

Colonial Farmer

POSTAGE PAID

SUBSCRIPTION—\$1.00 a year

OLD SERIES, VOL. 13 NEW SERIES VOL. 4.

FREDERICTON, N. B., JUNE 18, 1877.

NO. 37, WHOLE NUMBER 720

Correspondents.

For the Colonial Farmer.
RURAL TOPICS.

SEEDING STRAWBERRIES.

Probably nine-tenths of the people of the United States have an idea, that if we plant the seed of any variety of strawberry we should produce the same sort only; but that is not the law that governs the production of plants from the seed. Suppose that we take any named variety, and grow from its seed a million of plants, not one will be identical in all respects with the parent plant. Every plant produced will be a *distinct variety*. We may find among them all, after fruiting them, a few that are very large and fine; but nearly all will be of no special value. It generally takes about a thousand plants from the seed to obtain a variety worth cultivating that is equal to, or superior to any known, by sowing the seed on a single berry. Nor does it seem to make any difference in results, by selecting choice large sorts to obtain seeds from, as we stand as good a chance of obtaining fine, large varieties from the seed of poor, small berries as from seed of the best sorts known to exist. In this case, "like does not produce like;" yet it is well to select good varieties as parents, as they do not produce inferior sorts to those grown from ordinary kinds. There are men who claim to be able to produce valuable varieties, by fertilizing a pistillate (female) plant by a staminate (male) one, by growing them away from all other sorts, each being selected for some good quality. Then the seed of the pistillate plant is planted, and the result, these men claim, is fine, new varieties. This is all imaginary, as I have many times found; and fruit-growers may talk of "hybridized" strawberries as much as they please, their new varieties are nothing but *chanced seedlings*. A man who had spent seventeen years in "hybridizing" varieties, at last obtaining one very fine variety, while I took a few seeds and planted them in a raisin box, and succeeded, by mere good luck, in obtaining a variety about as large as his sort, and a good deal more prolific. The growing of new varieties is an interesting work to all persons who have a tendency that way; and I recommend a trial of it, as a variety that will make a man his fortune may be produced from a few seeds sown.

HOW TO PLANT, ETC.

Take any variety of ripe strawberries, and wash them in dry sand or earth, till they are thoroughly mixed, using sand or earth enough to leave the mixture in a good condition to be sown. Then select a piece in the shade, to be made rich with finely pulverized manure, and the soil to be made as fine as meal, on the top of which sow the seed evenly, sand and all; and over it sift through a coarse sieve enough earth to cover the seed a quarter of an inch deep. If you have no such sieve sprinkle finely pulverized earth on the bed by hand, then water carefully from a water pot; and in about two weeks the plants will begin to appear, first with two leaves no larger than the head of a pin; and ten days later a third, serrated leaf will appear, showing the plant to be strawberries. Leave them to grow till October, merely keeping the bed free of weeds; and as cold weather approaches lay down a few sticks about a half an inch in diameter, then cover lightly with hay or straw. The sticks are to support the covering, and prevent the plants from being smothered. In the spring they will be found to be in a growing condition; and they should then be transplanted where they can have room enough to fruit, which will be the third year from the seed.

CANADA THISTLES.

If all the labor expended on exterminating Canada thistles in the United States were paid for at the rate of a dollar a day, the sum would probably pay off our national debt. But the question is, how can they be destroyed? I once had this pest in my garden, and I was told that by cutting them off with a hoe as fast as they appeared they would die before fall, "as no plant can live long by such treatment." Well, they were so cut off from spring till fall, and the next they appeared as before, and they are probably in the same garden yet, which place I sold 20 years ago. At the same time I had a field that was covered with thistles, which was mowed several years, and the most of the thistles disappeared. The theory was among the farmers of the vicinity thistles are cut off near the ground, at a certain stage of their growth, and a rain comes soon after being cut, filling their hollow stalks with water that kills them; and this appears to be true. Ordinary plowing of the thistle land once in two or three weeks

will not kill them; but a case that came to my notice was as follows: A cut the thistles in August close to the ground and put a tablespoonful of fine salt upon the head of every stalk. This did not kill them, but it so weakened their vitality that three plowings the next season destroyed them all. I once killed a patch of these thistles by sowing the land to buckwheat so thick that it completely smothered them. A man who wrote on this subject some years ago, said that he had cut thistles several years, from the 15th to the 25th of August, and they had always died.

HAY MAKING.

It is generally supposed that every farmer knows how to make hay; but many of them manage their hay very badly. I consider the following points applicable to the case:—

1.—Get ready for haying in advance. See that your machines are in good order, and as far as possible guard against delays by breakage, the loss of nuts, &c., by having duplicate parts of machines that are most liable to get out of order; and also keep a supply of nuts on hand, to be used in the case of losing one while the machine is at work.

2.—Begin your haying early if you have much to cut, as you lose less by cutting a part of your grass before it is ripe for the machine than you do by waiting till all of your grass is ready to cut; and then have to cut a part of it a week or two after it ought to be cut.

3.—When the time comes to commence mowing, which should be when there is a prospect of fair weather, go ahead, and do not wait till the dew is off, on account of any injury the hay may sustain, as you will never be able to see any difference in value between hay from grass cut with or without the dew upon it. Of course, men differ on this point, and they will differ to the end of time.

4.—Just as soon as the sun has dried the upper surface of the grass, the spreading operation should commence; and you should have help enough to do the work well. No grass put during the previous afternoon, and up to 10 o'clock that day, should remain unspread at dinner-time, unless it be such as is light, and is left in good shape to dry by the machine, as is often the case. Keep the grass moving as long as possible before you begin to protect it for the night; and here we will say that I never would allow a load of hay to be put into my barn that was cut the same day, except when the grass had been delayed to be cut till it was past its prime, and partially dry, so that a few hours of sun and wind sufficed to cure it. I never saw any reason to regret curing hay well; but I have thrown away tons of it that had been mowed in my absence, in a half cured state. No grass can be injured by two days of sun and air, when cut at the proper time.

5.—When the time comes to commence haying, you should have all other work finished, as the cultivation of crops; because you should be able to devote your whole time to your hay when it is ready to cut. No half-awake farmer is fit to have the management of cutting from 50 to 100 tons of hay, as it requires energy and good judgment to cure and house, or stack it well. Nor should a farmer be absent from the field an hour; and he should let his help understand that he "means business." In the morning he should be up before the sun rises, and see that his men are up also; and if anything is to be got ready for the day's work, see that it is attended to before breakfast. A man can impart a wonderful degree of "mobility" to his hired help, by letting them know what is expected of them, and setting them an example of activity. Farmer A. always is found in his fields in haying time at work at seven o'clock in the morning; but farmer B. comes yawning along to his work an hour later, apologizing by saying that he "could not get ready earlier."

SCAB IN SHEEP.

Scab in sheep may be cured by a mixture made by boiling 1 pound of tobacco in water, adding one pound of sulphur after the boiling is done; and the water used for this weight of drugs should be, when ready to dip, five gallons. Add also, if the water is hard, $\frac{1}{2}$ lb. of soda for each 5 gallons. When dipping the sheep, keep the liquor at 100° to 110°, and rub the sheep well when immersed, keeping them in about two minutes, and rubbing all the time. Two weeks later dip and rub again, to render the cure sure.

FOODER CORN.

A writer in the *Country Gentleman* gives his method of preparing the land and sowing fodder corn as follows: "We pulverize the land with a lump crusher, made in the following manner: A log of hard wood, eight feet long and a foot through, is drawn by a pole inserted into the log in the

middle, and braces fastened on to keep the log from swinging. It leaves the land in better condition than a roller, because all the lumps are crushed, instead of being simply pressed down. The ground is then marked with a marker, then one man makes a light furrow with a corn plow, another man drops the seed into the furrow, and another covers with a till cultivator, with the middle tooth taken out and the side teeth turned so as to turn the soil upon the corn. Then the lump crusher is run across the rows, which leaves the fields smooth, so that the rows can be seen as soon as the corn is large enough to cultivate." Fodder corn can be sown as late as August 1st, except in the extreme Northern States, where July 15th is as late as is advisable to sow it.

A SCARE CROW.

A good way to keep crows away from corn-fields is to string up or fifteen kernels of corn on a long horse hair (from the tail), and a crow will swallow one of them, and the note of alarm will soon be sounded, and it will be impossible for him to dislodge the grain, and in a short time he will cut his own throat by scratching at the corn and hair; and in consequence of the note of the crow makes, all of his companions will leave the field and not pull up any more corn that season.

Selections.

The Independent Farmer.

How pleasant it seems to live on a farm, Where $\frac{1}{2}$ turn's so gaily dressed, And 'neath the shade of the old beech tree, As the sun is just sinking to rest; But not half so pleasant to hoe in the field, Where the whole-grass is six inches high, With the hot scorching sun pouring down on your back—

Seems each moment as though he would die! How pleasant to sit in the cool porch door, While you gaze, half reclined at your ease, Half asleep, at your beautiful field of grass As it sways to and fro in the breeze; But not quite so pleasant to start with your scythe,

Ere the morning sun smiles over the land, And work till your clothes are completely wet through, And blisters cover your hands, In keeping a dairy there's surely delight; And it speaks of contentment and plenty, To see a large stable well filled with choice cows,

Say numbering fifteen to twenty; And yet it seems hard when you've worked from the dawn Till the sun disappears from your sight, To think of the cows you have yet got to milk Before you retire for the night.

But the task fairly over you cheer up once more, And joyfully seek your repose, To dream of the cream-pots with luxury filled, And milk-pans in numberless rows; But the sweet dream is broken when early next day

You're politely requested to churn, And for three weary hours, with strength ebbing fast, The victim despondingly turns!

But no one disputes that the farmer is blessed With true independence and labor, Whose food don't depend on the whims of mankind,

Like that of his mercantile neighbor. For God in His mercy looks down from above And patiently gives him his bread, Provided he works eighteen hours a day, And devotes only six to his bed.

Henry W. Herbert.

A profligate young nobleman, being in company with some sober people, desired leave to toast the devil. The gentleman who sat next to him said "he had no objection to any of his lordship's friends."

A dreamy writer says it would be curious to follow a pound of silk from its spinning until it became a lady's dress. No doubt; but most men would prefer to follow it after it became a dress, and the lady was in it.

The "Hawkeye" man ruefully remarks: "Was it Her Brother?" is the title of a new novel. We think not. It is our impression that the large gentleman in a plaid coat, who was kicking him down stairs and calling for the dog, was her brother."

When a Buffalo young lady—so writes a correspondent—parts from her beau who is too bashful to understand the nicer usages of his position, she will say: "William, if you were to kiss me tonight, he afraid my ma would hear it. But if I creak the gate she won't know the difference!"

The Law Against Pork-Selling. The following is the text of the law in the State of New York against pork-selling, and the police officers have received orders to see it enforced: "SECTION 1.—Any person who shall keep any room or building, or any part or portion of any room or building, or occupy any place upon public or private ground anywhere within the State, with apparatus, hooks or paraphernalia, for the purpose of recording or registering bats or wagers,

of selling pools; and any person who shall record or register bats or wagers, or sell pools upon the results of any trial of contest or skill, speed, or power of endurance of man or beast, or upon the result of any political nomination, appointment, or election; or being the owner, lessee, or occupant, of any such room, building, or part or portion thereof, shall knowingly permit the same to be used or occupied for any of the purposes aforesaid; or shall therein keep, exhibit, or employ any device or apparatus for the purpose of registering or recording such bats or wagers, or the selling of such pools, or shall become the custodian or depository, for hire or reward, of any money, property or thing of value, staked, wagered or pledged aforesaid upon any such result, such person shall be deemed guilty of a misdemeanor, and shall, upon conviction, be punished by imprisonment in the county jail for not more than one year, or by fine not exceeding \$2,000, or by both such fine and such imprisonment."

Stick to Your Business. There is nothing which should be more frequently impressed upon the minds of young men than the importance of steadily pursuing some one business. The frequent changing from one employment to another is one of the most common errors committed, and it may be traced more than half the failures of men in business, and much of the discontent and disappointment which render life uncomfortable. It is a very common thing for a man to be dissatisfied with his business, and to desire to change it for some other, which, it seems to him, will prove a more lucrative employment; but in nine cases out of ten it is a mistake. Look around you, and you will find among your acquaintances abundant verification of our assertion.

There is an honest farmer who has toiled a few years, got his farm paid for, but does not grow rich rapidly, as much for lack of contentment mingled with industry as anything, though he is not aware of it. He hears the wonderful stories of California, and how fortunes may be had for the trouble of picking them up; mortgages his farm to raise the money, goes away to the land of gold, and after many months of hard toil, comes home to commence again at the bottom of the hill for a more weary and less successful climbing up again. Mark the men in every community who are notorious for ability, and equally notorious for never getting ahead, and you will usually find them to be those who never stick to one business long, but are always forsaking their occupation just when it begins to be profitable.—*Ex.*

How many people are there who really know how to make a mustard plaster? Not one in a hundred at the most, perhaps, and yet mustard plasters are used in every family, and physicians prescribe the application. The ordinary way is to mix the mustard with water, tempering it with a little flour; but such a plaster as this makes it simply abominable. Before it has half done its work it begins to blister the patient, and leaves him finally with a painful, flayed spot, after having produced far less effect in a beneficial way than was intended. Now, a mustard plaster should never blister at all. If a blister is wanted, there are other plasters far better than mustard plasters; then, use no water, but mix the mustard with the white of an egg, and the result will be a plaster which will "draw" perfectly, but will not produce blister on the skin of an infant, no matter how long it is allowed to remain on the part.—*Ex.*

Having often seen inquiries in your columns for something to keep bugs off squashes and melons, and having tried everything I ever heard of, and found at last what seems to be, here at least, a sure cure, I wish you to help me make it known. Nearly two years since, while talking with a friend of the ravages of the bug, she said: "Have you ever used plaster of paris?" Of course we took the hint, and that season, 1875, we saved cucumbers and squashes with it—we had no melons. Last summer we used it on melons, summer and winter squashes, and cucumbers with very satisfactory results. Now for the process. Get your plaster of paris at a marble shop, where you will find it cheap and cheapest. Watch your vines closely, and when the leaves have grown large enough to please the striped bug do up early in the morning while the dew is on, taking a basin for your plaster, get on the windward side of the vines, and sprinkle the powder carefully over them till they are well whitened. If there are striped bugs on them you will see them double up and roll off in a very disgusted manner. It is just as good for the watch and gone over after every shower, as the wind and rain will wash most of the plaster off. Don't forget that gypsum, or plaster as it is called here and in many other places, will do. It will not. Plaster of paris is the thing.—*New York Tribune.*

What do we Strain out of Milk? I had the opportunity recently of examining, under the microscope, certain minute brownish particles which were removed from milk by cloth strainers, after it had been strained in the usual way through wire gauze. These brown particles were determined by our village doctor, a man of no mean attainments in his profession, to be of "epithelium," which must have come from the interior of the udder. The straining cloth was double, and a good many of these particles were arrested by the second fold. In addition to these epithelial scales, there were multitudes of very minute hairs, so small that they were hardly visible except as a downy dust, to the naked eye. Now it is certain that the presence of epithelium in milk is a great incitement to change, and it may be to changes unfavorable to high flavor in the butter. One, to whom I spoke about this, sees in these impurities important aids to digestion, and thinks he would be actually "flying in the face of a benedict Providence," to strain them out. This is only another argument in favor of the view that factory butter cannot really compete with that which is produced in the very best private dairies. Straining the milk as it is drawn, without question, separates many of these particles, as well as of the fine hairs, at the outset from the milk, so that their influence for good or ill is of but short duration.—*Am. Agriculturist.*

Maintaining the Flow of Milk. "What is the best milk-producing food which can be fed to a heifer 21 months old, dam Short Horn, sire Jersey, with calf two weeks old? Cost of food not important so it produces plenty of good, rich milk. Heifer is now giving 12 to 14 quarts of milk per day, and has all the grass she can eat. Now what else shall be given her? She has water always before her. Milk is wanted for butter. Also, when shall the heifer be allowed to take the bull again—that is, to keep up her milk-

producing qualities without injury?" So long as the heifer has all the good fresh grass she can eat, it is not advisable to give extra feed, nor is it easy to find a food which, fed in connection with grass, will increase the flow. Meal very finely ground and scalded with grass, will increase the richness and flavor of the milk, but it will not be likely to increase the quantity so long as grass is plenty and fresh, nor will it pay in the long run to crowd a heifer so hard early in her milking season. As soon as grass begins to fail, either in quantity or freshness, it will contribute both to the milking capacity of the heifer, and to the welfare of her owner to give extra feed to keep up the flow produced by grass. Nothing further should be desired in a heifer, especially one less than two years old.

The flow of milk can be most readily and cheaply prolonged by supplementing the failing grass with some good soiling crop, such as mown grass, green peas and oats, or green clover and felder corn, used together; the soiling food always to be well wilted before feeding. But if expense is not to be counted, the same result can be obtained by feeding finely ground oat and corn meal and bran, taking equal weights of each and mixing with the day's food in a pint of meal. This will give a high-flavored and rich milk, and if fed as freely as it can be without producing scouring the flow will keep up to an amount that will surprise those who have been in the habit of feeding scantily to note to what an extent the milking capacity of heifers can be cultivated by liberal but judicious feeding. Heifers thus fed will be in a condition to give milk continuously, and may be permitted to come in again at any time to suit the wishes of their owners.—*N. Y. Tribune.*

Turning Cows To Pasture. There is great difference of opinion among dairymen in regard to the time when cows should be turned to grass. Many contend that all kinds of stock should be kept off pasture grounds during spring until there is a good growth of grass. In other words, the herbage must not obtain such a start that the stock will not be able to eat it down short during the season, and thus they believe a supply is more fully insured.

Another plan, practiced by many, is to let stock have the full run of pastures as soon as the snow is off the ground, allowing it to pack on the old grass and eat of the early vegetation as soon as it springs up. The chief reason urged for this latter course is, that the change from hay to grass in feeding should be as gradual as possible, in order that stock may be kept in good health; that if cows in spring are turned suddenly from dry food upon luxuriant pasturage, the change is very liable to produce serious troubles—excessive scouring—bloating and other disorders that impair health, often for a considerable length of time, and even if they do not lead to the total loss of her milk for longer or shorter periods.

Now, a middle course between the two plans named, we think is to be preferred, and will give the best results. In the first place, it may be remarked, pasture lands will be injured in productiveness by allowing stock to roam over the fields early in spring before the ground is settled, and while it is soft and easily trodden up. The "poaching of the land" by the frequent tread of cattle destroys the grass in places, while the surface is rendered uneven or filled with holes made by the foot of cattle. Again, when the frost is coming out of the ground it is often rendered so loose in texture that the roots of the grasses are easily pulled out, and cows feeding on the old herbage not infrequently injure the turf by pulling up grass by the roots. It will be advisable, then not to turn stock upon pasture until the ground is fully settled and is not in condition to be injured by the feet of cattle. Nothing is gained by allowing pastures to get a tall growth of grass before turning stock upon them, because they tramp the herbage down in places, and, by neglecting to seed other portions down, it soon becomes hard and woody and will not be eaten.

Grass is sweetest and gives the best results in milk when it is eaten off at regular intervals, and is not allowed to get large growth. In this way the product is greater, while the exhaustion to the soil is less than it is where tufts of grass are allowed to mature and go to seed. Cows ought not to be turned at once from hay to pasture, since a sudden change of this kind will be apt to affect their health. A better way is to give them the run of pastures for an hour or two at first, and so allow them gradually, from day to day, to become accustomed to the change of food, and they should

be fed from time to time with hay after they have been turned to pasture together. Cows will frequently eat greedily of hay when they have been out to pasture for a considerable length of time, and rations of hay will often be found useful in correcting a tendency to looseness of the bowels or scouring.

Some dairymen are in the habit of giving salt to animals at certain intervals of time, but the better way is to keep it constantly before them or within their reach, so they can take it daily or at will. Nature regulates the quantity of salt needed much better than it can be done by proportioning it out at intervals, and if the animal always has it within reach there is no danger of over-feeding and the milk will show less variation in character. An important point to be observed in the management of Milch stock is to keep them in a healthy, thrifty condition, and if cows on turning to grass are inclined to lose flesh and run down weak and thin, they should be fed rations of ground grain, and thus kept up to the maximum in health and strength.—*Rural New Yorker.*

The English Box System. One of the greatest drudgeries on a farm is the manure question when many horses are kept, each day a large pile of manure has to be removed, and generally it is piled against the outside wall of the stable, making an unsightly heap, taking up much room, hatching hosts of insects, and after a year or so has to be removed elsewhere to make room for more. Though I have seen many stables, both rich and poor, from those of our largest ranches down to the hovel made of shakes, I have never seen any planned on the English box system. It is true, it is for some reason not advisable for liverly stables, nor for the stable of fine carriage horses, and those horses whose coats always require the finest shine and bright appearance; nor would it do for those who are not able, from circumstances, to erect either substantial or commodious buildings; but there are many for their farm horses (as the breed is who are able and do build good stables more improved generally throughout the stable, this will become more necessary), who do not avail themselves of this plan, and I have found by conversation that all with whom I have spoken have been ignorant of any such system. When I built my barn I built it with the intention of using it with my brood mares and their colts, and I made each box large enough to hold mother and colt comfortably. Each animal is in a loose box by herself, and to work the system properly they should never be tied. Of course a few hours at a time makes no difference. As animal the s have their freedom in their own boxes they turn about constantly, and consequently they drop their dung wherever they may be standing. After a horse gets accustomed to being loose he takes full advantage of it. He eats at his manger until satisfied or until nothing is left; and he naturally turns exactly the other way to rest, either lying down or standing. The manure is dropped evenly or tolerably so all over his box, and as weeks go on he accumulates the heap under his feet. In making his bed, the first layer put down of bedding may be moderately plenty, but the next day and forever after it should be only just enough to cover the droppings of the previous day and no more. That will keep him clean, and the less bedding put down, consistent with moderate cleanliness, the better. On this depends the whole success of the system. If too much be put down it allows a certain amount of air to be standing in the dung, and the whole begins to ferment and heats and is very unhealthy. The horse walking about packs the whole level and compact. I have just removed the dung from under four of my mares, and I found it from top to bottom, solid and as cold and fresh smelling as if only one day old.

The system has many advantages, and these are a few: It saves a great deal of labor in removing each day's excrement. It saves a great deal of bedding. I use only what the animals leave in their manger each day. When the manure is finally removed, it is just as easy to put it into a wagon, cart it away and use it advantageously, and it almost compels the removal of it completely away from the standing. The animal gets better rest by being allowed to rest as he chooses. The bed is softer and drier than being bedded on the ground, and the urine is absorbed by the manure instead of by the ground, where it afterwards decays and gives rise to injurious gases and obnoxious smells. And, lastly, but not to any farmer who appreciates the value of manure, not by any means the least, it remains per-

fect in strength and purity, not having been washed by rains and baked by the sun until everything of any value is gone. The bulk to be removed is only about one-third the size that it would be on the ordinary plan, as very little of it is composed of litter and bedding.—*Pacific Rural Press.*

Introducing Swine. It is not my intention to go into details in regard to introducing, though I well know that, to give it what the subject deserves, would require much space and time, but will merely give my views, founded on experience and careful observation, and hope it may be the means of calling out the views of breeders generally on the subject of introducing, whether in reference to swine or to other stock.

There are very many persons, and breeders of experience too, who contend that introducing is always injurious, and that it should never be practised with any kind of stock whatever, for injury in many ways will be the evident result of such a pernicious practice.

In one particular sense I admit that such will be the case, and it is where a breeder persistently breeds in-and-in, generation after generation, without any definite purpose, merely to refine his stock, as he calls it. Doing anything aimlessly, without a fixed purpose or type to breed to, will result in failure and loss; and why should not breeding in-and-in result the same, when carried out without aim or purpose?

In breeding there are very many things to be considered, and, unless guided by a good and experienced judge of animals, no good will accrue to the breeder from such a course. Furthermore, in breeding animals, especially in a small way, the breeder does not have such a number of animals to select from, and consequently is not as fortunately situated as one who has many to select from, in commencing the establishment of a "strain" or type of animals he wishes to be the originator of. It is absolutely necessary to know your stock well, too, before commencing introducing, to be sure there are no hereditary ailments or disqualifications lurking in their systems, in a dormant condition, for introducing generally develops and intensifies the bad as well as the good qualities. This is a point often overlooked by the breeder, but one of great and vital importance, nevertheless. And it is often to a neglect of this point that is traceable the disappointment and loss resulting from an otherwise judicious coupling of carrying out a comparatively well-marked-out plan of introducing.

The age at which it is best to breed young animals, is another point to be well considered. Having selected the animals which answer best to your "type," it is best not to breed them until they are of fair age, and of good size; for, breeding swine too young weakens both the dam and the offspring; for, the dam, not being well developed, cannot nurse her offspring properly, consequently they are but feeble, consequent on a lack of nourishment.

To establish a "strain" in swine cannot be accomplished except by several years of persistent and judicious breeding to a purpose. Perhaps the very best way, noticeably,—as it partially does away with the tendency to deteriorate, which is sometimes the case when breeding brother and sister together for several generations, without a break,—is to select two out of a litter, which comes nearest to the ideal animal, and couple them at the proper age. From the litter produced by this coupling, select either a sow-pig which shows to have near approach to the ideal, or else a boar-pig, the selection being dependent upon whether the parent sow or the parent boar possesses the greatest number of merits; if the parent boar has the best record, then choose a sow from the litter, and vice versa; and then couple the mother and son, or the father and daughter, rather than coupling brother and sister. By a judicious continuance of this, much good will result in the refinement of the breed, without any bad results, if done knowingly, and there will be no loss of stamina, which may, though it does not always, result from breeding brother and sister together indiscriminately. I know of a very valuable herd of Berkshires which have been ruined by inbreeding, for the simple reason that the owner did not go to work with a purpose in view, and did not use care and judgment in the selection of the animals for breeding. The object was to refine the breed, and the result was a failure, not only to refine, but to keep up the before fine quality of his stock. Stock-breeding is a science; and, until persons realize that, they had better not venture many experiments not based on some practical views.—*Wallace's Monthly.*

feeding from time to time with hay after they have been turned to pasture together. Cows will frequently eat greedily of hay when they have been out to pasture for a considerable length of time, and rations of hay will often be found useful in correcting a tendency to looseness of the bowels or scouring.

Some dairymen are in the habit of giving salt to animals at certain intervals of time, but the better way is to keep it constantly before them or within their reach, so they can take it daily or at will. Nature regulates the quantity of salt needed much better than it can be done by proportioning it out at intervals, and if the animal always has it within reach there is no danger of over-feeding and the milk will show less variation in character. An important point to be observed in the management of Milch stock is to keep them in a healthy, thrifty condition, and if cows on turning to grass are inclined to lose flesh and run down weak and thin, they should be fed rations of ground grain, and thus kept up to the maximum in health and strength.—*Rural New Yorker.*

The English Box System. One of the greatest drudgeries on a farm is the manure question when many horses are kept, each day a large pile of manure has to be removed, and generally it is piled against the outside wall of the stable, making an unsightly heap, taking up much room, hatching hosts of insects, and after a year or so has to be removed elsewhere to make room for more. Though I have seen many stables, both rich and poor, from those of our largest ranches down to the hovel made of shakes, I have never seen any planned on the English box system. It is true, it is for some reason not advisable for liverly stables, nor for the stable of fine carriage horses, and those horses whose coats always require the finest shine and bright appearance; nor would it do for those who are not able, from circumstances, to erect either substantial or commodious buildings; but there are many for their farm horses (as the breed is who are able and do build good stables more improved generally throughout the stable, this will become more necessary), who do not avail themselves of this plan, and I have found by conversation that all with whom I have spoken have been ignorant of any such system. When I built my barn I built it with the intention of using it with my brood mares and their colts, and I made each box large enough to hold mother and colt comfortably. Each animal is in a loose box by herself, and to work the system properly they should never be tied. Of course a few hours at a time makes no difference. As animal the s have their freedom in their own boxes they turn about constantly, and consequently they drop their dung wherever they may be standing. After a horse gets accustomed to being loose he takes full advantage of it. He eats at his manger until satisfied or until nothing is left; and he naturally turns exactly the other way to rest, either lying down or standing. The manure is dropped evenly or tolerably so all over his box, and as weeks go on he accumulates the heap under his feet. In making his bed, the first layer put down of bedding may be moderately plenty, but the next day and forever after it should be only just enough to cover the droppings of the previous day and no more. That will keep him clean, and the less bedding put down, consistent with moderate cleanliness, the better. On this depends the whole success of the system. If too much be put down it allows a certain amount of air to be standing in the dung, and the whole begins to ferment and heats and is very unhealthy. The horse walking about packs the whole level and compact. I have just removed the dung from under four of my mares, and I found it from top to bottom, solid and as cold and fresh smelling as if only one day old.

The system has many advantages, and these are a few: It saves a great deal of labor in removing each day's excrement. It saves a great deal of bedding. I use only what the animals leave in their manger each day. When the manure is finally removed, it is just as easy to put it into a wagon, cart it away and use it advantageously, and it almost compels the removal of it completely away from the standing. The animal gets better rest by being allowed to rest as he chooses. The bed is softer and drier than being bedded on the ground, and the urine is absorbed by the manure instead of by the ground, where it afterwards decays and gives rise to injurious gases and obnoxious smells. And, lastly, but not to any farmer who appreciates the value of manure, not by any means the least, it remains per-

fect in strength and purity, not having been washed by rains and baked by the sun until everything of any value is gone. The bulk to be removed is only about one-third the size that it would be on the ordinary plan, as very little of it is composed of litter and bedding.—*Pacific Rural Press.*

Introducing Swine. It is not my intention to go into details in regard to introducing, though I well know that, to give it what the subject deserves, would require much space and time, but will merely give my views, founded on experience and careful observation, and hope it may be the means of calling out the views of breeders generally on the subject of introducing, whether in reference to swine or to other stock.

There are very many persons, and breeders of experience too, who contend that introducing is always injurious, and that it should never be practised with any kind of stock whatever, for injury in many ways will be the evident result of such a pernicious practice.

In one particular sense I admit that such will be the case, and it is where a breeder persistently breeds in-and-in, generation after generation, without any definite purpose, merely to refine his stock, as he calls it. Doing anything aimlessly, without a fixed purpose or type to breed to, will result in failure and loss; and why should not breeding in-and-in result the same, when carried out without aim or purpose?

In breeding there are very many things to be considered, and, unless guided by a good and experienced judge of animals, no good will accrue to the breeder from such a course. Furthermore, in breeding animals, especially in a small way, the breeder does not have such a number of animals to select from, and consequently is not as fortunately situated as one who has many to select from, in commencing the establishment of a "strain" or type of animals he wishes to be the originator of. It is absolutely necessary to know your stock well, too, before commencing introducing, to be sure there are no hereditary ailments or disqualifications lurking in their systems, in a dormant condition, for introducing generally develops and intensifies the bad as well as the good qualities. This is a point often overlooked by the breeder, but one of great and vital importance, nevertheless. And it is often to a neglect of this point that is traceable the disappointment and loss resulting from an otherwise judicious coupling of carrying out a comparatively well-marked-out plan of introducing.

The age at which it is best to breed young animals, is another point to be well considered. Having selected the animals which answer best to your "type," it is best not to breed them until they are of fair age, and of good size; for, breeding swine too young weakens both the dam and the offspring; for, the dam, not being well developed, cannot nurse her offspring properly, consequently they are but feeble, consequent on a lack of nourishment.

To establish a "strain" in swine cannot be accomplished except by several years of persistent and judicious breeding to a purpose. Perhaps the very best way, noticeably,—as it partially does away with the tendency to deteriorate, which is sometimes the case when breeding brother and sister together for several generations, without a break,—is to select two out of a litter, which comes nearest to the ideal animal, and couple them at the proper age. From the litter produced by this coupling, select either a sow-pig which shows to have near approach to the ideal, or else a boar-pig, the selection being dependent upon whether the parent sow or the parent boar possesses the greatest number of merits; if the parent boar has the best record, then choose a sow from the litter, and vice versa; and then couple the mother and son, or the father and daughter, rather than coupling brother and sister. By a judicious continuance of this, much good will result in the refinement of the breed, without any bad results, if done knowingly, and there will be no loss of stamina, which may, though it does not always, result from breeding brother and sister together indiscriminately. I know of a very valuable herd of Berkshires which have been ruined by inbreeding, for the simple reason that the owner did not go to work with a purpose in view, and did not use care and judgment in the selection of the animals for breeding. The object was to refine the breed, and the result was a failure, not only to refine, but to keep up the before fine quality of his stock. Stock-breeding is a science; and, until persons realize that, they had better not venture many experiments not based on some practical views.—*Wallace's Monthly.*

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