

# DAIRYMEN MUST KNOW HOW TO DO THEIR WORK

Now that the cost of cow feed is soaring sky high and the dairyman is depending on the profit from his cows for his living it is a self-evident fact that he must know what he is thinking about. One thing is certain, the poor feeder to the poor cow is not in the race and the sooner he gets out the better, even if he must hire out to work for the man who knows how to do his own thinking.

Under the strained circumstances of these days, to succeed in dairy work you must know how to think and that means that you must put yourself through some process of training, either on your own hook or by proxy, that is, with the help of a school or working for some practical dairyman. It does not matter at all how you get your information, just so you get it, but to begin dairying without it is as hopeless as to jump into a deep river without knowing how to swim.

For instance, you should know that there is a vast difference so far as the profit in dairying is concerned between raising your own cow feed and buying it from the store. There is also a great difference between feeding a big ration to a good cow or a poor cow. The good cow has that magic gift of turning whatever she eats into dairy products, while the poor dairy cow is one that has some latent power in her make-up that has another way of disposing of her food. She may make it into beef, or we find many of them that do not seem to have any object in life except only to live and eat. There are altogether too many of that kind of cows eating their heads off in all the dairies, and the wonder is how the average dairyman can have the patience to keep them going.

To keep out of this class of dairymen you must brush up your brain power. Learn to read and to study. If you are young then there is no excuse for you to be afraid of books. All young people must make themselves familiar with the books that relate to the business they propose to follow in these days. If you are too lazy or indifferent to read and study, then let me tell you that to try to make a dairyman of yourself will simply be a waste of time and that you had better use in working for some other man who is not afraid to use his brains to the best advantage.

Herein lies the difference between an up-to-date man and a back number—between the bright, energetic man and the slow coach who has no desire to be abreast with the times. For instance, the earnest young man who desires to learn dairying while doing the ordinary farm work—how easy for him to grapple with the most important of all dairy work in producing the economical dairy ration from the crops of the farm. Let him figure that out and his dairy education is half learned.

An interesting experiment has just been concluded at the Ohio station in testing corn and oats as feeds for work horses. Six mature grade Percheron geldings were used, one horse in each team being fed ear corn and the other one oats. Weights of the horses were taken each week throughout the experiment. By this plan a fair and square test was possible. While the experiment was not continued long enough to justify very comprehensive statements, yet the figures warrant the drawing of certain conclusions. When mixed clover and timothy hay are fed in combination with corn, the horse endured hard work during hot weather, as well as did the oats-fed horse. The use of corn to the exclusion of other grain for a period of 48 weeks was not detrimental to the health of the work horse. It has been stated often that corn as a grain ration induces laziness and lack of endurance, while oats, on the other hand, induces both endurance and spirit. Neither of these named conditions were found at all to be true in this experiment. It was found also that ear corn was somewhat cheaper than oats and just as efficient, pound for pound. This experiment is in line with others previously conducted at other stations, indicating that there is no special merit in any particular feed. What is desired in feeding horses is to give them a balanced ration, from which will be obtained the necessary digestible nutrients in proper proportions. On every farm there is a large quantity of feeds available, all home-grown, and through the use of which the farm horse can be maintained in splendid working form without the expense of purchasing chops or commercial feeding stuffs. Timothy hay as an exclusive roughage material has in recent years received a blow. No longer can the claim be advanced that it is the only desirable roughage feed for horses.

In feeding farm horses to secure the highest efficiency, let the aim be to select roughage materials that are nutritious and wholesome, and at the same time free from mold and dust, with the proper supplement of corn or oats or other home-grown grain materials. When this practice is followed, you will get efficiency and the maximum of work at the least expenditure of effort and expense.

In spite of Jethro Tull's famous dictum "Hillage is manure," farmers everywhere are beginning to appreciate the fact that plants must be fed. Undoubtedly complete cultivation results in better crops and is to be highly commended. Part of the results of thorough culture is undoubtedly due to the fact that plant food in the soil is made more available. If made more available, the supply will be more quickly exhausted. This being true, it stands to reason that in time the plant food taken out of the soil by the continuous growing of crops must be replaced. Certain elements may be practically inexhaustible, but phosphorus and potash undoubtedly are being gradually removed and the results are apparent everywhere in decreased yields and inferior grain. Nitrogen, the remaining essential element, may be supplied by the growing legumes. All this being true, and it cannot be disputed, it is worse than folly for any man to contend that the application of fertilizer and the growing of nitrogen-gathering crops are unnecessary. For a man who claims to be a leader in agriculture to make a claim of this kind is nothing short of a public calamity. He is a false teacher. If his teachings are followed the productive capacity of the farms in the United States would be greatly reduced and the agriculture of the country permanently injured. It is exceedingly unfortunate that men of this kind are permitted to get before the agricultural public. There are always some farmers who welcome teaching of this kind, as it affords an excuse for the continuation of their careless, wasteful methods. The greatest harm will come to these very farmers, for it has been positively demonstrated that within a quarter of a century they will wake up and find that they have been hugging a delusion. It is therefore the duty of everyone genuinely interested in maintaining soil fertility and improving agricultural conditions to constantly preach correct practice and protest against false teaching.

### STEER FEEDING EXPERIMENTS.

Steer feeding experiments at the Pennsylvania station developed that when corn silage forms a considerable portion of the ration of fattening steers more care is required in getting them on full feed than when a dry ration is fed exclusively or silage is fed in small quantities. After the first two weeks, steers fed all they would eat of corn silage once a day and a limited grain ration made better gains during the first half of a fourteen weeks' fattening period than did steers on a full grain ration with about half a silage ration, while during the last half of the fattening period the results were reversed. During the early part of the period

steers getting the larger quantity of dry matter in their feed made slightly better gains than those getting the smaller quantity of dry matter in connection with an equivalent amount of nutrients, and during the latter part of the period those getting these nutrients in connection with the smaller amount of dry matter made the better gains. Slaughter tests failed to show any differences in the carcasses of the two lots that might be attributed to methods of feeding. Those receiving the smaller amount of dry matter made more economical gains. Steers in an open shed made practically the same gains on the same grain ration as those in a well-ventilated barn. Those in the shed, however, ate slightly more roughage.

## DAIRYING PRODUCTION OF MARKET MILK UNDERGOING CHANGE

Many Careless Methods of the Past Must Be Dropped.

### DAIRYMEN ARE WILLING.

BY C. B. LANE.  
If I were to pass judgment on the desirability of the early part of the season for hatching my chicks, but in the latter part I employ hens. Preliminary hatching I make the stock early, so as to insure fertility of the eggs, then prior to hatching and rearing I make everything in order with the machine. Incubators and brooders are thoroughly overhauled and disinfected; the hot water tank is tested to make sure it does not leak, new wicks are put in the lamps, and the burners and lamp chimneys if needed. Every thing being in readiness for the eggs the machine is tested for regulation for at least 24 hours. When the temperature has remained stationary at



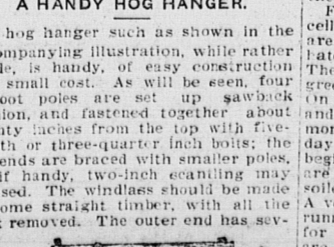
A PEN OF COLUMBIAN WYANDOTTES

source of his supply and to pay the dairyman a living price when the product is delivered to him in good condition, and not be looking for the cheapest milk he can buy. The average consumer is surprisingly ignorant concerning the importance of having pure milk, but is ignorant concerning its greater cost. Three-fourths of the milk consumers have never looked up the source of their supplies, or seen any account of it. The consumer has often been held up in a favorable light by those who have agitated the cause of better milk, but that is sweet and has lots of cream. The dairy industry, as far as it relates to the production of market milk, is rapidly undergoing a change, and the change demands that the boards of health must necessarily increase the cost of production somewhat, but not to the extent that we are sometimes led to believe. Many of the careless methods which have been sanctioned in the past must go, and I think we are agreed that they should. I believe the majority of dairymen are willing to do their part, but they do not want to be insulted into doing it, and you cannot blame them.

What, then, is required from the present-day standpoint? In a few words the demand is for clean, healthy cows, well-lighted, well-ventilated and clean, airy stables, tight, sound floors, clean healthy attendants, clean utensils, prompt removal and cooling of the milk in a proper room used exclusively for the purpose, and storage at a temperature below 60 degrees. I cannot recommend too strongly the use of the small-top milk pail in eliminating dirt and bacteria. In one instance where a study was made of this point it was found that where the ordinary open pail was used the bacteria count was 3,439,000 per cubic centimeter, as compared with 4,600 with the small-top pail. The use of the damp cloth in wiping the udders and flanks of the cows before milking is very important in reducing the bacterial count. Stocking found that where this method was used in one instance the number of bacteria in the milk was 716 per cubic centimeter, as compared with 7,058 per cubic centimeter where the moist cloth was not used.

### A HANDY HOG HANGER.

A hog hanger such as shown in the accompanying illustration, while rather crude, is handy, of easy construction and small cost. As will be seen, four 12-foot poles are set up sawbuck fashion, and fastened together about twenty inches from the top with five-eighths or three-quarter inch bolts; the top ends are braced with smaller poles, or, if handy, two-inch scantling may be used. The windlass should be made of some straight timber, with all the bark removed. The outer end has several



holes bored through, for the hand spikes, and two ropes with hooks at the lower end are firmly fixed in the centre as shown. These hooks are hooked over the gambrel stick and the hog hoisted in the hand spikes, by moving one at a time and placing same in the hole above. When the hog has been raised to the desired height, one hand spike is fastened to one of the

## POULTRY GETTING READY AND HANDLING THE SPRING HATCH

Only Even Sized Eggs Should Be Selected for Setting.

### TREATMENT OF THE CHICKS.

BY ANNA LEMBEKE.  
I use incubators and brooders during the early part of the season for hatching my chicks, but in the latter part I employ hens. Preliminary hatching I make the stock early, so as to insure fertility of the eggs, then prior to hatching and rearing I make everything in order with the machine. Incubators and brooders are thoroughly overhauled and disinfected; the hot water tank is tested to make sure it does not leak, new wicks are put in the lamps, and the burners and lamp chimneys if needed. Every thing being in readiness for the eggs the machine is tested for regulation for at least 24 hours. When the temperature has remained stationary at

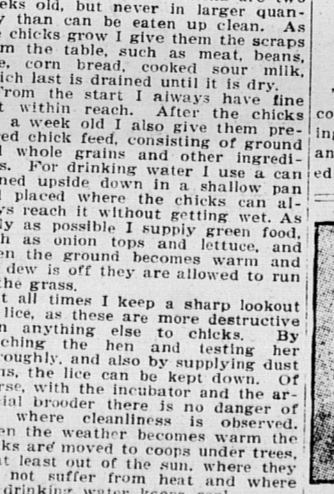
103 degrees it is time enough to put the eggs in. While the eggs are hatching I overhaul the brooders, so that everything will be in readiness for the chicks. Coops are also built if needed, so that the chicks may be removed from the brooders as occasion may demand. For natural hatching I see that the hens are rid of lice and mites and the house thoroughly cleaned and whitewashed the roosts given a good painting of kerosene and the hens dusted once a week after they begin to sit. The litter in the nests is replaced each week, and the old stuff burned, so that vermin may be destroyed. The boxes are also painted with kerosene at the time. Great care must be exercised to keep the oil off the eggs, as it is so easily absorbed. For both artificial and natural incubation I select only even sized eggs, discarding those too large and too small, as well as irregular ones. If necessary to hatch under hens, care should be taken to give them a good feed of clover and timothy hay, and to keep them in a clean, dry, well-ventilated place. For both artificial and natural incubation I select only even sized eggs, discarding those too large and too small, as well as irregular ones. If necessary to hatch under hens, care should be taken to give them a good feed of clover and timothy hay, and to keep them in a clean, dry, well-ventilated place.

### FEED FOR MARES IN FOAL.

Mares so used must be well fed on a ration supplying plenty of protein. It is no extravagance to cut the corn out of their ration entirely, and give them oats instead. The extra expense will be well repaid by a fatter, more healthy mare and a stronger foal. Naturally, mixed clover and timothy hay are better than straight timothy, as it supplies more protein, produces less tendency to constipation, and is usually quite as free of dust and mold as any hay. When her time approaches add a little bran to the ration as a laxative, and put her in a box stall at night. When the wax protrudes at the ends of the teats the colostrum may be expressed inside of two days, and it will be enough to let her rest. A mare at work will have comparatively little swelling of the limbs and other parts, since the exercise and consequent unobstructed system and vigorous circulation prevent it, so one must not neglect providing a box stall for her, simply because she shows only moderate signs of approaching parturition.

### ANOTHER GREAT JERSEY RECORD.

The wonderful work of the Jersey cow Financial Countess in establishing a year's record of 13,248 lbs. milk and 785 1/2 lbs. butter fat, has attracted a great deal of attention.



THE NEW JERSEY CHAMPION, ADELAIDE OF BEECHLANDS.

This great record has now been surpassed by Adelaide of Beechlands, who closed a year's test Nov. 21, with a record of 15,572 lbs. milk and 850 lbs. butter fat, equivalent to 1,600 lbs. butter. Her average percentage of fat was 5.5, rising from 4.4 when fresh to 7.1 the last month. Adelaide of Beechlands was bred in March, so was carrying a calf during the greater part of the year. It takes some feed to keep a cow of this sort. During her test she was fed 942 lbs. bran, 628 lbs. crushed oats, 263 1/2 lbs. meal, 142 lbs. cut alfalfa hay, 1,846 lbs. cover hay, 128 lbs. carrots, and 745 lbs. kale, and was five months in pasture. Under date Dec. 9, W. M. Ladd writes: "She was not forced at all, and is in perfect physical condition." She is owned by the Ladd estate of Ore, and was bred by the late Chas. A. Sweet of New York, who was dropped March 16, 1892, her sire being Stoke Pogis of Prospect 23121, a bull now having twelve daughters in the Register of Merit, and her dam is Adelaide's Daughter 123446, who, in private test, has a record of 11 lbs. 11 1/2 oz. butter in seven days.

## THE HORSE NO SERIOUS LOSS IN BREEDING COLTS FROM WORK MARES

Some of the Things One Should Know in This Connection.

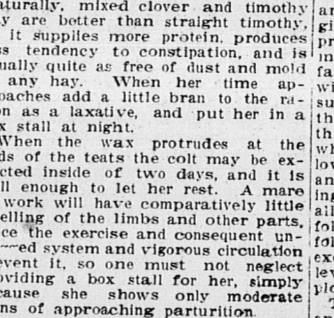
### FEED FOR MARES IN FOAL.

BY E. T. ROBBINS.  
No man to-day will question the desirability of raising a good colt in the next year from every good mare bred and a little time when she will be the opportunity to do so, for fear that the rush of their work will not permit it. It is true some little time is lost from work when the mare is bred and a little time when she drops her foal, and besides this, she cannot be crowded into work quite so heavily when she is suckling a foal as when she is not doing so. When this is said one has included the three most serious obstacles to successfully raising colts from work mares. These are not really so serious when he thinks of the busy days of spring plowing, and the tired, sweating, puffing horses at harvest time. Little time is really required to breed a mare, although sometimes they are aggravatingly shy, and only patient trial will determine whether a mare is a breeder at all or not. A knowledge of just what the loss of time of the mare, for indeed it is quite commonly assumed by the inexperienced that a mare must not be bred months before dropping a foal, nor for couple of months afterwards. Really, a mare need not lose two weeks' time. She needs exercise when carrying a foal, but feed her according to the work she will be kept in good flesh and spirits. When the foal is born and she has rested a few days she needs exercise again. A knowledge of just what is right and safe to do with working brood mares will prevent some little mistake which, perhaps may have serious consequences, and will enable one to make the best possible use of her time. While a mare may safely be worked hard and steadily from the day she is bred until the pail she drops her foal, she should be kept clear of excessively hard pulls and strains, such as are apt to occur in hauling grain on the road in a hilly country; working with smooth shoes or none at all when the roads are rocky, and hauling feed and manure through muddy fields and feed lots in the early spring.

Careful hauling on the road and steady work in the field, putting in crops and tending them are very safe for the mare. I have used mares at work for a long time, and have known them to be unhitched from the cultivator to give birth to a colt in the field. Under either method, breaking may commence in Western Canada as soon as the frost is sufficiently out of the ground in the spring, say April 15, or earlier. It may proceed uninterrupted until June 30. If shallow breaking is being done this will be found to be the best time to do it, as the ground is becoming tough and it is difficult to keep the plough in the ground at the necessary depth. The land first broken will be almost green, and the mechanical condition. By the more thorough method the first crop is deferred until the first of July, because the land which has been broken is in better mechanical condition, and its stores of plant food are more readily available. Right from the start the soil is better. Under either method, breaking may commence in Western Canada as soon as the frost is sufficiently out of the ground in the spring, say April 15, or earlier. It may proceed uninterrupted until June 30. If shallow breaking is being done this will be found to be the best time to do it, as the ground is becoming tough and it is difficult to keep the plough in the ground at the necessary depth. The land first broken will be almost green, and the mechanical condition. By the more thorough method the first crop is deferred until the first of July, because the land which has been broken is in better mechanical condition, and its stores of plant food are more readily available. Right from the start the soil is better.

### A HANDY HOG SCALDER.

The illustration will show how to set up an easily constructed hog scalding that will save much lifting and time. Three 16-foot poles are held together at the top with ropes, and set over a scalding barrel; a small block with rope is hung from the top, which has a rather sharp hook at its lower end.



THE DEAD HOG IS BROUGHT TO THE BARREL ON A WHEELBARROW, AND THE HOOK EITHER MADE FAST TO ONE LOG, OR A GAMMEL STICK, IF NECESSARY, THE HOOK MAY BE FASTENED IN THE ROOF OF THE HOG HOUSE, AS IS DONE AT THE PACKING HOUSES. THE HOG IS EASILY LIFTED FROM THE BARROW, SCALDED, AND TAKEN TO THE SCRAPPER OR CLEANING TABLE. THE DEVICE SEEMS RATHER CRUDE, BUT ONCE USED ITS ADVANTAGES WILL BE APPRECIATED.

This second ploughing may be done any time after a lapse of about two months. It is better done the same season, and will follow the same direction as the first. The plough should be run at least two inches deeper than at the first breaking. Two strokes of the disks and two or three of the drag harrow, followed by a ploughing will in a season of average moisture result in a seed bed fit to grow thirty or forty bushels of wheat to the acre. Such is the most thorough and satisfactory method known for turning a prairie into a seed bed for small grains. If, for any reason, deep ploughing is being practiced, the roller or packer should be pulled over the ground, and the latter may be kept going several weeks into July, as the roots will not be so tough five or six inches below the surface as at a depth of three inches. This being the final ploughing before seeding, the disk may follow the plough without any delay, and after a seed bed has been prepared, the ploughing may be sown until the first week in June. It will be readily understood that under such treatment the soil has small chance to rot quickly, being shut off from the action of air, sun and water to a considerable extent; so much so, that it is not uncommon for such land still to be decidedly soddy after two or three years have passed. Following the first crop this land may either be summer-fallowed, or, the stubble having been burned off, sown again after disking. As all educational authorities and most of our best farmers are united in recommending the more thorough method of breaking, it may be perfectly asked why men employ the other method. The suited method probably is that deep breaking involves less work per acre before the first crop may be sown, and another method of fact doubtless is that the first crop, be it feed or flax, is secured one year sooner than if backsetting is practiced. It will have been gathered from the foregoing that where time and trouble have been taken to secure first-class conditions at the outset, wheat is the proper crop to sow on new land. On the other hand, where time and trouble are not so much taken, the broken land sown the same year as broken, flax is the usual crop under such circumstances, and the succeeding crop of wheat will be more certain than if the first crop, be it feed or flax, is secured one year sooner than if backsetting is practiced. Steam ploughing is yearly becoming more of a factor in the development of the Canadian West, and it is having its influence on the problems connected with breaking. For large stretches of level land, free from stones, this form of power is proving to be more economical than horse flesh, but inasmuch as it is very difficult to do shallow ploughing with a steam plough, that implement is exercising a questionable influence on the course of improved agriculture. Many of the farms on which it was early introduced are veritable weed beds at this time, though it must be admitted that steam ploughs have been wonderfully developed. It is now possible under favorable circumstances to do with the glass of work fully equal to the average of that done with horses.

## AGRICULTURE HOPEFUL UP A FARM ON THE CANADIAN PLAINS

Shallow Ploughing and Back-Setting Best for the First Crop.

### EARLY START NECESSARY.

BY F. H. MANTLE.  
The prairie lands of Western Canada are covered with some more or less tough, according to the locality. The first problem which confronts the settler after he has located his farm is to dispose of this soil. If carefully dealt with, this is easy, but if the land is treated as though no sod existed on it, trouble is apt to arise which will be remedied that which I have to say is prairie land, not necessarily a scrub or bush land. Such lands often require very different handling. Two methods obtain for bringing the prairie into subjection. The earliest, most common, and under average conditions, the better method, consists of breaking and backsetting, while the second, and, often, the slipshod method, consists of breaking and back setting, followed by a second ploughing. These two methods are so distinct, and their results and subsequent treatment the land requires are so different, that they must be outlined separately. Briefly it may be said that the first method, that of breaking shallow, followed after a lapse of several months, by a deeper ploughing, and back setting, involves more work during the first summer, but it disposes of the sod more quickly. The method known as breaking and back setting, and back setting, involves more work during the first summer, but it disposes of the sod more quickly. The method known as breaking and back setting, and back setting, involves more work during the first summer, but it disposes of the sod more quickly.

Under either method, breaking may commence in Western Canada as soon as the frost is sufficiently out of the ground in the spring, say April 15, or earlier. It may proceed uninterrupted until June 30. If shallow breaking is being done this will be found to be the best time to do it, as the ground is becoming tough and it is difficult to keep the plough in the ground at the necessary depth. The land first broken will be almost green, and the mechanical condition. By the more thorough method the first crop is deferred until the first of July, because the land which has been broken is in better mechanical condition, and its stores of plant food are more readily available. Right from the start the soil is better. Under either method, breaking may commence in Western Canada as soon as the frost is sufficiently out of the ground in the spring, say April 15, or earlier. It may proceed uninterrupted until June 30. If shallow breaking is being done this will be found to be the best time to do it, as the ground is becoming tough and it is difficult to keep the plough in the ground at the necessary depth. The land first broken will be almost green, and the mechanical condition. By the more thorough method the first crop is deferred until the first of July, because the land which has been broken is in better mechanical condition, and its stores of plant food are more readily available. Right from the start the soil is better.

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### PROCURING OF A HIGH GRADE MAPLE SYRUP

I am a maple syrup maker and aim to get the largest possible amount of the best possible quality, with the least possible expense and injury to the trees. To do this I always have in mind that tapping the tree deadens the wood for a short distance on each side and a greater distance up and down; hence try to avoid any great injury here. In tapping I select a fresh place for the first tap, and use a 3/4-inch bit for the first tap, and a 1/2-inch bit for the second tap. This size of hole will produce just as much sap as a larger one, and unless the trees are quite large I hang only one bucket to the tree. When the trees have begun to dry up the exposed wood becomes sour, but there is still sap in the tree, and I do not want to stop it, so I bore out these old holes with a 3/4-inch bit, going in just a little deeper, so as to remove all of the seasoned and sour wood. By doing this I have a new tapping, with everything fresh and clean and the tree injured in but one place. Some sugar makers freshen the trees by putting in an extra spot, leaving the old one in also, but I cannot commend this practice. The two spots will produce very little more sap than one when freshened up. There is another side to it also, due to the fact that the old hole sends out sour sap that is certain to injure the quality of the syrup. All this means that to get quality you must be extremely careful that you have good sap in the first place, and then that everything is kept clean and neat thereafter. Consequently, covers are essential to keep out rain water, the washings from the bark of the trees and insects. When uncovered immense numbers of insects get into the pails and are drawn into the covers. Many covers are more or less saturated with water, and the boards large enough to cover the pails. These answer the purpose in every way. The pails are to be recommended over galvanized ones, as they are more clean, and a better quality of syrup can be produced. I find it an advantage to paint both outside and inside of the tin pails. Nothing destroys the quality of syrup so much as rain water, and if it is not so I begin to boil the sap as soon as there is enough to justify canning and continue to rapidly as possible until the entire job is completed. It is not a good plan to boil the same material over and over, which will surely ruin the quality of the syrup at frequent intervals. Boiling will be more rapid and the product better. If the sap is not more than 1/2 inch deep in the pans or evaporator, the quality of the sap can be taken from the trees and sealed up in the cans, and the same care is used to keep all handling clean, the better will be the quality of the crop.

## ARBORCULTURE

Aim to Get Greatest Possible Quantity at Least Expense.

### TAPPING OF THE TREES.

BY F. L. ALLEN.  
I am a maple syrup maker and aim to get the largest possible amount of the best possible quality, with the least possible expense and injury to the trees. To do this I always have in mind that tapping the tree deadens the wood for a short distance on each side and a greater distance up and down; hence try to avoid any great injury here. In tapping I select a fresh place for the first tap, and use a 3/4-inch bit for the first tap, and a 1/2-inch bit for the second tap. This size of hole will produce just as much sap as a larger one, and unless the trees are quite large I hang only one bucket to the tree. When the trees have begun to dry up the exposed wood becomes sour, but there is still sap in the tree, and I do not want to stop it, so I bore out these old holes with a 3/4-inch bit, going in just a little deeper, so as to remove all of the seasoned and sour wood. By doing this I have a new tapping, with everything fresh and clean and the tree injured in but one place. Some sugar makers freshen the trees by putting in an extra spot, leaving the old one in also, but I cannot commend this practice. The two spots will produce very little more sap than one when freshened up. There is another side to it also, due to the fact that the old hole sends out sour sap that is certain to injure the quality of the syrup. All this means that to get quality you must be extremely careful that you have good sap in the first place, and then that everything is kept clean and neat thereafter. Consequently, covers are essential to keep out rain water, the washings from the bark of the trees and insects. When uncovered immense numbers of insects get into the pails and are drawn into the covers. Many covers are more or less saturated with water, and the boards large enough to cover the pails. These answer the purpose in every way. The pails are to be recommended over galvanized ones, as they are more clean, and a better quality of syrup can be produced. I find it an advantage to paint both outside and inside of the tin pails. Nothing destroys the quality of syrup so much as rain water, and if it is not so I begin to boil the sap as soon as there is enough to justify canning and continue to rapidly as possible until the entire job is completed. It is not a good plan to boil the same material over and over, which will surely ruin the quality of the syrup at frequent intervals. Boiling will be more rapid and the product better. If the sap is not more than 1/2 inch deep in the pans or evaporator, the quality of the sap can be taken from the trees and sealed up in the cans, and the same care is used to keep all handling clean, the better will be the quality of the crop.

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