

# Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

## Essentials for Winter Eggs

The problem of obtaining winter eggs centres in the making of conditions as near like spring as possible in the winter laying-house. The floor of the poultry house is the winter range of the hen and there she must find conditions conducive to health, and food for egg production, or she cannot lay.

First, early-hatched pullets are necessary for the best results. They are the best machine for turning out winter eggs. Then the ration must contain animal food. This can be supplied by using beef scrap in the dry mash or by feeding plenty of sour milk. Green food is a tonic for the birds and needed to keep them in the right condition for laying. It can be supplied in the form of mangels, cut clover, cabbages or sprouted oats. At the present price of oats, the mangels are the most economical as a source of green feed. If cabbages and mangels are used the cabbages can be fed first as the mangels keep the best.

Charcoal, oyster shells and grit must be supplied in hoppers to help out in producing these spring conditions which are needed. The charcoal is good for the digestive system when the birds are eating heavily to obtain the ingredients necessary to make eggs. The oyster shells furnish lime to make strong egg shells. The grit is needed by the hen to grind her food. There are many farm flocks that suffer during the winter for a lack of grit.

A clean dry litter is important. There the farmer throws the scratch grain to make the birds exercise. The scratching for grain helps to keep them warm on cold winter days and tones up their physical being in the same manner that they are stimulated when scratching on the grassy range during the spring and summer. Straw makes a good litter and it should be dry and deep. A sunny poultry house gives the litter a chance to keep dry. A dark and damp poultry house means that the litter will be damp and the birds will not enjoy working for grain in such a mixture.

Lice and mites can thrive even in the winter and must be controlled if winter eggs are expected. Colds must be prevented by keeping the birds vigorous and isolating any individuals that show signs of cold by the eyes becoming swollen.

The water supply should be watched in the winter. Galvanized pails placed on wooden stands make a clean source of supply as they are not scratched full of litter. Empty them every night so they will not freeze over and spring a leak. Change the water frequently enough to keep the pails free from ice. Some poultrymen give warm water to the birds in the winter while others use water as it comes from the well. Both seem to have success if the water is clean and changed often enough so that the birds always have a fresh supply before them.

The best grain ration we have used in the winter consists of equal parts of corn and wheat. When this is fed in a deep litter the birds will swarm after it and it is good for egg production to keep them scratching for a couple of hours every morning and to send them to bed each night with full crops. Oats are a good egg feed, but the birds do not like oats as well as wheat. They will eat more oats if they are boiled or soaked over night and placed in the poultry house in galvanized pails.

The amount of feed to give poultry in the winter is only limited by the amount they will eat. There is nothing gained by half-feeding the flock, as that places them in a condition where they are unable to pay for what they do eat. If they can not be made profitable on full rations they cannot be made to pay at all. The dry mash in a hopper insures a plentiful supply of feed containing the elements of egg production. This is supplemented each day with the grain ration fed in the litter and any table scraps which may be available. Then the birds are sure of enough to eat of a balanced ration and this means that they will not overeat of any one food and they will keep in healthful condition.

If possible, separate the pullets from the hens in the laying-house. It is essential for the best results as the ration for pullets that are forced for eggs is too fattening for old hens that are to take a rest so they will be in the right condition to lay hatching eggs in the spring. In some large laying-houses a partition of poultry wire might be used to divide the pullets from the hens. Vigorous pullets can stand heavy feeding and pay for it and they should be given every chance to turn out winter eggs so that their winter feed bill will not be a loss to be charged against the spring and summer profits.

## When Our "Big Injun" Plays.

Supervised Play Must Still Be Genuine Play and Make the Player Glad.

BY ORA A. CLEMENT.

Professor Joseph Lee, discussing the stages of childhood, characterizes the age between six and thirteen as the Big-Injun-age, because the child at that period in many of his predominant traits resembles an Indian brave to whom all the world is a hunting ground and who recognizes no master save his own will. Children of this age are full of vitality and energy—if they are not it should be regarded as a danger signal. If their play at this age is supervised and directed, they receive a great deal of invaluable training and education through it.

It is possible to teach children many of the fundamental facts of life and to train them in many cultural habits through the medium of their play. The overworked teacher or mother need not feel that this means an added burden. A very slight amount of thought and preparation enables one to quite effectively direct children's play.

Let no one imagine that supervised play means calling a group of youngsters from their mud pies by saying: "Come, children, let us do a folk dance. That is a nice clean play and it will be good exercise for our bodies." The reply the little bakers would make to such an appeal is easily imagined. I suspect that teachers whose suggestions have been snubbed on the playground have made the mistake of trying to inaugurate too great a change or of suggesting toys which did not appeal to the children. And why should children accept the leadership of a new teacher before she has proven her good fellowship by playing their games with them under their own leadership? Children have to be won tactfully. If they want to do nothing but stand on the shady side of the school house and giggle, the teacher can best gain their confidence by standing there with them and by telling the best story. No one need think of leading children in their play without first winning their confidence.

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large boys may be encouraged to make shelves, book cases, sand tables for the little ones, and even teeters and swings outside. Girls also may be taught fascinating hand work. Basket weaving, stenciling, rug braiding are only a few of the pretty things a girl can do without taxing the eyes with a needle or crochet hook. Such work should be supervised to some extent so that measurements and work shall be accurate and careful. Otherwise the attempt ends in failure and the child is discouraged.

If they are accustomed to it, children like dramatization, but the child of ten or more who has never played that way is often diffident and shy about that form of make-believe.

Folk dancing and even wrestling may be introduced if it can be regularly supervised.

## Passing into the "Gang Age."

Children of thirteen and fourteen begin to show a disposition to form little "gangs" or circles. This indicates the passage into another stage of play. If possible, Boy Scout and Girl Guide organizations, Boys' and Girls' Clubs or some similar organization should be formed to meet the new need. If the group is too small for these, some other little club should be formed, even if it has only three members. It is highly important that at this age the child's desire to belong to a society of his own, be gratified, for in its conduct he will learn as he will nowhere else, the lessons of loyalty and self-abnegation which prepare for good citizenship in his mature years.

There are many books on the market which give long lists of plays for children and which will be found very interesting by parents or teachers who wish to prepare themselves to give more careful attention to their children's amusements.

In rural homes, blessed is the large family circle, where a "bunch" of brothers and sisters can enjoy home play-times together, thus cultivating the spirit of loving fellowship and fair play, unselfishness, patience and forbearance.

To get rid of moles, trap them. There are special traps made for the purpose.

## GIFTS AND—GIFTS

"What," asked Alicia, "are you going to give Aunt Hester?"

"Oh, I never have to bother about her," Ethel answered. "I always give all my aunts handkerchiefs. I get two dozen and divide them up among the aunts. It's such a relief to have so much off my mind on Christmas."

"It must be a great surprise," Alicia commented dryly.

Ethel frowned; then her face dimpled.

"Don't you think," she suggested, "that there's a great deal more Christmas spirit in a gift that you don't worry over than in a gift that you trail round town to find, all the while hunting for something new and different? Sometimes you almost wish that there wasn't a Christmas. And I always give nice handkerchiefs—you can't deny that."

"I can't see much Christmas spirit in either," Alicia replied bluntly. "You work so hard to give something 'different' to Sybil Hunter, who doesn't need it, and then don't give half a thought to Aunt Hester, who is old and shut in and would so love some little surprise."

"But you can't find things for old people," Ethel protested impatiently. "Indeed you can, if you try. And it's such a joy to do it. Do try this year, Ethel."

"Well, perhaps," Ethel replied lightly. "You're so funny, Alicia!"

To give Ethel credit, she did mean to try—but there were so many things to buy that she did not have the time! So she sent Aunt Hester handkerchiefs, as usual, trying to still a provoking memory by sending half a dozen—and half a dozen handkerchiefs of real linen were indeed a gift this year, she said to herself. Perhaps it was that same provoking memory which made her find time to run in to see Aunt Hester on Christmas Day.

Aunt Hester greeted her warmly. Ethel realized with a stab of dismay that she looked startlingly frail; but her eyes were as keen as ever. The table beside her was covered with gifts. Among them were at least two dozen handkerchiefs.

"Your handkerchiefs are lovely," Aunt Hester said. "You always do choose beautiful ones, child."

"But do you always have so many?" Ethel cried.

Aunt Hester's keen old eyes showed her amusement.

"Just about," she replied. "I often

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wonder whether people think that shut-ins have an extra allotment of noses. There, child, I'm ashamed. It is the thought that makes the gift, and I do appreciate them."

"What did Alicia give you?" asked Ethel.

Aunt Hester's face softened. "Alicia? She gave me that little vase with the roses; and her note says that the gift is to be one rosebud a month. Isn't that exactly like Alicia—a lovely thing to look forward to all the year? It isn't money value—it's love value in her gifts."

"I guess—it is," Ethel answered slowly.

## Sheep Notes

The best winter quarters for sheep is a shed in a dry location partly open to the south, so that it affords ample air and the flock should have free range of the yard continually—an old motto is "Never close a door upon a sheep."

They should be fed winter rations after the ground freezes, as grass then has but little nourishing power. Plenty of green feed either in the form of rape, clean turnip tops or roots, is relished at this season and only such hay as will be eaten up clean should be given. The hay is best fed in racks. Some shepherds prefer a rack into which the sheep can get its head, others, including the writer, prefer one with slats placed just far enough apart to enable the sheep to enter its nose and pull the hay out. A little hay is pulled out under foot in this way, but less is wasted than where the sheep get a chance to get their heads in and muss the whole lot. When sheep enter their heads into a rack they invariably tear the wool along their neck and spoil their appearance, as well as the neck wool.

Whether or not some grain should be fed during November, December and January is a question that must be decided by the sheep owner himself. If the hay is young-cut, well cured and with plenty of clover and the sheep are in good condition, grain is unnecessary. Succulent feed as above mentioned should, however, be provided. After tops are done turnips should be fed daily at the rate of from 2 to 4 pounds per head per day.

As the lambing season approaches, all long wool around the udders should be clipped away and a number of individual pens, 4 feet by 6 feet in size provided, where each ewe may be placed before or immediately after lambing. This plan prevents the disowning of lambs by the ewe and enables the attendant to give the ewe and lambs individual attention. When a ewe has twins she is very apt to lose one of them if she is in the pen or yard with the flock.

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Ontario Agricultural College Bulletin No. 278 (Prof. A. Lettich) reports:

## CROP YIELDS AND FARM PROFITS

Those who harvested	Per year	Income
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Two " " " 6-13 " " " 16 " " "  
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## Mania for Collecting.

Another almost universal characteristic which may be turned to good account is the child's mania for collecting. If a parent or teacher shows interest and gives a few suggestions, children may supplement their nature study with very interesting collections and classifications of stones, kinds of wood, leaves, grains, seeds, seed pods, and other things. With the same interest they will keep bird lists and weather charts.

Children love growing things and animals, especially if they feel a sense of possession in them. A jar of minnows caught in the stream will interest them, and of course a cat or dog becomes a playmate. They love to watch seeds germinate and grow, and they probably get more instruction and pleasure from a dozen beans planted by their own hands than from a potted plant which they must handle carefully if at all. Some rural teachers have encouraged boys to do seed testing for the farmers and have performed a real service to the community by so doing, as well as furnishing the boys an absorbing pastime. Even young children like tools. The child of ten to thirteen should be taught to use them. Boys will amuse themselves almost endlessly with a hammer, saw, nails and plenty of old boxes. In rural schools where both boys and equipment are scarce, the three or four

## THE SUNDAY SCHOOL

DECEMBER 19TH.

Jesus Feeds the Multitude—St. Matthew 14. Golden Text—St. Matt. 14: 16.

12-23. When Jesus heard. Evidently, it was when Jesus heard what Herod was saying about Him, and saw that as a result of Herod's fears His life might be in immediate danger, that He determined to withdraw to a remote place apart with His disciples. He had yet much to tell them, very much to explain and teach, and He desired to have them with Him alone. But His purpose was at this time thwarted by the action of the multitude who watched the course of the boat which conveyed Him across the lake, and followed on foot around the shore. Instead of quiet hours of rest with His immediate circle of disciples, Jesus found Himself again pressed upon by the curious, eager, enthusiastic crowd. He might have been angry, or resentful, or impatient, but He was not. He was moved with compassion. That was the effect the sight of the multitude always had upon Him. He could be angry with the meddling, officious, self-righteous scribes, but not with the hungry and uncared for people. They seemed to Him as "sheep not having a shepherd" (Mark 6: 34). He healed their sick. He "began to teach them many things" (Mark 6: 34.) He "welcomed them and spake to them of the Kingdom of God, and them that had need of healing He healed" (Luke 9: 11). John says that when He saw the multitude He turned to Philip and said, "Whence are we to buy bread that these may eat?" (John 6: 5). His first thought was not of His own weariness or discomfort, but of their need.

When It Was Evening. Apparently the day passed without any effort on the part of the disciples to get food for the people. They naturally, with their limited resources, thought that impossible. Now they come to beg their Master to dismiss the people that they may go and find food for themselves. The place where they were, however, was on the northern or north-eastern side of the lake, and probably remote from villages. They might have had to go a long way for the food, with which in their eagerness and thoughtlessness they had failed to provide themselves. Jesus said, "They need not depart, or, as Rev. Vers., "They have no need to go away."

The command of Jesus to His disciples to give, even though what they had to give seemed very little and altogether inadequate, illustrates a great truth of His gospel of human service. Giving is to be measured by quality and not by quantity. That

which is consecrated to service is always multiplied. One gift becomes a thousand. The kindly word or deed, the song, the prayer, is multiplied a thousand fold. That thought which a man has cherished in his heart and timidly feared to speak, becomes when spoken, an inspiration and a light, it may be, to millions and to future generations. There is no truer story in the Gospel than that of the five loaves and the two fishes.

He Went Up Into a Mountain Apart. The scenes and events of the day had moved Jesus strangely. The persistent following of the Galilean multitude and their warm attachment to Him must have appealed to Him very strongly. John tells us that Jesus saw "that they were about to come and take Him by force and make Him king." He was not yet prepared to take that step, which would at once have involved Him in war with the Roman powers. His kingdom, He believed, was not to be gained by war. And so He sent the people away, persuaded the disciples to return to Capernaum in the boat, and He Himself went apart alone into the mountain to pray. What thoughts occupied His mind, what petitions He offered up to God, we do not know. But we may well believe He prayed for those people whom He had sent away disappointed, and for Himself that the same spirit which came upon Him at baptism would guide Him through the perilous and perplexing days which lay ahead.

It is Luke who tells us in his gospel most of what we know of Jesus' habit of prayer—how He prayed at His baptism, and after the strenuous labors of a Sabbath day in Capernaum, before setting out upon His first tour of Galilee; how He prayed before His first encounter with suspicious and jealous Pharisees, and spent all night in prayer before His choosing of the twelve; how He taught His disciples to pray, prayed with three of them in the mount of Transfiguration, prayed for Peter, and prayed in the agony of Gethsemane. Prayer was His constant resource, His communion with God. Prayer was the expression of His unwavering faith.

24-33. From the mountain of prayer Jesus went after His disciples and came into them, walking upon the sea. The story of this amazing act is told as simply and naturally as that of the multiplying of the loaves and fishes. The evidence is as complete and full as that for any other event of Jesus' life. To reject it is to say, practically, that we know nothing with certainty of what Jesus did or said, and that no scholar of repute would assert to-day. And if Jesus did these things who and what was He? Must we not with His disciples worship Him and say, Of a truth thou art the Son of God?