

PRIZE ESSAY.

APPLICATION OF MANURE.

Written for the FARMER'S ADVOCATE.

SIR,—In the February number of the ADVOCATE you invite discussion on the proper time for applying barn-yard manure. Without preface, allow me to commune with you a short time on the subject.

In giving you my opinion, I would say that it is almost impossible to lay down any definite rule, as the climate and soils are so varied that a great deal will depend on the farmer's own judgment, and likewise the different crops he wishes to cultivate; but as to composting, there is not a doubt on my mind but it is the true principle for all light soils; but on strong, heavy clays, I think manure in a green state would be more beneficial.

With respect to the proper time for applying, for all root crops my experience is fall manuring, and if you cannot have a sufficient supply and have to use what manure is made in winter, I would say that the best way is to haul out as you make it on to a pile in the field, and apply as soon as possible in the spring, so that the dung becomes thoroughly incorporated with the soil by the different workings the land requires in preparing it for the reception of the seed; although I have seen very good results from having the land plowed in the fall and the dung spread on during the winter months, fresh from the stable: but, bear in mind, this dung was made from cattle that were fed on roots, pea meal and oil cake. The practice of applying long unfermented manure for roots in the month of June is an injury (unless you have a very weak season), because it has a tendency to hold the soil up, making it light, and the scorching sun dries all the moisture out of the ground, which should be preserved for the germination of the seeds. I have some years had to follow this latter plan, when not having a full supply to go over the field in the fall or spring, but I always take the precaution to use the heavy iron roller before putting the seed on. I may say that I have tried all the different modes of applying manure for root crops, and have come to the conclusion that the very best of all is to plow the land in the fall, and as soon as the ground is sufficiently frozen to bear the waggon, spread on twenty-five or thirty good loads of manure to the acre, and let it lay until the spring, and then give it the full amount of working to bring it to the proper tilth for receiving the seed; then if you use good seed, either mangel wurzel or turnips, and attend to them in proper season, your root crop will be satisfactory, your after crop of grain will be remunerative, and if you sow down to grass seed, your hay crop will likewise be good.

In speaking of the following crop of grain, I have never seen any difference between the fall manuring and that which was done in the spring, one part of the field being equally as good as the other, although the root crop was clearly the best on the part that was manured in the fall. Then, with regard to the proper time of applying manure to other crops, my experience has been somewhat extensive on a strong clay loam, where summer fallowing for fall wheat was practised to a large extent. The best results was from green manure applied before the second plowing in the month of June, at the rate of 25 loads to the acre, and about 20 loads of leached ashes added; being close to an ashery, we could have all we required for hauling. By applying manure unfermented to a strong retentive clay, it has a tendency to keep it open, making it more friable, and letting in the air and sun, which is of the greatest benefit to those cold clays.

When you say that the farm yard manure stands at the head of all manures, I fully endorse the sentiment. I look upon it as a perfect manure. The farm yard is the farmer's gold mine; we can draw from it, if properly attended to, all the fertilizing constituents favorable to the luxuriant growth of all crops. Experience has taught us that we have everything within our own means, without expending one dollar on any artificial manure, except salt and plaster. Artificial manures are not adapted to the wants of the Canadian farmer, because of the extreme dryness and shortness of the season; and perhaps from the time of their application to the gathering in of the crops, we don't have one single shower of rain, and therefore the returns do not permit of the outlay, however well they may do in the moist climates of the old countries. Not so with salt. I would say to everyone—if he cultivates not more than a garden plot—use salt either as a top-dressing or incorporated with the soil. I have seen the good effects of it on wheat, barley and oats, and especially have

I seen the advantage of it on the turnip crop, when put on with an unsparing hand.

In the case of grass or meadow lands, locality and nature of soil will again be brought into question; if a light soil, compost and spread evenly on the surface in the fall. In the month of April brush-harrow; this operation will regulate any large lumps. The rootlets of the grass will find the speedy effects, and a genial warmth will materially advance vegetation in the spring.

These remarks are from personal experience, and I would wish it to be understood that the same rule will not give the same results in all localities, but as a general thing the fall is the best time to apply manure, and the best mode is to keep it on the surface. Depend upon it, you will get a quicker and a more satisfactory return.

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Poultry Yard.

Amateur Poultry Keeping.

The following useful hints are condensed from the *London Agricultural Gazette*:—

At this season, more than at any other time, the poultry about our houses will repay the housekeeper for every little scrap she can spare, and for some thought and attention given to their wants and desires. We constantly hear that eggs are so scarce it is impossible to get fresh ones. Only a little management and little forethought, and all might have them. Our own experience is as follows:

We have no special convenience for keeping poultry. The soil is bad for them, being cold wet clay, and dry sand or chalk would suit all poultry ten times better. Our fowls have a steep corner, very few square yards for each bird being all the space they have to walk over so all their needs have to be thought of and met by their mistress. A very tiny scrap of garden for vegetables is not enough to give refuse all the year round for their green food, though every leaf not boiled is given to them. Fresh, green, raw vegetables are far better than any cooked, though these bits, if left on the plates, are favorite morsels. Fowls kept without access to sufficient grass for them to graze on must have a supply of green food to do well. Every scrap from the house the fowls look over, and eat the heads and cleanings from fish and fowl and game (for they have no cannibal scruples), and every little bit of fat that can be spared; and if they have been very bare of animal food, we buy from the butcher one pound of skinny fat thrown by for the chandler's use, and give 5d. for it; this will be enough for a fortnight. The fat skimmed from boiled meat and the grease cleaned from the dripping pan is mixed with the warm meal they get the first thing every morning, and they have two feeds in the day besides of mixed corn, maize, barley and wheat, which is now cheap; and they never have more than they eat at once, except in the summer, when the fowls are up hours before the inmates of the house; then there is a little more given at night for them to find and feed on—scatter as wide as possible to spread the grain over the space allotted to the poultry.

The corn and meal costs now, as near as possible, 2s. 3d. a week, never more. We have six hens two years old, two young cocks, eleven pullets of 1874; these were hatched in February and March; six are half-bred Cochins, from a pure Cochin cock and large French hens; three are half-bred Game from a pure Game cock and the same kind of hens; and one is a light Brahma, and one a half-bred Houdan. Yesterday the poulterer, seeing our egg brought in, offered 2½d. each for them. He keeps more than 40 fowls, and tells us he has not had an egg for more than six weeks, but he expects some every day! and wonders at our good fortune. The fishmonger cannot understand how not one of his fowls—almost 50—is laying now, when we are getting eggs every day. The butcher, who has a yard and green fields for them to stray over, told us yesterday, out of 60 or 70 hens he could not reckon on one egg every day now. But why cannot all have a good supply? All could if they would bestow the care and forethought which, unfortunately at present, poultry are not considered, worthy to receive from any household; if they did, of course our market for eggs at 2d. to 2½d. each would cease. It is a pleasure, or a labor if you will, that brings its own reward, and very quick return. If, in the other place, the kind most suitable, and the earliest and best pullets are selected and kept, they will begin to lay in September, or six or seven months old,

reckoning from February to March. But spring chickens are so nice, and so dear to buy, and every housekeeper has sometimes calls for a dainty dish, and so the spring chicken and asparagus are eaten and enjoyed in May or June, and the prospect of eggs fresh and good daily through the autumn is in jeopardy thereby.

For the assistance of housekeeping it is worth while to consider this well and so supply the needs of the fowls about our doors; if you keep them at haphazard, to feed as they can catch it, and all is guarded to them, most likely you will keep them weeks or months at this season without their returning you an egg, like our neighbors the poulterer, the fishmonger, and the butcher, the refuse from whose trades must supply valuable additions to the food of fowls. But the little things are not thought of; and this it is after all which secures success. They must have warm shelter in their roosting houses; a shed to escape from rain and to feather in, with dry ashes frequently thrown there; clean, good water three times daily given fresh, the same we drink ourselves; plenty of grit, road scrapings and old mortar rubbish put every few weeks and broken up three or four times in that time for them to get at fresh bits. All this we have to do, as there is nothing in our soil useful to them. All these little things we find needful to ensure success, and it does not take half an hour a day, and, if you love your birds, it is a great enjoyment to see them well and prosperous, and you will find them among your best friends; your poultry will show you practically, by filling your egg basket, that they, too, know that "one good turn deserves another."

At birth the pig has the temporary tusks and the corner incisors well up. These teeth are very fine and sharp, almost like fine needles, and occupy a position on each side the mouth, leaving a clear space in front. In a month to six weeks the central temporaries are cut, and soon after the completion of the second month the lateral incisors are cut, and the animal has its full set of temporary teeth, including three molars on each side, top and bottom, six incisors, top and bottom, and a tusk on each side, top and bottom. At the age of six months the premolars, which occupy a position between the first temporary molar and the tusk, are cut, and also a permanent molar, which is fourth in situation. The premolars are not always present, and in their absence the fourth molar will be accepted as an indication of the age of six months. At nine months the permanent tusks are cut, and the corner permanent incisors, which often prick through the gum soon after seven months, are fairly up. At one year old the central permanent incisors take the place of the temporary teeth, and the fifth molar is also in position.

Many pigs at the age of twelve months retain the temporary central incisors, and we have met with no instances of the permanent centrals being in their place before the full age of a year; hence the fact of these teeth being well up in an animal which was certified to be under one year, would be a ground of disqualification. At fifteen months the three anterior molars are permanent, and they may be easily recognized by their recent appearance and by the absence of any signs of wear. At eighteen months the permanent dentition of the pig is completed by the cutting of the last molar, and also the external permanent incisors.

After this period it is seldom necessary to define the age of the pig, nor is the evidence which is afforded by the growth and wear of the teeth sufficiently exact to enable the examiner to form a positive opinion.—*London Agr. Gazette*.

The *Sherbrooke Gazette* gives a detailed account of the operations of the Canadian Meat and Produce Company, and confesses astonishment "at the amount of work done, and the evident extent and magnitude of the business that will be carried on when once the Company is fairly in operation." We learn that there have been shipped to England already 200,000 lbs. of fresh meat; 50,000 lbs. of tinned meats, soups, &c.; 45,000 lbs. of salted meat; 500 hides, and large quantities of poultry, game, &c. The works seem to be exceedingly well arranged, but considerable improvements in the shape of a large permanent establishment and homes for the employees are contemplated. The *Gazette* says:—"Already the farmers in the adjoining townships have begun to realize the advantages resulting from the location in their midst of a regular and remunerative cash market for their beef, cattle, pork, poultry, &c."