

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.

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 your 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 plays 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.

One of the peculiarities of this age of activity and mischief is that the children cannot think of enough things to do. We constantly hear them saying, as they stand kicking stones, pinching one companion while they make faces at another: "Aw, what'll we do now?" It is in response to this query that the looking-on grown up may very tactfully and with proper humility, make suggestions. If the suggestions are well taken, the children will be disposed to listen next time something is proposed.

The most noticeable thing about the child of this age is his growing body, and the parent does not live who does not wish his child to develop a strong and well-proportioned form and if left entirely to himself, he undoubtedly would, as the savages do. But modern life interferes with his all-ways following his chosen pursuits. He spends several hours a day bending over his desk at school, he does chores at home and perhaps lifts too heavy loads—it is not unusual to see a child with a shuffling, listless walk and with stooping shoulders and hollow chest. Such children should be given plays that tend to correct these faults.

Games That Develop the Muscle. There is an almost unlimited number of plays which meet the needs of the growing body. Running games, such as races, dare-base, prisoner's base, pull-away and last-couple-out have been played for ages and continue popular. They all develop limbs and chest and also tend to straighten stooping shoulders.

Games in which throwing is the prominent feature are all the ball games, pitching quoits or horseshoes, bean bag, throwing darts or weighted feathers (a nail driven into the quill end of a goose feather), tossing up parachutes made by tying the four corners of a piece of muslin to a weight, and many variations of these. Throwing games need supervision in group-playing on account of the danger from missiles. There are many games based upon pulling and they are largely variations of tug-of-war.

Circle games, as drop-the-handkerchief, blind-man's-buff, Ruth-and-Jacob, are especially good for group playing if the children will play them. There comes a time during the Big-Injun age when they are taboo as "baby games," and when that time comes they may as well not be mentioned again. One might as well ask a boy to dress in his sister's dress as to join in such games after he feels he has outgrown them.

The senses develop with the muscles and there are many games for both indoors and out which give really valuable training to the faculties. Variations of I-spy cultivate alertness of the eye. Loto, games in which letters are dealt out and each player watches for a group which spell a word, blackboard games like tit-tat-toe, train both the eye and the mind and furnish endless amusement. Games like beast-bird-or-fish in which a player must think of an answer while a finger is pointing in his face, develop concentration of mind. There are many more games of this character which children like and which are especially valuable to the smaller ones whose hands, tongues and eyes are not yet trained to respond quickly to their will.

Another outstanding characteristic of the Big Injun is his desire—shall I say his determination?—to excel. "My dog can lick yours," "My dress is prettier than yours," "I can run faster than you," are commonplace challenges. From this trait comes their willingness to enter contests of whatever sort. Very simple contests such as an egg hunt or a strife to see who can get the most "hundreds" in spelling, are entered with spirit, and still more enthusiasm is shown over more organized contests. Every competition carried on under established rules must be supervised if it is to be successful, for children of this age will not observe rules. This is not an indication of lax morals or of faulty training but only one of



CANADA'S CHAMPION EGG-PRODUCER.

"Scotia's Red Rose," the single comb Rhode Island Red owned by C. B. McMullen, Truro, N.S., which won the championship of the Dominion at the Annual Exhibition of the Colchester Pet Stock Association. This hen laid 227 eggs in twelve months.

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 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.

Without the rich heart, wealth is an ugly figure.

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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 winter passes a grain mixture of oats 8 parts, bran 2 parts and oil cake one part should be started, gradually increasing the daily allowance up to from one to two pounds per head, and the turnips may be gradually decreased as there is a tendency for the lambs to develop rather large and weak if the turnip ration is heavy. However, some sheep men seem to have the best of luck

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While sheep will not perhaps drink a great deal of water before lambing if they are getting roots and there is snow available, yet it is a better plan to see that they have access to clean water every day. Salt should be placed where access may be had to it at all times.

As the lambing season approaches all long wool around the neck should be clipped away and a few individual pens, 4 feet by 4 feet, provided, where each ewe should be placed before or immediately after lambing. This plan prevents the attendant from owning of lambs by the ewe and lambs individual and a ewe has twins she loses one of them if she is in the pen or yard with the flock.

Your farm business is being enough to keep your son on the farm.

Astronomical tests have demonstrated that migrating birds when traveling by night fly from 1,500 to 3,000 feet above the earth, while in a few instances they have gone as high as 5,400 feet, or more than a mile high. Observations were made by aid of telescopes and the moon.

The Welfare of the Home

Prevention or Cure?—By Margaret A. Bartlett.

Mrs. Brown is one of the comparatively few women who takes a cold seriously. She believes that one can never tell where a cold is going to end, nor into what it is going to turn. Even though the cold remain "just a cold," she doesn't believe in having one merely because everyone around her has one. Neither does she believe in letting her children run about among people who have had colds, thus exposing them to the cold germs.

Her children are strong, healthy, robust. They sleep in unheated rooms with windows open wide, winter and summer. They eat only plain, nourishing foods—good bread and butter and milk, fruits and vegetables, well-cooked meat of the non-greasy variety—and thus never have indigestion. They play out of doors in all sorts of weather, and when they are in the house in winter, they are in rooms which are aired frequently and which are never overheated. Neighbors "hug the stove" when they come to call; they wonder why the whole family doesn't "catch its death of cold"; they shiver in a temperature which in summer they would have called "very warm"—and go home and bake in rooms heated to eighty degrees or more, rooms which have not been thoroughly aired since the first freeze of the season. These neighbors and their children have colds from the beginning of the "closed season" till its end, and they marvel at the fortune which keeps the Brown family coldless for month after month.

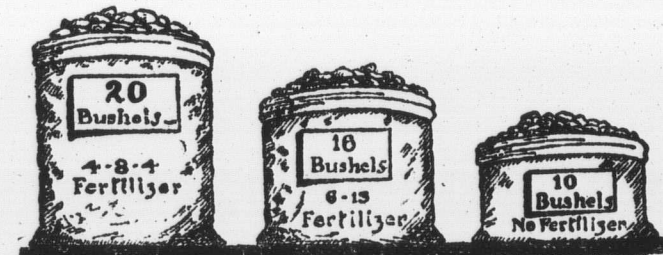
Some there are who call Mrs. Brown a cold-crunk. Although she is a very sweet, gentle woman, one always ready to do good, and one who never speaks ill of neighbor or acquaintance, she has, nevertheless, many who are by no means her friends, in the neighborhood, all on account of the way she feels about colds. On several occasions she has sent children who have come to play, home because they bore unmistakable evidences of bad, contagious colds. True, by so doing, she once side-stepped the whooping-cough, and again kept her children from having scarlet fever. The mothers of the children sent home knew that, and yet they were angry at Mrs. Brown for not letting their children remain to play.

It is hard to have these people antagonistic; it is decidedly unpleasant to know they are using uncomplimentary terms in discussing her with other acquaintances. Sometimes Mrs. Brown feels almost ready to give up in her fight against the cold habit—almost, but never quite. She sees too many pale-faced, washed-out looking children about her, too many little boys and girls suffering from adenoids and enlarged tonsils, which she feels sure had their beginnings in constant colds and their consequent irritation of the throat and nose; she sees too many children with weak eyesight or impaired hearing as a result of some children's disease which had its beginning in "just a cold"; she sees too many running noses, and hears the outbursts from too many irritated lungs, to make her willing that her children shall acquire the habit by taking cold which these other children have.

Mrs. Brown feels that she has worked out the problem of how to keep her family free from colds.

Clean, Wholesome, and a book that will be read in future generations, by the greatest living master of English, Joseph Conrad. The Book: "The Rescue," \$2.50. At All Bookellers or J. M. DENT & SONS, Ltd., Pubs. London, Eng., and 86 Church St., Toronto.

HIGH YIELDS ARE ALWAYS PROFITABLE. Because items of outlay, such as land, rental, equipment, labor, land preparation, seed and harvesting charges, are about the same whether you get 20 bushels of wheat or 40 bushels; 40 bushels per acre of oats or 85 bushels; 8 tons silage per acre or 12 tons; 80 bushels of potatoes or 250. Ontario Agricultural College Bulletin No. 275 (Prof. A. Leitch) reports: CROP YIELDS AND FARM PROFITS. Those who harvested 100 bushels of wheat per acre, 1921-22, received \$100.00. Those who harvested 120 bushels per acre, 1921-22, received \$120.00. Those who harvested 140 bushels per acre, 1921-22, received \$140.00. Those who harvested 160 bushels per acre, 1921-22, received \$160.00. Those who harvested 180 bushels per acre, 1921-22, received \$180.00. Those who harvested 200 bushels per acre, 1921-22, received \$200.00. Push your crop yields above the average and get the big labor income. For increased yields in 1921, apply Fertilizers. Write THE SOIL AND CROP Improvement Bureau of the Canadian Fertilizer Association 1111 Temple Building - Toronto



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