Efficient Farming

CARE FOR THE COLT TO MAKE THE HORSE

The time to commence the proper production of a draft horse is before he is born. Not only is the selection of his sire and dam but the care and management of the dam while pregnant. Strong, healthy foals can best be produced from healthy mares which are fed nutritious foods and given plenty of exercise, playing in fields or paddocks or doing light work. It is difficult on many farms to find desirable work for brood mares, particularly in the winter, but when spring work commences there is no difficulty, and any mare is better working, provided care is exercised in seeing that she is not put in slippery places, not unduly strained, not worked with too short a whiffletree, or overworked. Many foals have their chances ruined when their dams are overfed and underexercised during the winter season.

In view of the fact that a horse attains at least half his weight by the time he is a year old, care must be exercised to see that he is given the best possible chance. Many spring-born foals do well for the first six months of their lives and then owing to lack of proper attention and feeding during the winter months do not mature to the size they should.

Feeding—The mother's milk and pasture grass afford excellent foods to start with. By feeding the dam a little grain in a low manger, either in the barn or on pasture, the foal soon is found eating concentrate. When a creep may be erected in a corner of the pasture field and the foal will get grain in this manner. He should be provided with a shelter from heat and flies, and if the mother must be worked, the foal should be kept in a strong loose box or paddock and given a suck in the middle of each half day. At first the milk should be drawn from the mare, particularly if she is warm, as a preventive against digestive trouble.

Weaning—If the mother is a poor milker the colt will be better weaned at five months, while if she is a good milker this may be postponed till six or even seven months. If the foal has been feeding well, the weaning is a simple matter, better results being secured if more than one foal is being reared, for a group of foals will not worry so much as a single one. They should be given plenty of exercise with fresh water before them at all times and good bone and muscle building food. From three to five pounds of grain may be fed per day during the winter months; this would be composed of two parts oats and one part bran with a little oilcake added. The grain is best fed mixed with cut timothy and clover hay, slightly damped. This adds bulk to the ration and prevents the foal bolting his grain, and assists digestion as the grain cannot form in doughy lumps in the stomach. A few roots (carrots, mangels or turnips) should also be provided and plenty of good quality clean hay, mixed timothy and clover, or alfalfa, an excellent bone and muscle builder. Salt should be given regularly. The colt should be kept in a thrifty, active condition; a little thin rather than too fat. His bones and joints must be developed simultaneously with the rest of his body or injury will result. He should have the run of a field or paddock in the daytime during favorable weather and a dry, roomy stall in a well-ventilated and moderately warm barn at night.

The colt may be halter-broken with less difficulty before weaning and a little labor at this time also in handling the colt's feet is well expended. The feet should be picked up occasionally and later on pared. Keep the foot large, round and level, cut away the toe, keeping the foot wide at the heel and quarters. Do not cut the bar of the foot or the frog. A good blister applied to a small young foot will frequently stimulate growth. Too much emphasis cannot be laid on the care of the feet, exercise and good common sense feeding during the first year of the colt's life. Unless the colt weighs 1,100 pounds or more on his first birthday there is little chance of his ever making a ton horse.

Poultry

There is no time of the year when it is more urgent that the health of the birds be maintained than during the short winter days. Sanitation becomes a vital link in the chain of health during this season because the birds are confined to the house all of the time, filth accumulates rapidly and contamination, once started, spreads with great ease and rapidity.

Poultry sanitation should involve three operations.

First, do not forget the importance of removing the droppings frequently. Clean your droppings boards at least twice a week, sprinkling over them each time after cleaning a very thin layer of sand, which dries up the moisture and at the same time facilitates the removal of the droppings by preventing their freezing to the boards.

See that the water vessels are frequently rinsed and disinfected.

Last, but not least, is the importance of keeping the litter on the floor of the house in good sanitary condition. This will mean during the winter the occasional removal of all the accumulated litter with its droppings and dirt, and replacing it with clean coarse straw.

A good rule to follow in replacing the litter is to change it and replace with new whenever any of the following conditions become apparent:

Whenever the litter becomes wet and soggy and trampled down.

When the litter becomes so finely ground that it fails to hide the grain.

When the litter becomes heavily contaminated with poultry droppings.

In other words, poultry litter at all times should be coarse, deep, clean and dry.

Do not forget the value of sunlight, not only as a germ destroyer, but as an invigorator and carrier of health-giving properties to the birds. Be sure that the front of the house is so arranged that the direct rays of the sunlight can come in and sweep over the floor of the house during the day, allowing the birds to lie in the direct rays of the sun. By direct rays we mean, not those which have been filtered through glass, but those rays which reach the birds direct.

Birds have a high body temperature. They give off in process of respiration large quantities of carbon dioxide and they must have more oxygen than any other animal. These factors simply mean that the quarters in midwinter should be fully ventilated.

Fresh air, even if cold, is far to be preferred over warm air which has moisture in it. Combs will freeze and birds will suffer in a moist atmosphere, even if it is but a few degrees below the freezing point; whereas they will show no ill effects from a temperature around zero, if the atmosphere within the house is free from moisture and is fresh pure air.

Experiments With Lime Phosphate.

The lime phosphate experiments now being conducted by the Dept. of Chemistry of the O.A.C. have given interesting results and show without doubt that lime may be applied with profit for clover on the older soils of Ontario, and that acid phosphate may be used with profit on wheat. The average increase in yield of clover on the lime plots was 40 per cent. for the lime and phosphate 60 per cent. The average increase in wheat yields on the lime phosphate plots was in 1923, 54 per cent., in 1924, 45 per cent.

This work has now been extended to three farms in each of eighteen counties. The plots are one-half acre in size.

How High is Fog?

The fogs which at this time of the year are apt to afflict London and other great cities are in their essentials merely cumulus clouds resting upon the ground, or near it.

It is the soot and other impurities they hold in solution that cause them to be so unpleasant. A sea fog is the same thing, minus the impurities. Being composed of particles of watery vapor, it is clean, and though dangerous to shipping, it is not particularly so to breathe.

Low-lying city fogs are usually shallow, though some have been found by aeronauts to extend upwards to a height of 2,500ft.

Out of the discussion of farm problems and the farmer, this one thought is being generally crystalized in the minds of the public that the farmer is, and, of necessity must be an all-around business man.

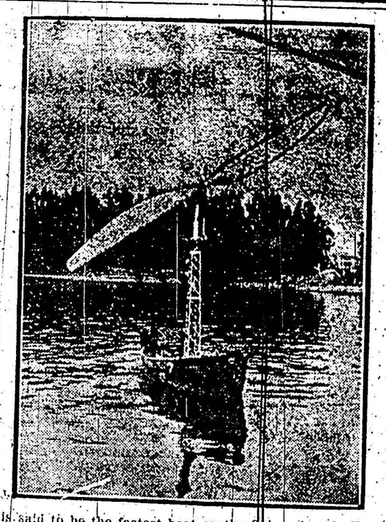
PREPARE A PLANTING PLAN

A bare unattractive house brings no credit to its occupant. If all homes were like those occasionally seen both in town and country places we would be compelled to hang our heads in the presence of visitors from other lands.

Why should any home with a bit of ground present a stark uninviting appearance? Few countries can boast of as wide a range of hardy planting material, and where can helpful information and co-operative assistance more easily be obtained? Our experimental farms and agricultural colleges exist to discover for the citizen reliable information on plants and cultural methods, and the horticultural societies stand ready at all times to help those who desire to improve their home surroundings.

One has only to attack the problem of beautifying his place to find assistance on every side, and when once commenced the way opens for proceeding with the undertaking. Whether it be the planting of a hedge, a clump of shrubbery, a hardy border, or a few vines, some thought must be given beforehand, and this is the season for making the necessary plans.

It should be borne in mind that sunshine is necessary for luxuriant growth. No plant can flourish in the shade of huge trees. Not even grass will thrive in soil filled with the roots of old elms and other trees that use up the plant nourishment and shut out the sun. If one would plant his grounds with fine ornamentals some thinning out of old trees may be necessary. Trees have their place in grounds that are roomy, but other things cannot prosper when trees monopolize the whole space. On the other hand, where tree planting has been neglected and there is space for both trees and smaller ornamentals, some carefully selected varieties should be chosen. Of these there are many kinds not commonly grown, that when used give distinction to the home, particularly when so placed as to screen unsightly views. A full planting plan needs to make provision for suitable kinds of trees and shrubs and herbaceous perennials as well as their location according to the size of the property and the style and position of the house. A simple, rather than a complex arrangement is to be preferred, not only because it is less expensive, but as a rule more pleasing. It is now regarded as a mistake to break up the lawn with flower beds of even shrubs. These had better occupy positions skirting the walk or embellishing a corner, or screening abrupt angles of the dwelling. What is known as foundation planting has become popular. It is done with low shrubs and vines and should be so placed as to appear to tie the dwelling to its surrounding grounds.



Here is said to be the fastest boat on the Seine river in France. The aeroplane propeller with its turbine engine is worked by one man and can be turned to catch the prevailing wind.

FOR HOME AND COUNTRY

The Next Step in Child Welfare.

Dr. Helen MacMurchy, Chief of the Division of Child Welfare, Dept. of Health, Ottawa, in making an earnest plea for adequate provision for the mother, especially the expectant mother and the mother with small children, referred to the loss of 1,236 mothers in Canada during the year, largely because of lack of adequate advice and proper care.

The death rate among infants of one year is 42 per thousand in New Zealand, 77 in England and Wales, and 100 in Canada. By far the greater number of deaths take place before the baby is a month old. "What does this mean? Take care of the mother, and she will make Canada safe for the baby. She will live and not die."

"We always know that the deaths from any cause are not half of the story. For every mother that dies in childbirth, probably five, perhaps ten, are never so well and strong again, if they are not properly cared for when the baby comes. If they are properly cared for they will be as well or better than ever before in their lives.

How shall we make Canada safe for the mother? There are two chief answers to that question. First, Give every Canadian mother the proper medical and nursing care. Dr. J. W. S. McCullough, Chief Medical Officer of Health for Ontario, at the meeting of Essex Medical Society, held at Windsor, June 10th, 1923, says: "By far the most valuable asset of any country, particularly of a young country like ours, is the conservation of its native-born children. Yet it is a curious fact that up to the present time, while the Government of Canada had for years had a Department the business of which was to look after the calves, the lambs and the colts, it has given not one cent for the protection of the babies of the country. You cannot have a healthy baby without healthy parents, and of the two parents the more important is the mother. Mothers without number have lost their lives, as every doctor knows, because certain conditions in their pregnancy were not appreciated and they failed to secure treatment. Many a woman has headache, a pucy face or swollen ankles or occasional vomiting during pregnancy which, if called to the attention of her doctor, would have received treatment which would in nine cases out of ten saved them from convulsions and the death of herself or her baby or both. There should be the most skilful medical assistance and clean lying-in facilities, for many women die of puerperal fever. It is a disgrace to our intelligence as physicians that they should die of such a malady. In 1882, Duclaux, the great pupil of Pasteur, lost his wife from this affection. He wrote a book on 'Ferments and Maladies,' which he dedicated to his wife in the following words: 'To you, the innocent victim of the infinitely little, I dedicate this book in which I have attempted to popularize their history. May it, slight as it is, serve to hasten a little the day wherein the accomplishment of her Sacred mission will no longer cause the wife to fail her husband, and the mother the new-born child.' The mother must be supervised during pregnancy. Too many mothers in Canada are not having that care."

The second chief answer is: Everybody help the mother. We need small hospitals, especially for maternity cases. We need nursing and medical care more readily available. District organizations and county organizations of Ontario Women's Institutes, send some one to see Dr. McCullough and ask him how many mothers died in your county in 1922, and how you can help to save their lives. Strengthen the hands of the Chief Provincial Medical Officer of Health, and tell him what the mothers need. You know more about that than even he does. We need the leadership of the mother. The mother has too much to do and too little help. "We mothers are always tired," said one of them.

"The saddest part of it was that she did not want to live. She was just tired out," said somebody of one of these 1,236 mothers who died in Canada in 1922.

The sum of it all is: Too much work—too little help.

There are many and great voices in this world. Influential is the sound of a voice. But the most influential is "the sound of a voice that is still." The voice of silence is the greatest voice of all in the world.

There was a Khaki Convocation at the Provincial University of Ontario, the University of Toronto, in the first year of the war. Even the examinations had to be hurried out of their time at the call to arms and these new graduates were in uniform when the president read out their names and they came up to receive their degrees. Fit to fight and ready to die, they went down from the University platform to go overseas.

At the next Convocation, the president of the University, Sir Robert Falconer, read to the whole silent assembly of Convocation, as they rose to hear, the list of the names of the fallen. Some of them graduated at that Khaki Convocation.

"They rose in reverence. Yet
But those who lie
Far on the Flanders field to-day
Had not an answering word to say,
Their silence thundered their reply.
They gave their lives away."

"And as they trusted: We the task inherit,
The unfinished task for which their lives were spent
But, leaving us a portion of their spirit,
They gave their witness and they died content."

What can we do for our country? Do something for the mothers. Listen to the silent voices of these 1,236 Canadian mothers: "They gave their lives away."

It is the mothers who can lead us to do for the other mothers. They know how.

Ghosts.

The Monday wash, in winter time,
Will freeze so stiff with frost and rime,
That when it's taken in at night,
As rigid as a paper kite.

A short will stand upon the floor
For fifteen minutes, often more,
With its uncanny arms akimbo,
A ghost of some forgotten limbo.

And as I'm wondering "Will it keep?"
It falls, exhausted, in a heap.
So soon extinguished is its glory,
I always feel a little sorry.

—Blanche D. Small.

Edison Marshall, who divides his time between big game hunting and writing novels, is shown with a bear he killed in the Canadian Rockies and which he refers to as a small one.

What a Beginner in Beekeeping Should Read.

The winter months afford the beekeeper an excellent opportunity of increasing his knowledge of bees and bee management through reading. There are, at the present time, so many good books and journals devoted entirely to beekeeping, the beginner is often at a loss to know which to choose. Mr. C. B. Gooderham, Dominion Apiarist, recommends one of the following for general reading: "The Honey Bee," by Langstroth and Dadant; "Beekeeping," by Dr. Phillips, or "Productive Beekeeping," by Frank C. Pellett. In addition to one of these, every beekeeper should have a copy of the "A.B.C. & X.Y.Z. of Beekeeping," which is the best reference book obtainable as it deals with practically every phase of beekeeping and has, in addition, special articles for beginners. These books can be purchased from any dealer in bee supplies.

It is also advisable that the beginner subscribe to at least one good bee journal, any one of the following can be recommended: "The Beekeeper," published at Peterboro, Ont., price $1 per year; "The Western Gardener and Beekeeper," Winnipeg, Man., price $1 per year; "The American Bee Journal," Hamilton, Ill., U.S.A., price $1.50; "Gleanings in Bee Culture," Medina, Ohio, U.S.A., price $1.15; and for the French reader "L'Abeille," Casier Postal 176, Quebec, P.Q., price $1.

The beginner is also advised to obtain the following Dominion Experimental Farms bulletins and circulars: Bulletin No. 33, "Bees and How To Keep Them." Bulletin No. 22, "Wintering Bees in Canada." Circular No. 105, "Bee Diseases." Circular No. 52, "Facts About Honey." Circular No. 18, "Beekeeping in Canada."

These may be had free upon application to either the Publications Branch, Dept. of Agriculture, or the Bee Division, Central Experimental Farm, Ottawa.

Dross of Earth.

The fault of most biography is that it represents the one who sits for the portraiture as incapable of wrong and innocent of failure. We are given what Henley called a chocolate candy or barley sugar seraph in place of the real man with blood in his arteries and human frailties and passions. That is a mistake, against which Owen Wister lodged his protest when he wrote "The Seven Ages of Washington". Recently a biography appeared which, in describing the earlier career of a well-beloved English author, makes it appear that he was a prodigal son and an ingrate given to dissolute courses and impervious to rebuke. But it does not fail to show that the later man grandly redeemed the old Adam and left an example of the triumph of the spirit over bodily weakness that will inspire mankind more than the printed book of the writer through all days to come.

We are, in fact, more likely to be edified by the stories of failure than by those of shining and complete success. A play recently seen in this city starrized the average "uplift" story of the greenhorn who breaks into a business and goes by leaps and bounds to the top. The young hero is seen attending a directors' meeting, describing to his approving elders the story of his rapid ascent of the ladder and moving them to such enthusiasm that they jump to their feet and press upon him checks for hundreds of thousands of dollars. That is the way it happens in romance. In real life men must work for what they get. They must expect crushing defeat. They must learn to "meet with triumph and disaster and treat those two imposters just the same."

And men are not as gods nor as angels. There is dross in their make-up, and they must pass through the refiner's fire of adversity that shall bring out the best that is in them. They must expect to endure hardness as good soldiers. Grave peril to the soul it is to find a place where no storms come, and there is nothing but the lazy pleasaunce of a tropic isle as one drifts and dawdles through the unresisting hours.

There are human beings who seem so good one can hardly imagine any need or mode of improvement; but they know how imperfect they are. We call them saints, and they are fairly bewildered, for they know not that their faces are radiant of the spirit of goodness that is a lamp within. We know nothing of the battle they fought ere they won to the peace we see, but they could tell us that they came out of great tribulation and ate the bread of weariness and tears before joy came with the light of the morning.

Snow.

The moon, like a round device
On a shadowy shield of war,
Hangs white in a heaven of ice
With a solitary star.

The wind has sunk to a sigh,
And the waters are stern with frost;
And gray, in the eastern sky,
The last snow-cloud is lost.

White fields, that are winter-starved,
Black woods, that are winter-fraught,
Cold, harsh as a face death-carved,
With the iron of some black thought.

If the Well Freezes.

I was a tubular well, equipped with the usual petcock vent which persisted in causing trouble in freezing weather. It was always necessary to dig down to it when the ground was frozen. Finally a pit was dug and the sides walled with concrete. Now, when the vent refuses to work as it should, it can be reached without digging in frozen ground. This pit also makes a fine cool place for cream and butter in the summer time.

Patterns on Walls Relieve Monotony.

For beauty and attractiveness in the home the most important and desired feature is color (properly used). And with color it is most important to consider pattern. Pattern relieves the monotony and adds a background richness which will enhance the furnishings of your home.

The Sunday School Lesson

FEBRUARY 8.

Christ's Intercessory Prayer, John 17: 1-26. Golden Text—Holy Father, keep through thine own name those whom thou hast given me, that they may be one, as we are.—John 17: 11.

ANALYSIS.

I. JESUS SURRENDERS TO GOD, 1-5.

II. HE INTERCEDES FOR HIS DISCIPLES, 6-17.

INTRODUCTION—The closing hours of Jesus in the upper room are concluded with a great act of prayer in which he commits himself, the disciples, and the whole future Church to God. He has spoken to the disciples of the great assurances which, as they go out to serve in the world, will be theirs, the assurance of the love of God, the assurance of Christ's presence, the assurance of the Spirit's coming. What more is left to do except to commend them to the care of the Father in heaven? Then, we have Jesus as the great Priest of his Church, pleading for his followers, both those ready his and those afterwards be gathered in. This lesson shows how he prays for his followers and what for them.

It will be instructive while we study the great prayer are an express other prayer which Jesus disciples and which we Prayer. There is a resemblance between the one prayer and the other. Both begin with petitions following of God's "name" up to petitions for the Christ's disciples from is in the world. It teacher of this lesson, conjunction with the Prayer, he will keep in but infinitely compre of "Our Father which

I. JESUS SURRENDERS TO GOD, 1-5.

V. 1. The opening prayer are an expression of Jesus's full and free "hour" appointed by heaven. Jesus had the hour when he must in sacrifice, and now he prays that God will that is, not only support veal him in the real character and Cross. Men have been purpose in the life of and not acknowledged pose of his coming. his going, his death, eyes, and make the plain.

V. 2. What was the expressed in Jesus' he should have "authority over all flesh," that is, that he human heart as Lord eternal life on all who give to him. We may the great words in Matthew "All power is given to me and on earth. Go, therefore, and make disciples of all nations."

V. 3. When "eternal life" is of, we should not think only of quantity of business, but, rather of quality of restricted life, the life which is no longer hidden, but stands immediately before God. Jesus explains this here, when eternal life consists in knowing and in acknowledging God and his messenger, as the Eternal life is thus a matter of experience: it has to do with the quality of existence, not with its duration.

Vs. 4-5. Jesus has glorified God on earth; that is, he has shown God's true character. He has finished the work committed to him, namely, to make men to God, as far as he could in his life. Now he prays that he may be glorified by God, that he may give the world the knowledge of that eternal majesty which he had with God before the world was. In other words, Jesus prays that the Cross may convince the world, by showing the glory of God, that he is the Son of the Father.

II. JESUS INTERCEDES FOR HIS DISCIPLES, 6-17.

V. 6. Jesus on earth had made God's "name" of God plain to his disciples; that is, he has given them a new consciousness and a new knowledge of God's holy character. For as long as Jesus has been in the world, they have been his disciples of God, and have kept God's word.

Vs. 7-8. As the result of Jesus' presence, the disciples have confessed that all his teachings have been inspired of God, and have been led to spiritual life both as to his origin and his mission. Here we have a reference back to what the disciples in Chap. 16, verses 29-30 knows the perils which his faith will encounter when he is gone.

Vs. 9-11. Therefore, he commends his disciples very solemnly and earnestly to God. He puts the world from his thoughts, and concentrates all his mind on the future of his loved ones. They are his own, by gift given to him by God, and the glory of his glory. Their joy is great because they are in a world which does not know them or their Master. He has sure confidence which they have in their continuance in faith, their being held securely in God's mighty hand, and so he prays, "Holy Father, keep in thy name those whom thou hast given me." He prays for them in that holy secret of his knowledge, which I received of Thee, and imparted in truth to them.

Vs. 12-14. This safe keeping of the disciples in the holy knowledge has been possible while he was on earth. So carefully has he guarded their understanding in the truth pertaining to God that not one of them, not even the apostate Judas, the "son of perdition" (that is, one doomed to perdition, fallen to Satan, and doomed to destruction) has been lost. The apostasy was foretold in Scripture. The rest of the disciples, too, must have to face the world, but not as Jesus has, because they do not belong to the world.

V. 15-17. Jesus does not pray, however, that the disciples should be removed from the world, but that they should be saved from the evil one. As we see by Chap. 15, their task is not to quit the world, but to overcome. We may recall here the petition of the other prayer, "Deliver us from evil." It is easy to go back on life, and go into a cloister. It is hard to fight the good fight in the world of severe temptation. This is what Jesus asks for his disciples. He prays that God may make them holy, make and keep them holy through the knowledge of the truth.

Application.

INTERCESSION—Of all the types of prayer, this ranks highest. Abraham yearning over the righteous who may be found in the wicked city, Moses pleading with God on behalf of the people, Hezekiah praying for a revival of religion, Nehemiah brooding over a great task and making supplication for the future of his race; these are types of men of faith whose prayers were for others.

There is pathos in the lesson picture before us. It is the eve of a long farewell. The morrow will bring its tragedy, and beyond that the scattering of the flock. Intimate personal relations are to be severed. Hence, for a time they will journey without their leader. Jesus commits them to the care and guidance of God.

Such critical moments constantly occur in life. It is a great day full of solemn import, when a little lad goes out into a big new world, for his first day at school. Mother watches him wistfully as he goes off without her. She will do well to pray with and for him at such a time. Family worship has a solemn hush upon the eve of long separations. "Men must work and women must weep," and mutual intercession for dear ones, near and far, is ever an appropriate expression of vital faith. Those whom we love may be far from us, over land or sea, but they are never far from God. "Though sundered far, by faith they meet."

The Manuring of Farm Crops.

Although everyone who attempts to farm knows that manure has value, many do not fully realize the extent to which the manure when properly saved and applied increases the farm income. During the past twelve years comparisons have been made between barnyard manure and commercial fertilizers at the Central Experimental Farm at Ottawa. Mr. E. S. Hopkins, Dominion Field Husbandman, in his report for 1923, which is now being distributed by the Publications Branch of the Department, states that the comparisons were made on a four-year rotation, which included mangels, oats, clover hay and timothy hay.

Farm manure was applied to the mangel crop at the rate of 15 tons per acre. Commercial fertilizers were applied on another portion of the land under experiment in the following manner: The mangel ground received a dressing of 100 pounds of nitrate of soda, 300 pounds of superphosphate and 75 pounds of muriate of potash per acre. To each of the other crops in the rotation there was applied 100 pounds of nitrate of soda to the acre. A third area received farm manure supplemented with commercial fertilizers. The mangel crop received 7½ tons of manure and one-half the quantity of fertilizers which were used in the area that received commercial fertilizers alone, while the oats and two hay crops areas in this rotation each received 100 pounds of nitrate of soda. The fourth area did not receive any manure or commercial fertilizers throughout the entire period of four years.

The outstanding point brought out in the tables published in the report show that both barnyard manure and commercial fertilizers considerably increased the yields of mangels and hay but that neither have increased yields materially the yield of oats. With respect to the results with the oats, it is explained in the report that the crop on the manured land was too heavy that it lodged, which prevented proper filling. The unmanured crop being lighter in the straw stood up and filled better.

"The lesson is drawn from this experiment that in farm practice the application of manure or commercial fertilizers should go to root crops, or other intertilled crops, or to hay.

In the matter of profit, the report shows that the cost of commercial fertilizers for the four crops in the rotation was $20.59 per acre, while the value of the increased crop over that taken from the unmanured land was $50.16 per acre. Some experience is pointed out, is needed in order to get the most profitable results from the use of commercial fertilizers. For this reason a beginner should use it in a small area at first, learning from his experience. Beginners are invited to write to the Dominion Husbandman for guidance in the use of commercial fertilizers for the various kinds of crops.

Feed Turnips After Milking.

Root crops, particularly turnips, often impart undesirable flavors to milk and cream from dairy cows fed this form of valuable succulence. The Department of Agriculture has carried on experiments to determine methods of avoiding this.

The results indicate that feeding turnips at the rate of fifteen pounds an hour before milking produces bad flavors and odors in the milk. Increasing this feeding to thirty pounds causes an increased intensity of these off flavors.

On the other hand, feeding at the rate of thirty pounds immediately after milking has practically no effect on flavor or odor of milk or cream.

The Oldest Animals.

Efforts are to be made to prevent extermination of the great tortoises on the Galapagos Islands, believed to be the oldest living animals, by finding a refuge for them on some desert island near the United States.

Dr. William Beebe, the naturalist, told the National Geographical Society at Washington that the tortoises, some of which were in existence before Columbus came to America in 1492, are rapidly being killed off for oil, and will disappear unless an isle of refuge is found.