



Agricultural Department.

SWINE AND THEIR HABITS.

The aggregate of swine raised in New England is quite large. No single farmer has a large number, but there is scarcely an exception among them all, where two or more are not annually slaughtered upon the farm. Properly housed, fed, preserved, and prepared for the table, there is no flesh more delicious, nutritive and wholesome. Now is the time to give them special attention. A few suggestions may serve as reminders; may afford much comfort to the animals, preserve health to the family and bring profit to the pocket.

1. Keep the sty and yard free from all offensive odors. This can be done with great profit by adding old litter, weeds which have gone to seed, and muck or loam, two or three times each week during the fall. This course will greatly increase the manure heap. The muck should be laid up this fall for next year's use.

2. Feed regularly. Perhaps three times each twenty-four hours is better than twice. When fed only once or twice, they eat too ravenously, and crowd the system so as to impair digestion and make themselves uncomfortable. They will not grow fast, or fat fast, while in this condition. Never add fresh food to any that may be left in the trough from a former meal. If worth preserving, take it out, work it up with the fresh food, and clean out the trough with clean water and an old broom. This will not seem too painstaking to those of methodical habits, and is the course in which to make money on the animals fed. Add a little salt frequently to the food, and in warm days give them as much pure, cold water as they want.

3. Be careful not to over-feed. Give them no more at one time than they will eat with a good appetite, and leave the trough clean.

4. Let them have a variety of food, so far as it can be made convenient. Give short, fresh grass or weeds every day. In a year of scarcity of grain, we knew a farmer who kept some dozen swine through the entire summer on a few potatoes, slops from the house, and four or five bushels of short, tender grass fed to them several times each day. A space near the hog house was kept smooth and clean, and the grass upon it cut when only one or two inches high. This the swine would eat readily as they would corn, and thrive as well upon it. The piece of land was rich, and was probably cut over twenty times during the summer. No lot of swine on the farm ever did better than these.

5. Classify the animals. Do not place young and old, large and small, in the same rooms. The strong will certainly abuse the weak.

6. Keep all the classes clean, dry and warm. Especially do not compel them to lie on a wet floor with cracks in it, when frosty nights come and keen November winds whistle up about their damp bodies.—N. E. Farmer.

IMPORTANCE OF PROTECTING MANURE.

The practice of keeping barnyard manure sheltered from the weather is continually gaining in favor with farmers. To accomplish this object successfully, covered sheds are found indispensable. In England this plan is very widely practised. The animals are fed and littered in covered stalls in which the manure accumulates throughout an entire season. These stalls, ten feet square, are placed in a shed of any desired length, open at each end, but when occupied closed by doors. The stalls are separated by movable bars, so that when they are taken down, a waggon can be driven through the shed to remove the manure. The floors of the stalls are sunk about three feet below the level of the ground, and the cattle are not taken out until they are sold or slaughtered. During this time the manure accumulates, mingled with litter out to a length of a few inches. As it is trodden down closely the air does not gain access, and consequently it does not heat. It decomposes gradually, being kept moist by the liquids discharged. All the fertilizing elements are thus preserved without loss from washing or evaporation.

The cattle fed in this way are not only fed with economy, but maintained in good health. They are daily carded, and kept clean, and being well supplied with water manifest entire contentment. The increased value of the manure by this plan has been repeatedly proved. The experiments of Lord Kennaird showed a result in wheat equal to 55 bushels per acre with manure thus protected, against 42 bushels with common barnyard dung; and in potatoes the yield per acre was 471 bushels

with protected manure, against 297 bushels with the usual kind. These results clearly show that the gain in manure by this method is much more than sufficient to counterbalance the extra cost.—*Christian Union.*

THE CABBAGE AS A FIELD CROP.—Among the profitable crops to be grown on the farm, cabbages hold an important place. They are not by any means so extensively cultivated as they deserve to be. In the vegetable garden they are of course indispensable for family use. But to every farmer who raises stock it is scarcely less important as a field crop. About ten thousand heads can be raised on an acre, which, at the low estimation of three cents per head, amount to three hundred dollars in value. But if taken from the field and sold at this price, there still remain the loose leaves and stalks which afford a considerable quantity of nutritious food to milch cows, at a time when grass begins to fail, promoting and keeping up a flow of milk in the fall which is not easily obtained from any other food. Where the soiling system has been adopted, cabbages should by all means be used as one of the crops in the succession. The elder Mr. Quincey, of Massachusetts, who is the highest authority on the subject, regards cabbages among the most important plants for soiling purposes. They come in play at a time when the nutritive value of grasses has been injured by frosts, and when the food of stock is changing from succulent grasses to dry fodder, and are therefore especially valuable for the dairy. Cabbages may be grown on almost any soil that is adapted to corn, if an abundance of well-rotted manure is used. The manure of the hog-pen usually produces the best results. This vegetable has been greatly improved within a few years, and some of the varieties are very superior. It is highly nutritious, and the yield is very productive. An acre will easily grow 10,000 heads, and, at an average of five pounds each, would produce twenty-five tons. It is highly probable that by selecting the larger varieties, and manuring abundantly, this product could be nearly doubled.—*Christian Union.*

SEEDING ON SANDY SOILS.—Sand is easily worked, says the *Rural New Yorker*, and farmers accustomed to ploughing and cultivating it are not easily persuaded to take and work heavier lands. The chief difficulty with sand is that of getting grass, and especially clover, to succeed well on it. While rich enough, there is no trouble, but sand needs frequent manuring, and a yearly addition of vegetable matter from some source. Ploughing under a growth of clover every third year will keep the soil up, and a "black sand" with plenty of vegetable matter is one of the most productive of all soils. But if several hoed crops have been taken in succession the vegetable matter is speedily exhausted. The fields become incapable of holding grass roots, and frequently in winter large hollows in the drifting sand are dug by the wind and blown away. What to do with these light sands is a difficult question. It is practically impossible to manure them all, and without manure, much of the most valuable part of the soil will be blown away, so that there will be nothing for clover to take root on the following spring. We will mention a method practised by some farmers who own some of this difficult soil to manage. They sow buckwheat early in July, which is ploughed under in August or first of September, and rye and timothy seed immediately sown. The decaying buckwheat keeps the soil moist, and both grain and grass get a good growth before winter. The roots hold the soil and the top of the plant keeps the wind from reaching it. In April or March following, clover is sown, which gets a better start than as though the field had been left naked.

BEST FOOD FOR SWINE.—What would be the best food for swine in summer would not answer the same purpose in winter. In summer, such food should be given as would keep the animal in an improving condition, and would cause it to lay on a little fat, but not so much as to cause it to suffer from heat, as a fat porker undoubtedly does. Cooling foods, such as plenty of young clover and bran and middling slop is what we use much of, not forgetting to give regular and abundant supplies of fresh, cool water. In putting up swine for exhibition purposes, we have tried many different kinds of food for the fall exhibitions, but have found none so desirable as a slop made of corn and oats ground together, one-third of the former, by measure, two-thirds of the latter. One of the best ways to prepare it is to scald it at night and feed next morning, put on the mass only enough hot water to thoroughly moisten it, and then cover up the barrel tight so it can steam well, and make the mass mellow and nice by morning. If it is found undesirable to scald it, moisten the mass with water and then put in one or more pans of sour milk—thick milk or clabber—to cause it to sour by the time it is used. We use both or either plan, and find them both good. As an ordinary summer feed, we have found this food to answer almost all purposes, as ex-

perience has abundantly proved that breeding stock should not be very fat, only in a healthy, growing condition, to insure healthy, vigorous offspring. The refuse from the truck patches, such as tomatoes, cabbages, &c., come nicely into play for summer food in connection with the above slop, as do apples—windfalls—pears, &c.—*Swine and Poultry Journal.*

BIG FARMS IN ENGLAND.—Reference to the big farm in Illinois—40,000 acres, 18 in corn, 5 in oats and flax, and the rest in grass—has called a notice of the *London Spectator*, from the Domesday Book of Scotland, which has a list of those landlords who each own more than 20,000 acres of land in that country. The result is that one man alone, in his own and wife's right, holds more than a fifteenth of the entire area of the Kingdom, and twelve men own nearly a third; a proportion probably exceeding anything in Western Europe. No less than 106 hold more than 50,000 each. The 11 who own the largest amounts of land are: The Duke of Sutherland, 1,176,343 acres; Duchess of Sutherland, 149,879 acres; Sir J. Matheson, 404,070 acres; Mr. A. Matheson, 220,432 acres; Duke of Buccleugh, 432,183 acres; Earl of Seafield, 306,000 acres; Mr. Evan Baillie, 306,000 acres; Earl of Stair, 270,000 acres; Duke of Athol, 134,000 acres; Sir K. McKenzie, of Grirlock, 164,680 acres; Macleod, of Macleod, 131,700 acres. The old idea that the Duke of Sutherland owns an entire county is not true, but the Duke, with his wife, the Countess of Cromartie, owns more than the entire surface of any county in England, except Yorkshire and Lincolnshire.

TO MAKE A HEDGE FENCE.—We would plant one-year-old plants, whenever we set them. We would plough and harrow the land thoroughly, until the hedgerow of six or eight feet in width, was deep and fine. Then strike a furrow a foot deep, keeping the land side of the plough exactly on the line of the hedge. Go twice in the furrow, if need be (in the same direction), until you have a deep furrow all the way, and a perpendicular land side on the line you want a hedge. Then let a man, or boy, with a bucket of thin mud in which the plants are placed, walk along the furrow and place a plant, nearly upright as may be, against the land side of the furrow, at every seven or eight inches. Have a good hand follow with a spade or shovel, and fill the furrow enough to cover the roots of the plants and hold them firm. Tramp each side of the hedge, by walking along it with short steps, and one foot on either side of the row. Then come on with steady horse and plow, and throw the earth well up against the plants. We have found no plan more satisfactory than this. If done in the fall we should throw up another furrow or two, as late as we dare leave it.—*Prairie Farmer.*

COAL AND COAL ASHES.—The sifting of the refuse coal from stoves and grates will pay well for the labor, and even twice sifting, first through a coarse sieve, and again through a finer one. The coarse coal saved is good for the cooking-stove, and the finest, as a covering for coarser coal in the stove or open grate, will keep the fire through the night. And now as to coal ashes; the ash heaps in the streets, or door-yards, or in the river-bed will soon become nuisances. And more: it is bad economy to waste coal ashes. They are the remains of carbon in the coal, and of the mineral substances of burnt stone, all elements of the soil reduced by the fire so as to become food for plants. A distinguished horticulturist, a man who makes it his business and derives a large income, uses coal ashes under his fruit trees; and the writer of this has known them to be used on grass and grain land with marked effect. Almost everybody uses a little wood with the coal, and this adds potash to the ash heap, and makes it all the better for application to the land. Well sifted coal ashes will be cheap manure at 12 1-2 cents a bushel on almost any sort of land. Keep all ashes under cover, that the lime and potash, &c., may not be leached out.

ATTEMPTING TOO MUCH.—Peter Henderson writes to the *American Agriculturist*: Twenty years ago, after the successful culture of a garden of some ten acres, combined with quite an extensive greenhouse business, my ambition led me to think that if I made \$3,000 from ten acres I might as readily make \$9,000 from thirty acres, so I undertook the cultivation of two more places, each about ten acres in extent, but about a mile apart. A trial of three years showed me that I had made a serious mistake, for I found that I was actually making less from my thirty acres than I had done from the original ten, and yet I had experience, capital, and I believe as much energy and business capacity as the average of mankind. Had the thirty acres been in one spot, the result might have been different, but it is probable that the profits might not have been in the same proportion as if ten acres only had been cultivated. This lesson was to me a salutary one, and I never hesitate to state my case to any one who informs me of his intention of attempting to carry on gardening in two or more different places at once.

WINTER SAUCE OF TOMATOES.—One gallon of strained tomato juice, two pounds of sugar, seven tea-spoonfuls of salt, four table-spoonfuls of black pepper, half a table-spoonful of allspice, three table-spoonfuls of mustard, half a pod of red pepper, a little horse-radish. Boil well, and just before taking off the fire add one quart of good vinegar.

TOMATO SAVOY.—Have the tomatoes peeled and sliced, and boil four pounds of fruit in one pint of vinegar and two pounds of sugar. Season it with cinnamon, cloves, and mace. Boil only half an hour, and bottle, corking tightly to exclude the air. This sauce will keep for years in a dry closet, where it will not be exposed to mould.

HOW TO FRY CHICKENS.—The best way to fry chickens is this:—Scald, pick and wash your chickens thoroughly in clean water; then quarter and throw them into boiling lard. In a few minutes they will be done brown then remove them and serve them hot and dry. Do not put them in grease again. In this way the fowl is very tender and is a great delicacy. If you don't believe it, try it; and if you do, why, try it again.

TOMATO CATSUP, No. 2.—One peck of tomatoes, half a dozen onions chopped fine, two table-spoonfuls of black pepper, two table-spoonfuls of allspice, two table-spoonfuls of cloves, two ounces of celery seed, a quarter of a pound of salt, or more if liked, one pound of brown sugar, and one quart of strong vinegar. The proportions used in this recipe are particularly recommended, and it may be relied upon as being generally admired when brought upon the table.

TOMATOES AND CORN.—In a baking dish put a layer of tomatoes about an inch in depth (either fresh or canned), and on top a few pieces of butter, and a small portion of salt and pepper; then a layer of corn the same in depth, alternating with corn and tomatoes until the dish is nearly full, finishing with grated bread-crumbs and seasoning. Cover the dish closely, and place in a moderate oven for half an hour; uncover, and bake half an hour longer, with the fire a little hotter. In winter, when the variety of vegetables is so limited, this will be found quite an addition.

HOLIDAY PUDDING.—Take two large lemons, and grate off the peel of both. Use only the juice of one, unless you like quite a tart flavor. Add to the lemon half a pound of fine white sugar; the yolks of twelve and the whites of eight eggs well beaten; melt half a pound of butter in four or five table-spoonfuls of cream. Stir all together, and set the mixture over the fire, stirring it until it begins to be pretty thick. Take it off, and when cold, fill your dish a little more than half full having previously lined its bottom with fine puff paste.

TO MAKE CHEESE-CAKES WITHOUT CURDS.—Take a pint of sweet cream and put it in into a skillet on the fire; beat up two eggs very well, and then add to them enough flour to make them into a very thick batter. Do not stir the eggs and flour into the cream until it is boiling hot; but when arrived at that point, stir them gradually into it, and let them boil together afterward for a few minutes. Then remove them from the fire, and while warm, stir in half a pound of butter. In the meantime have ready three eggs more, well beaten; these must be added, together with half a pound of sugar, a little salt and nutmeg. Put in a few currants, and bake in little tin pattypans lined with pastry.

HEYDAY PUDDING.—Lay a thin puff paste in the bottom of your dish, or rather pie plate, taking care to lay a thicker strip around the outer edge, moistening the bottom piece with a little cold water to make the layers stick together. Then take of candied orange peel, lemon peel, and citron each an ounce; slice them very thin, and lay them on the paste. Beat the yolks of eight eggs and the whites of two; add a light half pound of melted butter and a good half pound of sugar, blend all the ingredients smoothly and thoroughly together. When you are sure that your oven is properly heated for baking pastry, pour the pudding mixture into the plates prepared, and bake carefully, not letting the puddings brown too much.

MAKING SOUP.—Place over the fire as much stock as you will need for a soup for your family. Season it with such condiments as suit the family taste. Then, if you wish vegetable soup, cut them fine and boil slowly till all are as soft as to mash up smoothly. Pass through a coarse sieve or colander and serve hot. Nicely browned, but not scorched, toasted bread, cut in dice or any fancy shape, thrown in as the soup goes to the table is an improvement. Or if you wish the vegetables as ornaments to your soup, boil in this rich stock only till well done, and serve in the soup without straining. In that case strain the stock before adding the vegetables. Almost any soup but shell fish is better warmed over and served the second day.—*Christian Union.*