THE AGRICULTURIST

Will be published every

SATURDAY by

ANDREW LIPSETT,

at the

OFFICE ON QUEEN STREET,

Opposite City Hall, F'ton, N. B.

Subscription, - $1.50, in advance.

☞ Should the supscription remain unpaid for 3 months from the time the first paper is sent, the subscriber, the price will be $2.00.

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

VOL. 1. FREDERICTON, N. B., AUGUST 24, 1878. NO. 20.

BOOK AND JOB PRINTING

of all description

EXECUTED ON MODERATE TERMS.

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Ordinary advertisements, 11n., 1st insertion, $1.00
Each subsequent insertion, - - .50

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Agriculture.

For the "Agriculturist."

A King's County farmer writes us as follows:—

"Farming! what should the farmer write about when feeling so disposed, but about farming! If he has not got farming on the brain, he ought to; and if he does not grow wheat he ought to; because he thereby obtains a special benefit from the soil, which he could not otherwise secure from growing oats and buckwheat, as these have only surface feeding roots. Farmers who have experimented in growing wheat and oats in alternate ridges of sod, high, dry land, have been rewarded with more bushels per acre than of oats. There have been years of extreme drought, where oats yielded almost nothing, and when wheat, on account of its deep rooting nature, was a good crop. Farmers of most experience in growing wheat, find that it is more prolific on poorer land, deeply tilled, than on richer land, shallow tilled; so that it is the subsoil that wheat roots feed on, and it is on the surface that grass feeds. Hence the patent advantage of seeding down with wheat. And again: wheat will stand up when oats want to lie down on seed. What is wanting to ensure a good yield, is to plough deeply. Give the team two or three quarts of oats more aday, while ploughing in the fall especially, and on land approaching to clay, which is the best wheat soil. After ploughing not less than ten inches, it will pay 100 per cent on the cost, if the ground is drilled as high up as possible, in order that the action of the frost may pulverize it, and prepare it well for the reception of the seed, and its growth in spring.

It must be encouraging to young farmers to think that now-a-days they can raise their own bread, not being necessitated to buy it like a dependant mechanic, but like a real farmer, raise it for sale to supply the wants of those who need it.

Next to wheat the cultivation of the turnip, with its deep-feeding, searching root, and subsoil proclivities, should engage the attention of the farmer. The turnips call for deep ploughing, and must have it, on most lands, before it will yield a paying crops, with little manure. Artificial manure, as it occupies small space and does not invite drouth like barnyard manure, is best adapted for this root. The drills must be quite flat to encourage a good yield, six hundred bushels per acre, say. Any ambitious boy can thin out a quarter of an acre per day, of ten hours, after the cultivator leaving the drill on top about five inches wide.

There are more turnips lost by overwarm than by overcool storage. Yellow turnips are of a much warmer nature than potatoes; and are by horsemen considered better feed than carrots. For many horses standing idle, a bushel of turnips is as good as a bushel of oats. But the turnips must be raw; if they are boiled, or well scalded, it will make a difference.

For the "Agriculturist."

A subscriber in Upper Woodstock desires information on the following matter; will some of our readers be so kind as to give the needed advice? He writes:—

"Could you or any of your readers inform me what to do with a valuable mare, seven years old, by way of a cure. She had a colt two years ago, which died when three months old. Ever since the dam has milk in her bag. Last spring her milk veins broke out in scabs, but they are now healed over. The mare has a beautiful coat but it has lately faded."

FIELD MEETINGS.

The farmers of New England have a custom of holding, what are called "field meetings." We do not know whether it is an universal custom there, it is, at least, in vogue in Massachusetts. The members of a farmer's club, will, on invitation, during the harvesting season, visit the farm of one of their number, and walk over the fields and inspect and critise the growing crops, and the methods of culture pursued. Pleasure and business are combined. The guests, who have travelled a long distance on the various lines of railway by which their destination can be reached, are received with bounteous hospitality by the good ladies of the homestead. By the time that they have finished the bounteous mid day meal, and feel like giants refreshed, friends and neighbours of the host have assembled until there is a goodly gathering.

The farm to be inspected, is, of course, operated on by a farmer who has pride in his calling, and who bears the reputation of being a man of progressive ideas, who has always some experiment on hand; who pursues some particular system of culture, and from whom something worth knowing is sure to be gained. The farm is not, probably extensive, fifty acres at most, nor one under the highest scientific cultivation, but one on which the owner with perhaps but moderate means, has persistently carried out with intelligence and industry, his own methods of cultivation, and with excellent results.

The visitors and the neighbours take a walk over the fields, and watch the operations that may be going on, and examine the state of the crops. The host who accompanies them stands ready to answer all questions. His note book is at the disposal of those who require exact information. Questions are asked as to the sort and quantities of manures, and araificial fertilizers used per acre, and as to the cost of producing an acre of grain, corn, oats, or barley. On such a farm wheat is likely, but, as yet, an experimental crop. Leaving the fields, the company visit the vegetable garden, and examine the state of the cabbages, onions, squashes, beets, potatoes, &c. Questions and answers pass as to the best ways of killing the pests, the maggots, and vine borers that destroy the squashes, and Colorado beetles and worms that play the mischief with the potatoes and cabbages. From the garden the company pass to the outbuildings where the agricultural implements are kept, where they discuss the merits of the several ploughs, the Randal harrows, smoothing drags, corn and vegetable markers and cultivators, &c.; and then in the waning afternoon the visitors and outsiders hold an open air meeting of 'the club' beneath the trees of the old homestead, at which the speakers, with all due compliments to their host, remark at all they have seen and learned on their tour of inspection.

The merry-making and bees "which used to be" in the olden time so frequent on the farm have fallen greatly into disuse. The "field meetings," where business and quiet pleasure are combined, seem to suit well the graver and more anxious spirit of these modern days. Might not the custom of holding them be profitably introduced among the members of the different agricultural societies of the Province?

WHENCE PLANTS OBTAIN THEIR SUPPLIES OF FOOD.

Plants get part of their food from the air, through their leaves and other green parts, the rest from the soil through their roots. This was proven by a vast amount of laborious and accurate experimenting, carried on for the most part in European experiment stations, for the purpose of discovering the laws of plant nutrition and growth.

Water.—Plants have the power of absorbing water through their leaves, but the bulk of their supply comes, and must come, from the atmosphere to the soil, and thence to the plant through the roots.

Organic matter.—Carbon, oxygen, and hydrogen.—The carbon of plants is taken from the atmosphere. The leaves absorb carbonic acid, and with the aid of light wrests its carbon oxygen asunder, setting oxygen free, and thus purifying the air, while they retain the carbon. Carbon unites with hyddrogen, oxogen, and nitrogen, to make up the various tissues of the plant, the root, stem, leaf, and seed, the wood and bark, the gluten, starch, sugar, and so on. The atmosphere supplies carbon far in excess of the demands of plants. The best experiments indicate that the carbon is all, or nearly all, obtained from the air. The source of the oxygen hydrogen is not definitely settled. It is very probable that the water absorbed through the roots is the main, if not the entire source of supply.

Nitrogen.—Our cultivated plants get the bulk of their nitrogen from the soil, through their roots. Many years of labor of the best investigators, and many thousands of dollars, have been devoted to the study of the sources of the nitrogen of plant food. The theory that plants avail themselves of the free nitrogen of the air, of which there are thousands of tons over every farm, must be regarded as wrong. The theory that plants in general, and the "large-leaved plants in particular, as clover, turnips, corn, etc., obtain a good deal of combined nitrogen (ammonia and nitrates) from the air by their leaves, is hardly tenable. The gain of nitrogen from this source seems to be very small indeed. The most of the nitrogen of our crops is got from the soil through the roots. The soil gathers some nitrogen compounds from the air, however, and it is extremly probable that it assimilates free nitrogen, and thus, in two ways, stores up atmospheric nitrogen for plant food. The nitrates in the soil, formed mostly from the decay of vegetable and animal matter, are the chief natural sources of the nitrogen of plant-food. Ammonia, which like nitric acid, comes from vegetable debris and from manures, as well as from the air, is also used by plants, Other compounds of nitrogen, no one yet knows what or how many can also be assimilated by plants.

Mineral Matter, or Ash.—The mineral ingredients of plants are derived exclusively from the soil. Of these, potash, lime, magnesia, iron, phosphoric acid, and sulphuric acid, must be furnished to all agricultural plants through their roots and by the soil, in order to their growth. If the available soil supply of any one of these is deficent, the whole crop must suffer. As regards soda, silica, and chlorine, the experimental evidence is not so descive. A small quantity of chlorine has been proven necessary for the perfetieon of some plants. Soda is needed in very minute quantities, if at all, by crops. A little of silica is probably necessary to the perfect blossoming and ripening of grain.

To sum up in a few words: "Air and water together yield the materials of which fully ninty to ninty-eight per cent, of crops is built up. The soil has to give for their nourishment only the two to eight per cent. of mineral matters which remain as ashes when they are burned, and the one half to two per cent. of nitrogen which they also contain."—*American Agriculturist.*

MIXED FOOD FOR STOCK.

A correspondent of the *Country Gentleman* writes as follows on this subject:—

Cattle, in a state of nature, or if left free to their own choice, will feed on a variety of herbage. It is well, therefore, for farmers and stock raisers to take hints from the natural taste of the different animals of the farm and provide accordingly. Very many, I am pleased to say, do thus provide a variety of food for stock confined to the stable or yard; and where this is practiced, thrift, health and comfort of the stock is general, to the advantage of the owner. Without doubt, good hay is one of the best and most economical kinds of food in our northern climate, as it contains the different elements of nutrition in nearly the proportions required; and when land is cheap and labor comparatively dear, and especially where the soil is adapted to grass, hay is, perhaps, the most economical food for general use But we find exceptions to all general rules. Working animals require something in addition to hay, as do milch cows and other animals, where greatest returns are sought. Something containing more nutriment in smaller compass, admitting of more rapid digestion, is wanted. In such case an ecominical food consists of chopped hay, straw or chaff, or some kind of meal. Chopped roots mixed with these other articles, add much to the value of the whole and this is fed more economically if steamed, or if steaming is impracticable, if pressed into some confined space, as a close box or cask, a day or two before feeding, to allow of softening and partial ferment. Straw and meal are found adequate to supply the needs of working animals. Grain alone is insufficient, being too much condensed; coarser food being essential for distending the stomach, and keeping the digestive organs and bowels in good condition. Straw, also contains phosphates in considerable proportions, so essential to supply osseous materials for the wasting bones.

The chaffing of hay or straw makes quite a saving of waste in more than one way. The waste caused by dragging from the feed box and soiling and trampling under foot, is saved, while time and strength are saved in mastication, and more time is had for digestion and assimilation. Cooking also develops the nutritive matter of the feed, saving the animal system this labor which is more economically expended in ordinary work, or other productions. Whatever cutting, bruising, grinding, cooking or fermenting food is practicable—and where is it not in some of these ways?—they all tend to fit it for a rapid digestion and assimilation.

In adopting a mixed food much of the coarser products of the farm can be worked up, which now go directly to the manure heap. Scarcely any of the vegetable products of the farm need be wasted till they have first contributed all the nutriment they contain to the support of animal life. True, by mixing them with the manure they afford whatever of value they have to the next crop, when incorporated in the soil; but what an absurd waste to undergo the labor of producing and reproducing for the use of the stock what we have already secured! Straw and hay often are useful for absorbing and retaining valuable portions of animal excrement which often are left to waste; and where this is the case, they are valuable for enrishing the soil far beyond the materials they naturally possess—but why allow this waste at all when there are so many substitutes for straw available on nearly every farm? Other means can be provided for saving the manure, and the stock can be kept equally comfortable in their stalls and beds.

There is still time to prepare for a greater variety of food for the farm stock before cold weather, and by following out some of these suggestions much may be added to the value and products of the farm animals. Profit is what most farmers work for—would it not then be wise to add to it by adopting economical courses?

FARM LIFE IN NEW ENGLAND.

An article in *Scribner's Monthly Magazine* contrasts "Farm Life in New England" in the present day with what it was in the past, and in some respects is answers as well for New Brunswick as for Maine or Massachusetts. In its last issue, the Montreal *Witness* gives a review of a portion of it, which we reproduce, taking a few liberties with it:—

Spring has come sap-flow and sugar-making slacken. When neighbors meet, the question is, "Have you heard the frogs?" Only one "run" of sap after the frogs peep is the traditional rule. The quick transition from winter to spring is one of the most marked peculiarities of the New England and Canadian year. It behoves the farmer to gird up his loins and quicken his pace, for the stay of spring will be brief. It will depart hurriedly as it came. Passing over the usual routine of ploughing, sowing, looking after the calves, lambs, and poultry together with the other cares embraced in the comprehensive category of "spring work," we arrive at corn planting time. The hickory gives the signal for this important labor. When its leaves are as large as a squirrel's ear (some say a squirrel's foot) it is time to plant corn. The finishing touch is given to the job by setting up a grotesque scarecrow, or tying long stretches of twine to posts and hanging bits of glittering tin on them.

Formerly there came a little lull in work between planting and hoeing, during which it was considered right and proper to take a holiday. The boys and hired men would go a fishing; the older folks would go a visiting. Modern improved agriculture has annihilated this interval of leisure. It is just then that the business of turnip-culture begins in earnest. The land must have its final ploughing and ridging up. All things must be put in readiness for sowing, that advantage may be taken of the first favorable weather about the middle of June. It will be seen in the course of this outline of the farmer's year, that the course of events has abolished nearly all the holidays and merry-makings formerly indulged in by the agricultural community. During the "breathing-spell" just referred to, the path-master was wont to warn out "all hands" to "the performance of the farce termed by stretch of courtesy road-mending." The result usually was to "make good roads bad, and bad roads worse." This old custom still prevails in Canada equally with New England, and our readers will smile as they recognize the truth and perceive the sarcasm of the following sentence: "It is fortunate for those who travel much upon the high ways, that these road-menders do so little, playing at work for a short time, then stopping, leaning on plough-handle or spade to hold grave consultation concerning the mode of doing some part of their task, or gathering about the watering in the shade of a wayside tree, and spending an unconscionable time in quenching their thirst, lighting their pipes, and joking or discussing some matter of neighborhood gossip."

Corn-hoeing is on, the long suffering boy bestrides Old Dobbin, and guides him between the rows while he drags back and forth the plough or cultivator, held, most likely, by one too apt to blame the boy for every misstep of the horse, which buries, beyond resurrection, a hill of corn. It is my opinion that to this first odious compulsory equitation entailed upon the boys of my generation, is due the falling into disuse of equestrianism in New England. Who that had ever ridden a horse at snail's pace among the corn-rows in the lazy days of early summer, when he knew he ought to be catching the fish or hunting the birds' nests he was dreaming of instead of being a clothes-pin to the thin blanket on Dobbin's sharp back, and the mark for the sharper tongue of the plough-holder, would ever, of his own free will, mount a horse? I can speak for one. Happily this particular boy-torture has gone out of fashion, and in the tillage of hoed crops, as in hay-making, the horse is guided by the man who cultivates or rakes." Not only was this old-fashioned plan a species of "boy-torture," but it entailed much needless toil on the horse. It only requires a little careful training to make a steady horse trusty in doing this work, not only without the punished boy-rider, but even without reins. As turnips and other root crops require the same culture between rows, it is well that the importance and practicability of thus training horses should be understood.

The disuse of "bees," formerly so common for logging, barn-raising, sheep shearing, and other objects, is one of the characteristics of the present as compared with the past of New England farm life. It is the same in Canada. "These jolly gatherings, though by many years out-living the old-fashioned husking-bee, have at last fallen into disuse, and their hearty New England flavor is poorily supplied by the insipid sociables and abominable surprise parties that are now in vogue."

It is worthy a moment's reflection how much the tendency of things has been of late years to increase the isolation of farmers and their families. Formerly, hay-making and harvest were occasions for comparatively social gatherings. What with change of work, and the engagement of spare help in the neighborhood, it was for the most part, acquaintances who came together in force at such times. Machinery has done away with all that. The mower or reaper is used to cut so much hay or grain as can be taken care of by the hands regularly employed on the farm. "Bees" are things of the past. Threshing is almost the only job that brings a number of neighbors together, and the clatter of the machine, the whirring about of the straw, and the clouds of dust are not favorable to any intermixture of sociality with the labor. May not the lonesomeness of life on the farm have something to do with the disrelish for it on the part of young people, which is one of the evil signs of the times that are passing over us?

We have not space to notice the tasks that intervened between corn-hoeing and the close of the season. Suffice it to say, there are few changes except those which have been already referred to. After haying, harvesting and gathering in the root crops, any remaining then comes the final scene in this agricultural panorama.

"The last potato is dug and stored, the buck wheat drawn and threshed, the last pumpkin housed, and the cattle have begun to receive their regular allowance of corn-fooder. People begin to feel a pride in the increasing cold, and compare weather notes, and speculate and prophesy concerning the coming of winter. its foundations are again rein-forced with banking, its outside windows and storm-doors are set on their long guard of the winter weather, and all the sons and daughters of the old house have gathered from far and near to hold the New England (now the national) feast of Thanksgiving, and have dispersed. The last wedge of wild geese has cloven the cold sky. There is a wintry roar in the wind-swept hills, and as the first snow-flakes and the last sere leaves come eddying down together, our year of farm-life ends."

OVER PRODUCTION.

Many are complaning of over production, and crying out against all kinds of labor-saving machinery as the cause of the present stagnation of business, and some are so short sighted as to believe that labor can never again be so fully employed until the machinery, to which they abscribe their ills, is put out of existance. They do not see that under the present condition of things a large part of the earnings of labor is devoted to the payment of interest and taxes, consequently cannot be used to buy the goods they would be glad to have. In support of the theory, among other things, it is said that with improved machinery one man can make as many shoes in a day as fourteen men used to in the same time. Then they they say thirteen men must remain idle. This is not the fact. The demand has kept pace with these increased facilities which have reduced the price so poor people are not now reduced to the shifts they once were of mending and doing so much without. The work done with sewing machines is immense, and yet there is as much hand sewing as ever. And so it is in all departments of labor; as labor-saving machinery increases the facilities for production, prices are reduced and the wants of the people multiply, and the present apparrant over-production is but the want of means to buy,

All the talk about prosperity by doing less work, arises from the assumption that too much is produced—that there is too great an abundance of exchangeable and useful products. How it is possible for any human being to assume such a thing as a mystery. It is hardly possible to find man women or child that has enough of everything. The great mass of the people would gladly double their consumption if they could. Very many would gladly consume more food, and most people who have food enough would be glad to improve its quantity. There is hardly one person in a hundred who would not double his consumption of clothing, and more than double his supply of furniture and articles of personal use and adornment, such as watches and jewelry if he could afford to do so. There are very few people who would not be glad to spend more than twice as much as they do in building dwellings and improving their surroundings. If it were possible for once to fully satisfy the wants of all men, new wants would arise, impelling to farther industry. All the manual labor of men, supplemented by all the aid he can possibly derive from machinery—from the force of nature reduced to service—will never be able to satisfy his wants. It is the very fact that human wants are not supplied—that production is not equal to demand—that imperils our labor reformers to write essays, and make speeches in favor of reducing the hours of labor. They have not enough themselves, and they see others about them who have not enough themselves, and they see others about them who have not enough, and they imagine that somehow they and these others can get enough by assuming that there is two much in existance, and thereupon producing less.

The real trouble is, briefly stated, that things are not produced in due proportion. Relatively too much of some things and too little of other things is produced. The result is that exchanges are clogged, and production is arrested. It is because production is arrested, that men who depend wholly upon their personal efforts cannot find employment at good wages. Every man and women alive could work early and late, Sundays as well as week days, without "gorging" the markets, if only he or she knew exactly what to produce.

PEAT OR MUCK AS A FERTILIZING AGENT.

We have been very much interested in the essay on muck and peat as fertilizing agents by Mr. H. Weld Fuller, which we find in Part I of the Transactions of the Massachusetts Horticultural Society, just at hand; because it is of itself timely, and because it has formed the subject of recent thoughts of our own, of which we made a brief article in our last week's issue.

Mr. Fuller says that muck consists mostly of decayed and decaying vegetable matter, with some earthy and mineral admixture, and is nearly in the state of vegetable mould, or "*humus*" sometimes called "*geine.*" The value of this muck depends very much on its position. If it has been continually subject to drainage and leaching, much of its virtue may have run off and little remain. But if it has been confined within a flat basin, without any outlet or overflow, and not too much flooded, it will retain its tannin, nitrogen, and fertilizing salts, which may be converted into the best of plant food. Organic matter must be always at command in the soil, and there is no better way of supplying this organic matter than by mixing peat with *animal manures.* These manures not only tend to modify the mechanical texture of the soil, but they furnish carbonic acid and ammonia, or nitric acid, and the earthly and saline compounds required by plants. They assist in the decomposition of the vegetable matter, while the absorbing muck seizes and retains all the volatile parts, one-half or two-thirds of which might otherwise escape. It has been estimated that one cord of animal manure, properly composted with muck, will make four times its original value in good manure.

As ammonia is the natural food of plants, the best manure is that which will produce and retain the greatest amount of nitrogen, which is the base and principal ingredient of ammonia. If nitrogen is furnished in the solids the atmosphere will supply the hydrogen needed to form the ammonia. Hence the amount of nitrogen it can furnish, mostly determines the value of a manure. Professor Johnston is of the opinion that ammonia is supplied to plants by the natural decay of animal and vegetable substances; and that nitric acid is formed partly by the oxidation of *dead* organic matter, and partly by the union of oxygen and nitrogen through the electricity in the air.

The humus of peat is continually decaying, and is thus continually forming carbonic acid; it is also taking up nitrogen from the air and converting into nitric acid and ammonia. It gives warmth and porosity to the soil, and supplies it with soluble materials; while the insoluble earths are consumed by the acids, and thereby adapted to vegitation. Nitrates, and other salts (without animal manures,) must not be applied repeatedly to the same land. In the absence of humus, no vegetable fibrine or vegetable caseine can be formed. Alkalies, with animal manures, have the power to form nitrates and become very effective. Peat has the power to form alkalies, and this power is of great service.

Dr. Dana says that one cord of fresh muck will neutralize one hundred pounds of soda ash; and that one cord of barnyard manure will decompose from three to six cords of peat. One dead horse well covered with peat, will convert fifteen or twenty tons of peat into a manure equal to the average from the stable; for it will separate nearly all its nitrogen from the other constituents, and hold it in a heap. He thinks, also, that the salt contained in one cord of peat are equal to the droppings of a cow for three months; and, by anylisis, they are found to have the same chemical qualities, excepting that there is less actioning and odor in the peat or muck.

In his concluding summary on the valuable properties of peat or muck Mr. Fuller says: "Decomposed with animal manures it is undoubtedly an admirable manure; especially for high lands, or sandy, gravelly, or loamy soils. In fact it is good on any soil. It is valuable as a *great retainer and feeder* of these; it is valuable as a *constant collector and renewer* of supplies, and as a *great assimilator* of plant food."

Anything about dog days is *appropo* now; An exchange says:

"Dog days were so named because the season of greatest heat in summer in the latitude of the Mediterranean, nearly correspond with that in which the dog star rose at the same time with the sun. To this conjunction antiquity ascribed a malignant influence. The precise time when the dog star rises with the sun is very indefinite. It does not now occur until the 10th of August, when the greatest heat of summer is over. Dog days end Sept. 5th."

PIGS FOR BREEDERS, AND PIGS FOR PORK.

Pigs designed for breeding purposes require a different treatment from those intended to be converted into pork at an early age. In the latter case, the most rapid forcing is the most economical method of treatment, while in the former, a steady, healthy growth is all that should be aimed at. As remarked in a former article in these columns, pork can be made more rapidly and cheaply, with any of our improved breeds of hogs, during the first ten months of the pig's life, than at any subsequent period; but this implies higher feeding than is compatible with a healthy developement of the vital organs, and of the bony structure. When early conversion into pork is the object, the pigs should be fed mainly on concentrated food—the object being to grow flesh—corn, variously prepared, being the most available is a basis, while with those designed for breeding purposes, or to be kept to mature age before being fattened for pork, such a course will not prove a profitable one,

Pigs that are to be kept for breeders should have a mixed diet—plenty of bone and muscle-forming food—and ample opportunity for exercise If permitted the run of a good pasture (clover is the best), a moderate supply of corn will do them good, and aid in promoting a healthy growth; but if the circumstances of the breeder are such that he cannot have the benefit of pasture for his pigs, then he must endeavour to supply a substitute by using a variety of food—such as skimed milk, wheat middlings, ground oats, mixed with oil-meal occasionally A most excellent food may be prepaired by mixing six parts of good peas with five parts of good corn-meal and one part of oil-meal; or the peas, corn, and flaxseed may be cooked, and fed without grinding if desired. Oats and peas ground together, and cooked, make an excellent food. Cooked potatoes, mixed with corn-meal, and make a good combination—in short all the various grains and roots raised on the farm may be used to advantage in raising pigs, and they should nearly all *be* used when the pigs are not allowed the run of a good pasture. A variety of food, such as is above suggested, fed liberally, and accompanied by plenty of exercise, will promote a healthy and symmetrical development, and also ensure a steady growth.

Such a course of feeding as overloads the pig with fat, or forces him to an unnatural growth, is quite likely to result in loss of the reproductive powers. Great disappointment has often resulted from the purchase of unnaturally forced pigs at fairs by inexperienced breeders. The writer himself has bought his knowledge dearly—having on several occasions paid extravagant prices for premium pigs, and found them utterly sterile—and long since adopted the practice of requiring a special guarantee whenever purchasing one that had been "fitted for the fairs."—*Live Stock Journal.*

SPADING HEN YARDS.—As often as once a week, through the hot months of July and August, it will be found a good plan to dig over and turn up the soil, spade-deep, in the earth floors of your fowl-houses, as well as through the runs about the outside of the poultry quarters.

This easy process affords means for exercise again for the birds that are limited to contracted space. A great number of worms, grubs, etc., are thus brought to the surface, which the hens and chicks will devour greedily, and they will search for these vigorously.

This method, if followed up three or four times a month, will clean the premises under foot, and render the ground healthier for the stock to wander over. Before the earth is thus loosened and mellow, scatter whole grain over it—oats, barley or whole wheat. And in this way you may keep the strived up fowls busy, affords them needed exercise, purify the earth under their feet, and prevent many a viciously-inclined hen from acquiring the troublesome habit of plucking the feathers from her more docile companions' necks.—*Poultry Yard.*

All meat-producing animals should be killed when they are in the coolest state, or when respiration is the least active. Their flesh will then keep much longer fresh, and be more beautiful, sweet and healthful. When killed in a heated condition, or immediately after a hard drive, the flesh will take longer to cool through, spoil sooner, while the flesh and fat will have a dark, feverish look, caused by being full of blood, and hence will not be so inviting in appearance, or so healthy as food.

RAISING POULTRY FOR THE MARKET.—In an article on poultry the Philadelphia *Times* says:

As a general rule we do not think farmers pay sufficient attention to the production of poultry for sale. Carefully kept accounts will demonstrate that one pound of poultry can be produced for about half the cost of the same weight of beef or pork, and always meet with a ready market. Another advantage is that it can be attended to quite well, if not better, by women and children than by men thus economizing the labor of the whole family, and directing it into the production of profit for the general purse.

Try the experiment of allowing the children, if large enough, to take care of the poultry for a share of the products, either in eggs on in dressed poultry. Charge them with all the food consumed and credit them with all the eggs or flesh consumed by the family, and note your percentage in the speculation, and the benefit it has been to them. The Maryland *Farmer* puts it in this way: "If farmers who think poultry does not pay, would give their feathered stock to their sons or daughters, with premission to enjoy and own any profit that might accrue from them, they would soon be convinced that there is something in it." There certainly is no more health promoting exercise that that affords by caring for, or having the management of a flock of poultry, and if the flock is any of the pure breeds—there is in addition to the exhilarating influence, an enthusiasm that causes what might otherwise be considered a task to become a pleasure— and therefore profit and pleasure are combined. A young lady in Bethel, Pa., during the year of 1874, kept a strict account of all expenditures for food, etc., for her yard of fowls, and at regular market prices for eggs and chickens and she cleared above all expenses $300, besides having more stock on hand than she started with, Is not this an incentive sufficient to awaken an interest among the numerous fair readers of the farmers in favor of gallinaceous stock? It is certainly worthy of emulation."

BREAKING COLTS.—The time to begin breaking a colt is when it is a suckling by the side of its dam. It should early be taught that it has nothing to fear from the presence of man, and that no harm will come to it from being fondled from head to foot. A very little pains at this period will soon make the colt perfectly gentle, and he may then be broken to lead by the halter, and to stand when tied. All his subsequent lessons should be by gradual approaches; the main point being to inspire him with confidence that he will not be harmed. He should be accustomed to the bridle by no means of the "bitting rig" before any attempt is made to ride him; and the mounting should always be made by "gradual approaches"—in the stall or the the lot when the colt is perfectly familiar with all the suroundings. When it is desired to break him to harness, the same principle of gentleness, and and care to avoid giving fright, should be practised. Place portions of the harness on him at a time, and let him carry it in his stall until he finds that it will not harm him; then lead him out with the harness on, alone, and again by the side of another horse, also in harness. Accustom him perfectly to the use of the lines, then let him make the acquaintance of the acquaintance of the sulky, and push it after him, until he has found that it also is harmless. By pursuing this system of gradual approaches with perfect gentleness of manner on the part of the groom or other attendant, there need never be any trouble in breaking the most fiery tempered colt.—*National Live Stock Journal.*

STAND AT THE HEAD.—Young man, if you are going to be a farmer, be a good one. Don't play second fiddle to any one, be the chief musician yourself. This being second, third, fourth or fifth rate is not just the thing, It is the first that always wins esteem and respect. Study, observe, listen and gather information pertaining to your business from every source, and you can soon know as much as any one. Let no day pass without some increase of knowledge. Whatever stock you have, let it be good and take good care of it and improve it as fast as your means will admit. Whatever fruit you have, let it be choice, and study how to improve, how to market it so as to get the highest price, If you have a garden let it be the first in the heighborhood. Be at the head of the class, not third or fourth or at the foot.—*Rural World.*

Twelve butter factories are, according to the Guelph *Herald,* to be set in operation this spring in the country to the north of Wellington. We wish them every success.