Soils and Crops

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SHAPING THE YOUNG APPLE TREE.

The directing of the growth during the early years of the apple tree is of particular importance. The ideal tree is probably that which has the first branches about 24 inches from the ground, and the five or six branches which form the frame of the tree spaced evenly as far apart as possible. Particularly desirable is it to remove the next to the last branch at the top, which, if left, will produce a weak top because of the forked crotch formed with the top limb.

Heading back at planting time is necessary to balance the loss of roots cut off by digging. Tests made at Kentville show an average growth of 4.82 inches the first year and 20 inches the second year, where newly planted trees had three-quarters of their growth removed, whereas similar trees not headed back made a growth of one inch the first year and 2.4 inches the second year.

Strong growth branches should be suppressed by heading back and weak branches not pruned at all. If the whole tree is weak, a severe heading back in the spring will throw greater vigor into the remaining buds, and thus bring about a more vigorous development. But, if there are weak branches on one side of a tree and strong ones on the other, the reduction of the leaf area on the weak branches will tend further to weaken these branches because of the stronger sap flow toward the greater foliage area. Obviously, therefore, a reduction of foliage area on the strong branches will lessen this tendency and throw more growth toward the weaker branches.

The central branch should be allowed to maintain the lead, not however, for the purpose of forming a pyramidal tree with a central leader, but that from it several well-spaced scaffold limbs may be developed, thus forming a more desirable type of tree than if the scaffold branches are developed on side limbs only. After a few good scaffold branches are formed on this central leader, further tendency toward a pyramidal for with central leader extending high into the air and having many branches radiating from it should be checked, the aim being to form a tree combining the desirable features of the moderate pyramidal form and eliminating the undesirable open-centre type of tree.

To balance the tree, the heading back of strong growing branches is necessary. This heading back tends to develop sire branches, and attention must be given to the elimination of some of these, so that too many scaffold branches may not be formed. The whole aim should be to build up a framework that will carry large crops of fruit and at the same time not have an over-abundance of large branches.

SELECTING BREEDERS FOR EGG PRODUCTION.

As the time approaches when the breeding pens will have to be mated it becomes necessary to give careful attention to this, the most important work of the season.

The male selected should be one who is the son not only of a high laying hen, but of a hen having the power to transmit the quality to her daughters. When after careful study of records, it has been decided to use a male from a certain dam, the next point is selection of a promising specimen. Try to maintain size in the flock by choosing a bird as near standard weight as possible. More important still, however, is it to select a bird with constitutional vigor—one with a broad back and with the width carried well back to the tail, and having also a good depth of body. The head—and this is most important, because the vigor of the bird is expressed in his head and eye—should be clean-cut, free from coarseness, and with the face clear of wrinkles. The eye should be prominent and piercing.

To such a male mate the requiste number of females. This will depend on the breed and the conditions under which the birds are being kept. For American breeds such as the Plymouth Rock or Wyandotte from ten to twelve will make a satisfactory pen. For Mediterranean breeds, such as the Leghorn, about fifteen females may be used; but in all cases where the breeders have free range a larger number of females may be used.

Yearling hens make ideal breeders, but older hens or well developed pullets will also give excellent results. In selecting these birds also keep constitutional vigor in mind. Select those birds having capacity, as evinced in long, broad and deep bodies. Frequently a bird may be deficient in one of these dimensions, i.e., it may be a little short in the back; but if it is broad and carries the width well to the tail, and shows a good depth, it may make up in extra breadth and depth what it lacks in length.

Here, again, as in the male, the head is most important. The clean-cut face and prominent piercing eye are the marks of vigor and productiveness.

APPLE GROWING IN CANADA

BY J. B. SPENCER, B.S.A.

Fruit growing has become one of the chief industries in Canada and by far the most important species produced is the apple. This is due no doubt to the fact that the Dominion produces the best flavored, most highly colored, and longest keeping apples. The apple may be grown successfully in commercial quantities over an immense area, so great in fact that if it were planted to apple trees the product would be sufficient to supply the markets of the world. The crop of apples that will be harvested this year is estimated at 3,225,713 barrels, which is about 72 per cent. of the 1923 crop which reached 4,493,850 barrels. The extent of the industry may be gathered from the following table showing the crop of apples in the five principal producing provinces in 1923 and 1924:

	1923	1924 (estimated)
	Bbls.	Bbls.
New Brunswick..	69,292	86,615
Nova Scotia.....	1,821,064	1,274,742
Quebec	65,094	87,876
Ontario	1,304,400	913,080
British Columbia.	1,234,000	863,400

Historians differ as to just where the first apples were grown in Canada. Both Nova Scotia and Quebec claim the honor but one thing is assured and that is that for nearly three centuries this species of fruit has been ripening in Eastern Canada.

Apples have been grown in commercial quantities in Nova Scotia for the last fifty or sixty years and the industry has now reached extensive proportions. The largest crop produced to date in Nova Scotia was harvested in 1921 when 2,036,065 barrels were packed and sold from the Annapolis and adjacent valleys, which form the great producing district of the province and cover an area about one hundred miles long and from six to eleven miles wide.

In Quebec there are records that show that as early as 1663 apples were being produced in that province, and it is thought that the renowned Fameuse apple originated there. In the valleys of the Ottawa and St. Lawrence rivers and throughout the Eastern Townships there are many thousands of acres bearing apples, while in many other parts of the province good apple producing areas are to be found.

Ontario normally is one of the largest producers of apples and there is a considerable quantity of each year's crop exported. However, there still remains good orchard lands untouched. The now famous McIntosh Red apple, which for the second time in successive years has been declared the finest dessert apple in the British Empire, was first produced on the farm of the late John McIntosh at Iroquois.

Apple growing in British Columbia was only begun in comparatively recent years but the development of commercial orcharding has been very rapid, the greatest planting taking place between the years 1909 and 1914. The most noted district is that of the Okanagan valley where some of the best orchards in the province and in the Dominion are to be found.

In Prince Edward Island the culture of apples has not developed as rapidly as the climate and soil would justify. Owing to the comparatively cool summer and autumn which causes slow ripening, the fruit keeps as long or longer than in any other part of the Dominion. Apple trees were introduced into this province about 1768.

While apples in commercial quantities have no so far been produced in the Prairie Provinces—Manitoba, Saskatchewan, and Alberta—considerable attention is being given to their culture, more particularly in Manitoba. Small apples or crab-apples can be successfully grown in many places in Saskatchewan, as well as some apple sof the very hardy Russian varieties. The best results in apple growing in Alberta have been secured in the southern districts where a good quality has been produced.

The apples from Ontario, Nova Scotia, and British Columbia are well and favorably known in the markets of Great Britain and Europe and are in constant demand. Quebec, New Brunswick, and Prince Edward Island are at present producing only sufficient quantities for home consumption notwithstanding the fact that the possible producing area is far in excess of that at present under crop and that the climate and soil in all three provinces make for the growing of large quantities of the finest fruit. Experiments are being carried on in the Prairie Provinces with a view to developing varieties more suitable to the climate and when these are obtained there is no doubt that apples will be grown much more generally throughout the Dominion.

The "river cow" is the popular name given to this mammal, after the order of whales, which inhabits the Amazon River and its tributaries. It is the largest fresh water fish in the world and weighs over 200 pounds when fully grown.

INDOOR TOILET FOR THE FARM HOME

BY P. C. GROSE.

Outdoor toilets, located some little distance from the house, have always been one of the unpleasant things about rural life, especially in winter time. Aside from mere physical discomforts, there are the dangers from exposure to the ravages of cold and stormy weather.

Thanks to engineering skill and scientific research, satisfactory indoor closets have now been developed that meet the demands of any farmer's purse, and they can be used in houses without running water. Probably most folks would rather have the flush type of toilet that ordinarily constitutes part of the bathroom equipment where water pressure is available. This type will eventually be used in many, many farm homes; it demands a greater expenditure for fixtures, as well as a water-pressure system and a cesspool or tank.

The cesspool is a matter of no great consequence; a small amount of labor and expense will take care of that. A farmer can build a cesspool himself. And if he already has an electric lighting outfit, the matter of running water is likewise easily provided. Numerous outfits are now on the market (many of which cost less than $100) providing a compact unit, electrically operated and automatically controlled, which can be placed in the basement, connected with the cistern or well, and thereafter supply the water under pressure wherever needed throughout the house.

But many farmers can not afford these more elaborate and expensive conveniences, and still they need not do without an indoor closet. A good sanitary chemical closet can be purchased for the price of a fat shote.

FIRST COST NOT HIGH.

The sanitary chemical closet is mighty satisfactory, too. We purchased one several years ago and have found it so. We found quite a variety of makes on the market, all embodying the same principle and differing little in service; the difference was in the quality of material and finish and the cost. We selected one of the best; it cost us between $15 and $20 delivered. It is made of heavy galvanized steel finished in a durable white enamel that matches regular bathroom fixtures. It is equipped with a standard high-grade seat the same as a regular flush toilet. The vent pipe is likewise white enameled.

NO ODORS, NO DISEASE GERMS.

The closet has an inside container which holds about eight gallons and will run three or four weeks without recharging. The chemical is mixed with water in the container. The cost of chemical has never exceeded 25c a month. The sanitary closet, once installed, demands little care. Every three or four weeks the container is removed and its contents emptied and then returned to the closet and recharged with the chemical-water mixture. The contents, when removed, need not be buried, as there is no odor. The chemical takes care of that.

The success of the chemical toilet depends on two things—proper ventilation and proper chemical mixture. The chemical odors must be carried from the room, just as the smoke and gases from the cookstove must be carried from the room. If adequate ventilation is provided, the chemical closet is designed to function just as satisfactory as the stove. Usually the vent pipe is passed through the wall to the outside of the house to secure the necessary draught. This is more easily accomplished where the closet is located on an upper floor then when it is on a lower floor.

The chemical closet has met the approval of health authorities, as the chemical kills all germs and odors, is harmless to the skin, and protects the metal container from rust.

POULTRY

It is essential that the house be made draft proof if it is not already so, but care should be taken to keep an abundance of pure air in circulation.

The laying quarters should always be comfortable, if possible, but warmth at the expense of dryness is never wise.

Restricted ventilation is almost certain to be accompanied by dampness, particularly if the house is a trifle overcrowded. Dampness in the henhouse at this season is an invitation to colds and roup.

A laying hen is always a happy hen. A hen cannot be happy unless she is busy most of the time. Litter on the floor of the house, if fresh and clean, is an excellent means of keeping the layers busy.

Perhaps the best material for litter is wheat straw. It is not so stiff as rye straw but neither does it break up so easily as does oat straw. Renew the supply frequently. The litter must absorb moisture from the droppings and in wet weather may have to be changed often.

Care should be taken to use none but clean bright straw. Moldy straw is almost certain to cause trouble.

A Cold Weather Comfort.

The majority of farmers own some kind of an automobile and in the winter those who ride in the back seat usually complain of cold feet, especially if the ride is a very long one. This can be avoided if a feather cushion is made for the bottom of the car.

When killing poultry save all the feathers except the wing and tail feathers which have the large quills. Scald the feathers, then dry thoroughly. Take a cotton feed bag such as poultry mash comes in, dye it a dark color, and fill it with the feathers. Sew up the end of the bag and use this for a foot cushion and there will be no more complaints of cold feet when riding in cold weather.—C. A. J.

Home Education

"The Child's First School is the Family"—Froebel."

Persistent Misbehavior in Small Children

BY ZAHRAH E. PREBLE.

The great Chinese philosopher Confucius says: "I am not concerned at not being known; I seek to be worthy to be known."

The reverse is often the case with children and at the bottom of much misbehavior. They are so mightily concerned about being known and noticed that this great desire motivates many of their actions, both desirable and undesirable. If one wants to understand a child and his motives, a little knowledge of how his subconscious mind directs his actions will lead to a correction of the undesirable actions which make a child what we term "bad" or "naughty," or "disobedient."

The feeling of being slighted is easily and subtly developed after the age of four and sometimes even younger when other children arrive in the family. Up to that time he usually is the centre of the family plans because of his infantile state. Then that constant attention is gradually relaxed, and the child finds himself being neglected. If a new baby has come there is a sense of being pushed out of the centre of the picture, and he resolves, quite sub-consciously, to become reinstated in that desirable condition of being "the whole show." Many times this results in persistently "bad" behavior.

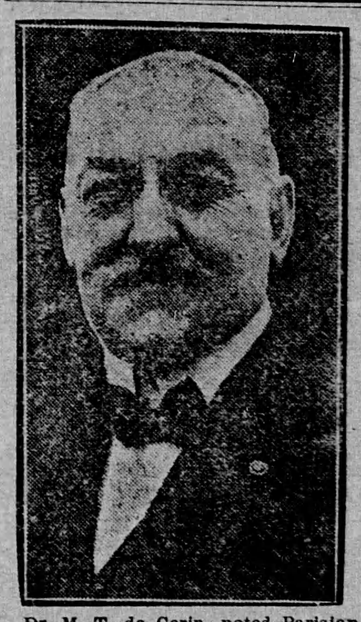
Sometimes such unwelcome deportment is only a spasmodic outbreak, following an unthinking rebuke by an older member of the family. It manifests itself in either a "smarty" attitude, or naughty and even vicious actions, in order to attract the desired attention.

Many times the parents are to blame for this more than the child because they refuse to recognize that the little individual has now reached a point where he can and does think things out for himself, and where he resents unfairness very keenly. If your child is persistently naughty, it might be wise first to investigate your own attitude toward him. Do you expect too much of him, or do you neglect to give due praise and attention to the little issues which to him are quite vital? Judicious praise is like water to a flower; it makes the plant bloom more beautifully.

That desire to be superior, to be given praise for good deeds well done, is not one to be destroyed. If directed rightly, it causes that part of the Chinese proverb, "I seek to be worthy to be known," to become the driving force. A child soon recognizes that he can command the attention he craves by being good instead of bad, if the parents will always notice and speak of his desirable qualities and actions instead of his faults and misbehavior. But how often do you enter a home and hear someone saying, "You are a bad, naughty child!" And that subtle suggestion is repeated continually, during the years that follow, until the growing, thinking child begins to act out the sub-conscious suggestions given to it.

There are problems which exhaust the patience of both parents and child—when the latter will not mind or insists upon doing something he should not do. These problems cannot be ignored; they have to be solved at the time in order to prevent recurrence. It takes time, patience and understanding to do it. The trouble is that too often the parents fall down miserably on their end of the task by not sticking to it long enough to get at the bottom of the trouble. The child is thus left with a feeling of injustice which rankles and causes the nucleus of future naughtiness, so the difficulty continues to grow, until it appalls both the child and the parents before it is overcome, if it ever is.

Misbehavior is just misspent energy; this energy needs directing into constructive instead of destructive channels—not an easy task but a satisfying one.



Dr. M. T. de Gerin, noted Parisian physician, who recently arrived in New York with a cure for pneumonia, as attested by 600 successful cases, claims that it will practically wipe out all possibilities of death from the disease.

Green Feed for Poultry.

Now that the poultry are off the range and no longer benefit by the picking of fresh green feed at liberty, a substitute should be provided. Mangels, kale, cabbage and sprouted oats do very well to supply in part the very necessary vitamines A and D, so essential to proper nutrition. A little attention to a seemingly unimportant point frequently means the difference between success and failure with breeding stock. At the O.A.C. Poultry Dept. a liberal allowance of green feed or roughage containing the vital elements is always available to the stock.

Exposure of fowls to cold rains will cause injury.

HORSE

If a horse could talk, he would have many things to say, especially when winter comes.

He would tell his driver how a frosty bit stings and sears his lips and tongue when it is thrust into his mouth without being warmed first.

He would tell how it feels to have nothing but ice cold water to drink, when he is already shivering from the cold.

He would tell of the bitter wind that frosts his sides when he halts, steaming from exertion, and is tied for hours in an exposed place without a blanket.

He would talk of slippery streets and the sensations of falling on cruel city cobblestones—the pressure of the load pushing him to the fall—the bruised knees and wrenched joints, the tightened straps and the feel of the driver's lash, the panting nostrils and heaving flanks, and the horrible fright of it all.

When he stumbles don't whip him. Think of your own feelings if struck every time you slipped or stumbled.

Warm the bit before putting it in his mouth.

Take the chill off his drinking water when possible, if it is very cold.

Give him enough to eat, and spread plenty of clean bedding in his stall.

Put a blanket on him in the stable, on cold nights.

Do not leave him standing in a cold wind without a blanket. Keep him in the sun, if possible.

Keep him sharp-shod during the winter.

Drive him carefully over icy pavements.

When he falls, quickly loosen his harness, push back the wagon, and help him to rise, without blows.

Watch for the appearance of galls-spots, and allow nothing to touch them till healed. Be humane with your horse. Treat him as well as he treats you.

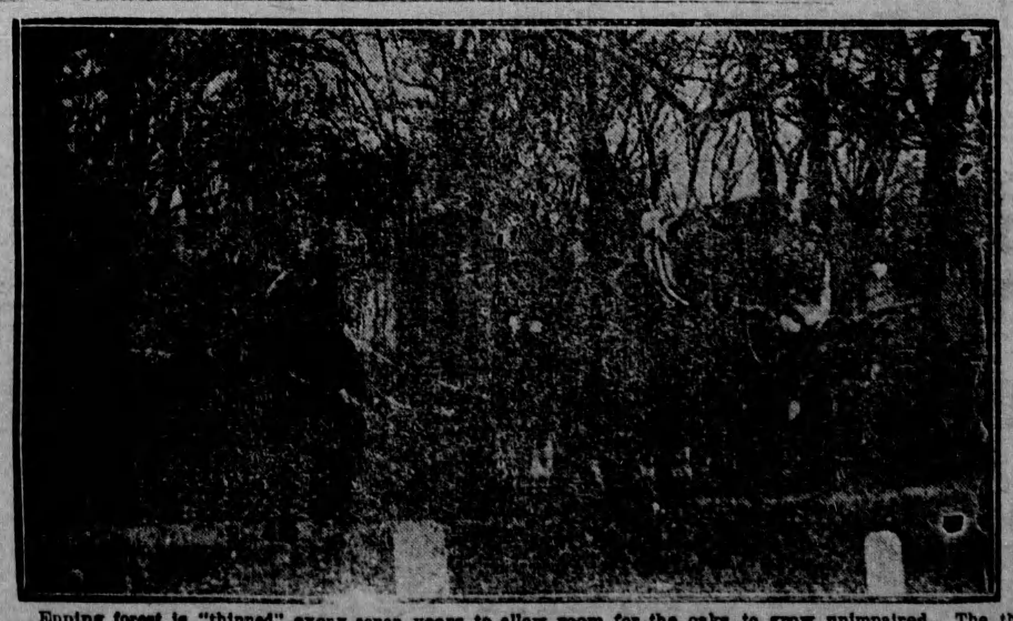
Same Girl.

Son—"Dad, I want to marry Dottie Dimples, the chorus girl."

Dad—"I wanted to marry her myself when I was about your age!"

The mongrel hen is fast disappearing. Gradually the Canadian farmer is waking up to the superior value of the well-bred, strong, vigorous, prolific hen over her mongrel sister, and the latter is being sent to the shambles.

Get the incubators and brooders ready for hatching broiler chicks.



Epping forest is "thinned" every seven years to allow room for the oaks to grow unimpaired. The thinning is now taking place and scenes reminiscent of the Canadian woods are daily enacted within fifteen miles of London.