# Farm Department

### THE THERMOMETER

On the farm much besides personal comfort and health depends on the temperature. Chemical changes are going on about us at all times, and, as a rule, take place more rapidly the warmer substances are. Note, for instance, the rapid rotting of fruit, the souring of milk, the decomposition in general when temperatures are high. It is important, therefore, on most farms to have a good thermometer and to expose it so that it will give an exact record. The following suggestions are from an article published by one of the weather specialists in the department Yearbook.

When buying a thermometer select one which bears the name of the maker and with the Fahrenheit scale etched on the glass stem, although one so made is usually more expensive than one with a metal scale. Further, in choosing a thermometer one should have in mind the use for which it is intended. There are thermometers for all uses—cooking, dairying, for outside, and so on. Thermometers for scientific purposes are provided with a Centigrade scale in which zero is the freezing point and 100 degrees the boiling point.

In most cases a thermometer hung in the free air will not give the actual temperature of the air, because it may be subject to the direct rays of the sun, and because radiation from the thermometer can take place unimpeded. Probably the best way to expose a thermometer in order to determine the temperature of the air is to hang it in a shelter so made that air may blow freely through it. A good result may be obtained also by rapidly whirling the thermometer in any outdoor shade.

Testing the bath water is another important use of the thermometer in the home, especially in the case of children or invalids. For a cool bath the water should be from 60 degress to 70 degrees, tepid bath from 84 degrees to 88 degrees, a normal bath about 98 degrees, and a hot bath should be over 100 degrees F.

Knowledge of the temperature of the pantry and cellar is important, in order that one may make improvements in conditions. Putrefaction will start at 50 degrees, so that a pantry or closet where food is kept should have a temperature at least as low as that. Cellars where canned goods are stored should have a temperature of 32 degrees or over. Apples are frequently stored in outside cellars, where the temperature should be kept at 31 degrees or 32 degrees; but apples may be kept satisfactorily at 34 degrees or 36 degrees. When stored at the higher temperatures, the fruit should be placed there soon after being picked.

A favorite pastime with the young women on the farm is candy making. There is no branch of cooking in which temperatures are more important than in making candy. For this purpose special instruments are made. No one can follow a good recipe for any kind of candy and ignore the temperature.

**In the Dairy**

A thermometer should be the constant companion of the dairyman. There is probably no other department of the farm in which a thermometer can be used to greater advantage than in connection with dairy operations. The temperatures at which milk, cream, and butter are kept, and at which the various operations of butter making are carried on, are very important.

When milk is to be sold as such, it should be immediately cooled. The reason for this is to stop the increase of bacteria as much as possible. It has been found that an increase of 14 degrees in the temperature of milk will increase the bacteria 600 per cent, and that bacteria will reproduce themselves every half hour if the temperatures are favorable.

If milk is to be separated by a centrifugal process, it should have a temperature of 90 degrees or 92 degress, and should be separated preferably right after milking, and then cooled. If milk is to be separated by gravity methods, it should be cooled to 50 degrees very soon after milking.

The temperature at which cream is churned is another important item, and success depends largely on this factor; 52 degrees to 62 degrees Fahrenheit is considered about right. And, lastly, butter should be stored in a cool place to insure its remaining sweet.

**Outside Uses**

It is sometimes desirable before planting to test the temperature of the ground. The experience of every farmer has taught him that every species of seed has a minimum temperature below which it will not germinate. There also appears to be an upper limit. One may plant in too high a temperature, but success under this condition is dependable largely on the moisture content of the soil.

**In the Orchard**

Much has been written regarding the uses of thermometers in the orchard at frost time, but they may be applied to all crops that are injured by early or late frosts, such as tomatoes and late onions. Some means of protection may be applied to them all.

The farmer should first know his farm. He should know what places are colder than others. He may not wish, nor is it necessary, to have a thermometer for every little hill and hollow, but he should by actual test find out the cold and the more favorable places. A knowledge of this kind will help the farmer not only in protecting his fruit and other crops, but also in planting. There should be a regular station somewhere convenient on the outside where a thermometer can be exposed. Knowing how other places on the farm compare with the regular station, the farmer may, by reading his station thermometer, estimate the temperature at any place on his land fairly accurately.

**Occasional Uses**

The clinical or fever thermometer may be found very useful on the farm. The condition of a patient may be the more intelligently reported by telephone or messenger to the attending physician. The temperature of a person in normal health is 98.6 degrees.

The following are the normal temperatures of farm animals: Swine, 104 degrees; goats or sheep, 102 degrees to 103 degrees; cows, 101 degrees to 102 degrees; horses, 99 degrees to 99.6 degrees; dogs, 99 degrees to 100 degrees. A rise of one or two degrees is unimportant if temporary; but if permanent it indicates a serious condition which needs attention. A rise of 10 degrees to 12 degrees in animals is usually fatal. One may wish to report the temperature of a sick animal together with other symptoms to a veterinary, and the exact fever condition can only be obtained with the use of a good clinical thermometer, which should be used in accordance with veterinary methods.

### THINK BEFORE YOU PLANT

The edttor of this paper does not profess to be an authority on farming, but to our mind it would seem that the following of a few simple rules would result in more satisfactory results from the standpoint of the soil.

1. Produce enough of each article needed to subsist the family from year to year and feed the stock without having to go into the market and buy those articles at high prices. Let this be carefully figured out before planting time and see that provision is made for quite enough of each article of diet.

2. Keep enough hogs, cattle and poultry to supply all of the meat and eggs required during the year without having to buy at the end of the season.

3. Instead of planting the surplus acreage to the time honored crops that yield small returns, study the market reports carefully and select crops that will produce well on the particular land in question and yet bring a high price in the city markets. Then put every available acre and all possible energy into producing a large yield from those crops and sell in the city markets when prices are at high tide.

4. To avoid wearing out the land rotate the crops, always selecting those articles that bring highest prices and yield the largest crops to the acreage, thus producing the greatest financial returns.

5. Study the different crops each season and devise ways and means of increasing the yield at the same time reducing the cost of production. This is not a difficult proposition if a person goes at it scientifically and with a determination to succeed.

6. When reports indicate that the country is going in heavily for one certain crop, let that crop alone and raise something else equally as productive of financial returns. The farmer who is long on a short crop has a small gold mine.

7. Don't be afraid to try something new. Others all over this country are becoming rich by getting in on the ground floor of a new and good thing.

### CALVES ON SKIM MILK

Which are the skim milk calves, was the puzzle. Two lots of four calves each, one fed whole milk and the other skim milk and boiled flax seed. The two lots looked equally sleek and thrifty. Mr. Peters, Animal Husbandman of the North Dakota Experiment Station, explained that the experiment was undertaken to determine how well dairy calves could be grown on skim milk.

The first three weeks both lots were fed whole milk. From then on, Lot. No. 1 was fed 8 pounds whole milk and 8 pounds skim milk daily, while Not. 2 was given 16 pounds of skim milk and one pound of boiled flax seed, which replaced the fat taken out of the cream. During the first three months Lot No. 1 made somewhat larger gains and looked a little more thrifty, but during the next three months, Lot No. 2 caught up. At six months several experienced dairy cattle breeders pronounced the calves in Lot No. 2 equal to those in Lot 1 in individual merit and dairy development. When the calves were five weeks old they were also fed clover hay and a grain ration made up of equal parts whole oats and bran. To this was added one-tenth by weight of linseed meal. It cost $19.00 less per head to feed the skim milk calves than those fed half whole milk, to the age of six months.

### HOW TO DRESS POULTRY

By G. E. Conkey

There are two sides to the poultry business—one, the show room; the other, the table. Both have their place, but in the writings on poultry it has always seemed to the writer that too much attention was given to the fancy and not enough to the practical profit paying side of the business.

For every bird that takes a prize there are thousands only valuable as market stock, and as most of us go into the business to make money, what we need are suggestions that will help us to meet the market demands and thereby realize the maximum price for the stock we ship.

Therefore, "dressing" is a very important subject, for the finishing touches have much to do with the market value of the bird. Thin birds carefully dressed will frequently bring as much or more than well fattened birds carelessly handled, for appearance is always the first thing that catches the customer's eye.

**How to Feed**

It is not my intention to treat on fattening foods, as this subject was covered in the previous article, but to merely take it up with the last feeding.

A buyer never likes to think that he is paying poultry prices for grain and for this reason, a full crop always reduces the market value of a bird.

Therefore, the last feed should be given twelve hours at least before killing time and should consist of corn meal mixed with clean sand and the whole moistened sufficiently to make the mixture crumbly. However, water should not be given to drink for about eighteen hours before dressing time.

Also, if the birds are cooped, be sure to give them plenty of room, so that they cannot get overheated. Crowded, feverish birds always have a red cast when dressed, which is detrimental to their appearance and therefore their sale.

**Dressing Turkeys and Chickens**

To begin at the beginning, we will assume that you have a plump chicken or turkey ready for the knife, and, as it will be better to make it a little more explicit, we shall say chicken (springer or fowl), for all are handled in much the same manner.

Attach a stout cord, with a noose at the loose end, to a beam in such a position that the bird, in struggling, will not be able to strike itself against any obstacle; then hold its feet together; thrust them through the loop and see that they are held securely and that the head of the bird is about opposite the waist line or a little below. Now take hold of the wings and lock them. This can be done by bringing one over the other and catching the tip of the upper wing under that of the other. This will make it impossible for the bird to struggle and will allow the dresser free use of both hands.

Then, in the left hand, grasp the head firmly and force the bill open thrust the blade down the throat just behind the head and draw the point by the use of the thumb and middle finger. After you have a secure hold, across the neck or back-bone.

This will sever the jugular vein and insure a good "stick." Now withdraw the knife and allow the bird to bleed for a few moments; then place the point of the knife against the roof of the mouth with the cutting edge toward the left hand and force it through the membrane into the brain cavity; then turn it three quarters of the way around, twisting the wrist in the natural way, and draw the blade directly across the base of the brain, thus severing the spinal cord and thereby destroying the control which, in life, the bird has over its feathers. It also destroys all sense of feeling.

With a few trials this method will become quite easy and you will find the feathers ready to almost drop off.

As soon as the brain has been pierced, the dresser should turn the knife into the skin of the lower bill and make a hole through which a hook suspending a weight of some kind should be hung (a horseshoe attached to a piece of strong wire is excellent). This keeps the neck extended and assures a thorough bleeding, which is all-important.

After this operation, quickly rub the hand down the neck, removing the feathers therefrom; then pull the tail and wing feathers by a quick, firm twist; and begin to remove those from the tenderest parts of the body, which on the chicken are the breast and back near the base of the tail, and on the turkey, the breast and thigh.

Never use the finger nails to pick promiscuously—the side of the forefinger and end of the thumb are far quicker and will not scratch. When pulling the short, or pin feathers, the nails will have to come into play, but great care should be used that only a careful, clean pluck is made—not a scratch or scrape.

By the time the body is finished, the bird will be so nearly dead that flapping will be almost impossible, so the wings can be unlocked and picked clean. It is not necessary to remove the point weathers. Nearly every housewife values the turkey's for brushes and does not mind paying for the slight additional weight, while the chicken's may be cut off at the outer joint and not effect the sale of the bird in the least, thus saving considerable time and disagreeable work.

A careful study of this description will prove invaluable. Professional dressers follow these rules and it pays to know the shortest and easiest way.

The next article will be on "Cooling, Packing and Shipping Market Poultry."

## CUTWORM REMEDIES

**POISONED-BRAN BAITS EFFECTIVE—DITCHES, BARRIERS, OR ARSENICAL SPRAYS FOR EXTREME OUTBREAKS**

Tomatoes, cabbages, sweet potatoes, and other vegetables and garden plants, and especially those which are started under glass and transplanted are subject to serious injury by cutworms. These pests appear sometimes in great numbers in the spring and early summer, and infrequently do severe injury before their ravages are noticed. Their method of attack is to cut off the young plants at about the surface of the ground, and as these caterpillars are of large size and voracious feeders, they are capable of destroying many plants in a single night—frequently more than they can devour. Every year these insects, working generally throughout the United States, have destroyed hundreds of thousands of dollars' worth of crops. By the timely application of remedies, however, as has been demonstrated throughout field agents and other entomologists of the Department of Agriculture they readily can be controlled, and large areas have been successfully treated. The usual method of control is by the use of poisoned baits.

**How to Mix and Apply Poisoned Baits**

Take a bushel of dry bran, add 1 pound of white arsenic or Paris green, and mix it thoroughly into a mash with 8 gallons of water in which has been stirred half a gallon of sorghum or other cheap molasses. This amount will be sufficient for the treatment of about 4 or 5 acres of cultivated crops. After the mash has stood for several hours, scatter it, in lumps about the size of a marble, over the fields where the injury is beginning to appear and about the base of the plants set out. Apply late in the day, so as to place the poison about the plants before night, which is the time when the cutworms are active. Apply a second time if necessary.

**What to Do When Cutworms Travel Like Army Worms**

When cutworms occur in unusual abundance, which happens locally, and sometimes generally, in some seasons, they exhaust their food supply and are driven to migrate to other fields. This they do literally in armies, assuming what is called the army-worm habit. At such times it is necessary to treat them the same as army worms. While the methods which have been advised are valuable in such cases, they may be too slow to destroy all the cut-worms, and other methods must be employed. These include trenching, ditching, the plowing of deep furrows in advance of the traveling cutworms to trap them, and the dragging of logs or brush through the furrows. If the trenches can be filled with water, the addition of a small quantity of kerosene, so as to form a thin scum on the surface, will prove fatal to the cutworms. In extreme cases, barriers of fence boards are erected and the tops smeared with tar or other sticky substances to stop the cutworms as they attempt to crawl over.

**Spraying With Arsenicals**

In extremely severe attacks by cutworms to choice plants there is sometimes no opportunity to prepare the poisoned bait. In such cases an arsenate of lead or Paris green spray will answer quite as well. In one instance a parsley field was sprayed with 4 pounds of arsenate of lead to 50 gallons of water; this killed all the cutworms, whereas if they had been left alone for a day or two longer the field probably would have been destroyed. The result, however, was a perfect stand—the best ever made by the grower. In this case five applications were made.

**Cultural Methods and Crop Rotation**

Clean cultural methods and crop rotation are advisable, as are also fall plowing and disking, to prevent recurrences of cutworm attacks. Many cutworms can be destroyed where it is possible to overflow the fields, particularly where irrigation is practiced.

### PEAT AS A STOCK FOOD

Some interesting uses are being made of peat in the United States. It is manufactured into a fertilizer and employed as a fertilizer filler, according to the United States Geological Survey; it is also used for making paper, stock food, and mud baths. In Germany and Austria peat baths are well-established institutions, and during the last few years such baths have been tried in some of the sanitariums of the Middle West and found beneficial in certain cases. As food for live stock, however, peat seems to have found its most curious use, inasmuch as the kind of peat used is thousands of years old, and, although it may still be classed as vegetable in character, it is only a step removed from low-grade coal. As a stock food it is used in a mixture containing molasses. The results are stated to have been very satisfactory in practice, the peat acting as a tonic and corrective. The peat used is the black, well-humified or rotted kind black, well-humified or rotted kind and is prepared in practically the same way as when used for fertilizer. Peat for various purposes was produced in the United States last year to the extent of 57,000 tons, valued at $367,000. The peat deposits of the United States are of enormous extent.

### ABOUT WATER

Most of us realize the importance of pure water when we can't get any. But ordinarily we never give it a thought.

Do you know, for instance, that seventy-five per cent. of the carcass you carry around when you put on your clothes in the morning is water? That, assuming the scales register you at 150 pounds, 113 of those lbs. will go up in steam if you should happen to get to a certain very hot place?

Well, that's a fact. A man is almost as well watered as some railroads. And here's another fact: Just to keep the mixture in you at the right degree of fluidity, just to make up for the body's evaporation and leakage through discharges, you need every day, to take into you, through food and drink, an ounce of water for every pound and seven-tenths that you weigh.

Say you weigh 150 pounds. This means that you need a daily water dosage of more than half a gallon simply to keep you from becoming dusty and crusty.

But there's one fine thing about water as a beverage; you don't need to be afraid of an overdose. It cleanses the innards as a rainfall flushes a sewer—so don't be afraid to go to it heartily and often.

### TO MAKE YOUR TOWN PROSPER

Don't fret.
Talk about it.
Write about it.
Beautify the streets.
Patronize the merchants.
Be friendly to everybody.
Advertise in its newspapers.
Elect good men to all the offices.
Don't grumble about hard times.
Avoid gossip about your neighbors.
Keep your sidewalks in good repair.
Do your trading with your own merchants.
Sell all you can and buy all you can at home.
If you don't think of any good word don't say anything about it.
If you are rich, invest something; employ somebody, be a rustler.
Remember that every dollar invested in permanent improvements is so much on interest.
Be courteous to strangers that come among you, so that they may go away with good impressions.
Always cheer on the men who go in for improvements, your portion of the cost will be nothing only what is just.
Don't kick at any proposed improvement because it is not at your own door, or for fear your taxes will be raised fifty cents.

If each of us would abstain from throwing tin cans and waste papers in the alleys and empty lots, the appearance of the neighborhood would be greatly improved.

Cooler weather will stimulate business and business can stand the stimulation. The future is bright, however, and within the next few months a decided commercial change for the better is expected.