

Soils and Crops

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Oats and Peas For Silage.

In districts where early frosts make corn an uncertain crop, oats and peas can be grown profitably for silage. Oats and peas withstand light frosts and make an excellent growth, even with low temperatures. When unfavorable weather for harvesting clover sets in, such as a long rainy spell, the clover can first be put in the silo, after which the oats and peas can be harvested. In sections where corn will not do well on account of a lack of heat, oats and peas, as a rule, will produce more tonnage and the silage will be much better, being nearer a balanced ration. Dressing of barnyard manure will increase the yield, especially on new lands which have not been inoculated by clovers. Oats and peas contain more than twice as much protein as corn, and therefore make a ration which is practically well balanced in itself. As a food for dairy cows it is most excellent, and will substitute the best of pasture.

In the fall of 1918 I had an occasion to test the worth of oat and pea silage compared with corn silage. I had been feeding corn silage to a number of dairy cows, and on the twenty-first of January came to the place in the silo where oats and peas had been put in. We noticed at once an increase in the production of milk from our herd. One cow which was nearly dry, giving about fourteen pounds per day, rose quickly to twenty pounds per day; another increased from fifteen pounds to twenty-four pounds, and similar increases were noted by other animals of the herd. This was sufficient evidence for us to prove that oats and pea silage was superior to corn silage, especially when given as we were feeding.

Our method of sowing is to work the ground as early in the spring as it can be plowed and harrowed, then sow one and one-half bushels of peas to one and one-half bushels of oats per acre. The oats and peas will germinate even when the ground is cold and wet, and in spring frosts will not destroy the plants. The crop will come on in mid-summer, and when the peas are well podded and most of the pods filled, the crop is ready for the silo. It should be cut and put in the silo when still green. Do not allow the forage to become dry and then be obliged to add water; the natural juice of the plants is the best and cannot be replaced by adding water.

Oats and peas can be handled much the same as hay when made into silage. It is better to cut, however, when the dew is on to prevent peas and oats from shelling. The land is cleared in simple time to prepare the ground for winter use or wheat. This is a special advantage when considering land is being farmed and labor is scarce and hard to get. Oats and peas are much easier to raise than corn as they can be planted fully a month earlier and will not be damaged by frosts. More than that, no cultivation is needed, and where quick grass is bothersome, a heavy yield will choke out and destroy the quick grass.

Working and Printing Butter.

I have often wondered if the average farm buttermaker realized the importance of working butter properly, after it has "come" in the churn. I have found that there are many buttermakers who do not think that

it is necessary to bother with a butterworker. I know of a certain lady who has a good reputation as a buttermaker, but I have noticed that her butter sometimes has a pale, salty look to it. I did not know the reason for it until I saw her working her butter. She took it in her hands and kneaded it and squeezed it in her chopping bowl, and after she thought it had received enough working she took a handful and pressed it into her butter-mold to print it. By then it was a greasy mess.

One can realize it better when he understands that the temperature of the hands is around 100 degrees F., whereas the temperature of the butter should be in the neighborhood of 55 degrees. Such a difference, of course, makes the butter melt more or less, which spoils the grain. Then, again, in looking at it from a sanitary standpoint, working the butter with the hands cannot be as clean as when using a butterworker, as the butter is more apt to absorb impurities when made soft by the heat of the hands. It is true that bread is often made with the hands, but although it would certainly be cleaner not to use the hands, bread or any mixture made of flour does not have the absorbing tendency of butter or other greasy substance.

Butter handled with the hands is very apt to have a greasy, salty texture, and it also has poor keeping qualities on account of being subjected to extremes in temperature.

I have noticed that quite a few farmers who have a fancy print for their butter do not realize that, although the mold may be supposed to print a certain amount in weight (in my neighborhood the one-pound seems to be the most popular), it does not always make the correct weight, depending somewhat on the firmness of the butter and the time of the year that it is made, and also on the way that it is handled. A very fancy print is more inclined to vary than one that is plain.

I know a farmer who had a nice hotel trade for his butter. He was really a good buttermaker and had all the necessary equipment. He had a very fancy butter mold which made a "hit." But he lost his trade at the hotel and at other places. To-day he is selling milk instead of butter. He never has known the reason why he lost his trade, but one day I was talking with a man who was a guest at the hotel, and he told me that he had seen the hotel people weighing the butter, and there had been times when it was as much as two ounces under weight. The hotel people, of course, thought they were being cheated. I know the farmer who made the butter was honest, but I remember how he printed it. He would take a piece and press it into the mold hard, slide the ladle along the edge to even it off, and wrap it in parchment paper. "Of course there must be an exact pound, because it was a pound mold," he thought.

I know a woman who makes nice butter. It is printed in pound lots, but I found that I always got a pound and two ounces when I weighed it.

No doubt, you can hold your trade better by giving overweight than underweight, for the average person does not like to feel that he is being cheated, but it is not very good business to give a pound and an ounce when you are being paid for one pound.

Poultry

On looking back over our records we found that January 1, 1919, we had a flock of 100 Plymouth Rock hens, all laying steadily, some young stock and a clear field to work in. Our hen house is a comfortable building, 12x32 feet and has the almost priceless feature of a cement floor, thereby doing away with a damp, musty interior. Facing the south, we had practically forty feet of glass windows which with the addition of some thirty feet of double-weight muslin sashes, gave our hens a moderate amount of fresh air during the day. In addition to this, the glass windows have screens back of them and the windows themselves are placed on hinges, so that during good weather they can be safely opened without the risk of having vermin enter the chicken house.

We have a large piece of heavy canvas which is stretched under the eaves at night and removed in the morning. This leaves the entire floor space for scratching and does away with much of the weekly cleaning so very essential in poultry raising.

We always keep several dust boxes placed in convenient spots, primarily in the sun, and have found this the better method of any so far for keeping the birds free from lice. We also use air-slaked lime very freely on the interior wall and ceiling of the buildings. Each spring, we very thoroughly spray roosts, nests and in fact the entire place with crude carbolic acid and kerosene which will kill any mites there are in the house.

We try to have all our chicks hatched by the end of the middle of April, therefore the latter part of February and the first part of March, the hens

showing an inclination to set, are placed in a room by themselves. This is considered a little early to set them, so additional care is necessary in arranging the nests that they might be warm and comfortable.

About October 1st, we dispose of all old hens, as by that time the young stock has begun laying.

Our accounts for 1919 return these figures:
Value of eggs for year \$392.95
Chickens sold 155.38
Chickens eaten 96.19
Total \$644.52
Feed 164.80
Profit \$479.72

Germany Makes First Belgian Reparation.

The Belgian Reparations Commission in Wiesbaden reports that up to April 1st, 1920, the following articles had been returned to the Belgians: 12,154 machines, and industrial appliances aggregating \$9,929 tons; 14,427 agricultural machines; 3,935 head of poultry; 1,315 goats; 3,197 sheep; 87 horses and 3,412 cattle; 3 tons of seed for sowing; 250 tons of oats, and 50 tons of barley.

Art treasures to the value of 2,109,000,000 francs (normally \$421,800,000) had been returned together with several million francs worth of jewelry. The International Commission had also returned 51,239 tons of railway material to the Belgian lines with 77,796 cars and 2,215 locomotives.

A small hopper containing grit, charcoal and granulated bone tends to correct leg weakness.

The first six months of a calf's life either makes or mars its future development.

Hogs

I am one of the users of a self-feeder. Mine is not an expensive one. I made it myself. My first experience with it was with 16 hogs. None of them weighed over 150 pounds. I made it five feet long, and it fed from one side only. There are two compartments. At first I thought it would be too small, but now I see that it was plenty big enough. There is only one reason for having more room, and that is to allow a larger amount of feed to be dumped in at one time.

As a matter of fact, a feeder of this kind is used all the time, and there are seldom more than two or three pigs eating at one time. So what is the use of having a feeder so big? I don't know of any reason. And what is the use of five or six compartments for the pigs to look into when they feel a little hungry? I don't see any.

So last fall, when I got my 16 pigs on clover, I threw the corn for them over the fence every couple of days, and kept the self-feeder full of tankage. I hauled a tank of water out, and let it drip a little all day into a trough for them. So they had water and corn and tankage with clover forage. What more could a pig want?

My feeder cost in actual material purchased about \$3. That was for matched siding used in it. The 2x4 stuff was on the farm, and the roof was also a piece left from roofing the hen house. Most farms have this same material lying around in a pile, so just why should we pay \$20 or \$30 for a feeder is not quite clear to me. My hogs grew faster than I ever had any grow before, and I know the feeder paid. I also think that a \$3 feeder made them grow just as fast as a \$30 one would. So I'm \$27 ahead, and that is just about the price of another pig—at present prices.

Control of Swarming.

Swarming is the bees' natural method of increase, and the instinct to swarm is particularly strong under the extremely favorable conditions for bee activity of the Canadian spring and summer.

The uncertainty of swarming, the loss of honey following the division of the working force of the colony, the possibility of swarms escaping, and the difficulty in preventing swarming in many parts of Canada without considerable labor, all make the control of swarming quite the greatest problem in bee management. To encourage work in the hive and to discourage the desire to swarm, plenty of room, both in the brood chamber and in the super, and large entrances should be given to all colonies as soon as conditions are favorable, but these measures will not always be enough to prevent swarming in many places, especially in the north.

If the apiary can be watched all day, it is a good plan to clip the queen's wings at fruit bloom time. When the colony swarms, remove the hive to a new stand, place on the old stand an empty hive, to which the bees will return, the queen having been meanwhile picked up and placed in a cage in the new hive. The field bees will join the swarm and the queen.

My Tractor Does the Work of Six Horses

The tractor is the greatest invention that has ever been found for extensive and intensive farming. I believe that by the use of a tractor modern agriculture has been made successful. From my experience I derive the opinion that it takes a farm of 125 acres or more to make the tractor pay like most purchasers expect it to. But there is a tractor for every farm and for every purpose.

The farm on which I use my tractor is about 200 acres, and this would require every bit of six good horses, because I put nearly all in grain. Besides, it would require an extra hand and team during the seeding and harvesting time. What it would cost to keep those six horses I can't tell you, but I know they would cost more than three times what it is costing me now. The cost of keeping my tractor is not very large. When I am plowing I use about 20 cents' worth of kerosene to the acre. The lubricating oil, gasoline, and grease amount to about 8 cents an acre. This makes about 28 cents to the acre for plowing, and plowing 10 acres a day costs about \$2.80. I always consider a day's work to cost me about \$2.80, whether I am plowing, disking, or reaping. Except when I am doing a small job, the cost is according to the load.

The tractor I chose for my 200 acres in cultivation was a 12-20. The sons I chose this make were: First, it was the proper size for my farm; second, it wasn't a cheap and half-constructed tractor, but backed by years of experience; third, I considered the type of motor it had, as I believe it takes a four-cylinder four-cycle motor to make the small tractor successful; fourth, this tractor is easily accessible to all parts by only lifting up the sides of the hood, which makes it easy to take it apart and to replace any worn parts; fifth, it was of the four-wheel construction, as I believe that every tractor should have four wheels; sixth, it was of a very simple and durable construction, as I believe that the fewer parts a tractor has the less there are to wear out.

I put nearly all the fields in grain, and attend to every acre myself, except during reaping and threshing time. In summer I plow every acre, and do all this myself, averaging about 10 acres a day with a four-disk plow. The last two years I plowed 500 acres on the average of 10 acres a day, counting delays, breakdowns, etc., and at the same time keeping the tractor in A-1 condition. I don't claim to be breaking any records, but if you will compare my figures with the ordinary small-tractor owner he might consider them well worth looking at.

After I am through plowing I disk my land and put it all in good condition for seeding time. I do all this with the tractor. But when the time comes to seed I rent a few horses, as I need them only a short time. I figure that this is cheaper than the equipment would cost to fix up a good rig to seed with my tractor. But I expect some day I might also do this job with a tractor. When reaping time comes there is nothing that beats a tractor in pulling a reaper. I have seven speeds on my tractor and I set it to go about 3 to 4 miles an hour and you ought to see the bundles come out.

ent colony will be so much weakened by their loss that it is not likely to swarm again.

Where the apiary cannot be watched, the plan of preventing swarming by examining every brood comb in every colony every week, and destroying all the queen cells is very laborious and not always effective. A simpler plan is to remove the queen at the beginning of the clover honey flow, and eight or nine days later, destroy all the queen cells except one, or destroy all and give a ripe cell of select parentage. In this way a young queen is obtained which will not swarm and, besides, will be more prolific in the fall and next year than the old queen, and will be less likely to swarm next year. This plan, however, causes a certain amount of loafing until the new queen starts laying. This loafing can be much reduced by introducing a ripe queen cell at the time the queen is removed, and if this is done early enough before any preparations for swarming have been started, the bees are unlikely to build further queen cells. Where, however, one prefers to use the surer method, only those colonies that are actually preparing to swarm should be treated, and some means for quickly ascertaining if a colony is building queen-cells in preparation for swarming should be employed. One of the best of these is to have the brood nest occupy two chambers, and then by prying up the upper chamber, one can see at a glance if the queen cells are being built along the lower edge of the combs in this chamber.

In many parts of southern Ontario, southern Quebec and similar regions the desire to swarm is strong only during the first two or three weeks of the honey flow from clover, and the separation of queen and brood by a queen excluder, the queen being put into a lower chamber containing only empty combs and foundation, may be enough to tide the colony over this period. Another good plan that may be enough to prevent swarming in this region is to use two brood chambers and confine the queen to the lower one only in the honey flow, at which time the combs in this chamber usually contain a large number of empty cells.

Experiments in Agriculture. Almost every farmer in Canada is interested in some phase of the agricultural work, carried on by the Dominion Experimental Farms System both at Ottawa and on the twenty branch farms distributed between the Atlantic and the Pacific. The work covered on these farms includes investigations with live stock, field crops, fruit growing, tobacco, bees, poultry and, in fact, all branches of agriculture adapted to Canadian conditions. The Report of the Dominion Experimental Farms for the Fiscal Year 1919 is obtainable from the Publications Branch, Department of Agriculture, Ottawa. This report records many valuable and interesting experiments that are under way. Among these are experiments in feeding live stock for market, in summer and winter experiments in fattening swine. The Bee Division gives a preliminary report of its experiments with two queens in one hive, and in the Division of Economic Fibre Production the var-

iet test and the prairie flax straw experiments are outlined. Throughout this publication there are many valuable conclusions stated which are based on the experimental work conducted at these farms.

Welfare of the Home

Baby's Second Summer.

By IDA M. ALEXANDER, M.D.

If the teeth have been coming in at a normal rate, the baby should have eight teeth at ten months of age and the really healthy baby has not been cross, because he had his plenty of cool water to drink. If the teeth have come in very slowly, I take it for a sign that the baby's stomach very slowly is getting ready for more food, and more caution is necessary in increasing the baby's food as to variety.

If all has gone well, one more meal may be changed from nursing to spoon feeding. If it is now summer, then this feeding had better be a sauce made of good prunes, that have been soaked until soft and then put through a colander. Cut slices of bread thin, roast them in the oven till they are a light brown and soften the bread with the prune sauce. This should be one meal. In winter, clear broth with the toasted bread may be used and the broth may be made with fresh beef, veal, mutton or chicken.

When the third meal is changed to spoon feeding, give wheat cereal that has been boiled one hour, or oatmeal that has been boiled for four hours. This is to be served with whole milk.

When the fourth meal of the day is dropped off, let this be the night nursing, because if the mother is tired, she is giving tired milk and tired milk means a baby that is restless at night. Better make the night feeding one of oatmeal gruel and milk, or the plain milk.

Last of all, drop the morning nurs-

ing, and the baby, interested in many things in the morning, will not miss that morning feeding very much; the mother having gradually cut off one feeding and then the other will not have such hard work to "dry up her milk," as she calls it. Nature is very sensible, if you will work with her instead of against her. When baby is put to the breast less and less often, she will take more and more time to make up the baby's milk supply, until at last the breast milk ceases to come at all. It is so much easier for both mother and baby to change to the new foods gradually and take never more than one new food in one week.

You may find it hard to keep the over-wise people from interfering with the baby's diet. "Oh, give her a taste of that cake, it won't hurt her!" one will say. "Why I gave my babies potatoes long before they were as old as your baby," your sister or mother may tell you. I know one mother to whom I had given special instructions as to diet and she had promised to let me decide the rate at which new foods should be given. When the thresher were at the house, the kind neighbors who were helping her, fed the baby when the mother was busy, in spite of the mother's orders against it, and their excuse was "it won't hurt her any." She was restless all night and sick the next day, but the kind neighbors did not foot the doctor's bill nor did they help her with the extra work.

The Little Old Woman and Her Very Big Basket.

A Little Old Woman with a very big basket went trudging down the road. After a while she met Pink Pig. "What is in your basket, Little Old Woman?" asked Pink Pig. "Don't be so curious," the Little Old Woman answered.

"I'll give you a penny if you will only let me look into your basket!" said Pink Pig.

"Very well," was the answer. "Follow me."

So Pink Pig followed the Little Old Woman down the road. Soon they met White Hen.

"What's in your basket, Little Old Woman?" asked White Hen.

"Don't be so curious," the Little Old Woman replied.

"I'll give you a penny," said White Hen, "if you will let me look into your basket!"

"Very well," answered the Little Old Woman. "Follow Pink Pig." So White Hen followed Pink Pig, and Pink Pig followed the Little Old Woman, and away they went down the road. Soon they met Black Bowwow.

"What's in your basket, Little Old Woman?" Black Bowwow asked.

"Don't be so curious," answered the Little Old Woman.

"I'll give you a penny," said Black Bowwow, "if you'll let me look into your basket!"

"Very well," answered the Little Old Woman. "Follow White Hen."

So Black Bowwow followed White Hen, and White Hen followed Pink Pig, and Pink Pig followed the Little Old Woman, and away they went down the road. People turned to look at the funny sight.

After a while they met Gray Puss. "What's in your basket, Little Old Woman?" asked Gray Puss. He sniffed at the closed lid.

"Don't be so curious," said the Little Old Woman as she fastened the lid down tighter.

"I will give you a penny," cried Gray Puss, "if you will let me look into your basket!"

"Very well," answered the Little Old Woman. "Follow Black Bowwow."

So Gray Puss followed Black Bowwow, and Black Bowwow followed White Hen, and White Hen followed Pink Pig, and Pink Pig followed the Little Old Woman, and on they went down the road. People turned to look at the funny sight.

After a while they came to the market place. "Now," said the Little Old Woman, "give me your pennies, and then you may look into my basket."

So each of them gave the Little Old Woman a penny. Then she opened the basket. Crowding eagerly round her, the four animals peered in.

"O dear!" cried Pink Pig. "There is nothing at all in your basket, Little Old Woman!"

"Nothing at all!" echoed White Hen.

"Nothing at all!" cried Black Bowwow.

"Nothing at all!" wept little Gray Puss.

"No, nothing at all," said the Little Old Woman. "But then, there soon will be something."

With that she put some pennies of her own with the other four pennies and bought in the market a large turnip, a handful of corn, a big juicy bone, a piece of cheese and a little hot bun and put them into her basket.

After that she and Pink Pig and Black Bowwow and White Hen and Gray Puss went out into the woods near the market place and had a picnic together.

"But next time don't be so curious," the Little Old Woman said as she laughed her hot bun, "for you might not face so well."

There can be no greater mistake than giving more food than young pigs can comfortably clean up at each meal.

MESSAGES IN STICKS AND STONES

The arrival of the first warm days of spring makes every person wish to get outdoors into the woods and fields. There is no other time of the year when country walks are more delightful, and the boy or girl who forms the habit of walking several miles a day in the soft spring air will be amply repaid by the exhilaration and the sense of physical well-being that are sure to follow.

Walking with some congenial friend or friends is far more enjoyable than walking alone; and, since there are often times when some member of the party wishes to linger behind the others, to pass them or to branch off for a short time in another direction, it is a good plan for a group of girls to arrange among themselves a simple system of signals that shall indicate the direction that each girl has taken, when she set out and when she expects to get back.

Whatever kind of signals you decide to use, an emblem that shows the identity of each one of the party will be necessary. A branch from some particular tree makes a good signature. A twig of ash, for example, placed between two stones of a pile, shows who placed it there.

If a girl wishes to inform a friend who has lingered behind which of two intersecting trails she has taken, she sharpens a twig to a point and places it between two stones so that it points toward the trail that she has taken; then she adds her special mark of identification.

The most common messages in the woods are those that indicate identity and direction; it is less often necessary to leave information relative to time. For that, make two piles of stones; the number of stones in one pile denotes the time at which the message was left; the other heap carries the arrow and signature. It is generally better to separate different messages in that way, and not to complicate matters by including a time signal with a direction sign.

If you wish to inform the friend who follows that you will return to a certain place at a designated hour, leave three piles of stones with a pointed twig fastened in the middle pile, together with your signature. The stones behind the arrow that indicates that direction show when you left, those in front of it, when you will return. These signals can be easily and quickly arranged, and the friend who follows will be able to read your message at a glance.

For example, suppose that a girl who follows finds that the trail has two forks, and that in the intersection is a twig placed among stones and pointing in the direction of the right-hand trail. She also finds a mark of identification. Behind the arrow are ten stones; in front of it, three. It should be clear that the person who left the message has taken the right-hand trail, that she started at ten o'clock and will return at three.

The Litterer.

As soon as ever spring drew near, and brooks and winds were looser, Tom Tuttle would be late to school with never an excuse. So little and so very late! And when the teacher said: "That he must take his punishment, he merely lunged his head."

She'd ask him all the hardest things in all the hardest books, and queerly he would answer her, with absent-minded looks.

"How many yards make twenty rods?" And Tommy said, "Oh, dear."

Twelve rods I've cut for fishing poles in our own yard this year."

"How many perches make a mile?" Now think before you speak."

"A mile?" said he. "There's millions in the upper awnml creek."

"What grows in Southern Hindustan?" Said Tom, "I do not know; But I can take you to a tree where blackheart cherries grow."

"Name Christopher Columbus' boats." "I can't remember, quite."

But mine, that lies below thy fall, is named the "Water Sprite."

"Now what is 'whistle'—noun or verb?" I do not know indeed; But just the other day I made a whistle from a reed."

Then all the little listening boys would wiggle in their places, And all the little watching girls would have to hide their faces;

And "Thomas, Thomas!" teacher'd say and shake her head in doubt, And make him write a hundred words before the day was out.

'Twas always so when grass turned green and blue was in the sky— Tom Tuttle coming late to school and never telling why.

Dutch Give Portable Town to Stricken French.

Many a Canadian tourist will be surprised this summer to find just outside the walled city of Lens, France, a quaint Dutch village. The village is a gift from the people of Holland to the returning citizens of Lens. The houses, all of wood and of an ingenious, knockdown construction, are now awaiting shipment from the Netherlands, where the parts were sawed and fitted.

Green food is a good appetiser.