

Soils and Crops

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Muck as a Fertilizer.

Peat and muck are accumulated deposits of plant remains which have been "pickled." Muck is a decomposed form of peat. We may visualize a muck swamp as a big straw stack with trees and bushes and leaves mixed through it. These trees and shrubs have fallen into the vat and have been preserved with the remains of the other plants. These remains are largely organic matter and nitrogen, with other substances washed in from the surrounding upland and the subsoil. The muck farmer is literally farming on top of a straw stack or on the top of nature's silo.

As these plants remain collect and go through this "pickling" process poisonous substances are formed. After drainage and exposure to the air, these poisonous elements disappear. It must also be remembered that we have different kinds of deposits, the marsh grass muck, huckleberry soft water muck, the cedar swamp muck, hardwood muck, and the moss bogs, so that we would expect different results not only in forming these areas, but in their use as fertilizer.

Analyses of the different types of muck and peat show that they all contain a large quantity of nitrogen. I mean that the average would be close to two per cent.; that is more than twice the amount of nitrogen that is found in the average straw. These are facts which must be kept in mind while considering the use of muck as a fertilizer.

But, some authorities have said that in most muck and peat, this nitrogen is to a large extent unavailable. However, we must not make the mistake that the nitrogen will not be made available later. It would be better to say that in the condition that muck or peat is taken from the swamp, in most cases the nitrogen is unavailable at that particular time, but experts have shown that nitrogen in the muck or peat may be made available after it is taken out of the swamp and before it is applied in the field by composting. It may be said that the nitrogen in straw is not available, every farmer knows that straw is worth more in the manure pile after it has been decomposed than it is worth spread alone. Every farmer knows that old straw is more valuable as a fertilizer than new straw. It would be reasonable to say that one should use muck and peat as he would straw. For example, if a soil is heavy clay and one got results

with straw alone, he will also get results with muck alone. If he has a light soil and straw does not show the results that this same straw would after it is used as a bedding, then apply muck freely in the barnyard to inoculate it with the right sort of bacteria before it goes to the field. Muck and peat are valuable as absorbents for liquids and gases, much more valuable than straw. In the barnyard a large part of the ammonia and urine may be saved by the liberal use of muck and peat. The use of muck as a fertilizer is past the experimental stage. It is being used and has been used for years.

Every orchardist knows how seriously he needs organic matter and nitrogen. Here is a simple way in which to get these materials if there is access to a muck deposit. The muck has at least the manual value of straw for what it lacks in mineral value it makes up in nitrogen value. In not a single instance where composted muck has been used did it fail to get satisfactory results.

Here are the facts summarized: Muck or peat can be used for a bedding or an absorbent to a better advantage than straw.

If you have been buying straw, the use of dried muck or peat will save you the high cost of straw. If you raise grain, sell your straw and use peat or muck.

A fertilizer factory in the east makes fertilizer by allowing muck to decompose after it is inoculated with the proper germs.

Raw muck or peat is clean. Muck or peat is better for horses' feet than straw.

Muck or peat is from two to seven times better as an absorbent of liquid than straw and will save all the valuable potash voided by your animals more efficiently than straw.

Muck or peat absorbs the valuable ammonia gas of the manure heap two to seven times better than straw. Muck or peat contains as much nitrogen as barnyard manure, if it is made available in the manure pile.

Peat or muck is largely organic matter.

Pile muck up closely under cover so that it will dry out, then use it freely in the stables.

It is quicker and cheaper to add organic matter by the use of muck and peat than by plowing under green crops. Sell the green crops and use muck or peat.

I would draw a ton of dry muck just as far as a ton of straw for the same price.

HOLIDAY WRAPPINGS

When you consider that "first impressions" are always the most lasting, you will recognize the importance of making Christmas presents look attractive.

Especially has this pleasant bit of Christmas work become an art since so many beautiful boxes of all sizes are now manufactured and sold at from one cent up to all sorts of prices. These boxes enable the givers to make the presents more attractive. There are also handsome tags, seals, ribbons, strings, artificial bits of holly, polka-dots and other holiday ornaments to be had for a few pennies which all go to help in the wrapping of the gifts in a manner that will enhance their value in the eyes of the recipient.

Red and green are the Christmas colors, both being seasonable and symbolic. Gold and silver play an important part, however, and white, also is much used.

Such simple gifts as a single handkerchief, hair-ribbon, sachet, box of home-made candy, or a jabot may be made to assume due importance by using a pretty box which is wrapped in tissue or Christmas paper, tied with holly ribbon, gummed with Christmas seals.

A novel Christmas parcel has the appearance of a gigantic firecracker. It can easily be made at home. Cover one end of a huge mailing-tube with a disk of heavy cardboard, to the centre of which fasten a five-yard length of stout red ribbon. To the ribbon attach small gifts at intervals of from ten to twelve inches, then draw through the tube, making the gifts lie on top of one another. Fill the spaces between with confetti or tiny candles. When the tube is packed, leave eight inches of the red ribbon to thread through the other end. Stick the ribbon down with stickers bearing legends such as, "It's Loaded, and Don't Light (Pull the String) Until Christmas."

Last year seven small gifts, which came all wrapped in holly crepe paper and decorated gaily with seals and holly ribbon, one to be opened each day of Christmas week, gave me the greatest surprise and pleasure. Attached to each gift was a tag with a cheerful greeting on it and the day and date on which each package was to be opened.

For the Christmas packages to go to the family in the old home, I chose several small gifts for each one, and wrapped these in different

colored tissue paper, marking them to be opened at different hours of the day. The first package contained some kodak views of my new home; the last package was a good-night letter to all.

Unique candy boxes can be made from oranges. Cut the orange in halves, remove the inside, fill the shells with candy, nuts, pop-corn, or raisins, and put the two shells together again, sealing the orange with paraffin. Tie a ribbon around it, and hang it on the tree.

When bottles of perfume or jars of grape-juice or home-made preserves, are to be presented as Christmas gifts, dress the bottles in crepe-paper costumes, to represent Quaker ladies in poke bonnets, pig-tailed Chinamen, infants in long clothes, hoop-skirted Colonial dames, cotton-bearded and long-coated Santa Claus, and so on. The head and face consists of cotton batting bunched about the cork and tied on with a piece of muslin or white paper on which a face is drawn. The head need not be carefully drawn, as all of it but the face will be covered by a large bonnet, hat or cap. The arms are wired rolls of crepe paper. A Christmas bottle thus camouflaged will cause delight out of all proportion to the simple task of dressing it.

Co-Operation and the Individual.

It is very natural that the first appeal of co-operation should be to bring an economical and just mode of business into operation and such has been the history of co-operative effort. But once the business of farming is placed upon an equitable plane with other industries, then it is reasonable to suppose that the co-operative movement will be extended beyond the market place and the halls of business education and become a powerful ally in bringing about a constructive environment for the members, one that will provide for their social needs as well as for their business demands.

But the criticism is made that co-operation tends to discourage individual effort, that organization will do many things for members that they naturally would do for themselves.

Experience abroad seems to teach otherwise. There co-operation has rather worked to give to the individual greater self-respect first through improving his economic outlook and then by making it possible to enjoy those finer things of life which came with an improved environment. In other words, democracy in business and social enterprises appears to have the same uplifting effect upon the individual that democracy has had in politics.

Poultry

Tuberculosis in poultry is not communicable to man; otherwise it would be dangerous. The main loss is financial.

Good layers always seek the top perches, while the star boarders are content with the lower roosts, as they require less exertion.

Some pullets will be kept for home use, others will go to market. These two classes ought to be kept separate and fed differently. For layers, the feed should be nourishing, but not so flesh-making as in the case of the birds destined for market. Separate yards and houses ought to be given.

In determining sex in geese, some of the English breeders shut up all the fowls in a stable, and then introduce a small dog. The moment the animal appears the geese lift up their heads and retire to the rear of the room, but the ganders are defiant, and will lower their heads and stretch out their necks, hissing all the time.

To kill a turkey, probably the best way is to tie its feet together, hang it on a pole, and then cut the throat, so as to bleed freely. It should then be dry-picked, leaving on the head and wings. After being picked, the carcass should be dipped into hot water, and then in cold to plump it. This treatment also gives the skin a fresher appearance.

Get Ready for a Fire.

We were passing along a country road last summer, when we came upon a farmhouse that was in flames. We rushed over, searching for some means to fight it.

The first thing that struck our notice was the entire absence of the family. For a while it greatly worried us, for we feared that they were in that mass of flames; but in an

hour or so, when only a pile of smoking ashes was left of their home, the family came driving leisurely home.

The city man has a city fire department to protect his property. The farm dweller, on the other hand, is obliged to rely largely upon his own resources in fighting the flames.

It is nothing short of "penny wise, pound foolish" folly for farmers to be without fire-fighting equipment of some kind. With dozens of chemical extinguishers on the market, it is not only poor economy, but exceedingly risky for those dependent upon one to refuse to take the "stitch in time."

It's all right to rely on the "bucket brigade" if you want to, and provided you know just when the fire is going to occur. If it happens in the day time when every one is up and dressed, you may be able to save things with the buckets; but fires don't work that way. Most country fires occur in the night time when folks are asleep, and a fire usually has a pretty good headway before you get awake and into your clothes and ready to fight it.

Invest a few dollars in your first line of defense against fire. It will not be money wasted, even if you never have a fire, for you have the protection, and that's worth all you pay.

Then get a second line of defense—insurance. Full many a man has had his back broken and the accumulation of years swept away in one night's bonfire. It's all right to wait, if you like waiting, but why not look at the thing the way my uncle did? "Since I learned the value of insurance, I can sleep nights," he said. "I know that nothing can come along and wipe out the crops or the animals or the house just at the wrong time. I've paid the insurance man to do the worrying and carry the load, and it's the best job of hiring I have ever done!"

THE SUNDAY SCHOOL

THE SUNDAY SCHOOL LESSON DECEMBER 5TH.

The Growth of the Kingdom—St. Matthew 13: 1-43. Golden Text—Psalm 37: 1.

Parable of the Sower (vv. 1-9). See Mark 4: 1-9 and Luke 8: 4-8. The scene was by the sea side. It was, probably, a narrow bay, or creek, in which the boat was anchored, and the people were gathered all about on the shore. Back from the lake rose the hills, upon the slopes of which might have been seen the cultivated fields, and where, even as Jesus spoke, the sower might have been going forth with his basket of precious seed, or the green sprouts showing through the dark soil.

Some writers think, however, that the parable was spoken at a more advanced season, "when the fields gave first promise of a harvest to be gathered in due time." Edersheim says, "We can almost picture to ourselves the Saviour seated in the prow of the boat, as He points His hearers to the rich plain over against Him, where the young corn, still in the first green of its growing, is giving promise of harvest." Jesus compares to the work of the sower His own ministry. He is sending out broadcast His seed of truth, and some of His words fall upon hard and unresponsive hearts, some into frivolous and shallow souls, where it is quickly received, but quickly forgotten, some into deeper soil of rich and gifted natures, where, however, its growth is choked by weeds of vice, and some into good and honest hearts. It is in these last that the hope of harvest lies and the coming of the kingdom of God on earth.

Why Jesus Taught in Parables (vv. 10-23). In answer to the disciples' question, Jesus gave them a great and comforting assurance. It was theirs as true disciples, as seekers after light and knowledge, to know the mysteries, and the hidden things are revealed to earnest souls. Those who have and prize the little knowledge and seek for more will be given more, but the ignorant and careless and indifferent lose what little they have. Such is the law of life—the inexorable law.

The truth lies hidden in the parable. The earnest and inquiring soul will seek and find it. He will penetrate and discover the mystery. But to the careless multitude, or to the enemy, it will be but a tale, a picture, nothing more. The penalty of their indifference or hostility is the hardening of their hearts and the closing of their eyes. But, Jesus says to his own questioning disciples, Blessed are your eyes, for they see: and your ears, for they hear.

Parable of the Tares (vv. 24-30). This parable occurs only in the Gospel of Matthew. Here the truths taught by Jesus, or the men who received into their hearts these truths, are compared to good seed sown in the field. Falsehood and hypocrisy, or false and insincere men who make profession of faith, are compared to tares among the wheat. Christ is the householder. His zealous servants would root out and destroy these tares, but their Master is wiser than they. To gather the tares of falsehood would be to root up also the wheat with them. Let both, He said, grow together until the harvest.

Jesus understood and reckoned with the complexity of human life. He knew how closely interwoven are our imperfect thinking and truth and

error, and how evil often clings to the action of good men. He was not prepared for an inquisition which would search out and destroy the evil and preserve only the good, nor was His kingdom to be achieved in that way. He was willing to be patient and to have His followers be patient, and to watch the steady and strong growth of the good seed, knowing that it must ultimately prevail. For, as said the ancient proverb, "Great is truth and it will prevail." His kingdom will come, not by the violent rooting out of wrong ideas or of evil men, but by the persuasive and purifying and stimulating power of the true and the good.

The interpretation of the parable is found in vv. 36-43, and is plain enough to him who can understand. There is nothing in it to discourage or forbid war against evil that is in the world. Jesus Himself preached repentance and turning from sin, and denounced in the strongest language the falsehood and selfishness and hypocrisy which He saw about Him. He saw clearly and would have His disciples learn to see and distinguish the tares, and not to confound them with the wheat. But it was with such clear-sighted vision and understanding, and with unfaltering faith in the virtue and potency of the gospel of Christ, not with the strong hand of the zealot or the persecutor, that He would have them labor and wait for the harvest of the kingdom in the field of the world. The zealot and the persecutor in religion has too often been narrow in vision and harsh in judgment. He has lacked the patience and gentleness of Christ.

The tares, according to the common view, were a species of darnel, growing plentifully in cornfields, the heads of which resembled wheat but bore poisonous seeds. In Palestine, when harvest approaches, and they can be readily distinguished from the wheat, they are weeded out by hand and burned.

The Mustard Seed and the Leaven (vv. 31-33). The so-called Black Mustard has a very small seed, so that in Palestine the saying, "small as a mustard seed," is common. The plant grows rapidly to the proportions of a small tree, and is sometimes eight to ten or twelve feet in height. The birds feed on its seeds.

Leaven is often used as a figure of evil influence or corruption, but here it is a ferment of good. The new conceptions of life which Jesus sets forth in His teachings and in His active ministry are working already as leaven in human society, and will ultimately transform and renew it. The kingdom of God, planted by His teaching, though small in its beginnings, will grow and fill the world. There seems to be no good ground for interpreting these parables as signifying the growth of evil in the world. It is sufficient to point to the fact that Jesus said, The kingdom of heaven is like unto a grain of mustard seed, is like unto leaven. The kingdom is not like something evil. But it is yet in the growing stage. It is yet incomplete, and there are mingled in its elements of error and of weakness. But the faith of the great Master sees it grow to splendid completeness and power in a future of glorious realization, when God's will will be done on earth and justice and righteousness will prevail.

The kingdom is indeed a treasure worthy of a great investment, a pearl of great price, in value beyond all the silver and gold of human wealth.

Traps, Trappers and Trapping.

Start right; the start you make in trapping is important. If the pelt hunter is handicapped in any way, generally his catch will not be so good as if he had made the proper preparations.

Trappers must plan long before the season opens if they wish to succeed with their lines. The pelt hunter who waits until the last minute will have to take second place to the one who has everything ready to make his sets when trapping time comes.

Much depends upon the trapping grounds. They should be selected with care. Strange as it may seem, amateurs usually imagine there are more skins to be had a distance from home. Often the most profitable field is close to where the trapper lives, especially if he has but a limited time each day to devote to the line. When traps are far away or scattered, the pelt hunter frequently uses most of his energy in traveling about, and as a result neglects the sets. And even if the trapper is not restricted as to time, if he can use the whole day, it is human for him not to pay so much attention to the line as if it were conveniently near. Hence, it is easy to see that whenever sets are to be made, nearness to home is an essential.

Naturally, of course, when it is possible to use an automobile, motorcycle, horse or bicycle, distance is not so important to the pelt hunter. But when one must walk, especially if the ground is rough and hard to cover, the matter assumes an importance which can not profitably be overlooked.

For the smaller animals, generally speaking, rough land overgrown with weeds and brush, or timber with small streams, lakes, ponds and marshes, furnish the best trapping. As a rule, fur-bearers of the type just mentioned prefer the ravines rather than the hills, since the former offer more protection for dens and runways. This does not mean, of course, that animals can not be caught on high ground, but more traps can be located where it is comparatively low, in most communities.

Locating the Fur-bearers.

The beginner is handicapped unless he knows where to look for the various fur-bearers. To guide him in his search, the following will be well to remember:

Skunks and civets like weed patches and rough, stony ground. They seem to have little fear of man, locating dens under houses and near barns. Minks prefer the small, meandering streams, the creeks where pools supply an abundance of fish easy to get for food. Further, the banks are usually covered with brush and growths that supply protection for dens and runways. Of course, marshes, ponds, lakes and rivers ought not be overlooked. However, the best trapping for minks, as a rule, is along the small streams.

Raccoons generally are near timber and running water. 'Possums are almost identical in their choice. No brush is too thick for them. Ditches supply good places for sets also. Muskrats, of course, are inhabitants of shallow water, ponds, lakes, streams and marshes. So far as the weasels are concerned (these animals when prime are known to the fur trader as "ermine"), they may be caught almost any place where there is an abundance of small game. Some of the most likely spots are in newly plowed fields, rock and log piles.

The trapping territory should be selected early. The best time to do this is in late summer or autumn when the animals are moving freely, storing up food and preparing winter quarters. At this season signs are very numerous but later will be hard to discover. The trapper who knows where to make his sets before the season opens will have a great advantage over the one who waits until November, for instance, and then trusts mostly to luck in getting out his line.

It is often possible to increase the game by placing food regularly in certain spots. These should be located, so far as possible, to enable the trapper to make good sets later. When animals find food, from time to time, they get used to coming for it. Often fur-bearers from a distance will locate their dens close to the bait. Outside of the extra game brought to the territory by feeding, one can, from the signs, tell about how much of a catch can be expected. Naturally, there is an advantage in selecting spots where traps may be placed rather than taking them as they come. Strange as it may seem, too, animals used to being fed seem

not so cunning when near the decoy as away. All in all, it is easy to see how food well placed will help the pelt hunter.

Many trappers make the mistake of starting too early for game. This does not pay. Frankly, there is no profit in taking fifty-cent pelts in October when in December, for instance, they will be worth approximately \$5. Yet trappers, not beginners alone, do this very thing. Some imagine that furs are prime every month with an "r" in the spelling. This is not the case at all.

Weather has much to do with making hides prime. If the fall is cold, skins fur up more quickly, than when it is warm. A few chilly days will not do the work; several weeks are required.

Fur-bearers fortunately, do not all become good at once. Skunks and civets are first. After these come minks, raccoons, opossums and weasels. Last of all, muskrats prime. The fur is not at its best until late winter and early spring. Animals that get good early in the season, shed and fade soonest in spring. Muskrats, for instance, generally may be taken for weeks after skunks and civets have deteriorated badly; and trapping too late is as bad as too early. It does not pay. Further, animals must be given a chance to multiply; otherwise they will soon become extinct.

Selecting the Traps.

Traps are, no doubt, of greatest importance to the beginner. Primarily, there are two kinds—those with protruding springs, carried by almost every hardware dealer, and jump traps. The jumps are compact traps, smaller and lighter. The name is given because they actually leap when sprung, catching high on the leg and insuring a good hold. The first style has been on the market longer and is better known. Some of the advantages of the jump trap are that more can be carried, and they can be located in cramped places; also, they are easier to conceal. The only disadvantage is in setting during cold weather. With fingers cold, it is harder. However, no one needs to reject the traps on this account.

Then there is the wire-spring trap, which has many advocates. Also, there is a trap designed especially for the marten trapper where there is deep snow. Lately, a trap that kills was invented. While suited for most small game, its advantage is greatest for muskrats in shallow water.

Size of trap to buy is a debatable subject. In general, be guided by what the maker recommends. Later, changes can be made if necessary.

Never set new traps, as they are hard to hide from the cunning animals. Rust them, and then stain with a dye made from walnut husks or certain barks and boiling water. A simpler way is to wire the bunch together and bury for a week or so in slimy mud. After rising in clear water, the traps will be a dead black.

Before making sets, test each trap carefully, noticing the action. Use a smooth, round stick for snapping, wrapping well to protect the jaws, so they will not break. When a trap snaps too hard, file the trigger slightly. Should it spring too easily, bend the metal holding the trigger, toward the pan.

Use Identification Marks.

Old traps ought to be examined to see that they work as they should and that they have sufficient strength to hold the game. There is no sense in losing pelts when steel traps may be had so cheaply.

Where several trappers have lines that cross, it is a good idea to mark traps. Use a steel punch or file for the purpose. Have the identification marks on the metal under the pans. To put them on the jaws or spring, makes weak traps.

For snow sets, traps may be whitened by mixing lime and water. The pelt hunter must handle carefully traps so treated.

It is a good idea to go quite early in the season over the territory selected, and lay rocks, poles, or something similar, for fastenings where traps can be put. This refers principally to land sets where stakes do not work to the best advantage. Fixed fastenings often permit the game to get a straight pull and work out; therefore, they ought to be avoided as much as possible. It is not easy to drive stakes in frozen ground nor pull them up once they are in.

Make preparations early. However, do not catch any fur until it is of good quality.

Pot of Apples in Storage.

The losses due to the rot of apples in storage are very heavy each year. In some sections it is estimated that apple rot losses amount to twenty per cent. of the crop. The most common causes of the rot in apples are black rot and blue mold funguses.

In helping to keep down the amount of rot in stored apples an expert who has had much experience in handling apples, says the storage room should be kept clean. The rot fungus thrives on litter and produces its spores on rotten fruit. If the cellar is kept clean and free from refuse, and no rotten fruits are allowed to remain there, the chances for rot infection are largely eliminated.

This authority says the cellar should be kept reasonably free from moisture, and the temperature of the

cellar kept as low as possible. The less bruises and skin abrasions the apples receive in handling the less rot will there be in storage.

High temperature, moisture and stagnant air are all favorable to the development of rots, spots and scalds, and it is recommended that a cool, dry storage, with a continuous supply of fresh air is the proper environment for apples in storage.

Work.

No man is born into this world whose work is not born with him. There is always ways who will, And tools to work withal, for those who work And blessed are the horny hands of toil.

—Lowell.