

Efficient Farming

PRUNING FRUIT TREES.

When speaking of pruning, the words "spring pruning" are generally used when "dormant pruning" is really meant. Much of this dormant pruning can be accomplished during the winter months and December is generally a good time to commence operations. At this season there is more slack time in the orchard than at any other. If pruning is left until spring, the rush of spring work often arrives before the trees are all worked over in the orchard. The habit of leaving the dormant pruning until early spring, as a rule, results in one of two things, either a continuation of operations long after the sap has begun to move, with consequent poor healing of wounds; or results in unavoidable slipshod work over a large part of the orchard due to a desire to finish the pruning and get at other important seasonal operations. By making a start in the early winter, working on days when climatic conditions are not too severe, the work can be completed early enough in the season to avoid interference with early spring duties.

In planning pruning operations it might be borne in mind that a light pruning each year will keep a tree in better condition than heavy pruning at less frequent intervals. Pruning recommendations to-day are radically different from those of a few years ago and those who are interested in the subject are advised to write to the Publications Branch, Dept. of Agriculture, Ottawa, for a copy of bulletin No. 18 (new series), which deals with modern orchard practices, and outlines up-to-date pruning methods.

FACTS ABOUT BEE DISEASES.
There are comparatively few bee diseases and these few may be di-

vided into two classes, namely, those that attack the adult bees and those that attack the brood. Of the former there is but little known. The Isle of Wight disease, the cause of which has been recently found to be a mite located in the spiracles or breathing tubes of the bee, is so far unknown on this continent. Paralysis, another disease of adult bees, is of little importance in this part of the country. Bees affected by this ailment, the cause of which is unknown, tremble and have a dark, greasy appearance.

Diseases of the brood, however, are of much more concern to the beekeeper. The most important of these are: American Foulbrood, caused by an organism called *Bacillus larvae*, which will eventually destroy a colony unless man intervenes and treats it; European Foulbrood, caused by *Bacillus pluton*, which may be overcome by a strong colony; and Sacbrood, caused by an unknown, exceedingly minute organism.

The first two diseases every year cause very heavy losses throughout the country, and it should be each beekeeper's business to become familiar with the symptoms and the prescribed treatment for such. If he has no literature on the subject he may secure a copy of "Bees' Diseases" from the Bee Division at the Central Experimental Farm, Ottawa. Great care is necessary in diagnosing as the application of the wrong treatment will spread the disease. Should the beekeeper have doubts, he should forward a sample of diseased brood to the Bee Division for analysis, and thus prevent making a costly error.

Bee diseases are a menace to bees only. The organisms which cause these diseases have no effect on human beings; therefore the consumer of honey need have no fear whatever when he hears of their existence.

TRAINING OUR CHILDREN

Thomas hurriedly turned out the contents of my sewing basket.

"Son, please don't muss my basket," I said.

"I had to, Mother, because my fishing tackle was in it. Button Brown and I are going down the railroad to fish in the hole."

"But," I said, "why don't you keep your fishing tackle in the box I gave you for it?"

"Oh, in an injured tone, "Sue took that for her doll trunk."

I sat down weakly. Crash! went a toy horse under my rocker.

"You've broken my horse, Mother. Never mind, I don't care so much anyway."

"He shouldn't have been on the floor, Tom."

"I forgot to put him up. Well, so long, Mother," and he went cheerfully off to the fishing hole.

I looked around the disordered room, the dear old room where we spend so many happy hours of sweet companionship—my boy and girl and I. "I must find some way to teach them to be orderly," I told myself.

"I spend so much time putting away their toys and clothes that I could devote to helping them in more important ways. Yet I just will not nag them about anything. I'd rather pick up after them, and even let them be untidy, than to spoil their joy in our home and their feeling of comradeship with me." I felt sure there was some way, and I found it; this story tells the tale.

When we were settled after our evening meal, we held a "Family Council," as we call it. "My dear audience," I began, in the make-believe way that we play so often, "I notice that this family, including myself, has fallen into bad habits."

"I am not smoking," began Tom.

"I haven't missed my spelling book twice this week," volunteered Sue.

"No, and I have not stolen a pig, nor dyed my hair green," I denied. "Still I insist that we as a family have a bad habit—one that wastes our time and makes our home look untidy."

"Oh, come, Mother, I can't think what it is," and Sue looked puzzled.

"I know!" Tom suddenly cried, "Mother means that we don't put our things in the right places after we use them. Sue, you go right straight and empty your doll rags out of my box."

"I guess I won't, Mister, till you give up my doll grip. Mother, he carried worms in it."

"Listen, children," I broke in, "Let's make a game of it. First, we will each put things in their proper places. Let's play that everything has a home and make it stay there, except when it is in use. After everything is home, the game will begin. If either of us leaves anything out, away from its proper place, the one who sees it may claim a pin as a forfeit, and the one who forgot must immediately put the article in its home."

"I'll get you, Miss," grumbled Tom, as he gave her a pin, and he did.

"Pay me a forfeit for not emptying the bowl!" I heard him roar, a light later.

So it went on. I paid as many forfeits as the others, but I no longer spent half of my time putting things away or looking for lost articles.

Seed and Feed Analysis.
During the year ending March 31, last, as recorded in the report of the Dominion Minister of Agriculture for 1923-24, 41,291 samples of seed and feed were received and analyzed—the former for purity or germination and the latter for determination of ingredients—at the five laboratories conducted by the Dominion Seed Branch.

Of the whole 2,864 samples were treated at the laboratory opened in Quebec last January, 14,892 at Ottawa, 8,831 at Toronto, 6,965 at Winnipeg, and 7,739 at Calgary. These samples come under the head of "Trade," referring to samples of seed sent in by merchants, farmers, and institutions; "Customs," referring to samples of seed taken from imported shipments by Customs officials; "Official," including both seed and feed samples taken by inspectors from lots which are sold or offered for sale and suspected of violating the Seeds Act or the Feeding Stuffs Act, on which prosecutions are based; "Feeding Stuffs," including all feeds, and in addition condiments and tonics sent in by farmers, merchants, and others who desire to know their approximate composition and value, and "Investigation," comprising all work of an experimental nature.

Canadian Seed Exhibit at Wembley.
Of especial value and interest was the Canadian seed exhibit at the British Empire Exhibition at Wembley. Thirty boxes of seed, of approximately six hundred pounds each, were assembled in Ottawa and shipped to London in care of the Canadian Exhibition Commissioner by the Dominion Dept. of Agriculture. Suitable pictures to illustrate seed production and marketing and sheaves of grain, grasses and clovers for decorative purposes, formed a part of the exhibit. This material, says the Dominion Minister of Agriculture in his report for 1923-24, was collected from various Dominion and provincial plant breeding stations, individual growers, and the wholesale seed trade, and included the first prize Canadian championship exhibits at the larger Canadian Shows and at the International Hay and Grain Show, Chicago.

Farming in Northern Ontario.
Very thorough attention is paid to the needs of agricultural production in Northern Ontario by the Dominion Experimental Farm System. The Station at Kapuskasing, which is under the superintendency of Mr. Smith Ballantyne, consists of five hundred acres and has no fewer than a hundred and fifteen experimental projects under way, fifteen being devoted to animal husbandry, seventeen to field husbandry, thirty-nine to horticulture, eleven to cereals, twenty-one to forage plants, and the balance to poultry, apiary and fibre plants. Progress on all is reported in the Superintendent's report for 1923, for which can be gathered much valuable information relative to live stock treatment and soil production in the district. Broad beans, for instance, are recommended to be grown in every garden of northern Ontario. The average of other beans obtained in a thirty-foot row last year was 16.61 quarts. The average yield of a thirty-foot row of beans was 20 pounds 8 ounces. The average yield of a similar row of carrots was 23 pounds 14.6 ounces. The average yield of twelve plots of cabbage was 38 pounds, 4 ounces; of cauliflower 15 pounds, 9 ounces, from 20 plants; of celery, 83 pounds, 11.4 ounces from a fifty foot row, and so on as regards the cultivation and yield of many other kinds of farm products. Especially interesting are the particulars given relative to the rotation of crops, the cost of production, cultivation of ensilage crops, care of cattle, winter treatment of poultry and apiary methods.

A Lantern Carrier.
A wire stretched the length of the barn or poultry house is mighty handy to hang the lantern on when working. To attach the lantern to the wire, procure a piece of small pipe about three inches long. Drill a small hole in the centre and insert an eye—either eyescrew-eye or a plain wire eye. Solder or rivet the shank of the screw-eye in the hole and then fasten a large, stiff wire hook to it. This completes the traveler.

Slip the wire through and the lantern can then be suspended from the hook and slid along wire.—L. B. R.

Removing Pushed-In Corks.
Corks sometimes slip down into the bottle, and getting them out is a hard job. Here is a simple method that will often get results:

Grease the inside of the neck of the bottle. Then put the bottle in very cold water or in the ice box for a while (do not fill with water). When it is cool, take a wire and get the cork up as far in the neck as possible, shutting the neck of the bottle tightly with it. Now hold the bottle over a flame or immerse all of it except the neck under hot water. The cork will come out with a bang.

The explanation to this is quite simple. The cool air has contracted when placed in the ice box. The air is then shut in the bottle and the heating of the air causes the air to expand and force the cork out. Try it some time.

Do not parents know that children are very impressionable and are easily influenced by the right kind of example; and by inculcating proper ideas and ideals?

Not to be Called Smart.
"So you think Mayme's a smart girl?"
"Sure she's a smart girl!"
"Smart nothing—she can't even make her chewing gum pop!"

It's difficult enough to make fire by friction, but much more of a task when an egg is balanced on one's head. Irving Spences, a Brooklyn boy scout, proves that it can be done—and in the space of thirty seconds.



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Poultry

Those who are using artificial lights to increase winter egg production sometimes reason that a little is good more is better, and so increase the length of the working day beyond the safety point.

It is a comparatively easy matter to get a flock to laying at better than 50 per cent. by the use of lights, but experience has proved that in most cases those who do this lose out in the long run.

Forcing production beyond a reasonable percentage is certain to be followed sooner or later by a slump and perhaps a partial molt so that the average egg yield for the year may fall below what might have been obtained without the use of lights.

Unless one has had previous experience with the practice he will do well to use only enough light to bring the flock up to 40 per cent. production during the winter.

Although hens can be made to produce well in both very cold and very warm climates it is always true that extreme variations in temperature have an unfavorable effect on any flock.

Uniformity of temperature in the henhouse is highly desirable. Fowls will stand a great deal of cold if it is a constant condition and the house is kept dry.

When a warm day comes, following a cold spell, it is probably just as important to lower the temperature by extra ventilation as it is to hold in as much of the heat as possible on cold days.

In a well-built house it is possible to reduce extreme variations in temperature to a much greater extent than one might at first think to be the case.

It is in ways of this sort that the real chicken man is able to secure the few extra eggs from each hen that in the course of a year mount up to a nice profit.

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A Mail-Shopping Plan.

Jim Munson, who lives in my locality, has a mail-shopping plan that saves him time and money. The plan is simple and inexpensive, and he put it into effect by calling on a neighbor who owned a typewriter, and having a number of order blanks printed as follows:

On..... 19... J. H. Munson will want the following articles shipped to PLAINVIEW FARM, by parcel post from your store:

Quantity	Article	Size	Model

Send bill when this order is shipped, and my cheque will be mailed you promptly.

When some article is needed on Plainview Farm, Munson fills in the blanks with his pen, addresses the envelope to the city dealer and a two-cent stamp takes it on its way. The dealer handles the order according to instructions, and sends his bill. Next day Munson mails his payment, cheque and the transaction is finished.

"I began this plan by calling at the city stores, and showing the dealers a sample blank," Munson explained to me. "I arranged the manner of payment, and left them my address and phone number. By so doing, I seldom have any trouble in getting an order filled. If a store happens not to have a certain article in stock, I am notified by telephone. If a substitute is wanted, I simply fill out another blank and mail it, as soon as I decide what substitute I want. There is no argument, no lengthy letter to write, and best of all, it saves a long trip to town on a busy day."

"While the blanks were printed mainly for repair and hardware orders, I now use them for everything—from horse buckles to a pound of sugar. In the grocery line it is necessary, of course, to alter the forms somewhat; using the "size" and "model" columns for other description. Because of the heading on these blanks, I am able to place an order at any time, and have it delivered to my mail-box when I need it. To get best results in this way, I plan my wants in advance, write down the needed article on the blank, and mail it before the item is forgotten. If an order happens to be a large one, I mail two blanks, thus dividing the goods into two mail shipments."

"I usually carry a number of these blanks with me, even when I am away from home, and when I think of something needed on the farm, I fill one out. I can do my shopping wherever there is a post office or rural route."

"I have kept careful account of the postage and parcel-post charges on this plan during the past year; also the cost of gasoline, team work and hours wasted by my former method. The difference has paid me for the order blank system many times over."

—F. R. C.

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The Sunday School Lesson

JANUARY 4

Christ's Triumphal Entry, Luke 19: 29-44. Golden Text—Blessed be the King that cometh in the name of the Lord.—Luke 19: 38.

ANALYSIS.

I. JESUS PROCLAIMS HIS ROYALTY, 29-36
II. THE TRIUMPH-HYMN OF HIS DISCIPLES, 37-40.

III. THE SORROW OF THE KING, 41-44.

INTRODUCTION.—The triumphant entrance of Jesus into Jerusalem marks his consent to the public proclamation of his Messiahship. This office, constituting the divine secret of his life, had been disclosed to him at his baptism; later, at the close of the Galilean ministry, it was revealed to his disciples; now, by Jesus' own act, it is announced quietly to the nation. It is important to mark the time of the announcement: just a week before Jesus' death on the cross. While the course of life still stretched before him, Jesus kept the mystery hidden: now, when about to die, he lays the veil aside, and steps into the open as the promised King.

The important also to notice the manner of the announcement. Jesus enters Jerusalem, not as conquering warrior, but as Prince of Peace, he who by his death reconciles men to God. This is brought out by the special arrangements which Jesus makes for his reception in the Holy City. He enters in the garb of civic life. In sending for the colt, he has in mind the prophecy in Zechariah, which promises joy to Jerusalem through the coming to it of a King of righteousness, who brings salvation. "Rejoice greatly, O daughter of Zion; behold, thy King cometh unto thee: he is just, and having salvation; lowly, and riding upon an ass, and upon a colt, the foal of an ass." (Zech. 9:9.)

Jesus fulfils the poetry of this prophecy to the letter, and for the same reason, and because all the circumstances of Jesus' entrance proclaim him King of Peace, Luke expressly includes in the hymn which follows the salutation, "Peace in heaven and glory in the highest."

The escort or attendants of Jesus on this triumphal journey are "the whole multitude of his disciples." They are not merely the Twelve, that is, but a large company of obscure followers. They celebrate his miracles as they go along, and they look forward with joy to the setting up of his kingdom in the Holy City. From many, if not all, of these joyous enthusiasts the solemn shadow of the cross is yet concealed. But Jesus rejoices greatly in their warm-hearted and child-like demonstrations, and defends them against the charge of speaking blasphemy.

Luke alone tells us that Jesus, coming into sight of the city, wept over it, and predicted the tragic doom which would fall on it at the hands of the Romans through its impenitence and rejection of God's terms of peace. This thought of the disaster which hung over Jerusalem if it continued deaf to God's call was often before the mind of Jesus, and provoked a crisis of tears at this supreme moment when he was about to offer himself as a sacrifice on behalf of the nation. It does not appear that any others than disciples even now recognized Jesus as the Messiah.

I. JESUS PROCLAIMS HIS ROYALTY, 29-36

V. 29. Of the two places named, Bethany and Bethphage, the latter, meaning "House of Figs," lay nearer to Jerusalem, and marked the city limit, so far as religious regulations such as the Sabbath-law, were concerned. On the Mount of Olives, which lay between the two villages, ancient prophecy proclaimed that God would one day reveal himself (Zech. 14:1-5), and many in Israel were, therefore, expecting the Messiah to appear there.

Vs. 30-34. It does not appear whether the colt stood in readiness by previous arrangement of any kind. The reason which the disciples were to give, if any one objected to the taking of the animal, was that the Lord had need of him. Jesus, as Messiah, exercises his royal right for the time to use the property of his subjects. It is specially mentioned that the colt was a young one, never yet ridden: this is to bring out its special fitness for the Messiah's use.

Vs. 35, 36. The disciples enthusiastically apparel the colt for Jesus, and spread their cloaks under him as he advances forward. The other evangelists mention that they also strewed the road with palm branches and garlands of green stuff, such as were used at the Feast of Tabernacles.

II. THE TRIUMPH-HYMN OF HIS DISCIPLES, 37-40.

V. 37. The moment for raising the hymn of praise is the moment when the procession, passing the crest of Olivet, comes into sight of Jerusalem. The whole city with its towers and battlements, as well as its holy temple, is before them. Then, as if at a signal, the whole company starts singing, giving thanks to God for all the "mighty deeds" which Jesus had done.

V. 38. The first verse of the anthem, as given here by Luke, is from Psalm 118, verse 26. It runs in the Psalm thus: "Blessed be he that cometh in the name of the Lord," and the words were generally used as a greeting to pilgrims coming up to the city for the Passover. Here the salutation is applied to Jesus as the Messiah, and is given by Luke in the form: "Blessed be the King who comes in the name of the Lord." It is followed by other words, recalling the angel-song heard by the shepherds of Bethlehem: "Peace in heaven, and glory in the highest." This means that God's purpose to reconcile men to himself, and so to make his glory seen, is now being accomplished in Jesus' last great act of self-sacrifice.

Vs. 39-40. Envious Pharisees wish to suppress this joyous acclamation, but Jesus defends his loyal followers, and contrasts their warm-hearted enthusiasm with the invidious silence of the religious leaders of the nation,

saying that if his disciples were silenced, the very stones would cry out for shame.

III. THE SORROW OF THE KING, 41-44.
Vs. 41-44. Tears start from Jesus' eyes at the sight of the city, now lying so peaceful in the spring sunshine, but so soon to be laid in dust and ashes. Nevertheless God's just will must be done. If Jerusalem only knew "the things which belong unto peace!" If it only realized that God was now making his final offer of reconciliation through the Messiah! But it is impatient, and soon after ruin will be sweeping over it. The terms of the prediction show that the Roman destruction of Jerusalem in the year 70 is in the evangelist's mind. Jerusalem did not realize, till it was too late, "the time of its visitation" by the Messiah.

"GLORY IN THE HIGHEST," V. 38.

The old Jews always associated rest from toil with praise of God. Philo, a contemporary of St. Paul, tells a story to illustrate this. They say, when God had finished making the world, he asked one of the angels if aught was wanting on land or on sea, in air or in heaven. The angel answered that all was perfect; one thing only he desired, speech to praise God's works, or to recount them, which would be their praise. And the Father approved the angel's words, and not long afterwards there appeared this race, gifted with the muses and with song, the Jewish race. Philo tells the story and adds: "It belongs peculiarly to God to help, and it is the work of his creatures to give him thanks." The Zohar, a later discussion of Jewish scripture, says, "There are halls in the heavens above that open but to the voice of song." And the Shorter Catechism puts it in a large way, if somewhat enigmatically: "Man's chief end is to glorify God and to enjoy him forever."

A QUEEN'S ADORATION.
It is well known that when Queen Victoria was crowned in 1837, there was at least one unexpected incident in the coronation ceremony. The young Queen was told that though other people arose during the ceremony she was to remain seated. When the great choir sang "The Messiah," the heart of the young Queen was deeply moved, and when that part of the Hallelujah Chorus was reached where the choir burst forth into exultant song, naming Christ "King of Kings and Lord of Lords," the entire audience arose and bowed their heads. Then it was that the Queen was over come. She could no longer remain seated. She arose from her seat and bowed her head with the others.

Catching Rats Wholesale.

An uncle of mine once showed me a method by which he rid his farm of rats. He said he always carried on his campaign against the rats during a dry season when the rats were forced to hunt for water to drink. Here is the plan:

Tubs and large buckets filled about two-thirds full of oats are placed in all of the granaries and barns. Enough water is poured over the oats to make about four or five inches of water in the bottom of the tub or bucket of oats. For three or four days these tubs and buckets are left in the barns and granaries. The rats soon learn there is water in the bottom of the vessels and dig down through the oats and drink it. They get in the habit of coming to these watering places.

About the fourth night all of the tubs are emptied, filled about two thirds full of water, and over the top of the water is scattered some oats and hay chaff. The rats are so in the habit of coming to the tubs for drinks that during the night they come and leap over the edges into the water and are drowned.

One night my uncle caught twelve rats in a half-bushel bucket and 34 in a washtub.—R. E. D.

Greasing Pump Leathers.

Don't grease pump leathers. I purchased a pitcher pump for a lift of about 22 feet above the water level in the well. The dealer, whom I knew to be reliable, said that the style of pump I selected should give good service up to 25 feet of lift. There was not much margin, so reasoning from experience with automobile cylinders, I decided to lubricate the leather to insure better suction—so I thought.

The pump gave poor service, requiring frequent priming, and it also failed to deliver as much water for the effort as I had been accustomed to get from a similar pump used for shorter lift.

When I took it back to the dealer, he observed grease on the leather and stated that a surprisingly large number of complaints of poor service from pumps was due to the mistake of greasing pump leathers. "Some pumps will not pump at all if the leathers are greased," he explained. I put on a new leather, cleaned the cylinder of grease and the pump has given excellent service ever since.

Grease gives a glazed surface to leather and reduces rather than increases the suction of a pump-plunger. "The best care you can give pump leathers," the pump expert explained, "is none at all. Don't put anything on them or handle them more than necessary. Sand is the worst enemy of a pump leather and is the cause of most needs for replacement."—D. S. B.