Soils and Crops

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Destructive Insects Lessen the Food Supply.

The toll taken by destructive insects from field, orchard and garden crops not only diminishes the yield, but reduces the returns the grower should derive from his crops. A conservative estimate places the loss from this source alone at $200,000,000 annually.

Under favorable conditions, such as an increase in the food supply, or the decrease of natural agencies for keeping them in check, such as our wild birds, some insect or other will at times increase to such an extent as to become a veritable scourge. Instances of this are found in the army-worm outbreak, and still more recently in the grasshopper outbreak in western Canada. Last season the governments of the western provinces expended large sums in combatting this menace, undertaking the work in a wholesale manner with the assistance and direction of experts in the service of the Federal Agricultural Department. It is estimated that in Saskatchewan alone 1,400,000 acres of crop were actually saved by systematic organization for the distribution of poison bait, at a cost of some $338,000. Preparations on a wholesale scale are now being made to meet the outbreak that again threatens western grain growers, and Dominion officials are now advocating the substitution of sawdust for bran in the preparation of the bait, at a considerable reduction in cost.

The presence of the European corn-borer in western Ontario is another menace to which expert attention is being directed. To prevent the spread of this pest, it has been found necessary to prohibit the shipment of shelled corn from infected areas, aggregating some three thousand five hundred square miles.

While the greater portion of the work of the Entomological Branch of the Dominion Department of Agriculture consists in the application of control measures, research work aiming at the discovery of better and cheaper insecticides is another of the many activities engaging its attention. Continuous investigations are carried on into the life history and habits, and means of control, of insects affecting live stock, fruit, grain and even forest trees. To facilitate work of this kind, field laboratories are maintained at many points throughout the country.

Winter Feed From Muck Soil.

Growing root crops as a winter feed is a good idea which is not being used. Roots were extensively and entirely used as a source of winter succulence before the silo was generally known.

It must be understood that there is nothing better for silage that one can grow than a good corn crop yielding from eight to fifteen tons to the acre. But frost is the serious factor which has made corn, either for silage or grain, a risky crop on muck soils.

On the other hand, there are other silage crops for the muck farmer. The importance of the sunflower was especially well shown on muck under extremely varying conditions last year. Exceedingly hardy to frost, drought, excess moisture, giving a high tonnage, the sunflower is only waiting for complete agreement by specialists on its feeding value as compared with corn, to be given unqualified recommendation for the muck farmer.

Of course, the muck farmer should have a silo. If he is situated where he cannot grow corn he can grow the sunflower, or oats and peas for silage. The silo is an important factor in farm management of the muck farmer growing general crops.

There are three situations in which it would appear that the growing of roots would aid the muck farmer. It would provide the farmer having a silo with additional winter feed; it would be of greater assistance to the one who expects to purchase a silo but who desires to keep stock until the time when he can make that investment and it is the only sensible course for the man who cannot use the silo at all.

Most muck soil is ideal for root crops. As long as agriculture has existed, roots have been a basic crop in the dairy districts of Europe. Many sections depend entirely upon roots for winter feed. Four tons of roots, such as beets, carrots, rutabagas and mangels equals three tons of silage. Twenty tons of roots to the acre is common on fertile muck soils. Thirty tons have been noted. Blocking and thinning is much easier on muck soil than on upland.

Feeding carrots and millet hay may not sound ethical, but horses on heavy hauling have come through the winter in splendid condition on such a ration.

A test of various root crops has shown rutabagas to be the most satisfactory. The reasons are summed up as follows:

"Besides being the largest yielder among root crops rutabagas have several other advantages: (1) seed is cheap; (2) germination is better than with mangels or sugar beets, therefore insuring a more even stand; (3) rutabagas sprout quicker and can be thinned and weeded sooner, which is a great advantage; (4) being of quicker growth they are less likely to be damaged by insects when small; (5) they are the most hardy of the root crops; (6) they are the best keepers, especially as compared with the flat turnip, which is likely to grow hollow and rot in storage.

"In feeding, a pulper or chopper may be used, though this is not necessary unless one wishes to mix them with grain feed. When feeding rutabagas in considerable quantity to dairy cows, it is important that the feeding should be done after milking time, as the aroma from the roots may taint the milk."

There are several very important practical advantages in growing roots. They can be planted later. Roots are adapted to new land. On numerous occasions my attention has been called to successful crops of carrots which have been grown on new muck. Harvesting may be delayed in the fall until the main work is done. Nothing but a hard freeze can harm roots, Root crops should be considered by the muck farmer as a winter feed. They should be considered as an integral part of his farm management plan.

About Broken Bones.

The stock owner may find it necessary to apply simple surgical treatment when a veterinarian cannot be conveniently be employed, or if the value of the animal does not warrant expense. He should, therefore, be able to determine if a bone is broken, which bone is affected, whether it can be set, and how that should be done.

A fracture may be suspected when after a fall, kick or other injury, the animal ceases to place weight upon the leg, or is extremely lame when made to walk. If the bone is broken, a grating or scraping sensation may be felt when the palm of the hand is held upon the part, or heard when the ear is applied while the leg is moved in different directions by an assistant. Fractures of the pelvis are diagnosed by passing the hand into the rectum and against the bone while an assistant moves the leg.

If the animal is small or young a simple fracture usually will unite successfully. In heavy animals that are well up in years chances of recovery are poor, especially if the broken bone is one that has to bear much weight or is in a part that is much moved.

Breaks implicating joints seldom are worth treating. That, too, is often the case when a bone is smashed to pieces or where broken bones have pierced the flesh and skin. Union will be most likely to take place when a bone of a young animal has broken in such a manner that splinters of one end of it dovetail into splinters of the other end.

Broken bones of calves, foals, pigs, lambs and puppies readily unite if held in apposition and kept rested. The following bones of an adult horse when fractured seldom can be successfully treated: Neck of shoulder blade, humerus or arm-bone, femur or thigh-bone. The leg bones, radius or forearm, and metacarpal or cannon-bone in the foreleg, and tibia or gaskin and metatarsal or cannon-bone of the hind leg, sometimes may be mended, if the fracture is simple and not in a sloping direction. Fractures of the pastern-bone usually knit readily, but the united part may be left in a thickened or even club-footed condition. Breaks in the pelvis unite readily if the hip-joint is not involved. Breaks causing distortions in contour of parts, such as a fracture of the point of the hip or of the buttock, generally give little trouble, but in some instances pus forms and pieces of bone have to be removed, or a troublesome fistula results. Fracture of the spines of the withers tends to cause fistula. Breaks in the back-bone usually cause paralysis, but partial fracture of the neck will sometimes merely result in a distortion.

Successful treatment of a fracture depends upon bringing the severed parts together perfectly and keeping them immovable until knitting has taken place in from four to six weeks. Joints above and below the broken bone must be rendered immobile. In small animals bandage the leg lightly with cheese-cloth, bring the foot of the injured leg into exactly the same position as the one of the other leg, also matching joint for joint in position. Then fit padded splints of light wood, gutta percha, strong cardboard or tin upon the leg from ground level to top, and hold there with starch bandages or a plaster of Paris cast. A horse has to be supported with slings, and after putting splints and a cast upon the leg from foot to body an iron brace may also have to be applied for support and to keep the leg rigid. If the pastern is fractured, it will suffice to put on a strong plaster cast and turn the horse loose in a box stall bedded with sawdust.

Stringing Verandah Climbers

In putting up strings on which verandah climbers are to run, instead of attaching the lower ends of the strings to sticks stuck in the ground, take narrow boards and drive small nails part way in. Lay the board down flat and tie the strings to the nails. This looks much more neat, is more easily worked around, and prevents weeds from coming up between. By there being a number of strings fastened to the board, it makes them much less likely to be disturbed by strong winds which often pull the single sticks up.

Read the Advertisements

THE publishers of this paper draw your attention to the advertising columns, and particularly to the advertisements of the local merchants.

These merchants have invested their money in goods to satisfy the needs and desires of us all.

Their enterprise is a distinct service to our community. For this reason we should buy from them to the best of our ability and in so far as our needs and judgment of value dictates.

Then, too, the general commodities advertised in our columns are worthy of consideration. It is desirable that readers should ask merchants to supply advertised goods wherever possible. By doing so the cycle of trade is kept alive and intercommunity commerce stimulated. We repeat—read the advertisements.

Poultry

The temperature of a setting hen's breast has been found to be one hundred and five degrees, while the temperature of the plumage varies from ninety to one hundred degrees. This proves that the chick is not confined to one temperature when brooded by a hen, but can select a place where it is comfortable. This idea must be followed out in artificial brooding. Do not confine the chicks in a brooder without ventilation and expect them to thrive.

The hen-brooded chick can at any time stick its head out of the mother's plumage into the cool fresh air. When brooding with stoves keep a good fire burning so that the chick can obtain plenty of warmth when it is needed but also give the chicks a chance to run out away from the heat where they can occasionally breathe the cool fresh air which seems to give them health and vigor.

When chicks huddle tightly together around a brooder fire it is a sign that the right amount of heat is lacking. A coal burning brooder fire should be warm enough so the chicks will spend the night close to the outer edge of the deflector. Then if the stove cools down the chicks can move closer. Chicks that are warm enough will not huddle but will rest quietly on the floor beneath the deflector. Only an occasional contented peep will tell the operator that several hundred lively young chicks are resting comfortably for the night.

Do not suddenly go into a brooder house at night with a lantern as the chicks may scatter away from the heat and have difficulty in finding their way back when the lantern is gone. It is best to use a flashlight and only keep the light on when it is very necessary.

Some tribes in the Sahara Desert have slave farms.

The number of sheep in the United States has increased about 4,000,000 in ten years.

Give the sow a liberal ration of good quality during the time she is nursing the litter.

THE SUNDAY SCHOOL

MAY 29.

Making the Neighborhood Christian. St. Luke 10: 25-37; Acts 2: 44-47. Golden Text—Romans 13: 10.

Connecting Links—As the individual cannot live a healthy life alone, but only in company with his fellows, so the true home is not that which stands by itself, but it is joined with other homes in close relationship. The group of homes, in a Christian society makes up the community or neighborhood. Just as one unsightly rent or patch will spoil a good suit of clothes, so will one evil-minded man the company to which he belongs, and one bad home the neighborhood. In a very real sense the neighborhood cannot afford to tolerate evil conditions. It must make an effort to set them right, or itself become corrupted.

St. Luke 10: 25-37. **Master, what shall I do?** The lawyer's question is the great question of the ages and of all races of men. It means a restless discontent with the present world, and a reaching out after something better—a new life in a world that is to come. It declares that inextinguishable faith in the breasts of men that this life is not all, and that what a man is or does in this life determines what he shall be in the life that lies beyond. What shall a man do, then, that he may have eternal life?

The lawyer was tempting Jesus, trying Him, so to speak, to see what kind of answer He would give, but there is no doubt that his question had in it a measure of sincerity. Jesus treated him with respect and courtesy, seeking to draw out his own opinion, and he answered well, quoting two great passages from the ancient books of Hebrew law—(Deut. 6: 5 and Lev. 19: 18). When Jesus said to him Thou hast answered right; this do and thou shalt live, He spoke sincerely and no doubt meant just what He said. If this man, or any man, loved God with a whole heart, and loved his neighbor, he was living the life God's law required, and for him there was surely the hope and promise of eternal life.

Who is my neighbor? The lawyer followed up his first question with another. He found it much more easy to discuss the matter than to put the law into actual practice. He looked for a definition; Jesus told him a story—such a story as, once told, can never be forgotten.

A traveller was going down from Jerusalem to Jericho. It was then and is still a lonely road through wild and rugged country. Of it Stanley writes, "There we see the long descent of three thousand feet, by which the traveller went down from Jerusalem on its high table-land to Jericho in the Jordan Valley. There the last traces of cultivation and habitation, after leaving Bethany, vanish away, and leave him in a wilderness as bare and solitary as the desert of Arabia. Up from the valley of the Jordan below, or from the caves in the overhanging mountains around him, issue the Bedouin robbers, who from a very early time gave this road a proverbial celebrity for its deeds of blood, and who now (when Dean Stanley wrote) make it impossible for even the vast host of pilgrims to descend to the Jordan without a Turkish guard. Sharp turns of the road, projecting spurs of rock, everywhere facilitate the attack and escape of the plunderers. They seize upon the traveller and strip him, as is still the custom of their descendants in like case; they beat him severely, and leave him naked and bleeding under the fierce sun reflected from the white glaring mountains, to die, unless some unexpected aid arrives."

The point of the story lies in the contrasted conduct of the priest and Levite and the Samaritan. The Samaritan was of a mixed race which inhabited Central Palestine, and would have been looked upon with dislike and contempt by the orthodox Jew, who would never have believed that a Samaritan could inherit eternal life. Yet it was he who, in the story, observed the ancient law of neighborly kindness. "Go and do thou likewise" is the Master's parting word to His questioner.

The priest and the Levite were ministers of the Jewish religion, but they did not know that their religion, as well as their law, demanded of them deeds of mercy and kindness.

The story teaches unmistakably that the first and chief duty of neighborliness is just kindness. The Samaritan made no attempt on a large scale to reform the social evils of his time, but he showed kindness to one who was in desperate need. The schemes of social reformers are right and good in their proper place, but too much must not be expected of them. Any set of social conditions can be made Christian where kindness and love prevail. It is of kind hearts and the humble ministry of kindly folk, even more than by economic or social change, that the betterment of the world is coming.

Acts 2: 44-47. **All things common.** The spirit of those disciples of Jesus, and converts to faith in Him, who made up the early church in Jerusalem, was good. They joined together in a kindly brotherhood, giving special attention to those who were in need. They saw to it, in particular, that widows did not lack anything. Yet no one was compelled to give. All was done generously and freely. They ate often together, they visited, and worshipped together, expecting that their Lord would soon return to them. Their happiness, their generous kindness and goodwill, and their faith attracted many to their company.

But their communistic system did not last. The spirit of it was good, but it had serious defects. People do best when they have their own homes, their own little property, their own shop, or factory, or field. The spirit of unselfish sharing must, however, remain. Through it society is becoming, and will become more and more, Christian.

Application.

Jesus details the various things which the Good Samaritan did for his unfortunate brother. Deftly and methodically and efficiently he proceeds to administer first aid, then to provide restorative influences and then to secure continued attention. We note his businesslike way even in his kindness, his readiness to do the work of a surgeon, his cheerful improvisation of an ambulance, his care at the inn, his generosity, prudent in a promised future auditing of accounts. This man's compassion was blended with shrewdness and was as practical as the least compassionate man could have been. This is the kind of wise goodwill which is needed to develop a proper community spirit. Sentimentality will not do it, nor plans which are not the result of careful consideration and common-sense.

The Welfare of the Home

Providing a Motive.

"I don't want to get up. I'm going to stay abed this morning. I'm sick," came the grumpy call from the boy of the house.

Neither opposition nor argument was offered by the wise mother. She ignored the remark and merely spoke over the banister to her husband below. "Did you say, Daddy, that those of the children who were ready on time could ride out to see the circus unload?"

Two bare feet slapped to the floor and a smiling boy in good health made a prompt appearance at breakfast.

In another case—"I hate to sell tickets," was the irritable reply to the mother's request.

"These are stamps, John, not tickets. Every one you sell gives food for a day to a starving little Chinese boy."

Visions of a black-queued laundry man who had given John a nut arose in the boy's mind. "So it's saving Chinks," was the boy's wording of his motive, and with zest he sold eight dollars' worth of the three-cent stamps.

The mother who can supply motives in place of arguments finds a harmony in her home that generates peace, which in its turn is a strong factor in promoting good health. Constant friction reacts upon the physical condition of the members of the family.

Many pleasures and joys are due the children, yet it is only right that they should share in a simple way the burdens and responsibilities that go to make for comfort in the home. Where a mature mind can vision the needs and outcome of the work required, a child can see only the irksome task to be accomplished and often must be provided with a motive.

At one time when a new garden plot was plowed many stones were turned up. The father of the family left word in the morning for the children to toss out the stones after school that day. It was easy work for a while, but soon the interest lagged. Suddenly the oldest boy had a happy thought. "Let's get all the stones we can find and build a gate-post. Father will fix the cement and help us when he gets home." The garden plot was searched for every stone and a wonderfully fine piece of work was accomplished there before the father returned.

Many fine acts and homely accomplishments are recognized with honor for Boy Scouts and Girl Guides which provide motives within their vision. However, the motive must be a right one, and not of the kind one mother offered in holding up a twenty-five cent piece to calm her boy in his fit of temper. It was an easy way to earn money and the temper fits became frequent. That bit of silver might have accomplished more if offered to the child of that tendency for every week or month when no temper was allowed to show itself. In that way the child would have learned self-control of life-long value.

Neither rules nor laws can be fixed for the varied situations a mother faces, but if she can be equipped with a point of view from which to work, it will often meet a wide stretch of needs. To be able to offer a legitimate motive for action is one step towards happy home harmony.

Less Danger from Fire.

We live about a mile from town, our electricity coming from there. We have all our rooms wired, also our front and back porches, cellar and barn. It would be very hard to decide which light we value the most, as we feel now we could not do without any of them.

I also have an electric iron with which the week's ironing can be done in less than half the time taken with other heat. We think no other money invested on our place has paid such returns as our electricity, and, when one considers the great danger of fire from lanterns, too much praise can not be given electricity on the farm. —C. B.

Mark Your Pigs.

In marking the pure-bred spring pigs use a punch making a long oval notch, as that kind is more satisfactory than a V-shaped one. Any accidental tear is apt to be mistaken for a V-shaped notch, while the oval is unmistakable. Tags are not generally satisfactory for marking pigs, as they are difficult to read and are easily torn out. The system of notches is swift and certain. In marking young pigs the notches must be out of proportion to the size of the ear, for the pig's ear will grow, while the notches do not get larger. Thus when the animal is full grown, notches that were plainly seen on the young pig are barely visible.

Blindness, in nearly 40 per cent. of cases, occurs after the age of 45.

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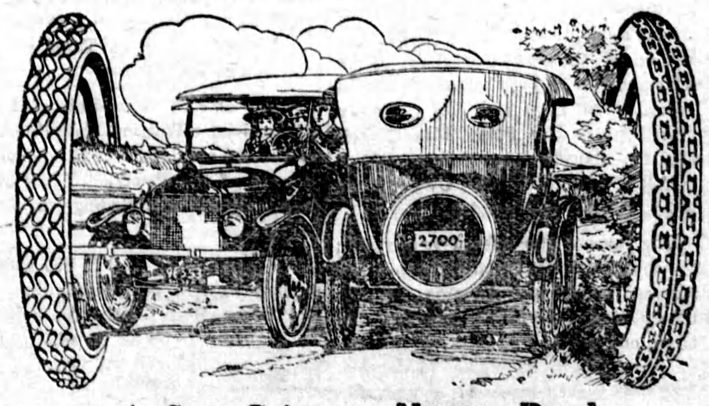

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