of the fields the soil of which contains those chemical ingredients, that science has discovered to be required for the growing of wheat, or the soil lacking those elements, its introduction thereto, by application of the right kind of fertilizers there is no good reason, why our farmers should not successfully cultivate the cereal.

The Agriculturist.

A WEEKLY JOURNAL DEVOTED TO AGRICULTURE, LITERATURE, AND NEWS.

ANDREW LIPSETT, Publisher.

"AGRICULTURE THE TRUE BASIS OF A NATION'S WEALTH."

ANDREW ARCHER, Editor

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A Good Word for the Jerseys.

The testimony regarding "Jerseys" is rather conflicting. We lately quoted the opinion of Mr. J. B. Wallace, in favor of the Guernseys as a larger and hardier breed, of the same fine milk producing race. The Jersey cow is not a poor man's cow or will it thrive on poor pasture and rough usage, but it is, no doubt a most excellent animal in the proper hands. An Indian correspondent of the *Country Gentleman*, writes:—

"The inquiry and demand for choice Jersey cattle is on the steady increase all over the country. Breeders and dairymen are waiting up to the realization that the only cow in existence, from which can be made fine butter and in large quantities, is the Channel Island cow, and they are being introduced as grades or thoroughbreds wherever practicable. Indians has the reputation of manufacturing more butter than any other State in the Union, and to illustrate the superiority of Jersey butter, Beech Grove Farm disposes of from 150 to 200 pounds weekly at 40 cents per pound (yearly price), while the butter market is quoted to-day in Indianapolis at from 4 to 15 cents per pound and the very best dairy butter rarely sells for more than 25 cents. Whenever Jersey butter is known it is appreciated, and sells at advanced rates, as it deserves."

Sheep Nomenclature.

Sheep breeders in England apply to their sheep, a number of terms not used, and little known on this side of the water. The *New York Sun* gives the following explanation of these terms:—

For instance, the male is called a ram, as here, also a tup. While with his mother, he is called a tup or ram lamb, a heeder, and in some parts of the west of England a pur lamb. From the time of weaning until he is shorn, he has a variety of names, being called a hog, a hogget, a hogger, a lamb hog, a tup hog, or teg, and, if castrated a wether hog. After shearing, when probably a year and a half old, he is called a shearer, a shearing, a shear hog, a diamond or diamond ram, or stud, and a shearing wether when castrated. After the second shearing, he is a two-shear ram, or tup, or wether. In the north of England and Scotland, he is a tup lamb until shorn, and then a top hog, and after that a tup, or, if castrated, a diamond or wether. The female is a ewe, or grimmer, and sometimes a theave, a double-toothed ewe, or teg, and afterward a two-shear, three-shear, a four-shear theave. In some of the northern districts, ewes that are barren or have weaned their lambs are called eild or yeld ewes.

THE SEASON FOR EDUCATION.

Every farmer should possess a few books on the art of agriculture, for reading and study during the winter months, as we know that it pays well to seek hints from the experience of other workers in the same field. The farmer, who knows the whys and wherefores of his success, is better fitted for securing success in the future. Now, the principles of agriculture are ever correct, and are continually finding application in practice, and therefore each farmer should know what they are, and how their application can influence the crops. Then, there are a class of books telling of the how to do. Such, each farmer should possess, and read and study, for it takes but a small hint of a better course to start the better farmer into action, which shall result in saving or making money. The winter season should be the season for educating the man into thought, preparatory for action. The summer season should mean the application of thought, gained both from self-experience and outside-experience, to the soil and the crops. The whole year should furnish time for developing the powers of the mind, which is to control nature towards working out the desire of the man. Now, farmers, don't be afraid of printer's ink, but patronize it, only using judgment derived from experience, in interpreting what is impressed upon paper.

WELL-KEPT FARMS.

A well ordered farm, well chosen stock, comfortable buildings, a neatly-kept garden, road way or entrance way, gates well hung, fences well kept, shade trees, ornamental shrubbery, paint without and whitewash within—all these are worth more to the farmer in money value than a few hundred dollars carefully scraped together and jealously hoarded and loaned to needy neighbors at interest. No investment pays so well as money judiciously spent in farm improvements. Draining wet land will pay fifty to one hundred per cent. on its cost every year; good stock will pay equally well; good roads will turn their cost every year; a gate will save its cost in a short time; a good fence may save its whole cost in one night; a well-kept garden, a neat lawn, orchard and shade trees, which need not cost \$100, have added ten times that amount to the value of a farm, and comfort and self respect gained through the outlay for these and from their possession are worth more than the cost.—*New York Times.*

The farmers of the Bay Side, are still determined to secure a market for their surplus turnips in Boston, they have a strong faith in the result of pluck and perseverance they believe, that the turnips grown in this district surpasses in flavor, and other good qualities, those grown elsewhere, and this belief is shared by a great many others, the further believe that they will yet constrain the people of the "Hub" to entertain the same opinion. The result will be to secure a demand for these turnips in the Boston Market, such as was obtained in St. John for some years past, where St. Andrews turnips have always commanded a higher price, than have done any others.

The hay crop so far as we can learn, has been an average one. Prices for almost all kinds of farm produce, except potatoes, rate lower this year, than they have for some years past, but as a compensation, manufactured and imported goods of all kinds rate correspondingly low. The committee of management, believing that the introduction of a good Stud Horse into this county, was most desirable, and would greatly encourage the breeding and raising of a better class of horses, have had under consideration from time to time, the ways and means of procuring one. They very lately heard that one of the best of the Pecheron Stud, imported four years since by the Government was for sale, they at once instituted enquiry as to the terms on which he could be purchased; finding that the price named exceeded the means of the society, and believing that it did also that of the other Societies in this county, the committee made a proposition to the other Societies in the County, with a view of, by united action, securing the horse for the County; the proposition they thought was a feasible and a reasonable one, viz., that each Society in the County appropriate one-half of their Government grant each year, for say four years, or less, which would be governed by the price paid. A committee from each Society, in proportion to the stock held in the animal, to be appointed, they to have its control and management. The proposition was favorably received, but the St. Croix Society, as your committee have learned, are in treaty for the purchase of the horse on their own account; the negotiations looking towards joint action of the Societies, remains in abeyance.

It is a source of satisfaction to all right minded people, that greater interest is being manifested in the pursuit of agriculture—which no doubt to some extent is caused by the general depression that so widely prevails in commercial, mechanical and manufacturing interests. People begin to think of the farms that were once productive, but which, by a reckless system, or no system of cultivation, were in a common phrase run out; and abandoned; the owners rushing to the towns and cities, where they for a time secured an ephemeral success; but when the days of stagnation came,—as periodically they will—when freights went down, workshops and shipyards closed, and building operations were suspended; when Saturday night after Saturday night there were no wages to take home; when want began severely to press, and the children cry for food, then the memory reverted to the old farm, which, although it was treated so badly, was starved and neglected, they never refused a return in proportion to the labor expended upon it. Then the determination is at once formed to return once more to that loving mother earth, that when cultivated, no hard times ever caused it to cease yielding its increase. In this province of ours, no man need be without a farm. The Government are prepared under the "three grants act," to give farms to all who will take them, requiring only for payment, that within a certain fixed period, improvements shall be made thereon, these improvements being solely and entirely for the benefit of those who make them. To those who dread going into the forest, there, to hew out a home for themselves, there are plenty of chances to purchase farms; farms that have been abandoned by their owners as worn out, but which, like many abandoned mining claims in the gold regions, prove perfect gold mines to those who patiently and perseveringly work them. In the words of Rev. M. F. Clarke, as published in a recent number of the *Montreal Witness*. "It was a mistake to think that land was poor, simply because it was old. Farmers ought to take a lesson from nature, which when the tree sheds its leaves, converts them into a manure to keep up the fertility of the soil, from whence nourishment for the tree has been drawn, and will yet be. Look at

nature's plan, even as shown in the fence corners of the farm, and it will be seen that it enriches the soil. That plan is every year to return to the soil something in the shape of fertilizers, and thus keep gaining a little every season. Will it pay to continue the present style of exhausting husbandry, or turn over a new leaf, and go to work scientifically, and make farms more productive." The Rev. gentleman also said he would rather start upon an old farm, than upon a new one with all the difficulties and trials incident to the latter. On working an old worn out farm, he found his first mistake was in the idea that he could restore fertility to the soil by applying manure; he found it was too costly a method, as he could not procure enough on the farm. He then tried another plan; another agent about which farmers seemed to know little, and used less, the fertilizing properties of which were discovered simultaneously by a chemist in England, and a practical farmer in New York state—was red clover—and this he tried with perfect success. Timothy was nearly as exhaustive in its effect as a grain crop. Clover, unlike any other crop, actually seemed to increase the fertility of the soil, instead of decreasing it. Its long, tap root strikes deep down into the soil, with its countless fibres pumps up the nutritious elements from the subsoil, and brings them up on the surface of the ground; while the broad leaves draw from the air ammonia. Although it is supposed that all leaves absorb ammonia from the air, the clover leaf is the only one that has been "caught in the act." Plaster, which fixes ammonia, is therefore a most valuable material to apply by sowing on clover fields, and increases the yield in a reasonable degree. Thus it is seen that what the tap root does below ground surface, the leaf does in the atmosphere. A farmer with a hundred acres of land can keep enough stock to manure about ten acres, and no more, but by care he can fertilize another ten acres, by means of clover, and by this method the whole farm could soon be brought up to a higher state of fertility. Our farmers lose manure by the wretched way in which they keep their barnyards exposed to all kinds of weather, which rapidly destroys the fertilizing properties of manure.

We would urge upon farmers the necessity of organization, meeting together frequently in clubs for the interchange of ideas; farmers as a rule too much neglect this. Why is it that farmers send so few from their own ranks to represent them in Parliament? Is it because the farming interest are of so little importance, no, no, a thousand times, no, for upon the whole superstructure of society rests; for without bread we cannot live. But there is more than bread required. The intellect must be cultivated, advantage must be taken of the means of education placed within our reach by the Common Schools of the Country, and then by meeting with each other in your clubs or societies, you will in presence of your fellows learn to express your ideas without embarrassment, and thus cultivate the art of speech which will enable you to advocate the claims, the interests, the rights of your class, in our Legislative Halls.

Another educator is the Agricultural Newspaper, we cannot help thinking, that every farmer who does not subscribe for a good Agricultural Journal is guilty of a blunder, and a crime against his children. While we do not wish to say a word against agricultural papers, published in another country, we must say that in our humble judgement a paper published in our own province, ought to be first considered, for it is more apt to contain information on farm culture suited to our own immediate locality, than will be found in papers elsewhere published. In this connection we would invite attention, to the *Agriculturist*, a paper published in Fredericton, and would urge upon our people its claims for a generous support.

Before concluding we desire to place on record our sense of the great loss our Society has sustained by the death recently of two active members of the Committee of Management; we refer first to the death of the late John Curry, who for so many years took such an active and intelligent interest in the working of our Society; it will be hard to replace him, or to find in any respect his equal. Immediate cause, that led to his death, was a wound received from a bull, at the St. Croix Agricultural Society's Fair, held at St. Stephen, where he was acting as a judge. He was always ready to do all he could to forward the interest of our Society, with whose Committee of Management he was associated so many years. And secondly the death of the late Benjamin Pettegrove, after a painful illness,

He like Mr. Curry took an interest in the success of our Society, was for several years a member of the Committee of Management, but being of a quiet manner, did not so actively engage in the work as did Mr. Curry. It is seldom that we have to record the death of two of our members in one year; their decease is a solemn warning to us all, and in solemn tones saith to us, "Be ye also ready; for in such an hour as ye think not, the Son of Man cometh."

About the time we presented to you our last Annual Report, the rumblings of war, were heard all over Europe, and at one time, Old England, had determined, that her interests required, that she should say to the Northern Bear, "stop, thy ravages must proceed no further, thou must return to thy lair again," and in order to enforce obedience to her command, the guns were loaded, the hand was on the sword, and British tars, and soldiers stood "ready as ready," for the signal which would have led to mortal combat. But by the great skill of British Statesman war was happily averted, and the premier, was able on his return to England, to announce to his nation, that he had brought peace, with honor, and the world hoped for its continuance; but even while we address you, our countrymen, are engaged in battle, in the dreadful passes of the mountains bordering upon Afghanistan in India, pouring out their blood in defence of the honor of their "Motor Flag of England," which has braved "a thousand years the battle and the breeze," and which, although it may "hang to the mast, a shattered wreck, will never float over a slave." It must to-night be the prayer of every loyal heart, that success will crown their efforts, and that right speedily.

Since last we met together in Annual Meeting, the gentleman who by favor of our Queen, held the high and honorable position of Governor General of this Dominion, has at the expiration of his term of office, taken his departure from our shores. Nothing that we can say, can in any adequate sense, illustrate how strong a hold he and his amiable wife, the Countess of Dufferin had taken of the affections of our people, we trust that they may long be spared in honor, happiness and prosperity, and we feel assured that should Lord Dufferin be again called upon to serve Her Majesty, he will do so in such a manner, as to add new lustre to his name.

To-night, in another part of our Dominion, thousands of our fellow countrymen, are engaged in giving a right loyal Canadian welcome to the Princess Louise, daughter of our beloved Queen, who comes to our shores as the wife of our newly appointed Governor General, the Marquis of Lorne. Right welcome are they both, and may our Dominion increase in importance and wealth, under their gentle rule, and may they find in Canadian hearts and homes, a full equivalent for those they left behind. In conclusion we tender to the members of the society our thanks for their kind co-operation and support, without which, any efforts made by us, would have been in vain. We urge upon all, this fifty ninth anniversary of our society, the continuance and cultivation of that bearing with each others faults, which has in the past years, done so much to keep our society together, and earnestly request each member to become an active canvasser for new members. There are a great many farmers and others who remain outside of the society, and who take no interest in its working, who might, and ought to be enrolled as active members. There ought to be no difficulty in increasing our membership to one hundred at least. "With a long pull, and a strong pull and a pull all together this can be done; we are willing to do our share. Will each member do the same? Indulging in the hope, that on the presentation of our next Annual Report, should God spare us until that time, that we shall have the satisfaction of recording a large addition to the membership and consequently to the usefulness of our society, we subscribe ourselves, your obedient servants.

J. S. MAGEE, Secretary.

By a unanimous vote the report was adopted, and ordered to be placed by the records of the society.

The Audit Committee reported that they had carefully examined the accounts of the Treasurer, and found every item of expenditure accompanied by vouchers, and strictly correct. The report of committee was adopted. It was moved, seconded and carried, that as a recognition of the services of the Secretary, and as a compensation for his labor in writing the Annual Report, and collecting statistics for his returns to the Department for Agriculture, that ten dollars be added to the usual five per cent. allowed for charges of management.

The following gentlemen were elected office bearers for the ensuing year, viz:—

- ROBERT STEVENSON, Esq., President,
- ALEX. T. PAUL and JAMES RUSSELL, Esq., Vice-Presidents.
- JOHN S. MAGEE, Esq., Secretary-Treas.

Renovating Worn Soils.

We copy a letter from a correspondent of the *Country Gentleman* on the subject upon which the Secretary of the Charlotte Co. Agricultural Society touches in his Report, which we publish in another column. The letter was written in answer to an enquiry touching the speediest, practical and cheapest mode of recuperating worn out land, with red clover. Red clover, lime and gypsum are by far the cheapest fertilizers within our reach. It is not so essential that a coat of green clover be plowed under in early or mid-summer as some imagine. I would never advise it, for the reason that you only turn water under and lay bare the soil to rain, sun and wind. The office of clover is to shade the ground; protect it from a burning sun, washing rains and wind. In so doing, the ammonia which is in constant process of creation is protected and retained. It is to vegetable life what blood is to an animal life, and therein lies the marvelous effect a dense, heavy coat of clover has on the ensuing crop. The effect depends in a very slight degree upon the roots, stems, or blades, which some suppose to be the agency. Then it is clear that the clover should in some form remain as a clover to the ground until the last day before plowing for the corn crop which should follow.

If in June it is cut off for hay it soon rallies and affords shelter, and should not be pastured, if the aim is to get the soil in good heart for a crop. The ensuing summer, if it is desired to sow wheat, plow it down a few weeks before seeding time, and that is the time to scatter the lime over the plowed ground, having then plenty of vegetable matter to decompose, to prepare it for food for the wheat plant. Then sow a peck of clover seed per acre on the wheat in April following. In May or early June the gypsum is usually sown when there is a still, damp morning; two or three pecks to the acre being enough. Its use lies in fixing the ammonia, retaining it, and attracting the carbonic acid gas from the air. Gypsum is in no sense food for plants, but is highly useful in concentrating other elements.

Such a rotation with inexpensive manures, such as 100 bushels of lime per acre, a peck of clover seed and gypsum will, in every instance, bring up and if it is not too wet or undrained, and is far more durable and far less expensive than by the use of phosphates, guano, or other mineral preparations, which are only within the reach of wealthy amateur farmers and require renewed applications each crop, whereas land restored by the use of the system herein set forth, will remain again for many years. This line of treatment has never failed to bring up land to a highly productive standard, and is not attended with much outlay of cash. Everything but the trifling cost of the gypsum is usually produced on the land by the labors of the farmer and family. Hundreds of worn out farms have been rescued from dilapidation and ruin, and an accepted truism that as long as "clover will catch," the farm can soon be restored to paying fertility, and by such rotation is even getting more productive and profitable, for after some years of such treatment the land will bear harder farming; that is, two or three crops may succeed a good coat of clover before laying down to clover again.

Although new land should be subdued by the use of the large (some call it English) clover. Nothing else so effectually rots out stumps and kills weeds and sprouts, and prepares the land for the plow and good paying crops. Wild new lands should always have it sown on the first grain crop grown. It saves a vast amount of labor, for in a few years it so tames the ground and clears it of enemies to the plow, that it works like old ground and is good for full crops.

One great error is often fallen into, and that is following the old tradition that a bushel of clover seed will do for eight acres. That may have been enough to clover the land partially when it was new, but whoever aims at getting up his land in a speedy and profitable way, should sow a bushel on four acres, so that his land may be thoroughly shaded.

Artificial Fattening.

A correspondent of the *Country Gentleman* has the following interesting observations on the artificial fattening of fowls:—

"The fattening of fowls for market has for a long time occupied the attention of poultrymen in this country, but while nearly every known natural process for making the birds take on flesh has been put in practice, little or no regard has ever, I believe, been paid to the use of artificial means, for the purpose of bringing about easier and more rapid results."

In France, and some other countries the continent of Europe, the fattening of poultry has for years been made a study, until it has been reduced almost to a science. Nature is assisted in her work whenever it is practicable, and many curious and ingenious instruments for feeding the birds, have been invented. Probably one of the

most simple, as well as the most effectual of these machines, is now in successful operation in the poultry establishment of a gentleman near Paris. It is constructed in the form of a small rubber pipe about four feet in length, one end of which is attached to a little pump, while the other is placed in a vessel holding the food, which is in a liquid form. The fowls are put in a large cage or coop, which is separated into compartments holding only one bird each, room enough being allowed for a very little exercise. It is ascertained by experiment, just how much food each fowl can comfortably digest, and the amount is marked on the coop under each division. The food, consisting of a mixture of Indian meal, barley meal, milk and water, is put into the machine, which is rolled up in front of the nests by means of a light truck, and the operator, opening the bird's mouth, inserts the tube and gently pumps the fluid into the crop, a small faucet being turned when the sufficient quantity has been introduced. A skillful operator will thus feed about sixty fowls an hour, and perform the work neatly and without cruelty. After having been fed in this manner for a few times, the birds become very tractable, and rather seem to enjoy the operation. The time required to fatten poultry treated as above, is from fifteen to twenty days, according to age and previous condition.

There has always been more or less difference of opinion with regard to whether or not fowls artificially fattened are in a healthy condition, and fit to be used as an article of food. I do not pretend to claim they are, as I have not yet fully satisfied myself with reference to that question. However, according to the experience of those who have employed referred to, the fowls seldom die from disease, are on an average very healthy, and when killed and properly prepared for the table, will bear the inspection of the most fastidious epicure.

When to Kill Pigs.

A story is told about a man who had a hog of peculiar color, which a visitor noticed.

Several years later, the visitor returned and saw the same hog which he remembered by its peculiar marking, and not much larger than before. He asked with some curiosity whether his guess as to the identity of the animal was correct. "Why, yes, of course," replied the farmer, "it is the hog which we keep to eat up the sweat. We should not know what to do with our swill if we killed him." I had a hearty laugh at the idea of keeping a hog for the sake of feeding it; but after all, this plan, in a modified form, is too largely practiced all over the country. Wherever a 'hog is kept twelve months, to make the weight it should in six or eight months, the fact shows that much of its food has been wasted. All the food required to barely sustain life without growth is dead loss in feeding pigs. All the profit from feeding comes from the surplus beyond what is needed to keep the animal from falling away. It is possible with some breeds, to feed heavily and profitably, till the hog is fifteen or eighteen months old, but it is rarely done. As a rule, the results come from feeding pigs all they will eat till they are six or eight months old. At this age, they should weigh 175 to 200 pounds, and if sold then, the pork will usually bring more per ewt. than if it was heavier. Pig pork is the best, and the preference for it in the markets is well deserved.

Sows for breeding may profitably be kept later. Pigs from old sows are stronger, and they generally bring larger litters. This plan is entirely compatible with fattening pigs early—is in fact an essential part of it. A sow can easily have two litters of pigs a year, one in spring and one in fall. Beginning to fatten these as soon as possible, and on an average he will be ready to kill at any time. If the summer, beef, mutton or chicken should, as far as possible, take the place of pork, salt or fresh, at the farmer's table. By having two litters of pigs per year, and fattening and killing the pigs as needed, more pork can be made from the food consumed, the farmer's family will live better through the year, and on an average he will be able to sell more pork at higher prices, than by the present method. The sow for breeding should be a large framed animal, with good digestion, and healthy. If kept breeding pretty closely, she will bear heavy feeding without becoming too fat. So far as possible, she should have a run in clover in summer, and roots or other green food in winter. It is more important that the boar should be thoroughly bred.

Grade pigs grow faster and fatten more rapidly when both parents are full blood. For quick fattening the boar should be of a smaller breed than the mother. If more pigs are produced than can be fattened readily the surplus will usually sell at a good profit. In fact with a large litter it is always best to sell one, two, or three, as the remaining pigs will do enough better for the extra feed they will get. That a part is more than the whole, is a paradox often proved true in feeding stock, and is never more applicable than in growing and fattening a litter of pigs. Vary often a farmer can fatten one or two fat pigs at three or four months old, and make the remainder weigh nearly as much as the whole would have done with the same amount of feed.—*Ex.*

At Oxford, N. H., apples are so abundant that farmers are giving them away, and older sets at \$1.50 a barrel and is hard to get rid of at that price. A resident of Rumney recently sold forty bushels of apples at two cents per bushel.

Soluble and Reverted Phosphate.

It is known that phosphate of lime may occur in three forms in our common phosphatic manures; one insoluble in water, another soluble, and a third standing between the others, being insoluble in pure water, but, unlike the insoluble phosphate, soluble in a solution of ammonium citrate; the last is what is known as the reverted phosphate, or, as it is sometimes called, precipitated phosphate. As it is thus more readily taken up by certain solvents it is presumed to be more soluble in the soil water from which the plants draw their food, and to be, therefore, more valuable than the insoluble compound: some agricultural chemists rate its value at about one fourth less than that of the soluble phosphate; others have considered the two as equally valuable, while still others have looked upon the reverted as worth no more than the insoluble phosphate.

In order to throw some light on the disputed question Petermann, in Belgium, manured oats in pots with soluble and reverted phosphate, and obtained the same yield with both. In the following year, 1877, he continued the experiments, and with wheat obtained similar results; with peas a little better crop, even, was obtained with the reverted phosphate. Petermann informs us that Grandean, of the Experiment Station at Nancy, has performed some field experiments on the large scale with the two phosphates on potatoes, rye, rape, wheat, mangold, barley, and maize; in four trials with each kind of plant the yield was in most cases nearly the same with the two fertilizers, and where there was a difference it was but slight, and sometimes in favor of the one and again in favor of the other.

These results, if confirmed by further experiments, will have an important bearing on the manufacture of superphosphate and on the methods for their chemical examination. It will be a matter of no concern whether much or little of the phosphoric acid that is converted into more soluble forms by the action of the sulphuric acid on the bones or the mineral phosphate exists in the product in the form of reverted instead of soluble phosphate, and in the chemical analysis both phosphates can be estimated together in one series of analytical operations.—*Prof. G. C. Caldwell in New York Tribune.*

CUT OR GROUND HAY.

In some places hay is cut into inch and half inch pieces and then ground, for the purpose of feeding cattle, horses, &c., in the belief of its adding to the nutrition of the food. We always doubted this theory, for the reason that hay fed in the usual manner performed all the offices of nutrition, as it was perfectly digested, and there was nothing more to be attained. But, in order to sustain our theory, we consulted an old, careful livestock keeper, who had many horses, and who, in a long series of years, studied the profit and loss in the various supplies for his stock. He said there was nothing gained in feeding cracked corn, but, on the contrary, there was a loss in the increased price demanded for it. Also that cut hay was a loss to the extent of a trifle. Good hay—and none other should be fed—is eaten up clean where not too much is given at a time. Oats should be fed whole, mixed with a little bran and moistened. He said he usually gave each horse in the evening a couple of ears of corn in the cob, and they were greatly relished. His horses were in the best of health, having lost but two by disease in thirty-years.—*German Town Telegraph.*

EFFECT OF SALT ON WHEAT.

In an interesting series of experiments recently made on the farm of the Royal Agricultural Society of England, the manurial value of salt was unmistakably indicated. An acre of wheat dressed with three hundred pounds of salt yielded thirty nine bushels of grain, while an adjoining acre, left unmanured, produced only twenty nine bushels per acre, with the straw imperfectly developed. The entire cost of the crop is not stated, but this experiment shows that the additional ten bushels resulting from the salt were produced at a cost of thirty cents each. In another case a piece of ground intended for wheat was ploughed the preceding fall, and again in May, when it was sowed with salt, and afterward ploughed before seeding. On the 1st and 2nd of September wheat was sown at the rate of two bushels to the acre. The crop when harvested, yielded, according to the estimate of the owner, Mr. John Parke, not less than forty bushels of grain to the acre, with a luxuriant growth of straw. From these and many similar cases the inference seems to be that salt is a specific.