

Soils and Crops

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Sticking to the Hog Business.
Economy in the use of feeds and the adoption of labor-saving methods are imperative for the hog raisers of to-day, and short feeding periods in which cheap bulky feeds play as important a part as consistent with rapid gains will undoubtedly yield the greatest net profit.

Ample provision should be made for the supply of suitable feeding materials. Many a hog grower has overlooked the feed problem only to realize that putting weight on a large drove of hogs involved serious outlays. While corn is the most important grain feed, there are many times when barley and oats may be used to advantage in feeding breeding stock and growing pigs. So the farmer who desires to follow a safe and conservative system of hog feeding, especially in a region where there is more or less danger of a partial failure of the corn crop to mature sound ears, will find it advantageous from several points of view to grow a few acres of these small grains to help out in his feeding operations in case the corn crop fails. Not only will they prove of great value at such times, but they may be used to good advantage to balance up the protein content of the ration when corn is being fed in liberal amounts to the growing pigs and breeding stock. These feeds will save many dollars in the purchase of protein concentrates and prove an efficient substitute for corn in case of partial crop failure.

Another factor in economical hog growing at the present time is that of keeping down labor costs. Science and experiments indicate that hogs make more economical gains from the same amount of feeding materials where labor charges are low, than is on farms where the hogs are allowed to gather a portion of their feed in the fields, and where the grain feeding is simplified as much as possible by the use of self-feeders. Various feeders report satisfactory results with self-feeders for growing pigs and breeding stock; while other men prefer the old way, inasmuch as it makes it possible for them to make more efficient use of the crops and pastures. During the fattening period, however, the hog is the best judge of its own needs, for when left to his choice it will balance its ration to produce the most profitable gain, eating less and less of protein and more and more of carbohydrates as it grows older and fatter. Besides, this makes it possible for one man to feed a large number of hogs without neglecting his other work. When conditions justify a full feed of grain there is no doubt that the free choice method of feeding is the most efficient and economical.

Harvesting corn with hogs not only helps to solve the complicated labor problem, but it pays. In test after test it has been found that hogs turned into forage and corn fields waste but little feed and produce cheaper gains than when fed in yards, and they save a lot of work gathering and preparing the feeds. The practice of hogging down corn is so profitable that many farmers now sow rape in the corn fields and plan the corn crop so as to extend the length of time during which the hogs can be used in harvesting the crop. Each spring the first corn which they plant consists of a small field of a ninety-day variety. This matures two or three weeks before the main crop and gives the hogs that much more work to do before cold weather comes. The early maturing varieties of corn usually yield rather less than the later ones, but the saving of labor and the extra pork per bushel in full compensation for that. Besides beginning

the full feeding period that much earlier makes it possible to hasten the time of marketing the hogs.

Fertilizing the Orchard.

The need of plenty of plant food in the orchard is one of the essentials which has been greatly overlooked. A properly balanced ration is as necessary for the apple and peach and small fruit as it is for an animal. It is this which produces the bearing wood, and hence the fruit and quality of the fruit is also dependent upon this. Proper balance must be kept between the amount of plant food elements obtained by the leaves from the air, and those obtained by the roots from the soil, in order to get the large, attractively colored and deliciously tasting fruit. And if plant food is not present in sufficient quantities in the soil, the roots can not get it.

The kind, form and amount of plant food available for the use of the plant controls wood growth. Wherever one of the essential plant foods is lacking, that is—present in unavailable form or in insufficient amounts—satisfactory growth of bearing wood is impossible. With fruits, as well as with all other crops, each of the three essential plant foods has a specific function.

Ammonia is the stem and leaf producer. It makes new wood, and gives to the foliage the healthy green color which by experience we associate with thriftiness and vigor.

Phosphoric acid hastens maturity and increases production of fruit. This is seen on corn, is seen on wheat, and is equally apparent, although oftentimes more important, on fruit trees.

Potash strengthens wood growth. It also aids in producing healthy, disease-resistant growth, the kind which allows the production of quality fruits. As mentioned earlier, the plant food must be balanced. The best fertility practice is that which grows enough wood for a full set of fruit, but which also controls the growth, ripens it in time to prevent winter killing, and keeps it within bounds so that it may not smother or otherwise injure the fruit.

Just what fertilizer to apply depends very largely on how the orchard is being treated. Tillage increases the availability of soil nitrogen, so for a time, although a limited time, a tiled orchard requires less ammonia than does a sod mulch orchard. There, also is a difference in soils, sandy soils being weaker in potash and phosphoric acid than loamy soils, while clay soils are richer in potash.

Commercial fertilizers are valued according to the amount of ammonia, phosphoric acid and potash contained, the amounts being figured in per cents, indicating that the fertilizer contains four per cent. of ammonia, ten per cent. of available phosphoric acid, and six per cent. of potash.

The following fertilizers give apple growers a sufficient range of choice: Sol Mulch System: Sand 5-7-2; loam, 6-8-0; clay, 6-8-0.

Tiled Orchards: Sand, 3-10-4; loam, 3-10-2; clay, 3-12-0.

The amount to apply also varies, but four to five pounds per tree, spread on about a month before the trees blossom, will give best results. As a fruit grower studies his crop, the relationship between plant growth and fruit production becomes more and more evident and he is then able, sometimes, to change his fertilizer so as to fit changing needs. The above range of analyses, however, fits nearly all needs of the modern progressive apple grower.

C Poultry

Turkey eggs are almost invariably hatched under turkeys or ordinary hens. Artificial methods are very seldom used, though good results are often obtained when high class incubators are used. When ordinary hens are used, the methods of caring for both hens and eggs are the same, except that when hens' eggs are used, it requires four weeks to hatch turkey eggs where only three weeks are required to hatch hens' eggs.

Turkey hens have considerable of the wild nature, although bred more or less in confinement for a good many generations. For that reason they are likely to "steal" their nests in out of the way places where it is difficult to find the eggs and take proper care of them. It is therefore wise to make nests out of old material (never use new material for it makes the turkeys suspicious) and in secluded places and put a nest egg or two in each nest to encourage the turkey to lay there. It is best to examine these nests in the late afternoon, because if the turkey is found there, she is likely to leave that nest and select a new one which she thinks will not be discovered. While there is danger from frost or when there is danger from rats, crows, or other animals which like eggs, the eggs should be picked up every day and nest eggs put in their places so that the hen will not notice their absence. Then when the hen begins to sit, the

eggs may be placed in the nest and the nest eggs removed while the hen is eating.

When a turkey steals her nest, it should be carefully examined when the hen is absent to make sure that it is not where water will settle in during a rain and has sides high enough so that the eggs will not roll out. Very often the nest that a turkey will select is not at all adequate to hold the eggs. Any changes made, however, should be accomplished with the old material around the nest, like dried twigs, leaves and so forth, so that the hen will not notice it and start a new nest in a more secret place.

It is never advisable to have two hens sitting near together, because if one hatches first the other may leave her nest entirely, in an attempt to adopt some of the poult of the other mother. During the sitting period, care should be taken that the hens get off their nests to eat once a day and that they have plenty of clean, sweet, whole corn, some grit and plenty of fresh water. After they begin to sit there is not any danger that they will leave the nest and it is safe to visit them occasionally, though care must be taken not to frighten them.

Days for deeds are few, my brother. Then to-day fulfill your vow; If you mean to help another, Do not dream it—do it now.

It is as easy for you to please everybody as it is for everybody to please you.

Welfare of the Home

Baby's Second Summer Will be His Happiest if You Take Care of Him.

By IDA M. ALEXANDER, M.D.

"When this boy was two years and four months old," said a six-foot father to me, "I never thought we should raise him."

"What was the matter?" I asked with interest.

"Oh, the baby's second summer, you know," he answered vaguely.

I told this father very promptly that there was no reason why a "baby's second summer" should be any harder on him than the first summer. For such a well-educated man he had believed the "baby's second summer" lie entirely too long.

How did such a lie come to be believed? I remember mothers expecting their babies to be sick the second summer and the babies hardly ever disappointed them in that, but what was the real reason?

Did you ever see a father make a five-year-old do chores that were hard for a ten-year-old boy? Did you not feel "mad clear through" to see a father so cruel to a mere baby? I know you have. Well, the stomach of a baby is made of muscle and the muscle of the two-year-old baby has only two-year-old strength, so you should give your baby such food as does not require a strong stomach-muscle, or else you are just as cruel to your baby as the father who works a five-year-old boy. You have no more right to overwork a baby's stomach-muscle than you have to overwork the arm and back muscles of the five-year-old.

The sickness of the baby's second summer was just the result of making a two-year-old muscle do the work of a ten-year-old muscle. It was the result of giving a two-year-old such food as only a ten-year-old should be allowed to have. It was ignorant cruelty and not kindness; was selfishness and not consideration; it was bigoted ignorance instead of open-eyed knowledge.

There is one excuse I hope to hear no mother make for the harmful food she prepares for her family: "They like it." Least of all should that be the reason for what you give the baby to eat. I have known babies to like

pickles, at least the mother assured me the baby liked pickles. Now if pickles are good food for a baby, then they must be good for you. We know that the food value of pickles is "one cent on the dollar." If you doubt my word, then eat pickles for breakfast next wash-day, just pickles and nothing more, and see how much strength pickles have to give!

There are two questions every mother should ask of the food she intends to put into a baby's stomach. First: Has this a food value? Second: Is it child food, or is it man food? You would not make a baby do the work of a man? Well, then don't make the baby's stomach do the work of a man's stomach.

Suppose we have here a perfectly healthy breast-fed baby that has learned to take his meals at regular hours, drink water when thirsty and sleep all night long without nursing. Let us take him through the weaning period (and to do that we now begin at six months old instead of weaning him all at once). At six months he is weaned away from his night feeding and sleeps all night with only a drink of water. Now the teeth begin to come and there is a heavier demand made on the lime in the system and the alkalinity of all the tissues need something to keep them normal. This is supplied by giving orange juice at least twice a week, two tablespoonfuls twice a week to every day.

This acts as a food and a medicine both. Give it. At seven or eight months of age, the baby may be given one meal a day, but not any meal of chewing food. This should be a thin oatmeal gruel or barley gruel with whole milk, using one part of the thin-milk gruel to two parts milk and baby should be able to eat eight ounces at a feeding. If this is made an afternoon feeding, the mother can get away from home without taking the baby with her. A little change is good for the mother and the baby too. Give thought to these matters. More on this subject next week.

Saving Work in Seeding.

It is inconvenient to fill the drill box every round, and especially when a tractor is used. Here is a simple way to make an extension on a drill box. Take two 1x4-inch boards the length of the drill box, and two 1x4-inch boards the width of the top of the drill box to use for ends. Nail them together, forming a box, using 2x2x6-inch blocks in each corner to nail to. Brace the box in centre with good, stiff strap iron. It is necessary that you have the exact width of the top of the drill box so the cover will fit on the extension.

Take a piece of strap iron one-fourth inch thick and one inch wide; have your blacksmith cut twelve

pieces three inches long; bend each one of them back an inch, forming the shape of an L, and drill two holes in the long part and one in the short part of each. Remove cover from drill box, and bolt on extension by placing three of the L-shaped irons in front of drill box, and three of them on the back of box. Bolt the strap irons together and fasten cover to extension box. This nearly doubles the capacity of the drill and save a great many stops and valuable time in the planting season.

Production is the saving grace of a nation.

Work is the panacea for the world's ills.

THE FARM WORK SHOP

The farm shop had best be near the house, or can be a part of it, if easy of access. A part of the wagon house, either the ground floor or loft, or a wing of the barn, may be partitioned off. Better yet, erect a separate and especially planned building, perhaps as a shed or lean-to. It should be large enough to swing a twelve-foot board or a wagon tongue and hounds, and at least as high as an ordinary room—nine feet. It must be well lighted, with windows on two sides—better, on three sides; or there may be a glass door. For winter work, when most making and mending jobs can be done, the shop should have a stove, a little air-tight affair suited for wood.

The special appliances in a shop are several and should be placed where they will be most handy to get at and to use. On one side put the carpenter's bench, having its strong wooden vise and broad, level top so-called bench stops at one end. Best is a regular cabinet-maker's bench, with side and tail vises; opposite the latter should be a row of holes for plugs, with another plug in the vise so that a strip or board can be held between plug and vise, and planed. Behind the bench, on the wall, there should be a tool rack, consisting of strips of various sizes cut out to hold the carpenter tools.

In one corner near the bench place the chopping-block, an article too often overlooked even in the more elaborate trade shops. This is a three-foot section of log of any sound wood, eighteen inches or more in diameter, stood on end over a floor-joint, or with a brace beneath to the ground. With a sharp hatchet no end of rapid work can be done on this block, thereby often saving time and energy.

Near a window, on a stout piece of plank set on a heavy upright, braced to the wall, though at least two feet from it, bolt the iron vise, a heavy, reliable article with jaws four or five inches long and made to open as wide. The vise that is attached to a small anvil is very handy. On the back of this stand, nail a board with a raised rim or strip around it for the metal-working tools—monkey-wrenches, files, chisels, wire cutters and pliers, cold chisels and ball-peen hammers.

A pair of carpenter's horses, or trestles, are necessary; let them be heavy, with legs that spread comfortably and fit the even floor. And do not forget the grindstone, preferably foot power.

For the storage of useful articles, such as assortments of brads, nails, screws, bolts, rivets, wire, strip iron, braces, angles, metal cleats, hinges, clamps, etc., make use of an old chiffonier, or similar article of furniture with drawers, into the divided portions of which this material may be classified. A very good way is to use cigar boxes with the lids torn off.

The foregoing is the simply appointed shop; there may be wisely added by the enthusiast for mechanical appliances a steam forge, a light drill press, and even a foot-power circular saw. Indeed, there is hardly an end to the useful machinery that in a small way may constitute time and money savers on a large place, for there is not any one of them but will pay for itself in a short time. Many a useful, many a happy hour may be spent in the farm shop. Put a comfortable old chair in a corner and, having a good fire in the stove, engage some friends in conversation while you work.

Tools for Metal Work.
Following is a list of metal-working tools which the busy and up-to-date agriculturist could use to good advantage for the many and varied mending and making jobs that are forever turning up and proving necessary.

For metal work: A hack-saw frame and set of saws; set of twist drills to fit brace or drill press, from one-sixteenth-inch to one-half-inch by thirty-seconds; set of files, including twelve-inch flat coarse, eight-inch, flat fine, ten inch rat-tail coarse, six-inch rat-tail fine, ten inch three-corner, seven-inch three-corner, ten-inch half-round and twelve-inch rasp; pair heavy wire cutters; pair light pliers; cold chisels, one-fourth-inch and one-inch; centre punch; bevel reamer, monkey wrenches, light and heavy; countersink; two ball-peen hammers, eight ounce and twenty ounce; set of standard bolt thread taps and dies.

These tools can be secured from any dealer in hardware. It pays to buy a good brand.

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BECAUSE of its Tone superiority, its ability to play correctly every make of record and the unrivalled beauty of its cabinet work, the Brunswick is an ideal wedding gift.

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Washing Spoils Eggs.

Eggs should not be washed, as this removes the gelatinous film of the shell that keeps out air and germs. The nests should be kept clean so that the eggs will have no chance to be

come soiled, as removing dirt by washing will allow molds and germs to enter the egg and hasten its spoiling.

Buy Thrift Stamps.



Chance never drew a neat picture nor built a fair house.

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Partridge Tires are all that good Tires can possibly be.

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TEACHING THRIFT TO CHILDREN

The parents and teachers of every child wish him to have the benefit of greater advantages than they have had. That is one of the reasons why parents often make great personal sacrifices to educate their children for more congenial work than they themselves have enjoyed, and interest in his pupils is one of the few compensations for the trials and insufficiencies of financial returns of a teacher's career.

To make the principles of thrift effective to the child, they must be put into constant practice both at home and in school and must have a direct connection with his daily life.

Every educator realizes the tremendous value of teaching thrift and industry to little children, both for their immediate benefit and in anticipation of their future success. Parents who have not had a training in personal economy are anxious to have their children realize that the practice of thrift and an appreciation for the value of money are essential to success and self respect. Thrift principles enter into every relationship and problem of daily life.

Training in economy is equally necessary for the child of parents in poor or moderate circumstances and for those who are rich. In our complex Canadian life it is possible that the poor child of to-day may be the rich man or woman of to-morrow, and that the child born with a silver spoon in his mouth may sometime be thrown upon his own resources.

It is never too early in a child's training to begin the teaching and practice of thrift. Traits of the habits and animals and insects furnish many examples of this quality. The simple story of the red squirrel will interest any child. Tell him that before cold weather begins the red squirrel builds a comfortable and durable home, that during the summer and fall he gathers nuts and acorns to provide food for the winter time when snow covers the ground. Contrast the habits of the spendthrift rabbit, who saves nothing and who consequently suffers from hunger.

The thrift and enterprise of the bee and the ant may be contrasted with the laziness of the grasshopper and the butterfly. The Book of Proverbs and Aesop's Fables contain many a story which shows the stupidity of extravagance and laziness.

Thrift may also be taught by the careful use of materials in the school-room by economy in handling chalk, clay, paper and other articles, and in the home by careful use of furniture and by the elimination of waste in household necessities such as food, fuel and light.

In every walk through the streets to and from school, material for consideration presents itself. The example of the fire department, a source of interest to every child, may be used to show how loss of life and property is prevented. The public cans for rubbish are another public economy, for by their use we decrease the duties of the street-sweeper.

The means of practicing the principles of thrift are numerous. Children may be encouraged to buy the Thrift Stamps issued by the Government, or to have accounts in Postal or Savings Banks. Through these channels the systematic saving of money may be brought home to the child in an attractive and profitable way, and the sums so saved conserved and invested. Canadians are spendthrifts by habit. It may not be possible to eradicate the vice of extravagance in this present generation, but it can be stamped out by the boys and girls of the future by continued instruction.

The influence of economy is far-reaching, and instruction in thrift is a personal, a municipal, and a patriotic duty which both parents and teachers owe to the children, the community, and the country.

Locust Control.

Of all the means employed in destroying locusts none other can compare favorably with the poisoned baits, the utility of which has been proved beyond question. Their success, however, depends greatly upon careful application, while failure can nearly always be traced to some fault in making or applying the baits. The Entomological Branch has just issued Circular No. 13 "Locust Control in the Prairie Provinces," by Norman Criddle. This will be sent free upon application to the Publications Branch of the Department of Agriculture, Ottawa. It gives full information regarding preparation and application of baits. It further states that the locusts, which last year did great damage in Western Canada, are the native kinds known respectively as the Lesser Migratory and the Pelucid Locusts. These locusts pass through various stages and reach maturity about forty-five days after emerging from the ground in early May. During this time they continuously feed on growing plants. On attaining the winged state the habits of the locusts undergo a change, they acquire flying and egg-laying habits, still remaining voracious feeders. By the end of June flights as a general occurrence and extensive migrations may be observed on warm days.

A man had a denkey for sale, and hearing that a friend in a neighboring town wished to buy one, sent him a card as follows: "My dear Richard,