

Soils and Crops

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

Our Truck Beats Horses.

"What is the most profitable piece of equipment on your farm?" is a question frequently asked by county representatives and others interested in modern farming.

After careful thought I have arrived at the conclusion that there is but one answer to the question as applied to our farm—the motor truck.

For thousands of years the problem of successfully marketing farm products remained unsolved. The farmer produced with hope, but marketed in despair. As a rule, he was greatly hampered by the many miles which separated him from an active market; the result was that he sold his stuff to the nearest dealer, and often was nearly trimmed in the transaction.

To a great extent the motor truck on the farm has remedied that evil. To-day the motorized farm can be likened to a farm upon which there is a railroad station.

The possession of a truck gives the owner a choice of markets; he can deliver his produce to the market offering him the best profit.

A two-ton truck travels four times as fast as the average team. One can haul a two-ton truck can haul as much in the same length of time as can four mules, four wagons, and eight horses.

Our regularity is alfalfa hay and feed, and our shipping point is three and a half miles away—a much shorter haul than the average. By the team method of delivery it costs \$1.20 a ton for each ton placed in a car at shipping point. By motor-truck delivery, and with every item of upkeep figured, it costs us 73 cents for each ton hauled.

Around a thriving city, twenty-five miles away, there are a number of dairy farms which are always in the market for choice alfalfa hay. It is simply impossible to deliver hay to these farms by team and realize a profit, but with a truck it is different; twenty-five miles by truck is practically the same as six miles by team.

By opening up better markets for practically all farm products, the motor truck increases the value of land, for the richest soil ever created is absolutely without value if its products cannot be marketed at a profit.

By having a reliable truck on our farm we can take advantage of a sharp demand for our products that may exist at a hundred miles away. We try to find markets where competition for the products we sell exists.

Having had considerable experience with various sizes and makes of farm trucks, the following things I have learned may be of some assistance to you:

In trucks, as in everything else, the cheapest in first cost is seldom the cheapest in the end. When buying a truck for farm use it is wise to select one built especially for country roads and country loads.

By building your own truck body you can save from \$50 to \$100, and carry out your own idea of what a truck body should be. If you build for permanence, do not use a nail in the wrong job; nails soon work loose or break and give a world of bother. Use quarter-inch bolts in place of nails.

Pneumatic tires give much better satisfaction.

The stitch-in-time policy is an excellent one to apply to motor trucks. Ten minutes devoted to an inspection twice each day the truck is in use will practically insure you against serious trouble. Ninety per cent. of all truck trouble can be directly traced to carelessness.

If a truck meets with an accident, it can always be made new, but you can't repair a dead horse with a screw driver and a monkey wrench.

And please remember this: Just because your truck is a willing worker, do not overload it. Overloading takes a heavy toll in tire costs, and is never profitable.

Use nothing but the best oil in crank case, and change often; oil soon loses its lubricating qualities when used in a heavy-duty motor pulling its regular load.

The farther you live from market the greater your need for a good farm truck.

Preparing for the Perennial Flower Border.

No flower garden is complete without perennial flowers. Even though the plot of ground be small, some of the space should be devoted to these useful and varied class of plants. Few flowers require as little care as hardy perennials, and if given the proper conditions to start with, the soil should be a good loam which will not bake, and well drained, for thorough drainage is very essential. When planted, most perennials should be left undisturbed for a long time, hence the soil should be well prepared in the beginning by trenching and digging in a liberal supply of well rotted stable manure. Most perennials thrive best in full sunlight, and where possible they should be planted where they will get the most favored conditions. A southern aspect is the most suitable, and where there is protection from the cold winds the plant do best. Planting may be done either in spring or autumn, and the month of October is a very suitable time to plant most kinds of perennials.

In making and planting a border it is most important to plant those kinds which will give a continuity of bloom from early in the spring until late in the autumn, and to arrange them so that they will be most effective. The dates of blooming, heights of the plants and colors of the flowers of the best known hardy perennials are given in Bulletin No. 5, S.S., Experimental Farms, Ottawa. In large borders the best effects are obtained by massing several plants of one color or several varieties of one species, and also arranging for a continuity of bloom, but in smaller borders and where the number of plants is limited it is often not thought possible to get this, and sometimes one part of the border will be without bloom.

Many good perennials can be grown readily from seed. These include Iceland and Oriental poppies; Columbine, Coropopsis, Galandria, Campanula, Platycodon, Delphinium. In this way, at a comparatively small outlay, and in two seasons, many hundred plants may be grown which will furnish bloom from early in the spring until late in the autumn. The planting of small clumps of bulbs between the later blooming perennials will furnish bloom in the spring when flowers are most desired. Seed should be sown in rows about six inches apart. Autumn is the best time to sow the seed, as it will be softened by the moisture then in the soil and cracked by frost before spring, and will then germinate readily, whereas if it were sown in the spring it may be a whole year without germinating. The depth of sowing will depend on the seed. The large proportion of lean to fat, the thick, fleshy belly, and great length of side render the breed peculiarly desirable from the breeder's and the consumer's standpoint. At the Ontario Provincial Winter Fair, held annually at Guelph, Ontario, Large Yorkshires and their grades always take a prominent place in the bacon carcass competition and are a large share of the prizes.

The Large Yorkshire is spoken of quite commonly as being slower in maturing than the fat types of hogs, but this is not a fair way of stating the case. From a breeder's standpoint, Large Yorkshires will reach desirable market weight and condition at as early an age as any existing breed, and there are few breeds which equal them in this respect. Therefore, so far as the farmer who is feeding hogs for the export trade is concerned, no breed excels the Large Yorkshire in point of early maturity.

For the production of a very fat carcass at an early age, the Large Yorkshire is not so well adapted as the fat or large types. It is a special purpose breed, and for the special purpose will mature just as early as, or earlier than almost any other breed.

Quarantine for the European Corn Borer.

The scouting work to determine the spread of the European Corn Borer in southern Ontario is still being continued by the Dominion Department of Agriculture in co-operation with the Provincial Government. Up to September 24th, one hundred and seventy townships were examined of which sixty-five were found infested by the pest. Thirty-seven townships were found infested last year, so that the total number of townships infested now amounts to one hundred and two.

On October 3rd a Ministerial Order was passed quarantining the townships most recently infested, and prohibiting the removal of all portions of the corn plant, except clean shelled corn.

The areas now quarantined for the European Corn Borer includes the following counties and townships: Oakland, Brantford, Burford and Onondaga in the county of Brant; all of Elgin county; Gosfield south, Mersea and Pelee in the county of Essex; all of Haldimand county; Stephen, Hay, Tuckersmith and Goderich in the county of Huron; Zone, Orford, Howard, Harwich, Raleigh, Romney, Tilbury east and Gore of Camden in Kent county; Euphemia, Brooke and Warwick in the county of Lambton; Louth, Grandham, Niagara and Canning in the county of Lincoln; all of Middlesex county; all of Norfolk county; Pickering in the county of Ontario; all of Oxford county; Easthope north, Easthope south, Dufferin, Blanshard, Highbury, Fullerton, Ellice, Mornington, Leppin in the county of Perth; Wilmet, Waterloo and Woolwich in the county of Waterloo; all of Welland county; Guelph in the county of Wellington; and Ancaster in the county of Wentworth.

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Breed for Bacon Production.

Prof. G. E. Day, B.S.A., in his work, "Productive Swine Husbandry," states the excellent qualities of the Large Yorkshire hog, a breed widespread throughout Canada, for bacon production in a way which must carry conviction to anyone who grips the fact that this trade has been and must continue to be the mainstay of the Dominion Hog-breeding industry.

The Large Yorkshire is highly valued for bacon production, where a long side abounding in lean meat and a light shoulder and neck are especially desirable. For quality of bacon it is rivaled only by the Tamworth. The large proportion of lean to fat, the thick, fleshy belly, and great length of side render the breed peculiarly desirable from the breeder's and the consumer's standpoint. At the Ontario Provincial Winter Fair, held annually at Guelph, Ontario, Large Yorkshires and their grades always take a prominent place in the bacon carcass competition and are a large share of the prizes.

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True Service.

"He has not served who gathers gold. Nor has he served whose life is told. In selfish battles he has won, Or deeds of skill that he has done. But he has served who now and then Has helped along his fellow men."

The greatest truths are the simplest, and so are the greatest men.

Dipping the Flock

While the regular dipping of sheep for the control of parasites of the skin has long been recommended, it is surprising to find that even yet a large number of sheep owners do not dip their flocks. It is especially important that this be done before the winter season sets in, because no animal that is infested by crawling, irritating, blood-sucking insects can make the best use of its food. The sheep tick is not the only enemy that can be controlled by dipping. Many sheep carry smaller insects of the louse tribe. The dipping should not be delayed until cold weather, for there is danger of the sheep taking cold and receiving perhaps greater injury than if the dipping had not been done. At this time of the year the lambs will carry perhaps more ticks than the older sheep, and this is sufficient reason for giving the whole flock attention.

Classes of Dips. Dips can be classified according to the nature of the poison they contain, as carbolic, arsenic and tobacco. Most standard proprietary dips will produce effective results, providing the directions of the manufacturers are carefully followed. No material, however, should be purchased without a thorough investigation of its merits. Farmers may often "club" purchases and reduce the cost by buying in large quantities.

For a small flock of sheep it is not necessary to construct an elaborate dipping apparatus; a tub or trough, large enough to hold a sheep, will answer. Connected with the dipping trough there should be a small pen with a floor sloping toward the latter, wherein the sheep may be permitted to drain. The wool, especially if long, will soap up a large quantity of dip, a part of which can be saved by keeping the sheep in this draining pen for several minutes.

The dipping tank. Modern steel tanks may be purchased on the market at a reasonable cost. One can readily be made by a tinmith from galvanized iron, or a wooden frame can be constructed and lined with this material. Concrete vats are also coming into common use. For the average sheep raiser, quite satisfactory results can be obtained from a tank made entirely from inch and a half pine plank, smoothly planed and firmly bolted together. The joints should be well covered with pitch to prevent leaking.

A tank conforming with the following measurements, will prove suitable for a flock of 50 to 600 head: 10 feet long at the top, 3 1/2 feet at the bottom, 2 feet wide and 4 feet deep. The sides and one end are perpendicular, the other end having a slope in the neighborhood of 35 degrees. On the entire inner surface of the dipping end are fastened cleats 8 inches apart. These form a stairway by means of which the sheep, with little or no aid, can climb from the vat. The tank is placed in the ground so that the upper edge rests only a foot or so above the surface.

Dipping should be performed, if possible, on a bright sunny day, so that the sheep may have an opportunity to dry off perfectly. They should remain in the dip at least two minutes. Several minutes must be allowed for draining. The fluid should be heated to about 110 deg. F. Guard, however, against having it so warm as to give the animals a sudden chill when they return to the cold air.

Wanted--A Dish of Ice Cream

A Halloween Story—By Myrtle Jamison Trachel.

"I dare you—double dare you! Are you afraid?"

Melvin Terry and his twin brother Milton, "Mell and Mill" they were called, stood on the front porch watching an older brother walk proudly across the street. To Ted Bowman's Halloween party, to which the twins had not been invited because they happened to be three years younger than Ted, brother Jim, and the other boys of that little bunch.

"Are you afraid?" repeated Mell, and this time he met a flat denial.

"I am not. And besides they will never know we are there. We are almost as tall as Jim, and with ghost costumes on they will think we belong there. I like ice cream myself, and Mrs. Bowman always gives you lots of it."

"Then let's be moving. We'll pretend we are going to bed, then when we get fixed up we can climb down the rose trellis."

Terry was surprised to find the twins coming to bed so early on Halloween, but she was only too glad to have them safely out of mischief. The boys took sheets and pillow-cases from the drawer of old linens, and behind their locked door they fixed themselves up as they had seen their mother dress Jim. Very quietly they slipped out of their window onto the roof of the porch. They had been up and down the rose trellis many times by daylight, but getting down at night, wrapped in trailing robes with two small holes to see through, was an entirely different matter. Mell tried it first, but the thorns of the roses would not even let him get started.

"I'll never get down with this blindfold," he whispered, and he pulled the pillow-case from his head and dropped it to the ground. He wrapped the sheet tight against his shoulders, but even then it was hard enough. The thorns scratched his legs and managed to be always in the way when he put his hand on the trellis. Only the thought of the ice cream gave the boys courage enough to get down that prickly ladder by night.

The door of Ted Bowman's home stood open but there was no one about. The twins disguised by their ghostly attire, boldly entered the house to which they had not been invited. A Jack-o'-lantern stood on the hall table. Above it was a black hand pointing towards the stairs; it bore the words, "This way to the Golden Den."

They could hear laughter somewhere above and they hurried up the stairs only to come to an open door, pointing toward the attic. At the top of the second flight of stairs they were met by a figure dressed like themselves.

"Shake, my friend," said the figure. Mell, who was leading, grasped the cold, clammy hand held out to him, then to his surprise it seemed to him a moment and then dropped it to the floor, much to the enjoyment of the other phantoms gathered around.

"It's only a long kid glove filled with wet sand," whispered Mill. "Remember the ice cream."

There were other surprises in store for the boys. They were asked to reach into the "Witches' caldron" and take out a fortune. But when they put their hands into the jars they touched the soft, squirming bodies of live frogs. They were told to walk down a narrow runway, and in doing so they stumbled onto a coil of bedspring. The attic was lighted only by a few Jack-o'-lanterns and the boys could not see what it was they had come upon, nor how to get over it. So they had to flounder along the best they could.

"They're being extra nice to us," said Mell sarcastically. "Let's get out of here."

"Oh, they all had to do these things; we just happened to be the last. Look, they are going downstairs now and we will have ice cream."

They were going downstairs, sure enough, but not for refreshments. The ghostly figures seated themselves on the floor around an open fireplace, and began to tell ghost stories—of spirits haunting lonely places; of people being followed at night, and so on. The twins listened in silence. They were not frightened, but they felt pretty jumpy and they had to think hard of the ice cream they had come for. At last the mother of the host came in and asked the boys to come to the dining-room; the twins jumped up—but what was this? Ted Bowman had pulled off his sheet and pillow-case and was asking the others to unmask.

But the twins couldn't! They had come to the party unmasked and if they refused to unmask, the boys would insist upon knowing who they were. "Come," said Mell, and the twins slipped out of the front door unnoticed.

"All of that and no ice cream," waived Mill.

"Hush!" cautioned Mell. "Let's slip around to the back. They usually have brick ice cream and we might be able to sneak out half a brick."

Quietly they crept round the house. A big freezer was being opened on the porch, the maid took out two bricks and carried them into the house.

"Now," whispered Mill, and he threw his leg over the railing. But before he could get his hand into the freezer the maid returned.

"You young rascals, get out of here!" she screamed, and the twins lost no time doing so. They ran over into the next yard and were greeted with a hail from an upstairs window. "What do you want round here?" demanded the voice. "I've had enough gates walk away on Halloween and if you don't move on I'll sic the dog on you."

The twins paused behind a tree, frantically trying to remove their sheet and pillow-case outfits.

"That's old Mr. James. Tell him who we are and say we are not bothering anything."

"Yes, I will," said Mell, "then he'll tell the Bowmans we came from—"

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Mell's speech was cut short by the sound of the old man calling to his dog.

"Take them out, Tribby," he called, and the dog answered with a short bark.

The twins jumped the back fence and ran down the alley, the dog close behind. The boys had no more than passed the Bowman house when he was at their heels—they had just time to clamber to the top of a low shed. Not in the least put out by the turn of affairs, the dog sat down in the alley and waited.

"Gee, do you suppose that dog is going to sit there all night?" Mell asked. "It looks like it," was the answer.

Seconds lengthened into minutes and the minutes became a half-hour and still the dog kept guard. Two weary boys watched from above.

"If this roof didn't dent so I would chance a nap. I suppose he'll get tired soon," said Mell.

They stretched out as best they could, intending to make the best of it. But the night was chilly and in a short time Mell sat up. The lights were being put out in the Bowman house. Already the lower floor was dark.

"The party is over, we can go home now. Wasn't the ice cream good?" joked Mill. His eyes were upon the attic window; he wondered why they had not put the lights out there. As he looked the blaze flared up, and he remembered a Jack-o'-lantern had stood by that window.

"Look!" he cried, "look at the attic window." A larger blaze showed; perhaps the window shade had caught.

Mell looked over the roof, the dog was not in sight. "Come," he said, "we must spread the alarm."

They managed to do this without themselves being known and watched from across the street while the fire was being put out. It was a very little fire, but the boys had the satisfaction of knowing that they were the ones who kept it from being a big one. And this thought comforted them as they climbed up the rose trellis and got into bed.

They were late getting up the next morning. Jim was just finishing an account of the party when they reached the breakfast table.

"They had lovely refreshments, more ice cream than we could eat."

"Yes, I know," assented Mrs. Terry. "They sent over two big bowls of cream for the twins but they were so sound asleep I couldn't rouse them. Papa and I ate it all. Boys, what made you lock your door last night?"

But the boys did not answer. They were looking at each other and thinking of all the things they had endured trying to get the cream they could have had by staying at home. And yet, if it had not been for their chilly sojourn on the shed in the alley, what might have happened to the Bowman house? So after all, the dish of ice cream they didn't get was well worth the trouble.

Seed Grain Distribution.

The annual free distribution of samples of seed grain will be conducted as usual at the Central Experimental Farm, Ottawa, by the Dominion Cereals.

The following kinds of seed grain will be sent out this season:

Spring wheat (in about 5-lb. samples); white oats (about 4-lb.); barley (about 5-lb.); field beans (about 5-lb.); field peas (about 2-lb.); flax (about 2-lb.).

Only one sample can be sent to each applicant.

Applications must be on printed forms which may be obtained by writing to the Dominion Cereals, Experimental Farm, Ottawa.

As the stock of seed is limited, farmers are advised to apply early to avoid disappointment. Those who applied too late last season are particularly requested to send in their names at once so that application forms may be forwarded to them. No application forms will be furnished after Feb. 1st, 1922. C. E. Saunders, Dominion Cereals.

Save your own flower seeds this fall.

The purebred sire is here to stay, and Mr. Scrub has had his day.

Gloves and mittens—have you a good supply for husking corn? And hand lotion? Be prepared.

Do your doors stick when you shut them? Paint or varnish the edges. This may remedy matters.

BUT FATHER WAS WRONG

Many a time, when finishing a threshing job, a corn-shelling job, or when hauling heavy material, father told me to put the heaviest part of the load over the front axle. That I did, taking it for granted that father was right. He generally was, and some of his old doctrines in agriculture are still my guiding stars, but on this one thing I found him wrong.

The fact of the matter is, it requires twenty-eight per cent. more pull to draw the wagon when the load is placed over the front axle. The writer in company with an agricultural engineering expert worked for three days to test out a theory that larger wheels reduce draft, no matter how placed on a wagon. All tests go to show that the ordinary wagon or dray should be loaded with the larger part of the weight over the rear axle. A load that required but a force of 460 pounds to pull it at 1.75 miles an hour with all the weight over the rear axle, required 590 pounds of eight per cent. force to pull it at 1.75 miles an hour when loaded entirely over the front wheels.

Standard equipment was used in all cases. The tires of the wagon were three inches wide, the front wheels were thirty-six inches high and the rear ones forty-four inches. The hitch was nine feet from the wagon, corresponding as nearly as possible to the height and distance that a horse would be hitched from the wagon.

It is common consent among all persons hauling loads that the shorter hitch makes lighter draft, but the larger the wheels under a load the lighter the draft, and it was this fact that led to the tests. The wheels were reversed; that is, the big wheels were put on in front and the small ones in the rear. The pull was about reversed, the front wheels, when larger, pull with less draft.

The results were not entirely reversed, which leads to another fact: In ground not firmly packed, a light load going ahead packing the track for a heavy load always reduces the draft on the second load. In other words, the second, third, fourth, loads, etc., always pull easier over soft ground, when following in the tracks of the first load than did the first load. Then why does the same principle not apply to a wagon. That is, why not let the front end of the wagon, lightly loaded, pack the ground for the rear wheels heavily loaded?

We attempted to pull the wagon with an auto truck. The truck was able to move the load fairly well placed over the rear wheels, but when placed over the front wheel's the truck refused to move it. If it were practical to make wagons with the large wheels in front, then the teamster would have the benefits of both large wheels and short hitch, which would no doubt be the ideal condition as far as the horse is concerned.

Solving a Marketing Problem.

Our big problem for years was how to get produce to town, where it was sold to consumers. This town, which is ten miles away, is the nearest market, and the roads are not always in good condition. Therefore, considerable time was lost in hauling. Finally, a meeting of the farmers was called, and a co-operative market system was discussed. They decided that, by co-operating, the delivery work could be performed more effectively, and much time saved. By beginning alphabetically, the man whose name came first should go from farm to farm, gather the produce, and haul it to market. By this method each farmer only lost one day in every twelve as there were that many members. They could also sell their produce every day at no expense, cash could be obtained, and regular consumers were found. The method pays so well and is so satisfactory that the trucking business has greatly increased. Two wagons instead of one are now required.—G. R.

The New Clock.

Many a person is disappointed because his new clock will run for only a short time and then, unaccountably, stop. If shaken vigorously, it will again tick haltingly for another half-hour. When a clock works in this intermittent fashion, it is nearly always because the spring has been wound too tightly. The stiff new spring must not, even once, be wound too tightly or it is hopelessly injured. It is far better to give the new clock only a few turns of the screw at a winding, and do it often until it has become well limbered up and in the habit of running; for it is true that even brainless machinery has to adapt itself to its task and work itself into perfect adjustment.

The man who wantonly abuses an animal will undoubtedly get what is coming to him somewhere.

When you drop a match or leave a camp-fire in a forest, be sure it is safely out.

Why lose manure, waste energy, kill time, spoil milk, drive away boys and hired men, when a manure carrier in the barn will prevent these things?

If the sun were extinguished suddenly, we should not be aware of the fact until 8 minutes and 18 seconds afterwards.

Poultry

There is no better time than now to give the houses and premises a thorough cleaning. The yards should be raked up and then spaded or plowed. The houses should be given a thorough cleaning and disinfection. To complete the work and add brightness, whitewash the interior of the coops.

November, too, is a good time of the year to paint; if the outside of the houses are painted, the woodwork will be preserved and the buildings will have a more attractive appearance.

The floor of each house must be at least several inches higher than the level of the outside ground; otherwise melting snows may cause considerable dampness. Ventilation must also be looked after. Unless there is good ventilation in the houses, frost is likely to gather on the ceiling and walls, causing sickness.

Broken window-panes should be attended to. If the door is not in proper order, attend to it now and make it swing clear and easy and shut tight and neat. If the roof is not tight and sound, make it so before the fall rains set in. If a board is off, or shingles have made cracks to let the wind whistle through, fix them up right away by nailing on the board or battening the cracks.

These things can all be attended to comfortably this month. It is disagreeable work to be tinkering at them in bad weather. Besides, if they are left till later, they are not likely to be done, and the fowls will suffer. Prepare for winter now.

Over-Seas Cattle Trade.

Apart from the details of cost in transportation and handling, which are given with exactitude, the report made by the representative of the Live Stock Branch at Ottawa on his return from a visit of inquiry into the possibilities of the cattle trade in Britain, contains much information of value to breeders and shippers. For the English market, he says the most saleable animals are those that weigh between twelve and thirteen hundred pounds, well leanned and under three years of age. In Scotland heavier beasts find favor and those running between thirteen and fourteen hundred pounds sell well, but there also fat is depreciable. At present, Canadian stock is criticized in England as heavy in the bone, rather too old, too weighty and rough, and where fat, too much on the outside. Cattle, it is said, should come "Kosher," that is, there should be no adherence of the lungs to the carcasses. In this respect Canadian cattle are reported to be extremely satisfactory, as they are judged free from tuberculosis. There is a large Jewish population in the British Isles, by whom chilled or frozen meat is unacceptable. As a matter of fact the heavy fat steer has no permanent outlet either at home or abroad. The standard requirement is the young handy-weight animal devoid of an excess of fat. From the

The Growing of Flax.

Mr. R. J. Hutchinson, Chief of the Economic Division of the Dominion Experimental Farms, surely hits the mark on the head when he says in his recently issued bulletin, "Flax Culture," "diligent and systematic destruction of weeds always repays the cost of the work in the extra yield of the cultivated crop." The weeds most injurious to the growth and subsequent preparation of flax and the purity of any seed derived therefrom are Charlock, Redbank, Corn Marigold, Thistle, Field Bindweed, Flax Dodder and Dock. All weeds should be persistently destroyed throughout the rotation series. It has been claimed that flax impoverished the soil. This is not so if the field is kept clean, a fact that has been abundantly proved by experiments on several experimental farms. Mr. Hutchinson, in giving a list of manures and fertilizers that can be beneficially used, disproves another erroneous idea, namely, that flax is a non-manurial crop. For getting the best yield, rotations should extend over five, six or seven years, flax will do best after meadow or pasture. Rotations, however, are not rigid and must vary according to conditions. In preparing the soil, plowing and cross-plowing, or alternate grubbing, followed by harrowing and rolling are necessary. The soil must also be firm and sufficiently porous. The seed must be of good quality, heavy in weight, uniform in