

Rearing Ducklings.

Upon the early treatment of the ducklings a great deal depends—in fact, it may be said that the first couple of weeks is the most important time in their lives. When they are for killing immediately they are large enough, forcing food must be supplied, together with as little exercise as possible. On the other hand, when they are for stock purposes, the idea should be to allow them to grow and develop slowly, as only in this manner is it possible for them to attain a large size and a good sound constitution. In the former case the ducklings should not have access to water in which to swim, as the less exercise they are given the more rapidly will they add on flesh. When for stock purposes, they may be permitted into the water as soon as they are old enough, the age depending upon the weather.

For the first two or three days after their exit from the shell, the ducklings should be fed on hard-boiled eggs, chopped up finely and mixed with biscuit meal. Frequently one sees bread-crumbs recommended, but I have never had as good results from these as from the biscuit meal, the former having a tendency to bring about bowel trouble. The food should be moistened with warm water or milk, but not sufficient to make it sloppy. The eggs would be discontinued at the end of two or three days, and biscuit meal would form a staple diet. No better food can be given to ducklings during the first week to ten days after the eggs have been left off than biscuit meal, well soaked in hot water, and dried off with ground oats. Variety in feeding is one of the causes of success, and no one food should be supplied day after day without change. Oatmeal is perhaps one of the best possible materials for feeding to ducklings. Some are in the habit of supplying food in a sloppy condition, and when this is the case it is not necessary to give them drinking water during the first week or ten days. Personally, I have had better results preparing the food in a crumbly moist condition, and giving a plentiful supply of water.—Ex.

Egg-eating Hens.

The question, "How to stop hens from eating their eggs?" has been asked several times through the columns of the "Farmer's Advocate," and has been answered, by "using china eggs," "trap-nests," "feeding vinegar," etc.

These remedies are worthless from the fact that egg-eating is neither a habit nor vice, but is caused by a craving for egg-forming material, of which there has been an insufficient quantity in the feed. This trouble is immediately overcome by feeding the hens oyster-shell, which can be procured from any poultry-supply house at a very small cost. Oyster-shell and grit, of which a hen will eat about one-quarter pound per week while laying, should always be within reach of the hens. Farmers would secure a far greater number of winter eggs if they would give this matter attention. A. W. FOLEY.

[Do other expert poultrymen agree with this doctrine?—Ed. "F. A."]

GARDEN AND ORCHARD.

Be Sure to Spray.

There is just a possibility that owing to the scarcity of labor, and the comparative immunity from orchard insects and diseases last year, that spraying will not be as general this year as it should be. The first application of Bordeaux for scale, and Paris green for moths, should have been given before this date, but it is not too late to begin now to spray apple, pear and plum trees. The second and third sprayings, or those just before the blossoms have opened, and after they have fallen, are the most important for apples and pears, but the first should not be neglected. For the codling moth, the most injurious insect to the apple, the falling of the blossoms is a sign to begin spraying. Spraying must now be regarded as a type of insurance, or a system of protection. The eggs of insects and spores of diseases are everywhere prevalent, and some precaution must be taken to protect the trees against them. Everyone recognizes the necessity of spraying potatoes to insure a crop, and of disinfecting a house to stamp out a contagious disease, and spraying of orchards is nothing more than these two operations combined. Where it is practicable, let several neighbors unite to purchase a large pump, hose and nozzles, and undertake the work just as they would threshing or other large farm operations. To a barrel containing forty gallons of water, add four pounds of dissolved copper sulphate, six pounds of fresh slacked lime, and four ounces of Paris green. Mix well, and apply in a thin spray. Do not attempt to drench the trees, simply spray them. After the operation is completed the leaves are colored with the dried paste of the compounds, which should be visible until at least the end of July. Usually four or five applications is sufficient for this purpose, and frequently three sprayings will be all that is required.

Some Timely Vegetables.

By Mrs. Anna L. Jack.

It is often a surprise to find in rural districts that many choice early vegetables are excluded from the garden. Each spring finds a tempting array displayed in store and market for residents of the city. There are tender asparagus, young onions, lettuce and radishes, while spinach is brought from afar to be the principal greens at that season. All these, except asparagus, grow annually, and can be used within six or eight weeks from sowing of seed, while the advantage of having them in the freshest condition is in itself an advantage we country dwellers have over those who are dependent upon the markets; for while tilling the soil we are entitled to the best gifts it can give, and fresh vegetables early in the season are certainly of value.

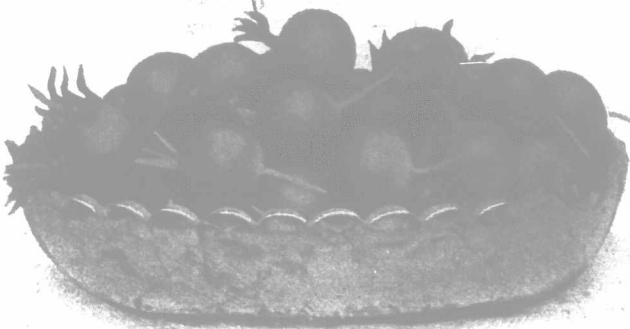
Foremost among these, for quick growth and early use, is spinach, a favorite and wholesome vegetable, cultivated for the sake of its young leaves. It is an annual, and must be used before the stem begins to develop, for the leaves become bitter and unfit for use after the plant has grown.

Spinach was introduced from Asia into Spain by the Arabs, and they were very well aware of its value as a food. It is now considered valuable as a nerve builder, and to replenish an exhausted condition of body.

John Evelyn, an old writer, says of this vegetable in 1699: "Being boiled it is an excellent condiment for all sorts and conditions of men; it may accompany a sick man's diet. 'Tis profitable for the aged, and may be had at almost any season."

In cultivating, it is a saying that lean land makes lean spinach, and it needs rich soil, so as to make quick growth.

In preparing it for the table, spinach must be well washed in two or three waters, or, rather, given a steady rinsing and drain. Then place



A Good Sample of Radishes.

it in the pot, with a small quantity of boiling water and a little salt. Press it down while cooking, which will be from ten to fifteen minutes, and drain well; then press it into a dish, with butter, pepper and salt chopped in, and send to the table fresh and hot. It is a common practice to use too much water in cooking this vegetable, which renders it insipid. Over-cooking spoils the flavor.

It is most likely we all know the value of onions, and they need no special recommendation. The essential oil has stimulating properties, and acts upon the system as an expectorant and diuretic as well.

The Jews and Arabians, who use garlic as an article of food to excess, were in the habit of employing it in dropsy, ague and asthma with great advantage.

A few seeds of lettuce and radishes sown among the onions can be pulled out early, and not be missed. Lettuce is remarkable for the large quantity of milky juice it contains, which on exposure to the air becomes a narcotic, containing the properties of opium in a mild degree. This substance has a sedative effect on those who eat largely of the plant, and is useful in nervous disorders.

Radishes are of value in scorbutic conditions of body, and are stimulating to the kidneys, being chiefly used in a salad with lettuce and endive.

The Jerusalem artichoke that lives in the ground all winter is useful in spring. It is really a species of sunflower (*Helianthus tuberosus*), but is a vegetable to be used in soup, and also boiled and mashed like potatoes, is made a substitute for potatoes where they have failed. The plant is recommended to be grown on dry arid soils, that are liable to great drouth, and the tubers make excellent cattle food, for they have the quality of allaying thirst, while the tops are cured to make hay in times of scarcity. The vegetables mentioned here are such as can be grown during the spring, and also used to fill in the odd places in the garden, and give a quick return.

The Fertility of Our Orchards.

In view of the favorable reputation which Canadian apples hold in Great Britain and the European continent, and the large and rapidly growing trade which is carried on in fruits of all kinds, but especially in apples, we, as fruit-growers, should do everything in our power to increase the quantity and add to the quality, in face of the increased competition from other countries.

The question: "How shall we maintain the fertility of our orchards?" will be asked by all. Some say, use stable manure. This is all right as far as it goes, only it is not a complete manure for orchards, having an insufficient amount of potash, and, under our present system of growing leguminous crops, it has much more nitrogen than is necessary. But the chief argument against its use for the orchard is that no farmer has more stable manure than he can apply with profit to his ordinary crops, and if he applies it to the orchard, he must skimp some other part of the farm, which system, if followed for some time, will eventually run down the farm.

This system of "robbing Peter to pay Paul" is seen to perfection in Southern Wisconsin among the tobacco growers, where it is a common saying that tobacco ruins a farm, and a man wishing to buy a farm will steer clear of one that has grown tobacco. Here, the fault is not so much with the tobacco as with the farmer.

Tobacco being a money crop, and also requiring large quantities of manure, it is a common practice to apply the entire amount of manure made on a farm to a few acres of tobacco, which practice, in a series of years, will surely run down the farm. The same argument holds good in Ontario as in Wisconsin, where they say, or, at least, the thinking farmers do, that if tobacco will not pay for its fertilizer, better go out of the business. So, before we in Ontario run down our farms, we had better decide that if fruits will not pay to buy fertilizer for, we had better dig up our trees by the roots and plant something else.

The next question would be, "What shall we use?" Those who are situated near towns can buy stable manure, but for the majority of farmers this is impracticable. Even in favorable cases it is doubtful if, for large fruit, it will pay for the reasons given above.

In some cases, poor land, or where a proper system has not been followed, it may be desirable for a time to use stable manures, but the successful farmer must get his nitrogen cheaper than paying twelve to sixteen cents per pound for it, and he can obtain it for nothing by means of a leguminous cover crop. Of all the different cover crops advocated, I believe lucerne clover to be the best, as it will make a better growth in the dry weather which we usually have in the fall, and also a better root growth than the common red clover, which is favorably known for this purpose. Lucerne is subject to being winter-killed, but this makes little difference where it is sown to be plowed under in the spring. The hairy vetch is also highly recommended for this purpose.

But I would give a word of advice. Don't sow too early in the season. Remember, it is a full apple barrel, rather than a luxuriant cover crop, which is wanted. I believe that in dry seasons the fruit-grower loses an enormous amount by stopping the cultivator too soon, and, as a rule, cover crops should be sown a month later than usually advised. Never sow a cover crop until you feel sure that the apples are safe, even in case that no rain should come until picking time. This system might not produce such a fine cover crop, but it will produce more apples. Luxuriant cover crops will provide for all the nitrogen necessary, but something else is required or we will ruin our fruit crop through unbalanced feeding. I firmly believe that the popularity of cover crops, together with the use of stable manure, has had much to do with the cry that Canadian apples are not keeping as well as they did in former years. We all know that an excessive amount of stable manure, which is largely a nitrogenous manure, will grow a large, pale, soft apple, lacking in color, flavor, long-keeping qualities, and that indescribable element often called "snap," for which Canadian apples are noted. I know for a fact that dealers are beginning to keep records, in order to find where the poor-keeping apples come from. Thus we see we can provide ourselves with an abundant supply of nitrogen and humus, but we cannot get in that way the potash and phosphoric acid which are also needed.

Experiment stations recommend a fertilizer containing two per cent. of nitrogen, nine per cent. of potash and two per cent. of phosphoric acid, but if a proper system of cover crops is followed, I think we can leave out the nitrogen and use potash and phosphoric acid in above proportions. In order to obtain these materials, "common sense" would teach us to use our own waste matters; that is, bone meal and wood ashes, which at present we ship across to the United States to improve the quality of their fruit.

In bone meal, the steamed will be found more economical than the raw, being less in price and having a higher percentage of phosphoric acid, though lower in nitrogen, which is no detriment in a properly managed orchard.

For the potash, we should use the ashes produced at the farm, and, in addition thereto, the commercial potash salts, particularly sulphate and muriate of potash, which are very high grade, containing fifty per cent. of pure potash, while ashes contain only five per cent. on an average. Weight for weight, the potash