POULTRY POINTERS FOR JUNE.

One of the most critical times in the life of the growing pullets is when they are from ten to fifteen weeks of age, or along in June when the days and nights are getting warm and when the chicks are large enough so that they can do without artificial heat. When the brooder fires are put out, if the chicks are not handled with special care, they are very apt to crowd on some cold night and a rather heavy loss will occur. Weaning the pullets is a simple process, but must be done carefully each year. It involves, first of all, the gradual reduction of the temperature under the hover, taking possibly a week to get the chicks used to a normal room temperature. This should be done by giving a little more ventilation to the house and by gradually checking the brooder fire. Finally the fire can be let out entirely, but the stove should be allowed to remain for another week, because the chicks will have a tendency in cool weather to lie around under the hover. Do not move chicks from a heated brooder house to a cold house just at this time. Postpone this big change until they are thoroughly weaned in their own brooder quarters.

A CHIEF CAUSE OF TROUBLE.

During the weaning time it is especially important that no square corners be present in the brooder house. Boards or inch-mesh poultry netting tacked across the corners will eliminate these pockets and keep the chicks spread out over the floor. The weather conditions will have a lot to do with weaning. If one has let the brooder fires out for a few days and the weather turns cold and damp, it is a good plan to start them up again, giving the chicks a little heat over this trying period.

How many times have you succeeded in brooding a fine bunch of chicks up to four or five weeks of age, and then experienced the disappointment of seeing them begin to go backwards; when for weeks you have had practically no mortality, you begin to find weak and dead chicks each morning under the hover. There may be a number of causes that might bring about this condition, but there is no question but that the most general one is the ailment commonly termed coccidiosis. Expressed simply, this means that the ground immediately about the brooder house has become infested with coccidia. These little organisms are present in the normal chick in limited numbers, but in the case of intensive brooding conditions, where hundreds of chicks are brooded on a small piece of land and where they have been brooded on the same piece of land for a number of years, coccidia are apt to be present in excessive numbers, in which event heavy losses are bound to occur.

Some of the common symptoms are the fact that the chicks seem to stop growing. They get thin, many of them weak on their legs, and when opened and a post-mortem examination is made, the liver will frequently show spots upon it and the caecum will be filled with a hard cheesy material. As with all diseases, an ounce of prevention is worth a pound of cure. If we know the dangers of coccidial infection and we take pains to guard against it each year, a serious epidemic in the flock can always be prevented.

The two precautions to take are to move the brooder house to new ground each season. It may not be necessary to change ranges, but simply move the houses twenty or thirty feet to new ground, because it seems to be the ground right around the brooder house that becomes infected. Then, secondly, lime the ground, plow, cultivate and seed it each fall to a good quick-growing succulent crop. There is nothing better for the average climate than rye or winter vetch. In the Southern climate, where clover will winter through, this can well be added. Old ground which has not been plowed, limed or seeded for a number of years seems to be especially open to easy infection. Should you find your birds infected with coccidiosis this spring, there are two or three things you can do to relieve the situation. First, plow up the ground immediately around the brooder houses, lime it thoroughly, sow oats on it, even though the chicks are running on the land, for the oats will germinate in the ground and the chicks will scratch them out and eat off the young shoots as they appear at the surface. Another valuable corrective is the feeding of sour milk. The lactic acid in this product seems to act very decidedly in the nature of an internal disinfectant, cleaning the intestinal tract and having a tendency to impair the number of coccidial organisms. Normal buttermilk, sour milk and semisolid buttermilk are admirable products to feed for this purpose.

Root Maggot Control.

As root maggots are reported unusually active in some localities this spring, pamphlet No. 32 on their nature and control just published by the Dominion Department of Agriculture, Ottawa, is particularly timely. For the cabbage maggot, treatment with corrosive sublimate has been found most economical and effective. Radishes, garden and field turnips, as well as cabbages and cauliflowers, can all be treated with this substance without injury. Use one ounce of corrosive sublimate to ten gallons of water and apply liberally to the stem and roots of each plant two or three times at intervals of a week, commencing the fourth day after egg-laying has been started in, which is about the second or third week in May in normal seasons and a little later in backward seasons. An ordinary watering can, with the rose removed and the spout reduced to a convenient form, is used in making the application. In control of the onion maggot, poisoned bait and trap crop methods have been found satisfactory. The bait, consisting of ¼ to ½ an ounce of sodium arsenate to a gallon of boiling water with a pint of cheap molasses added, should be set in from twenty to forty pans, dishes, or saucers arranged on the soil surface of each acre. In the trap method, cull onions from the previous season's crop are planted a hundred feet apart and, as these produce a leaf growth four or five times greater than the seedlings at the time the adults are depositing their eggs, the flies are attracted to them. Pull up and destroy the trap plants about June 15 or at the time the greatest number of first generation maggots are present.

It should be remembered that the poisons referred to are of a deadly nature, and care should be taken not to leave them around where children may gain access to them.

In ordinary seasons soil cultivation and the planting of seeds of high vitality will keep seed corn and seed potato maggots under control, but in cold, damp weather the corrosive sublimate, recommended for the cabbage maggot, may be found effective. Changing the location of the fields each year, crop rotation, and the destruction of remnants of crops are also recommended as methods of prevention.

Determining Battery Poparity.

Often when overhauling the car or light plant or working with the radio set the storage batteries are disconnected. When put back in place they should always be connected in the same manner as removed. If the polarity markings on the battery have been obliterated so you cannot tell the negative from the positive pole, connect a short length of wire to each pole of the battery and plunge them into the raw surface of a freshly cut potato. In a short time a faint green discoloration will appear around the wire leading to the negative pole.—R. E. D.

Never discard old nightdresses, but sew up the bottoms and cut away part of the sleeves if long. A frock to be kept fresh and free from dust may then be placed on a hanger and slipped through the neck of the nightgown and hung in place in the wardrobe.

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The Sunday School Lesson

JUNE 17

Esther, the Patriot Queen, Esther 4: 13 to 5: 3. Golden Text—Who knoweth whether thou art not come to the kingdom for such a time as this?—Esther 4: 14.

LESSON FOREWORD—In preparation for the lesson, the whole of the book of Esther should be read. One scholar puts the story briefly thus: "Esther is the story of a beautiful Jewess of Susa whom Xerxes (Ahasuerus) raises from his concubines to be his queen, and who uses her influence over him to save her people from general massacre, which the grand vizier (Haman) has prepared for them by way of avenging an affront from one of their race." The story of Esther has ever been popular with the Jews, for it magnifies the importance of the Jewish people and maintains throughout the traditional pride of their race. It has also importance for the Jews, since it explains the origin of the feast of Purim, one of the great Jewish feasts. See ch. 9 and especially vs. 26, 31, 32.

Haman, piqued at Mordecai's lack of civility to him, persuaded the king to issue a decree permitting the slaughter of the Jews. (See ch. 3:1-15.) The Jews are filled with consternation and Mordecai sits by the palace gate clothed in sackcloth and ashes. When Esther sends out other clothes to him, he refuses to put them on, but urges Esther to go to the king and beg that the decree be rescinded.

Mordecai's message was taken to Esther by Hatach, one of the eunuchs of Ahasuerus' court, and probably a personal attendant upon Esther, the queen. He must have been a trustworthy man to carry such confidential messages between Esther and Mordecai. Ch. 4:1-10.

In order to preserve the dignity of court life and to prevent the assassination of the king, it was a law of the Persians that no one could approach the king without being summoned. Not even the queen could appear before him except she be summoned. It was not thirty days since Ahasuerus had sent for Esther. It would, therefore, be dangerous for Esther to venture unbidden into the king's private chambers.

I. AN URGENT REQUEST, 10-17.

V. 13. *Think not . . that thou shalt escape.* Esther was, of course, a Jewess and also a relative of the hated Mordecai. But this was not known at the court. Yet when, and if it were finally known, she would perish in the general massacre of her people. But it was just as dangerous for her to remain away from the king as to go to him.

V. 14. *Enlargement and deliverance . . to the Jews from another place.* The book of Esther nowhere directly mentions the name of God. This is an instance of how the mention of it is avoided. "Another place" is just a roundabout way of saying "God." In later times, the Jews did not pronounce the name of God, since they believed that the mere utterance of the ineffable name had a magical potency. The passage here means that if Esther will not plead before the king for her people, then God himself, remembering his ancient promise of Israel, will deliver them. *But thou and thy father's house,* etc. If Esther will not intercede on behalf of the Jews, she will be visited with a special judgment, which will involve all of her family. Eventually the other Jews may escape the decreed massacre, but Esther and her family will not so escape. *Who knoweth,* etc. Remember that Mordecai is urging Esther to appear before the king for Israel's sake. He has urged other arguments, but now he pleads on very high grounds. God may have elevated Esther to the queenship for the express purpose of delivering her people from the threatened catastrophe.

V. 16. A deep chord among Esther's heart-strings has been touched, and now vibrates with a noble response. She resolves, with calm determination and with her eyes open to the grave dangers involved in her course, to enter, unsummoned, the inner chamber of the king. She requests that all the Jews in Susa should lend her their spiritual support. They are to fast for three days. This general abasement will be accompanied, no doubt, with prayers for the success of her project.

II. ESTHER FINDS FAVOR, 5:1-3.

V. 1. *Esther put on,* etc. Esther, womanlike, arrays herself in her finest garments to enhance her charms in the eyes of the king. *The inner court of the king's house.* In 1884-6 Dieulafoy excavated the ruins of the palace of Artaxerxes in Susa. He describes the palace as standing in the midst of a garden or "paradise" surrounded with a fortified wall. In one section of the royal residence was the harem or "house of the women." In another section was the throne-room, surrounded with an open space that may have been used as a garden. To the king's section of the palace, Esther now repairs.

V. 2. *The king . . held out . . the golden sceptre.* The golden sceptre appears in the monuments as "a long, tapering rod with a headlike ornament at one end a loop at the other." Josephus says: "The king sat with a golden sceptre in his hand; and when he wished to save any one who came uncalled, he held it out to him; and he that touched it was safe."

V. 3. Even . . *to the half of the kingdom.* See Mark 6:23. This has been described as "the exaggeration born of Oriental politeness." It was not meant to be taken too literally, any more than the offer of a merchant in an Eastern bazaar who says to the prospective purchaser, "Oh, take it for nothing."

APPLICATION.

Let us set down some of the good elements in the character of Queen Esther:

(a) Although she sprang from a humble home and a foreign race, she did not forget her friends and relatives when she was promoted suddenly to the highest office in Persia open to any woman,—that of queen. She did not forget Mordecai who had cared for her during her childhood, nor did she forget the people of her own blood, —the Jews. When the opportunity came, she showed herself their helper and benefactress.

(b) Esther was a woman of extraordinary courage. She faced the possibility of death when she approached the Persian monarch unbidden, ch. 4:5.

(c) She was wise and resourceful in the carrying out of her plans for the saving of her people from the horrible edict that had been promulgated by the Persian king at the instigation of the small-minded Haman, ch. 3. She studied the situation carefully, and so clearly that the king must be brought to see the black motive of his prime minister, Haman. The king pledged himself to give his beautiful queen whatever she would ask, and at the psychological moment she made her accusation against Haman, ch. 7.

3. Let us now set down some of Esther's defects, bearing in mind that they reflect the characteristic feelings of her people.

(a) Esther's patriotism was too cruel and harsh in its feelings for outsiders. She pushed her advantage with the Persian Xerxes to an extreme, and asked that Haman's ten sons should be hanged, ch. 9:13. The spirit of revenge is too strong. Edith Cavell has taught us a better way, and she learned it from Jesus.

(b) Esther's idea of God is very inadequate. She and her Jewish countrymen evidently thought that God would be pleased with the slaughter of 75,000 of their enemies. Here, again, we must not forget that this notion of God was common to the Jews at this time. It was the chief task of Jesus to show his countrymen a richer thought of God.

Plowin' in the Stumps.

Full many tasks with which we meet,
As down this vale we trot,
With gall and wormwood are replete
And do not hit the spot.
But, of these chores, the one sublime,
That brings us grief in lumps,
And jars our tempers out of time,
Is plowin' in the stumps.

You hitch old Dobbin to the plow,
And whistle as you go,
But soon you knot your noble brow
And mutter something low.
The handles give your ribs a jolt
That makes you have the thumps.
And on good thoughts you lose your holt,
A-plowin' in the stumps.

The man who farms cut-over land
Should not be charged with sin
When roots kerplunk from out the sand
And crack him on the shin.
When good Saint Peter jots him down,
And views his many bumps,
He will, no doubt, say, "Here's a crown
For plowin' in the stumps!"

—Harry J. Williams.

Chicks Need Exercise.

An experiment in chick feeding was tried out last year at the Brandon, Man., Dominion Experimental Farm. According to the report of the Superintendent, two systems were adopted; in one the chicks were given a light ration at the start and fed sparingly during the early stages, compelling them to scratch for sufficient to satisfy their appetites; and, in the other, the chicks were started on a heavier ration and sufficient feed was available without scratching. The report gives the rations in detail. In the experiment where the chicks were kept actively scratching for food, there was not a case of diarrhoea developed in the pen; the chicks remained in a thrifty condition, grew satisfactorily, and the mortality from any cause was very small. In the second instance, the chicks ate too much and were not required to take sufficient exercise. A few cases of diarrhoea developed, the chicks were not as thrifty in appearance, did not grow as satisfactorily, and the mortality was greater than in the first instance.

The Chicken.

A round white egg within a nest
Beneath a mother hen's warm breast.

Soon with a tiny "peep, peep, peep,"
A little chicken wakes from sleep;

And breaks its shell and wriggles out,
And tries in vain to walk about—

The sweetest, dearest thing of all,
A pretty, fluffy, yellow ball.

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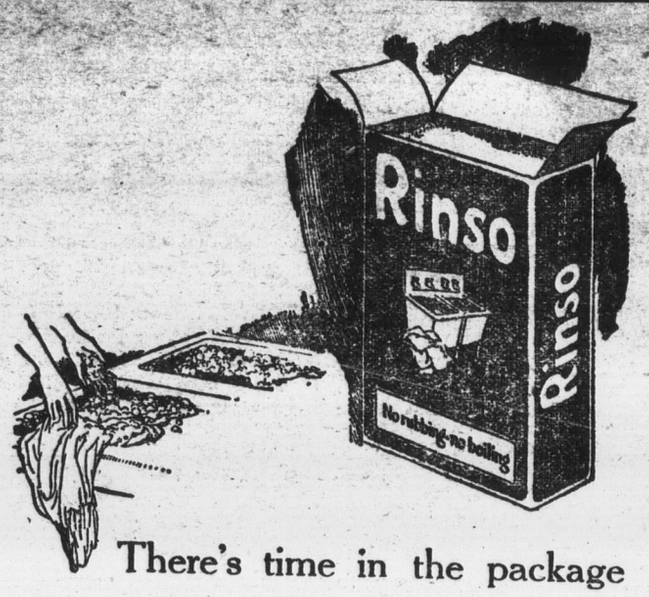

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GARDEN ROSES

How to Plant and How to Prune Them

By J. E. Carter, Vice-President Ontario Horticultural Society

It is much better to use garden roses in beds rather than in mixed borders, for in the latter position they seem to be out of place. Moreover roses need more care than most plants, and this cannot be given them to advantage unless they are kept by themselves. The Rugosa rose is an exception, and so is the new Grootendorst rose, both of which can be grown advantageously in the shrubbery.

Roses need plenty of sunshine, and should have an open exposure. At the same time they dislike high winds, for which reason a screen or wind break of some kind is desirable. This does not mean that the plants should be planted close to trees or tall shrubs, because then the danger of having the roots penetrate the beds, stealing both the moisture and plant food, is encountered. If the roses must be planted near trees, the roots can be protected by sinking cypress boards into the ground or by making a cement wall between the trees and the garden.

Roses love moisture, and if the beds can be placed where artificial watering is possible the advantage will be great.

At the same time the plants abhor wet feet, so that good drainage is imperative. Tile drains can often be used to advantage.

The hybrid perpetual roses thrive best in heavy clay loam, while hybrid teas like a warmer and more sandy soil. Yet one need not look for perfect conditions, for roses adapt themselves fairly well to most soils, providing there is no lack of nourishment. When the subsoil is near the surface or very poor, it should be dug out. In any event it is well to have an excavation eighteen inches deep so that a thick layer of manure can be placed in the bottom. Cow manure is by all means the most satisfactory. Then the beds can be filled with loam, with which a liberal amount of well rotted manure has been mixed. If manure is not available, pulverized sheep manure and bone meal may be substituted. Bone meal is a good fertilizer for roses, as for most flowers, and can be worked into the ground around well established plants with distinct benefit.

Before setting, the plants should be examined and all broken roots cut off. Budded roses should be examined for buds or incipient shoots from the stock, which should be cut out. Large deep holes should be dug for the plants, the roots spread out evenly, and the holes filled with well pulverized soil. When the sole is almost full, pack the soil firmly by treading on it. If the soil is not too wet to handle, firming it will do no harm and is an essential to success. Budded roses should be planted so that the bud onion, generally indicated by a crook in the stem, is two inches below the surface of the bed. If they are thus planted, the number of suckers is reduced to a minimum, if not entirely eliminated. Own-root roses should be set the same depth as before transplanting. If the ground is dry, a good watering should be given.

Potted plants are easier to set, but it is essential that the balls of soil and roots are thoroughly moist before planting.

Pruning is to be done when cold weather has passed. There is danger in doing the work too early. A few reliable rules:

Cut down newly planted bushes to within two inches to four inches of where they are budded.

To obtain quantity of bloom, lighter pruning is necessary than when show blooms are desired.

Strong-growing varieties require less severe pruning than weak ones, immature growths being, however, in both cases pruned back to a ripened part.

The shoots of an average rose bush when pruned may vary from four inches to 16 inches long or thereabouts, according to the vigor of the variety, pruning the side shoots in proportion. These brief hints apply to bush roses only, it being assumed the climbing kinds were thinned and pruned after flowering last summer.

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When you wish to skim soup, tilt the pot towards you and the scum will rise to the farther side and can easily be removed without loss of soup.

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