

FARM MISCELLANY

Loss of Soil Nitrogen.

The nitrogen of the soil is one of its most important constituents and a fertilizing element that quickly disappears. It volatilizes rapidly and one of the chief agents of holding it in the soil is the humus. When the humus becomes exhausted the nitrogen escapes with increased rapidity. Experiments with continuous wheat growing on the same soil have shown that the animal and vegetable matter in the soil disappears very rapidly. This causes the liberation of the nitrogen. As long as the nitrogen is in combination with and forms a part of the humus, or decaying animal and vegetable matter of the soil, it is in a stable form; but as soon as the humus decays the nitrogen is liberated in various gases and soluble forms, which are easily lost from the soil. It is the statement of scientists that there is no element that is so readily lost as nitrogen. It is not possible for the mineral forms of plant food, such as potash and phosphoric acid, to be converted into gaseous and soluble forms by the ordinary chemical changes that take place in the soil, as in the case of nitrogen. With them the principal loss is in their removal from the soil as plant food. But with humus it is different. There is a loss of course of the plant food by its being used by the crops, but much additional is leached downward by the soil water and some is sent off in the form of gas when the humus decays. We have an illustration of this in the decay of piles of manure and vegetable matter. We say that we can smell the ammonia rising from them; but that ammonia is the gas into which the nitrogen in the decaying mass is being changed.

The loss of soil nitrogen can only be prevented by keeping up the humus in the soil. In most countries rotation of crops alone is able to do this. Some men brag that they have grown wheat year after year on the same soil for a generation without loss, but it will be found that such soil was in the beginning very rich in humus. By all means rotate, and include in the rotation some of the legumes.

Cooling Milk in Winter.

Most milk producers now know that milk must be quickly cooled in summer to increase its keeping power, but many do not know that the process is also necessary in winter. Men that make a business of delivering milk know that at certain times in winter they have as much trouble with milk souring as they do in the summer. The cooling of milk in the winter should be done in exactly the same way as it is in summer; namely, by placing the milk in cans in tanks of cold water as soon as the milk is drawn from the cows. In the winter ice and snow may be easily obtained for reducing the temperature of the water in the tank. As this is entirely without expense there is no good reason why it should not be done. Milk for all purposes will then keep very much longer than if it is not cooled after being drawn.

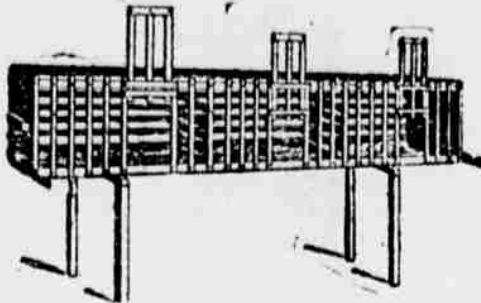
Turnips for Ducks.

Grow a crop of turnips for ducks, if you intend to raise a large number of ducks. In the large establishments, where hundreds of ducks are raised, the principal food for them is cooked turnips, with a small proportion of ground grain. No crop can be grown to better advantage than turnips, and in no way can turnips be grown so profitably as to feed them to ducks. Ducks and turnips are adjuncts to each other on the duck farms, for without turnips the ducks could not be made to lay so well.—Exchange.

POULTRY

Crates for Fattening Fowls.

We herewith illustrate a fowl-fattening crate, used at the Ontario Agricultural College. This crate is six feet six inches long, eighteen to twenty inches high and sixteen inches wide. It is divided into three compartments, each holding from four to five birds, according to the size of the chickens. The crate is made of slats, except the ends. The slats are usually one and a half inches wide and five-eighths inches thick. The slats in front are run up and down



and are two inches apart, to allow the chickens to put their heads through for feeding. The slats on the bottom are three-fourths inches apart, so as to admit of the droppings passing through to the ground. Care should be taken not to have the first bottom slat at the back fit closely against the back, as this will hold the droppings. The feeding and watering are done by means of a trough in front running the entire length of the coop. This trough is from two to three inches deep and is made of three-fourths-inch lumber.—Farmers' Review.

Colds and Roup.

Roup in fowls of all kinds is very dangerous to the whole flock. The hatchet is the best cure for it after the fowl's head becomes foully odorous. Roup starts from colds, damp quarters, foul air, and other causes. When a cold gets bad and runs into a form of catarrh it is then almost sure to go into roup. Burn or bury all fowls that die or are kill of it. Weak constitutional flocks are always troubled with colds and roup. Kill them off and try new blood. A cold can be cured in a healthy fowl by an application of three or four drops of coal oil in the fowl's nostrils. Never get it in the eyes. Put enough permanganate of potash in the drinking water to color it. This is good for throat infections of all kinds and will prevent the spread of the trouble.—Farm Life.

Evil in Surplus Male Birds.

Many people who raise pure blood chickens forget that they are good for anything else than to sell for breeding purposes and keep themselves poor feeding surplus male birds during the winter. Many of them that if kept until spring will not bring more than \$1 and sometimes less, if they had been sold when they were tiny broilers would have brought at least forty cents. Just consider the feed and the room, not saying anything of the time that would have been saved. A person who is well versed in the intricacies of the standard of excellency can readily pick out the birds which have glaring defects, so they are not likely to kill the ones that will bring the big money.

Selling Eggs by Weight.

In France official agents are appointed to inspect not only the number and quality of all eggs marketed but all eggs which pass through a hole of certain size are rejected. If eggs were sold by weight in this country with twenty-four ounces to the dozen as the legal standard what a relative difference it would create among the breeds. Everybody would be scrambling to secure fowls which would always lay eggs up to weight.

HORTICULTURE



"Heeling-in" Trees.

Several correspondents ask about "heeling-in" trees. Some do not know what is meant by it, and others do not know how to do it. The following explicit directions are from "Green's Amateur Fruit Grower," a book that should be owned by every one who grows fruit of any kind, or who contemplates growing it:

"Heeling-in" is a term used to designate the temporary burying of the roots of trees or plants in earth or other material. If the trees are to be moved again in a few days a very light covering will be sufficient; but if they are to remain several weeks much care should be taken to do the



work well. To begin with, select a dry, mellow piece of ground; dig a wide trench, put in the trees—a few at a time—either in an erect or sloping position, and cover them so deep and firm they cannot dry out. If apple or other somewhat tender trees are to remain heeled over winter it is best to dig a trench about two feet deep and three wide in land where no water will stand in the trenches; put in a layer of trees sloping; cover the roots with a thin layer of fine, mellow earth, filling in carefully and solid all the interstices among the roots and stems; continue this until all the trees are in, when the tops and all should be bent down to the ground and entirely covered with about six inches of earth. The cut shows the various stages of the operation. (A, row of trees with roots covered; B, the trees bent down and tops covered with earth at C.) The stems and all should be completely covered when the work is finished.—Farm, Stock and Home.

Never Too Much Fancy Fruit.

Some people always see gloomy prospects and glutted markets; they always look on the dark side of everything and seem never to catch even a glimpse to the silver edging of a cloud, says the Canadian Horticulturist. We do, indeed, find our markets at times over-supplied with certain fruits, but if we look into the conditions we find either that the fruit was poor or that it was badly distributed. Perhaps one market was receiving three-fourths of the shipments from our Canadian growers, and hundreds of smaller markets throughout Ontario were almost bare of supply. We do not believe that too much really high grade fruit, of good shipping quality, can be grown. There is an axiom about this which we believe will hold good, namely, "The more good fruit put into a market the greater will be the consumption and the better the prices in the end," while no doubt the reverse of this statement is equally true. The fact is that when people cannot get good apples, for example, they will look out for choice fruits of other kinds, whether fresh or preserved, to take their place, and so on throughout the chapter. The moral then is plain—grow only fancy high grade fruit, and place such goods only on the markets, and the chances are that we should seldom see a glut, unless it be of over-ripe fruit that must be hurriedly disposed of.—Farmers' Guide.

The best care will result in the largest net profit.

DAIRY NOTES

Milk in the Stable.

A good many keepers of cows have in the cow stable and behind the cows pegs on which to hang the milk pails that are too full of milk to prevent of their being further used at that milking. A man fills the pail, hangs it on the hook and proceeds to milk another cow. By the time the milking is completed several pails have been hanging on the pegs for fifteen minutes to half an hour. In addition the empty pails hung on the same pegs before they were taken for milking purposes and just as readily gathered germs as when they had the milk in them. So far as the milker can see, there is no reason why this practice should not be continued. The pails look clean when they are taken down to be used for milking purposes and the milk in the pails that have been hanging there looks as clean as any other milk. The pails are hung too high up to catch any visible dirt. The custom is bad, but its badness is hard to prove, because only the student and the scientist knows that the air is full of odors and germs and that they are constantly settling in the pails to become manifest later in bad flavored butter or quickly souring milk. The milk should be removed from the stable as fast as milked, that the time of exposure to bad odors may be as short as possible.

Lime for Dairy and Stable.

In Denmark there is a box of lime in every dairy or creamery, where it is of use in rinsing out vessels to keep them sweet and clean, and to wash down the creamery floors and to purify the air generally.

We are using it to a small extent in this country, but it is not common enough. It is one of the best purifiers and cheapest. Its use can be applied to the cows' drinking troughs in warm weather, to remove the scum or organic matter therefrom; it can be applied in the cow stable, where it is most invaluable. We know of nothing as effective as slaked lime with carbolic acid mixed in it, for giving the surroundings of the barn a wholesome atmosphere.

This cheap and handy agent is readily made by slaking the lime, filling a three-gallon pail about half full, adding about two ounces of crude carbolic acid. If the lime is not all to be used at one time it can be put away in an air-tight vessel, but it is best to use it fresh.

For the dairy and creamery use the slaked lime only—slaked just before using. It has the physical advantages, as well, in lighting up the barn, in making it sweet, clean and wholesome when sprayed on the walls, in the spring and fall.—Farmers' Guide.

Milk Veins.

The milk veins of a dairy cow go a good ways in indicating her ability at the pail. These so-called milk veins are really large blood veins running from the udder forward to near the forelegs, where they enter the body. The orifices where they enter the body are called milk wells. These large veins convey the blood from the udder to the heart and lungs, where it is purified and again forced to the udder. A cow can not give a large flow of milk without large milk veins. When examining a cow for the dairy, feel along the under side of the belly for these veins. If they are large and tortuous, she is a good cow, other things being equal.

Dairy Wisdom.

Look out as the cold nights come that the cows are in their stalls and have a good supply of fodder—all they will eat up clean.

The temperature for churning ranges from 55 to 65 degrees, according to conditions, while 60 and 62 degrees are the most common temperatures.