Tractor Things to Know and Do.

Keeping the tractor fit means constant care and attention on the part of the operator. Like a good horse, it should be handled and cared for by one man who can become familiar with it and know its individual requirements. While it is an inanimate object, it responds to intelligent treatment. Further, the operator should study the principles of its construction as much as opportunity will permit. If the purpose of each part of the tractor is understood, better judgment will be used in its care.

The instruction book which accompanies every tractor represents the tractor-maker's best judgment as to the care of the machine. It also enables the operator to become familiar with the tractor's construction and principles. Under no circumstances allow it to become misplaced or lost. The repair-parts list, which gives cuts, description and number of parts, is nearly always furnished with the instructions and this book therefore becomes indispensable in ordering new parts or repairs.

The greatest foes of the tractor are friction and wear. This is true of other machines but it is doubly true of the tractor, because of the heat in the cylinders which must be lubricated and on account of the heavy pressures which are occasioned by the explosions within the cylinder. The lubricating properties of oil are destroyed by the heat within the cylinders so that the system of lubrication for these parts should have special attention. Frequent inspection of the supply is also necessary because the tractor, being a heavy duty machine, consumes much more oil than an automobile engine running at the same speed.

The use of kerosene in the engine may also cause some difficulty with the lubricating system. While many engines burn kerosene economically, there are times, especially when the motor may not be hot, when liquid kerosene gets into the cylinders and cuts or thins the lubricating oil so that it does not have the same lubricating properties as fresh oil. For this reason, many manufacturers of kerosene-burning engines recommend removing old oil from the crank case and replacing with fresh oil after periods of from twenty-five to sixty hours' work for the tractor.

Go over your tractor once a day with rags and wipe off excess dirt and grease. This is not so necessary from the standpoint of appearance, although the operator should take pride in its appearance. This daily cleaning is more valuable in bringing to the attention of the operator loose nuts and bolts, worn or overheated parts, parts bent or out of adjustment, and the like. The tractor represents an investment probably equivalent to the value of two teams of horses, and is therefore entitled to as much attention daily as two teams of horses would receive.

Specific instructions regarding the care of any particular make of tractor are given in the instruction book which is sent out with the machine. There are, however, a number of general rules which apply to all types and makes of tractors, and these may be summarized as follows:

Things You Should Know.

1. That your tanks contain fuel, oil and water.
2. That every part is properly lubricated.
3. That all bolts and nuts are tight.
4. When you have proper fuel, oil and spark adjustment.
5. When engine is overloaded or overspeeded.
6. When engine is in good condition; that is, no carbon deposits, loose rings or bearings.
7. When valves and ignition are properly set.
8. When the clutch, brake and governor are correctly set.
9. What kind of lubricant to use in each place.
10. When engine gives signs of distress, knocking, overheating, lost power, etc.

Things You Should Do Every Day.

1. Follow out oiling schedule as required for each day.
2. Make inspection for worn, heated, or loose parts, nuts and bolts.
3. Clean tractor with rags.
4. Drain radiator in cold weather.

Every Week.

1. When using kerosene drain crank case, wash with kerosene, replace with fresh oil.
2. Make inspection of other parts of motor. Do not make adjustment unless it is clearly necessary, and then with the greatest care.
3. See that transmission has enough oil.

Every Month.

Examine valve and valve adjustments and clean carbon from cylinders.

Every Year.

1. Thoroughly overhaul tractor.
2. Make renewals.
3. Order additional parts and supplies likely to be needed for the year.

Six Points to Study When You Buy or Sell a Farm.

1. The Soil. What is the soil like; what is its texture; is it fertile, sour, stony; and how has it been handled by previous farmers? Associated with this are such suplementary points as: Is it well drained, naturally or artificially? To what crops is it especially adapted? What have been its per-acre yields of important crops?

2. Size and Arrangement. A second point compounded of several parts has to do with the size of the farm and the arrangement of its fields. By this is meant both the total acreage paid for and the actual acreage of arable land from which the returns must come. As an expert puts it:

"Very frequently land that sounds cheap is actually very expensive when viewed in the light of its tillable area. Wood and pasture land is usually not very valuable." In other words, if you buy 100 acres for $5,000 and 75 acres turn out rough, scrubby, or otherwise unproductive, you might as well consider the property as consisting of 52 acres which must pay interest on a valuation of $200 an acre, instead of the $50 per acre you paid, presumably, for the whole farm. Another adviser cautions:

"See that the sum of the different kinds of land—pasture, woodland, tilled fields, house lot, etc.—equals and does not exceed the figure given for the whole farm. Be watchful for a possible duplication of wood lot and permanent pasture."

The arrangement of the fields is sometimes obviously good or poor. But more often a farmer gets so used to going the longest way round, or to avoiding a wet swale or a pile of rocks, or to tilling half a dozen little fields that might be better thrown into one, that he loses sight of the inconvenience to which he is being subjected, and the time and money he is wasting. Study the farm to see not only how it is arranged, but also how it can be rearranged.

3. Topography. The lay of the land has special significance in these days of machine farming and power equipment. Is it level so as to permit the use of such machinery, or is it rolling, hilly, or cut by gullies or ledges? Is it easy to cultivate, or is there danger of soil erosion taking place, together with its numerous attendant losses? And is the air drainage good, especially in the case of the farm that is sought for the growing of fruit?

4. Water Supply. Quite aside from the problem of water for crops, whether from heaven or from irrigation ditch, is there an adequate, unfailing, conveniently located supply of pure drinking water? Offhand one is likely to scoff at the possibility of overlooking such an important feature, yet upon how many farms are man and beast dependent on a single shallow well or a few casual springs so poorly located that every gallon of water used has to be "toted" at an almost inconceivable cost in the aggregate of both time (which means money) and human effort and comfort!

5. Buildings. Closely related to the water supply are the buildings and other improvements that measure the liveableness of the farm. Here, of course, there is room for considerable latitude, but the range of the questions to be asked under this head is well expressed by this query:

"What kind of improvements are there on the place, and are they adapted to the purposes of the buyer?" A farmer can afford to build a dwelling which costs an amount about equal to the annual income of the farm, and he can afford other buildings costing in all about the same as his dwelling.

Are the improvements old or insufficient, or out of proportion to the true value of the farm, and so extensive as to prove burdensome? There is a state of being "building poor" which is just as undesirable as that of being "land poor."

6. What of the Farm's Environment and Community? This, the last of the most essential questions to ask about a farm, includes roads and railway facilities, the geographical location and its characteristics, such as climate, and, of prime importance, the people of the community. Take any one of these factors you like and you will find that it affects the value of the farm in three different ways. The first deals with the economic side of farm management—the marketing of its products, the obtaining of supplies and of labor, the cost of production, etc., not to mention the effects (of climate, for instance) upon every detail of the actual crop and animal production. The second determines the social life and status of the farmer and his family—first in relation to schools, churches, stores, mail and telephone facilities, granges and other means of human intercourse; and, second, in respect to the character and desirability of the people themselves as neighbors, friends, and co-workers. The third group of effects bear upon the actual life of the man, woman, and child on the farm, since climate, the intellectual development of the neighborhood, and the ideals and habits of its people all contribute directly to the maintenance or destruction of health and, through that channel, to the very foundation stones of happy, useful existence.

In seeking answers to this group of questions in particular, no little tact and persistence are required. It is not enough, for instance, to find out that the average annual rainfall for the section is forty inches; the important thing is, how much of that rainfall comes during the growing months when it is needed, and how much in the form of torrential, larvely wasted spring or winter storms?

Again, as to location, the town two miles distant may be far less accessible than one six miles from another farm, if the former has to be reached over muddy, rut-carved, uncared-for roads or by crossing an insecure bridge over a stream frequently subject to floods, while the latter is reached via hard-surfaced highways and easy grades.

Address all communications for this department to Mrs. Helen Law, 235 Woodbine Ave., Toronto.

M. V. B.: You should not be worried about your hair being lighter in some place than in others. You have probably exposed it to the sun, my dear, and it has bleached where the sun's rays have struck it. When you are working in the sun next summer, protect it with a big hat. If you are very wise, you will do nothing about it, for it will soon grow out from the roots and if as I said above you are careful next summer, it will soon, I am sure, take on the proper shade all over your head.

Until you are very much older you should not go driving at night with your young man friend without an older person or a girl companion. Do you think you are wise to accept a ring or a watch from a boy who is just a friend? Will not your acceptance of it imply that you consider your relation more than that of a friend? Convention decrees nothing absolute in that regard but it is my opinion that presents of jewellery should not be exchanged except by engaged couples. I am very sorry this young fellow is so jealous. Ask him some day if he considers it complimentary to you that he cannot trust you to speak to other boys. I think jealousy is a kind of selfishness, don't you? It cannot grow out of a pure love.

Doleful: My dear girl, you are not the only one to come to me with your pathetic little problem about an allowance and a father who doesn't understand and various pitiful little needs that you wish to satisfy. There seem to be lots of you, bless your hearts! How I wish I could help you all by giving you that longed-for bit of money that would spell happiness for you. I cannot even suggest any sure way of getting it and the only consolation I can offer you is that when you have girls of your own, you will understand and keep such misery from them. Have you had a good serious talk with your father? Have you told him of the legitimate needs you have and how much happiness that little sum each week would bring you? Or have you just sulked and been unpleasant whenever you have spoken of it? I know a girl whose father just could not see her side and refused the allowance she needed each week at school, so she asked him if she might earn it. And she did, working hours after school and insisting on doing work her brothers should have one. Her father soon realized what it meant to her and softened. Somehow I feel if you do your best and are as nice and sweet about it to your father as you can be, he will give it to you.

Clementina: To make a bath bag, scrape a bar of pure castile soap into a powder, add one-half pound of orris root, one-half pound of almond meal and one and one-half pounds of oatmeal. Make cheese cloth bags four inches square and put a heaping tablespoonful of the mixture in each—less if you wish. Use as a wash cloth.

Inexperienced: How can one be comfortable in a sleeping-car? I have never traveled so do not know what to wear, nor where to put my things.

In making up the berth in a sleeping-car, the porter will hang a small net hammock between the windows, and into this you can put some of your belongings; others can be placed on the shelf, which is made by folding up the back of the seat, and a coat-hanger will be hung against the curtains of your berth. All of this will help you in disposing of your day-clothing.

When you are about to retire, draw the curtains and fasten the buttons. Some travelers prefer to keep on their underwear, wearing a kimono over it. Others prefer to remove all clothing, changing the undervest and putting on a night-dress; over this is worn a kimono, which you will need in going to and from the dressing-room.

Shoes and stockings are removed for the night, but are worn to and from the dressing-room. You might provide a boudoir cap of India or China silk to wear when the hair needs to be protected from the dust, but this is not always necessary.

Experienced travelers rise and make their toilets early, as the dressing-room is sure to be crowded later. Much of one's dressing can be done in the berth; if you find that you can not manage this, you can take your belongings to the dressing-room and dress there. Make as much use of the dressing-room as you are entitled to, but in fairness to other travelers do not monopolize it. For example, while traveling on a crowded car last year, a number of passengers were uncomfortably delayed by the thoughtlessness of two girls who not only took an unnecessary length of time to make their toilets, but proceeded to spread out their belongings and repack their suitcases on the dressing-room floor. A suitcase should not be carried into a dressing-room at such a time. A toilet-case or a Pullman apron will hold all the toilet belongings.

Poultry

In marking hens with leg bands we have saved time by purchasing the bands which are made for that purpose rather than making them. Home-made bands can be constructed of wire but it takes time and they are usually not as satisfactory as the commercial article which sells at a moderate price. We like the single coil spiral bands which are made in several colors. They slip on quickly and stay. The birds cannot pick them loose.

The colored spiral bands are useful to distinguish the pullets, the year-old and the two-year-old hens. The early hatched pullets and cockerels can also be marked with the spiral bands to separate them from stock hatched a few weeks later. These spiral bands are also made with a long lap at a slightly increased expense. Possibly they might stay on better but the single coil with the short lap has proven satisfactory.

The spiral bands are also made with a double coil and these have the advantage of being more easily seen. The aluminum bands with numbers are handy in trap-nesting work or for designating certain hens of special value when they are culled to find the best egg-laying types. We like the bands the best that are the least complicated. One type consists of double clinches for locking around the fowl's leg. When once clamped down with pliers it is not apt to work loose. There are adjustable bands made which are suitable for birds of all sizes but we do not like them as well as the system of clinching is more complicated and occasionally we have had such a band work loose. Bands that are sealed with a soft metal rivet are valued highly by some poultrymen who wish to take no chance of losing good records by finding hens with missing bands.

Rules of Health for Children.

A full bath oftener than once a week.

Brushing the teeth at least once a day.

Sleeping long hours with windows open.

Drinking as much milk as possible, but neither coffee nor tea.

Eating vegetables or fruit every day.

A bowel movement every morning.

Drinking at least four glasses of water a day.

Playing part of the day out-of-doors.

The Dairy

The following rules in the care and management of the herd will prove of value to many farmers who are new in the business:

1. Keep as many cows as you can properly feed and care for.
2. Use purebred sires and raise only the best heifer calves.
3. Use the scales, Babcock tester and pencil.
4. Grow as much of your feed as possible.
5. Provide a comfortable and sanitary stable.
6. Feed all the good roughage they will eat up clean.
7. Have faith in your cows and in the dairy business.

Two Farm Essentials.

A typewriter and a camera should have a home on every Canadian farm, if the owner expects to get the most out of his products. He would as soon try to farm without power as to do without either. A typewriter letter on letter-head stationery, mailed promptly, creates a pleasant impression on the man who has written to enquire about your products.

A camera is a valuable aid in selling farm products direct by mail. There is something convincing about a picture—something difficult to express by mere words alone; it seems as if a picture adds proof to the truth of statements made in a letter. I know beyond all doubt that our camera is valuable in our business. Probably you will laugh at me when I say that pictures have at least half to do with every sale made by mail. If this is not true why do the successful mail-order houses spend vast fortunes in illustrating their catalogues?

Although it has been argued times without number that farm products can not be successfully sold direct to consumer, our experience leads us to believe that such statements are circulated by local dealers and commission men who have been lining their pockets from both producer and consumer.

Cheese sandwiches require two-thirds of a cupful of grated cheese, one tablespoonful of butter, yolk of one hard-cooked egg, a quarter teaspoonful of mustard, a quarter teaspoonful of salt, a pinch of cayenne pepper. Mix to a smooth paste.

Mineral Feeds For Hogs.

"If you want strong-boned hogs, hogs that will carry their flesh well, give them the feeds to make bone," an old hog feeder told me, and this should be evident to every breeder who expects to make a name for himself in the sale ring or simply as a breeder of market hogs. A good bone development is a great asset to growing hogs; the lack of it is seen in the big stock yards where hogs with a light or weak bone are crushed or mashed, legs broken or ribs caved in through shipping and handling.

Mineral matter in the feed, or available, will produce good bone growth if of the proper kind. Most of the mineral feed eaten by hogs is utilized in the bony structure or skeleton. The grain we commonly feed hogs contains such a small proportion of the needed mineral elements that additional mineral feed must be supplied by some means in order to properly nourish the bones.

Oftentimes conditions are such that the hog picks up the minerals himself. Hogs having access to lots where ashes and limestone are dumped may supply themselves in liberal quantity of the calciums. Hogs running in the woods or woodlot or on pastures of most kinds commonly grown, supply their bodies with mineral nutrients.

Recently I visited the farm of a well-recognized hog breeder who pointed with pride to his big-boned, well-developed boars and brood sows. He lays emphasis on strength of bone in his stock and keeps them in excellent breeding shape. He had a small piece of woodland and a clover field adjoining in which he said his hogs licked up most of their mineral feed rather than take so much from the self-feeder.

I have never seen a weak-boned hog where they have access to pastures. I have heard it said that that was because the pastured hog got sufficient exercise to stimulate a good bone development, which has some weight, but forage crops contain a great deal of calcium which enters into the bone structure. One breeder told me that he never thought of feeding mineral feeds to his hogs, but he was doing it just the same when he allowed them to run on pasture and fed them skim-milk and tankage.

If hogs are confined it is very essential that their bodies be supplied with mineral feeds; especially is this true of hogs kept for breeding purposes. Hogs that are finished for killing at two hundred pounds or so will need little mineral feed after put in the feedlot besides what they get in milk and tankage.

Wood ashes and cinders are eaten by hogs to satisfy a craving for mineral food. I have seen them crunch the fresh cinders as if they were corn. Corncobs are suitable in some respects if they are charred; they can be charred by putting them in a metal drum that is closed at the top, or the pile of cobs may be covered with dirt and charred in the old-fashioned way. Charcoal can be purchased for the purpose. Charcoal are beneficial to the digestive tract. Besides these, bone flour is valuable to furnish phosphorous and lime, also. Growing pigs require salt in their ration; it is an aid to digestion.

A good mixture which can be fed to pigs confined in small lots or that may be given to pigs on range, is made up of the following ingredients: One hundred pounds of wood ashes, thirty pounds of salt, forty pounds of slaked lime, four pounds of copperas, thirty pounds of charcoal; mix well and feed three or four times a week.

A good mixture to keep before hogs in a self-feeder is made up of three parts air-slaked lime, three parts of wood ashes or charcoal, and one part of salt. If tankage is being fed there is no need of feeding ground bone or any other phosphorous carriers, as tankage carries sufficient.

Sick Room Dont's.

Don't forget to be kind and patient.

Don't allow the sheets to become wrinkled.

Don't jar the bed by leaning or sitting upon it.

Don't allow stale flowers to remain in the room.

Don't appear anxious.

Don't rattle papers. Nothing gets on one's nerves more than this.

Don't forget to be kind and patient!

Depend upon your alarm clock to remind you when it is time to peep into the oven and you can rest while the baking goes on.

The Sunday School

INTERNATIONAL LESSON.
February 8.

Peter at Lydda and Joppa—Acts 9: 32-43. Golden Text—James 5: 15.

32-35. As Peter Went Through all Parts. Since the conversion of Saul (or Paul) the Christians of Jerusalem and Judaea had comparative peace, for he had been their most zealous persecutor. See 9: 31. But persecution, while it lasted, had driven many of those who lived in Jerusalem to seek homes elsewhere. They had carried the gospel with them and they founded Christian churches and communities wherever they went. The church in Jerusalem became a mother church and had a care over its daughters, and so the apostles went out from time to time to visit them. We can imagine how great an event, in one of these little communities of the country towns, the visit of Peter, or John, or James would be, and how eagerly looked for. It is an interesting conjecture that Philip, who knew the country towns so well, and who lived in Caesarea, may have told these stories of himself and of Peter to Luke, who was Paul's companion when he visited him in Caesarea, and when Paul was a prisoner there (Acts 21: 8: 23: 33), and Luke, as we know, was the writer of this book of Acts.

Lydda, called Lod in 1 Chron. 8: 12, was a large village on the road from Jerusalem to Joppa. Æneas is a Greek name, and he may have been a Jew who had adopted the Greek language and customs. There were many such in Palestine. Peter said to him, "Æneas, Jesus Christ healeth thee." So sure is he of the presence and power of Jesus with him, so sure is he that he can rely upon Him at this moment, that he declares to the sick man His healing grace. The news of this wonderful event spread abroad and the people of Lydda and the plain of Sharon which bordered upon the sea turned to faith in the Lord Jesus.

36-43. Joppa, an ancient seaport, is now called Jaffa. The house of Simon the tanner, where Peter lodged, is still pointed out to travellers, but its identity is doubtful.

Tabitha, the Aramaic, word for gazelle, is in Greek Dorcas. The woman who bore this name was "full of good works and almsdeeds which she did," and her death was mourned by many. It was one of the best features of the Jewish religion that it taught kindness to the poor.

The scene which Peter witnessed when he came is graphically described, as if told by an eye-witness—the upper chamber, the still form of the dead, and the widows weeping and showing the "coats and garments which Dorcas made."

No queen ever had a more honorable burial than that which they would have given her. The simple tribute of tears which they gave as lavishly was the highest praise.

She opened her eyes. It is impossible to explain what happened here by the ordinary principles or laws of nature. Some higher and over-ruling Power was present, as in the case of the miraculous works of Jesus. There is a cheap and easy criticism abroad which assumes the right to deny all such events as those of the present lesson, and to regard these stories as the product of a pious imagination. Criticism is justifiable but it must be based upon evidence, and history has abundantly shown how precarious it is to assume, apart from the evidence that certain things cannot have happened. The modern scientific view of the world does not create or deny facts, but only tries to understand them. And all the facts of human history have not yet been understood or explained. We may very well believe that in the story of Dorcas we have an actual event of Peter's ministry which can only be regarded as the working of the power of God through the name and by the Spirit of Jesus Christ.

Farm Shop Saves Money.

A small farm shop, equipped to handle simple repairs, will soon pay for itself. The greater part of many winter days can be spent in putting the farm implements into good condition. It doesn't require much shop equipment to make welds and bend rods. A forge, anvil, tongs and hammer will do it. With these tools as a start, others can be made. Old machinery ready for the junk heap can be rescued and handy tools made from its steel. Chisels of all shapes and sizes, S-wrenches and the like, can be shaped from the old steel and tempered to suit the use to which they are to be put. Tongs of any size and shape may be made from the wrought iron parts. Add to the equipment a press drill, and many visits to the village blacksmith will be forestalled. The best thing about having a shop is that the more it is used, the more proficient the operator will become. Results at first may be disappointing, but the new smithy can soon develop a proficiency in handling common repairs.

When agriculture prospers all the people prosper. When agriculture sickens all the people languish.