

Address communications to Agronomist, 73 Adelaide St. West, Toronto

Winter Care of Sows.

Pruning.

Where light heading back practiced for the first three years was adopted, the comparison between trees pruned and unpruned showed little difference in favor of the unpruned, but those trees which had been pruned were of decidedly better shape and in better condition for future work than the ones where pruning had been neglected. These results have simply justified the practice of pruning during the first few years of a tree's life with the express purpose of obtaining a desirable amount of growth placed where we want it. In the case of some trees this will require considerable cutting out and some cutting back for the first three or four years. In other cases it will require very lit-

What is the purpose of our lives?
What are we doing to make this a better world?
Are our differences in beliefs and doctrines retarding our religious life?
Are we at fault for what our children are to-day?

For sows under such conditions, care should be taken to avoid the laying on of excess fat, and where a ration comprised entirely of meal is fed, without care, the sow is liable to derangement of the digestive organs, which sometimes results in the development of an abnormal appetite at farrowing, and is a cause of the sow devouring her young.

the life of the young tree. At the moment the relation between pruning and the growth of the tree is determined by the roots of a tree function by gathering from the soil plant foods in solution, which is transmitted to the different parts of the tree for elaboration by the leaves. The plant food gathered may be roughly divided into three classes: nitrates, as supplied, for example, by nitrate of soda and carbohydrates. These latter are the elaborated forms produced by the leaves from the solutions obtained by the roots. It is very close to the point of manufacture. In order that the leaves can manufacture these carbohydrates sunlight is necessary, so that if a tree becomes too thick in the head, thus shutting out sun from the leaves, the parts close to the tree, those parts shut off from the sunlight will not be able to manufacture carbohydrates and will, as a consequence, become unfruitful; an essential reason why some pruning is essential is that it enables the tree to get all the parts of the tree by admitting the necessary sunlight.

The man who always takes time to say what he thinks, doesn't have time to think much.

In a study of the marketing of Canadian dairy products the Dairy and Cold Storage Commissioner, Mr. J. A. Ruddick, discovered that Canadian cheese is slipping backward on the export market. Canada has held the field in the export trade in cheese almost to herself, but New Zealand is found to be gaining the ascendancy in the markets of Great Britain.

Good judgment is one of the essentials of good farming.

It is a human failing to spend time bemoaning conditions, which had better be used to improve them by starting on ourselves.

BY W. A. FREEHOFF.

den and get appetizing greens, radishes, and other good things in profusion. The rather solid diet of winter, combined with the severity of the weather, puts the system into that condition so that the first fresh, green things are the most precious. For millions of dollars. Of course, one can go to the corner grocer and get a few wilted, expensive substitutes, but few farmers do, and I don't blame them.

The early vegetables not only taste the best, but if there is a surplus, bring the most money. For this reason, anybody who can possibly do a little fussing in the house or with a cold frame will be repaid handsomely for drinking.

Filling the box any old way will not bring the best results. The most successful gardeners fill the boxes loosely, then scrape the earth level with the top of the box. Then press the soil down with a small piece of board, leaving the top of the soil about one-half inch below the top of the box. A better stand of plants will usually result if the last half-inch of soil put into the box before pressing it down is sand. The seed should be sown in this layer of sand and close to the soil beneath.

Sowing the seed, in these inside boxes is quite an art. If they are sown too thickly there is great danger

It is not necessary to have a greenhouse to insure early vegetables, or otherwise few farmers would get out of rotting off, and it soon becomes a valuable space is wasted. Make a shallow trench about a quarter of an inch deep crosswise of the box with the finger or a dull pointed stick. A trench marker may be used, of course. The distance between the rows should be from one and a quarter to two inches.

Immediately after seeding, enough water should be put on the boxes to

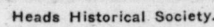
In place of the hothead the cold frame is a good substitute. The cold frame is a box or frame covered with glass, having the south side somewhat lower than the north. It can be inexpensively made by using storm sash. Lettuce and radish can be grown to maturity in it, while it is a very handy device for securing early plants for setting out later.

It has always been my plan to start as many plants indoors as possible. Sometimes I would hurry up matters by buying greenhouse plants, but as a rule results were better by using the harder cold frame plants. I have also found that if I start a large quantity in the house, then transplanted to the cold frame, and then to the garden, that crops could be secured almost as early as with the hotbed. Of course, all through this article I am speaking in terms of the home garden, because commercial gardeners have the advantage of preliminary operations in the house.

Do not keep the boxes where it is too warm, because that causes soft and spongy plants. Unless plenty of light is furnished, the plants will be yellow and spindly. Do not water the plants often with little dabs of water. Give them a large quantity of water, but give them just enough so that the soil is moistened through. Do not water again until the surface appears light in color. Too frequent watering causes choking of the plants and too much water drowns them.

The plants cannot remain in these boxes very long. They must be removed and become one-stemmed

operations to the house. The man who once goes into his early March to secure soil for his boxes, cold frame, etc., will be more forthcoming the next time, and gather it in fall before the frost comes. However, if you did not collect the soil last fall, get the soil some sunny day and let it thaw indoors. Mix a little sand with it if possible, and also use a thin top layer of sand in the seed box. Before starting the seed, use the soil and mix it up a little until it does not pack in a hard lump when squeezed by hand. Three or four small boxes will be enough to start all the lettuce, cabbage and tomato plants for the average grower. The soil should be moist and become slightly steam-heated. Sow and become slightly-stemmed. Plants for transplanting, one for tomatoes, pepper and eggplant (the latter are grown), one for lettuce, one for cabbage and cauliflower, and one for celery, will meet the demands of the average gardener. A box twelve inches square will hold thirty-six seed plants set two inches by two inches or sixty-four when planted one and a half inches by one and a half inches. Plants started in boxes often die because the plants are not "hardened off" properly. Too sudden changes are fatal. Setting the boxes outside for a few minutes daily until transplanting time will prevent much of this trouble.



Sir Edmund Walker has been elected head of the Champlain Society, the largest organization in Canada for the collecting of Canadian Historical data. Its officers represent all parts of the Dominion.

Chapped teats are very common in winter and often caused from washing the udder, or the teats getting wet and chapping in the cold wind. I find some cows give more trouble from this source than others. If it is necessary to wash the udder, or even sponge it off, the teats should be thoroughly dried. I have found it an excellent practice where cows give trouble with chapped teats to use vaseline while milking, just enough to grease the teats. By using vaseline during the process of milking, the cow is worked into the cracks and seals them up, keeping the air out and preventing further chapping.

Not infrequently cows contract the habit of kicking from no other cause than chapped teats. Cows subject to chapped teats should be given special care to see that the teats are dry after milking and before turned out for exercise. The milking should be done carefully and in a gentle manner, not to cause irritation. Do not punish a cow for kicking or stepping away from the milker while being milked if she is suffering from chapped teats as they are very painful.

Tinkering time is now. An hour now is not as valuable as minutes will be later on. Save valuable minutes by getting things fixed up now.

Is Cow-Testing Worth While?

"I know testing worth while?" is the title of Pamphlet No. 20, published by the Senior Dairy Inspector, the Dominion Department of Agriculture, Mr. A. H. White. In answering the question the writer points out that in some cases testing has been an average practice for several years. In some cases of over 11,000 pounds of milk and and 371.3 pounds of fat has been attained. Individual grade cows in these select-herds produce over 15,000 pounds of milk and over 1,000 pounds of butterfat in a period of 365 days. In some named localities there is a herd that has an average production per cow of 12,000 pounds of milk and 375 pounds of fat, while in the same district there is another herd of 18 cows with an average of only 5,398 pounds of milk and 192.2 pounds of fat. This is the point to note, and it is hardly necessary to say there is a similar difference in

As Mr. White says, it is generally recognized in the dairy business that milk should be produced on a butterfat basis, thereby ensuring a premium for quality rather than for quantity. Hence it is in the interest of every farmer to test each individual cow for butterfat content. If low testers are found, they should be eliminated at the first opportunity unless they produce enough milk to justify their retention in spite of the lowness of their test.

Turning to the feed question, it is, of course, important that the dairy cow should be given the right sort of feed in sufficient quantity to maintain her and at the same time to produce as much milk as she is capable of. This can only be determined by a knowledge of the requirements of each cow.

In proof that good cows are the most economical producers, an instance is supplied of the two best herds in the country in 1920, producing a profit above feed cost of \$707.75 while the two poorest in the same herd produced only \$211.76. Cows return a profit of \$100.00 per cow per return and profit made by each cow in the herd. More important still is the use of good bulls. In this connection, the following figures show that in the present time, sires to head many herds are being selected because of the known milking characteristics of their daughters. It is not possible to make this possible. In the future he predicts that bulls will be selected more and more from high milk-producing herds. To prove this, he has samples to show that a good purebred sire is the best investment a dairy farmer can make in connection with his herd. He has a record of a farmer who, after testing for ten years, was getting nearly twice as much milk from thirteen cows than he was from twenty-five cows. When he started, the increase began on an average per cow of 5,438 pounds of milk to an average of 10,236

A man in attendance at a recent farmers' meeting presented some statements that were made by one of the speakers. This speaker had had every available means for getting facts on his subject. The man who criticized did not. The latter objected because the thing said was unpleasant.

There may be some advantage in not knowing all our dangers. Ignorance is bliss, we say. Things we do not know, do not hurt us. Should it be our good luck to go along our way and, by mere chance, miss the pitfalls and the dangers near us, then nothing particularly is lost by having definite information about the way we traveled. We would, however, have taken less chance by knowing of these dangers.

We make real advancement only by learning the truth. If, in our ignorance, we violate the laws of living, we, sooner or later, suffer for our transgression. Examples are too numerous in the life of every person to require illustration. And the laws of economics are just as certain in their action as are the laws of health.

It is our business to learn these laws. We should welcome light from whatever source, if that light reveals to us additional knowledge about our business, or our living.

Rational beings can make progress only when they have facts upon which to estimate the future.

It is calculated that the acreage of wheat in seven principal wheat-producing countries is about a million acres short of that sown the preceding year. These reports cover the American continent and the present important European producing countries. Conditions are reported generally good.

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With all his dislike for getting his name in the papers, John Smith said I might tell his experience. "It's such a common name," he said, that nobody will know me from another John Smith, if you don't put the name of my next-office in the article."

But, to get down to the facts of the story—John Smith put in ten long years milking for exercise. That's just what he told me—ten long, lean years of hard work. He was milking cows that didn't give enough butterfat to pay for their feed and his labor. When he finally checked up on his feed bills and cream cheques, he discovered that all he had got out of those ten years of milking—hard milking, ten cows, year in and year out—was a lot of exercise.

"How did he come to check up on matters? Simple enough—his neighbors persuaded him to go into a cow-testing association.

"I didn't want to go into it," John said to me a few weeks ago. "Couldn't see any good in it for me; thought it was just a fad. But my neighbors kept after me. Finally they said they needed just one more man to round out the number, so the tester would be busy every working day, and I went into it."

That was three years ago last October, and when I saw John he had the completed records of his herd for three years. He was just about as proud of them as a boy is of his first pair of long trousers.

"Look here," he said, indicating with his forefinger. "I've only two cows that I had three years ago, and I've got fourteen cows in the herd now. The butcher made a little money out of this testing business, but I don't begrudge that; I've made more than he.

"First year I was in the association, there were only two cows that made money for me. Last year every one paid her board, my labor, and a little besides."

If figures don't lie, as is so often stated, then the things John told me are true. I glanced through his records. That first year's record looked pretty bad. The column marked "Loss" was almost full—only two blank spaces at the end of the year. There was Pansy, described as a red and white cow, that gave 2,650 pounds of milk in a year. Her name did not show on the second year's records. There was Star, a red cow with a white face, that gave 2,700 pounds. She gave 3,000 pounds of milk. "Star" went to the butcher, too," John explained, when I looked for her name on the second year's record.

The thing that told the whole story was this: "Average butterfat per cow for year, 137.1 pounds. Average loss per cow for year, \$19.22."

Records for the second year showed an average of 165 pounds of butterfat per cow for the year and a profit of \$22.10 per cow. Third year, the average butterfat per cow was 210 pounds and the profit was \$33.94 per cow.

"I'm just beginning to get started," said John, when I remarked at the increase in profit. "I'm going to bring that average up to 275 pounds this year, and I'm going to keep on raising it."

I believe he will reach that goal; you would too if you could talk to him, for his enthusiasm for testing is contagious. I caught it, and I hope you will, too.—K.

Ontario shows up hardly as well as might be expected in the Dominion Educational Butter Scoring Contest. The butter is not so rich in flavor and in standing for workmanship based on the scores for texture, incorporation of moisture, color, saltiness and flavor. The scores for the provinces being British Columbia first, Quebec second, Alberta third, New Brunswick fourth, Ontario fifth, Saskatchewan sixth, Prince Edward Island seventh, and Nova Scotia eighth. The difference in points of all the provinces is not so great as is slight, running in a total of 55 from 54.92 for the highest to 54.48 for the lowest. The most satisfactory feature of the butter is that the Government improvement is reported in texture, moisture, and in salting. Relative to the last point, the Government has made an effort of the Branch in connection with the contest, writes "The Canadian Markets are gradually coming to require more butter than can be produced for export must contain less salt than most creameries are using at present, one to one and a half per cent. is the limit, quite enough for the British market."



WHETHER HE GROVELLED OR
NOT

Suitor (proposing): Would you
have me grovelling in the dust?

The Girl: I have no objection to
the "dust".