

to the surface soil. Barnyard manure is most valuable for garden purposes.

To keep up a method of rotation and a succession of vegetables requires both thought and skill. An English gardener gives a plan of rotation for a garden of a quarter of an acre, in which the lot is divided into four parts, one of which is trenched every year. On the first quarter he grows savoys, cauliflowers, potatoes, etc., on the second, onions, beans, cabbage, and such like; on the third, garden peas, and on the fourth, celery. This list makes up the principal crops on the various lots, but other vegetables, such as lettuce, beets, radishes, parsnips, etc., are grown chiefly mixed in with the others. Other vegetables are grown around the sides of the garden, and every bit of space is utilized.

While the farmer in this country might not be able to follow any specific plan of rotation in his garden, he could follow the principle and not plant the same kind of vegetables several years in succession in the same place. Attention to this feature of the garden and to maintaining the fertility will make the returns greater and the work in connection with it more pleasant and agreeable.

Look After the Setting Hens

Many sittings of valuable eggs are lost each year from a lack of knowledge concerning the proper care for the eggs. It may seem a "simple trick" to put eggs under a hen or in an incubator and take out the chicks in twenty-one days; but this, like a great many other things, is often easier said than done. But we can all learn how it is done, and then it will not be such a difficult thing to do.

Eggs should not be old. We do not think a few days or even a week or two injures the vitality of the eggs if they are kept in a cool place where the air is rather moist. It is evaporation that destroys the vitality of the egg. Eggs of the ruffed grouse, quail and wild turkeys all hatch, as a rule, and some of the eggs cannot be less than three or four weeks old when large clutches are laid by single females.

The nest must be warm and cosy in early spring where the rain, snow and wind cannot blow directly upon the hen. When the hen comes off to feed, it is a good plan, especially upon raw, cold days, to cover the eggs with a warm cloth until the hen is ready to return. Not more than ten or eleven eggs should be given to a hen early in the season, because if more are placed under her she will very likely chill all of them at different times during incubation, moving them to and from the body, killing or weakening the embryo chicks. Many a dozen of strong, fertile eggs have been lost in just this way, and the poor breeding stock or the expressman made to carry the blame. Nine eggs for very early hatches is a much safer rule than a dozen. If we had purchased a costly clutch of eggs we would not put more than six or seven eggs under each hen, filling up to eight or ten eggs of other kinds. This has been found a very wise plan by many who have tried it. Some even use three hens if they can be had, and any fickle inclined hen that gives one the slip some evening and goes upon the roost cannot spoil our whole sitting of eggs, only a third of our valuable ones.

When the season advances and the weather becomes warmer the nest should be constructed with special reference to moisture.

It should be on or near the ground or made of soft earth, sods, or anything that will retain the moisture. We pour a little water about the nest each week during very hot weather, thus keeping the bottom of the nest as damp as a quail's nest upon the ground. A nest of fine hay should always be made in the hollowed out earth.

If an egg is broken during the hatching process take it out of the nest, place some fresh soft hay in the nest, wash all the eggs with luke warm water, dry and place in the nest and let the hen on again. Always have the nest so arranged that the hen need not fly or jump up on the eggs when going on the nest, and fronted up so that she will not

take any of the eggs with her when she leaves the nest. Use an egg tester. Don't have the hen bothered with unfertile eggs after the eighth day. They will become stale and produce a very disagreeable smell about the nest, unsavory to the olfactory nerves of the attendant if not to the hen. Use judgment and common sense. Learn how to do it and you will succeed.—*Exchange*.

Feeding the Brood Sow

From a Paper on the "Bacon Hog Industry," Prepared for the Nova Scotia Pork Packing Co., by J. J. Ferguson, B.S.A., Smith's Falls, Ont.

After the sow is separated from her spring litter, she will be able to find a living upon good grass or clover pasture, with little or no additional grain ration. Two or three weeks before she is due to farrow her fall litter, her ration of meal should be increased. We have found a mixture of bran and shorts, equal parts, about the best at this time. The sow should not be made over fat by heavy feeding, but a thin condition often results in weak, puny pigs at farrowing time. After the fall litter is weaned, the sow can be very cheaply carried through the winter upon a ration of mangolds or sugar beets. Of these we feed about thirty pounds per head per day, in two feeds, morning and night, with two or three pounds of *whole* oats fed at noon. Turnips can be used, but to get the best results they should be sliced or pulped: our mangolds are fed whole, which is quite a saving in time and labor. Not only is this ration cheap and convenient to feed, but it carries the sows along in first-class breeding condition. This, combined with exercise taken at will in roomy yards, results in a much smaller loss of young pigs, when farrowing time comes, than is usually found where sows are kept closely confined during the winter and fed entirely upon a grain ration.

A month or so before farrowing, the sow should receive a lighter ration of roots and more meal. Large quantities of cold watery roots, fed shortly before the birth of the pigs, may give them such a chill as to result in their death. Roots do not contain sufficient mineral water to build up a proper bony framework in the litter. The sow should farrow in a warm, dry pen, to which she has become accustomed for some time. A fender should be placed around the base of the walls, projecting out at the foot, and ten inches from the floor, to prevent her over-lying any of the young pigs. For the first week after farrowing she should be fed but a light meal ration of bran and shorts, or bran and finely-ground oats mixed to a thin slop with warmed water or skim-milk. Over-feeding of the sow at this period, or feeding her heavily on barley, or pea-meal, is very likely to cause a milk fever, often resulting in the loss of dam and litter. Her ration during the time she is suckling her litter should consist largely of bran, since this is one of the very best milk-producing foods obtainable. When the young pigs are two weeks old, they should be provided with a supply of new milk in a shallow trough or pan, protected from the old sow. After a time, skim-milk may be substituted, with the addition of a small quantity of ground oil cake, shorts, or oat-meal. When treated in this way they become well able to do for themselves at seven or eight weeks old, and will suffer no set-back when taken from the mother.

It is a serious mistake to wean pigs at four or five weeks, as is so often done, resulting in their making slow growth during the second month. Every day of lost time on the pig's part means money lost for the owner; they must be kept moving right along steadily from start to finish. The sow and litter should have access to a roomy yard, or, if she farrow in late spring to a small clover or grass patch. When the pigs are ten or twelve weeks old they will make good use of pasture of this kind; in many sections of Ontario the farmers carry their hogs during the summer months almost entirely on clover. Light movable fences or