

Soils and Crops

By Agronomist.

This Department is for the use of our farm readers who want the advice of an expert on any question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If stamped and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W., Toronto.

Save Farm Manures.

Animal manure is the only "universal fertilizer" to be had. Yet in some poorly favored countries manure must be used as a fuel, and in some sections of our own country manure is burned instead of being spread on the land. But even in sections where the value of manure is appreciated there are thousands of farms where half or more of the available supply is unintentionally "burned up" before the land-owner gets ready to use it as it should be used.

Manure furnishes humus. It also supplies plant food. It both adds and stimulates bacterial life in the soil. For one or the other of these three reasons, or perhaps for all three, the use of manure on land increases crop growth; and because the value of the increase produced is practically always greater than the cost of applying the manure, it is good business to save and use manure as a fertilizer. To some fertilizer men it may seem that manure is a competitor of fertilizer, but this is not the case. Manure and fertilizer are two very different things. They are supplementary, but not antagonistic. Fertilizer cannot on most farms fulfill all the duties of animal manure. Neither can manure furnish all of the plant food needed by the nation's crops. Furthermore, waste of manure is an economic loss. The chances are "dollars to doughnuts" that in the long run those farmers who allow manure to waste are the ones who very shortly will have no money with which to buy fertilizer. Good practice in conservation and application of manure goes hand in hand with sound practice in the use of fertilizer.

Let us take, for illustration, a practice all too common—that of allowing the manure pile to remain loose and open for weeks, even for months, before spreading. Just as well may the farmer set a torch to the pile, for just as surely it will be burned up and destroyed, with both organic matter and ammonia lost to the winds of the heavens. The value of the increase in crop which this might bring is lost, and to this extent the farmer is less prosperous and less able to improve his agriculture.

On the other hand, suppose the farmer practices the simple expedient of either applying the manure when fresh, as can be done in large sections of the country, or, if it must be stored for any length of time, keep it packed and moist, thus preventing destructive heating. The cost is very little. The saving in humus is immense. The prevention of loss of ammonia is even still more important. Those farmers who follow the last practice can keep their soils alive, in good condition, and in such shape as to make the best possible use of fertilizer. On the other hand, those farmers who waste manure use their fertilizer at a disadvantage, with loss alike to themselves and to all those industries depending on agriculture for their prosperity.

There are a number of ways in

which fertilizer is supplementary to manure. It may be used to balance the plant food ration furnished by manure. It may be used to piece out the inadequate supply of manure. In fact, it may even be used to grow those crops from which more manure is made or to replace manure by the growing of green manuring crops. Before taking up these several points, however, let it be clearly understood that the better the use made of manure the greater the opportunity for the fertilizer industry.

Use of Clover, Green Oats and Vetches for Silage.

We wish to impress upon the live stock men of Eastern Canada the necessity of making plans to have sufficient green forage crops available to fill their silos in case their corn crop is not up to the standard, as happened last season.

We do not for one moment wish to discourage the raising of corn, as corn is one of our most valuable forage crops in many sections of Eastern Canada. Corn is also a crop that is very useful for the cleaning of our fields of weeds and putting the soil, if cultivated properly, in the best shape possible for the succeeding crop.

But in Eastern Canada corn is very uncertain in certain sections on account of the late frosts in spring and early frost in autumn which prevent its maturing sufficiently to make the best silage. However, there are other crops that thrive and do very well in these districts and that make the best of silage when harvested at the proper time. One of these is our red clover plant, which makes very palatable and nutritious silage. If the first cut of clover is made about the last of June for hay, the second cutting can be utilized very nicely for the silo, and another point in favor of using the second cutting for silage is that it is very often difficult to dry it sufficiently to make the best of hay at this late season.

Oats and vetches can also be grown very successfully for silage; sow at rate of two bushels of oats of a strong-growing stiff straw variety such as Storm King or Alaska, one bushel of spring rye; and one-half bushel vetches per acre, cut in autumn as soon as beginning to show any signs of turning. This crop can be cut with a binder or with a mowing machine and raked and put into silo as soon as possible after cutting, as it will conserve better.

Our experience at the Lennoxville Station has been that there is more milk in clover, oats and vetches silage pound for pound than in immature corn. Clover silage is much relished by stock and has proven very useful in conjunction with other feed for hogs.

In using clover or oats and vetches for silo it is best, if possible, to run through cutting box and harvest before the corn, as the weight of the corn on top will cause it to settle properly and keep it in the best condition possible.—Experimental Farms Note.

wire-mesh-covered frames made to fit the corners, with an incline of a foot above the floor, keeps the chicks from piling up, and allows air to circulate below the chicks that sleep on the frames.

Not over three inches above the highest part of the wire-mesh incline I place roosts, and the chicks soon get the habit of roosting.

Don't Forget the Garden.

Don't forget to include the home garden as one of your main lines of work the coming season. If you have not already made your plans for a garden do so at once. Select, fertilize, and prepare your ground as soon as possible. The seed supply should also be looked after and ordered at the earliest possible date, in order to prevent disappointments and delays in planting. See that the garden includes a good variety of vegetables, and also plant it so that it will continue to work for you and supply your table with fresh vegetables throughout the entire summer and fall. Too many gardens are abandoned after the first crop of vegetables is harvested in the summer.

Destroy Grasshoppers.

Winter wheat and clover cannot be grown, with any success, in fields overrun with grasshoppers. Cows cannot give any quantity of milk if most of their food is devoured by these pests. Bread is dependent on grain, but grain is not plentiful where the hoppers abound. Improved varieties of farm produce taste just as good to these insects as do the common varieties. No community can prosper when the farmer, the foundation of prosperity, is nearly "eaten out of house and home." The grasshopper is truly a limiting factor and it must be eliminated.

Timely Things About Stock.

Try a few beets, carrots, or any other root crop for the stock this year.

Army horses averaged \$230 each at an English sale not long ago. The highest price paid was \$408.

The cream separator with its many parts, requires daily washing and sealing to keep bad odors from developing.

Clipping the horses when shedding begins means comfort to the horse and may prevent overheating with resultant chills and colic.

Nothing keeps hogs well and thrifty so cheaply as good, old-fashioned exercise. To bring that about is often quite a problem. A covered and well-sheltered outside yard is fine. Roomy pens come next in the order of importance.

More milk sours during April and May than in hot weather, because this is the time, more than in summer, when dairymen do not realize the necessity of proper cooling of milk. Ten gallons of spoiled milk cost more than a half ton of ice.

Foot and mouth disease broke out in England recently. This is the second time within six months that the disease has appeared there. Veterinarians and stock owners in Canada should keep a sharp watch for the disease.

Docked lambs sell highest. If docked when one week old lambs will not suffer from bleeding. Hot pincers are often used for cutting off the tails, and when used the searing prevents bleeding. A sharp knife can be used. Cut between the joints one inch or less from the body.

The grass taste in milk can be almost entirely prevented if the cows are allowed to graze for only a few hours daily during the first few weeks they are turned to pasture. This should be during the early part of the day. Then they should be

placed in yard or stable until after the evening milking is finished, when they can again be turned to pasture for a few hours more.

Building Up Permanent Pastures.

Fertilizing pastures should be looked upon as a permanent investment, in a class with fences and buildings, rather than a reason for expecting full pay and a profit the season they are applied, says a department specialist. No system of farming maintains fertility, once in a soil, as does grazing with beef cattle or sheep. There are many pastures which have been grazed continuously for about fifty years and to all appearances are better than ever now.

Lime, phosphates and stable manure are the materials which give the best and most lasting benefits. They are also the cheapest fertilizing substances. A liberal use of these at the start is advisable rather than small applications at frequent intervals. Scattering a little seed among weeds and brush is usually a waste of time and money. The results obtained are not at all comparable to those where a seed bed with fertilization has been prepared before seeding.

Grain Bag Holder.

The farmer who sacks much grain alone will welcome this. Take an old bucket and remove the bottom. Turn it upside down, slip on a hoop which is about an inch less in diameter than the largest end of the bucket, and fasten the bucket to the ceiling by two wires. Slip the mouth of the bag over the bucket and push the hoop down over it. This will hold the bag securely and the more grain you pour in the tighter it will hold it. When full raise the sack to loosen it.

MOTHER WISDOM

By Helen Johnson Keyes.

There are some days which are very dark for mothers. The darkest of them all are those when tenderness and love disappear under cloud of temper and irritation.

Although motherhood is divine, mothers are human! There are few if any who do not at times lose self-control, treat their children with undue severity, nagging and scolding. Then how deep is the sorrow and how unfortunate are the results! For although it is not wise to exaggerate evil effects or to become morbid over our shortcomings, nevertheless, such days if they occur often do leave ugly scars.

The cry of the old Persian poet finds an echo in our discouraged hearts:

O, Love, could you and I with Him conspire And wreck this sorry scheme of things entire, Would we not shatter it to bits and then remold it?

Nearer to the heart's desire? That is what we all long to do—remold the world nearer to our heart's desire. Then we should not any more be cross to our children, for we should not have to do work which we hate or do any work longer than our strength lasted—and crossness is born of fatigue. We could be good and gentle and, when night came, face without humiliation, the memory of the day which had passed. It seems altogether right to desire a world in which we could be always gentle, always lovable and good, and influence our children to be so, too.

Yet we are not permitted to shatter to bits the scheme of life and all that we can remold are our own habits. It is astonishing how many improvements we can make in those if, instead of accepting consequences and helplessly bewailing our faults we set about correcting our habits and thus changing consequences.

I have spoken of temper as being born of fatigue. That is true and at first thought the fact seems a terrible injustice, because usually our fatigue is created by the fulfillment of our duty—or at least what we consider our duty. "Why is it fair," cry our outraged hearts, "to punish us for working hard? Surely we deserve peace and refreshment, not fatigue?" Fatigue is illogical, for it makes us do evil as a result of having done good! It is destructive, for it humiliates us by breeding outbursts of temper which cause us to injure and alienate our children.

Wait a minute! Are we always quite sure of the nobility of our motives in working too hard? Do we not, for instance, sometimes prepare a greater variety of food than is necessary, impelled—let us admit it—by vanity of our cooking? Do we not sometimes wear ourselves out with an unnecessary amount of sewing, impelled by a desire to appear a little more industrious than our neighbors? As a matter of fact, excessive fatigue—fatigue which exhausts our nerves—is a violation of the laws of health and these laws go on operating inexorably, punishing us for the abuse of our bodies, whether our motives are noble or not. The law has no reward for what we thought was "self-sacrifice," but only chastisement for our disobedience to the laws of body and mind. Law ever acts according to law.

In view of this fact, should not mothers weigh the importance of the various acts of housekeeping and

home-making, asking: "Are these going to fatigue me to such an extent as to rob me of time and a companionable mind and an untired body to devote to my children? If so, are they worth more than what I could give directly to my children out of the same amount of time and strength?"

A certain variety of food is necessary to health and must be prepared; but beyond this point, variety is usually hurtful. One kind of potato, one kind of meat, and one kind of pie are better than more kinds at one meal. Clothes are promoters of self-respect and every one is better off for being able to appear appropriately dressed; but unused garments in a closet merely double labor, for they must be made over before they are worn out.

Dust, though certainly it is never healthful or refined, is yet preferable in small quantities to temper in large quantities! The laws of health do not care whether the kitchen floor shines white; but they will set your nerves on edge if you have added one too many labors to your day.

Mothers! In dealing with our children we are dealing with life and death, life and death of character. The pleasures of gluttony last only for a moment; the pride of material possessions, except as these create the joyful spirit of home, is without value; the characters of our children are eternal.

We have brought our boys and girls into this earthly life which gives them their opportunity so to grow in strength and purity that they shall become worthy of Heaven. Shall we neglect them in order to lay up a little more money? Shall we deny them our companionship in order to have more pies for dinner? Shall we scour the darkest corner of every closet but allow to develop in our own hearts the germs of bad temper which drive our children from us?

The children who have not mothers who are comrades, and homes which they enjoy, are likely to drift into evil places when they pass through those stormy changes which carry them from childhood into maturity. Then, when it is too late, we mourn and, perhaps, pity ourselves, because our children have "gone wrong." It is not, after all, the bottomless misery of our own wounded love which matters; it is the loss of eternal life to the souls which we brought into the world and for whom we are accountable to God.

Our children need us at every age. Sometimes, it is true, they need most to have us let them alone, so that they can explore life and develop self-reliance; in order to know when such hours are at hand a mother must be in closest sympathy with her children's development, and when she stands aside they will be all the more conscious of her love and ready to come back to her confidence.

We cannot be perfect. Sometimes we shall be cross and sometimes we shall nag, but let it be as seldom as possible, for these things inflict a real injury. A part of the laundry can remain unironed while we refresh our spirits and make ourselves companionable for our children, whose souls are immortal.

It is not easy for a conscientious housekeeper to seem to neglect her "work," but when we must choose, let us put the really living work first.

Your Health



Dr. Huber will answer all signed letters pertaining to health. If your question is of general interest it will be answered through these columns; if not, it will be answered personally if stamped, addressed envelopes is enclosed. Dr. Huber will not prescribe for individual cases or make diagnosis. Address Dr. John B. Huber, M.D., care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

Details in Infant Feeding.

Almost all breast fed infants give very little trouble; but it requires the greatest care to avoid trouble with bottle fed infants. In those cases (much rarer than is generally considered) where infants have to be brought up on the bottle, infinite attention to detail will bring the best results. After we have properly prepared and proportioned the food and arranged for the quantity, intervals and number of feedings we must consider other things:

After each bottle feeding the infant's mouth must be washed with boiled water or boric acid solution. There must be the regular daily bath by which the skin is made to function properly. A moderate amount of crying should be encouraged rather than suppressed; for thus are the lungs developed. After feeding the infant should be laid down; it should not be picked up because it cries, but a change of position often makes it comfortable. Walking, patting, rocking and bouncing an infant are undesirable procedures; they don't relieve pain and they further tire the nervous system—the infant's, the mother's and the neighbors'. Abundant sleep at regular hours and feeding are the infant's main business in life. Let there be reasonable free play for arms and legs. The every-day marvels of its surroundings are sufficient stimuli for the infant's brain development.

When we think of nourishment we seldom take into account its most important element—oxygen, the very

breath of life. It is the combination of oxygen with foodstuffs that make the body grow. We give the infant food at regular intervals, but of oxygen it must have a continuous, twenty-four hour a day meal and that every day. This means the child must ever have plenty of fresh air day and night. The infant must be taken into the open as early and as much as the season allows. In inclement weather the infant should at least once a day, be dressed as for going out doors, and all the windows of its nursery thrown open.

By attention to such details as these failure in infant's feeding is often turned into success.

Questions and Answers.

M. E.—1—What is the difference between chronic arthritis and rheumatoid arthritis?

2—Would a sufferer from either disease be injured by living in a house which has sewer gas in the cellar?

3—To whom should one go to find out whether sewer gas really is present in the cellar?

Answer.—1—Chronic arthritis is any form of inflammation of the joint. Rheumatoid arthritis is chronic joint disease without wasting and deformity and loss of power.

2. Anybody would be likely to suffer from such a condition, sewer gas being one of the most pervasive of gases.

3. To your local health officer. He would make the proper tests to determine its presence or absence.

Growing Good Tomatoes.

The tomato is not a hard crop to grow, and yet there are some years when we have had trouble with them, and there are some things about their growth that makes for more certainty than there is generally known as might be. There is one fact, that has kept many from having the best success, and that is that tomatoes will not bear on rich soil. It is natural that such an idea should be formed when certain methods have been followed, but the fault was with the methods and not the rich soil.

The fruit of tomatoes calls for an abundance of phosphate and potash, and any lack of these elements will result in smaller fruit and less of it, while an excess of nitrogen will produce a heavy vine growth. This does not indicate that the soil should not be rich in nitrogen, but that a corresponding amount of the other elements should be provided also. For many crops, this would not be so essential, but it is with tomatoes. Then the use of fresh manure the same year that the tomatoes are set will produce a very rank soft growth. Nor should any nitrogen manure be added late in the season, for the vine growth should be encouraged at the beginning of the season before fruit begins to ripen.

There are several types of tomatoes and each has its advocates for home use. Earliana is a favorite with market gardeners. Chalk's Early Jewel ripens right up to the stem without any cracks. The Blue Stem Early or King Edward is about the finest early pink tomato and stands shipment remarkably well.

Staking and pruning will make the fruits better and earlier, but it is up to the grower to decide whether it will pay to do it. It takes lots of time and does not increase the yield very greatly. To do it, select two or three main canes and keep all the side branches cut out, not allowing them to grow "beyond" where one bunch of bloom sets. The canes are kept tied up to the stake and in good soil will grow to five or six feet in height.

Wooden Ships.

They are remembering forests where they grew. The midnight quiet and the giant dance. Are haunting still their altered circumstance. Leaves they have lost, and robins in the nest. Tug of the friendly earth denied to ships. These, and the rooted certainties, and rest—

To gain a watery girdle at the hips. Only the wind that follows ever aft. They greet not as a stranger on their ways; But this old friend, with whom they drank and laughed, Sits in the stern and talks of other days. When they had held high bacchanals still, Or dreamed among the stars on some tall hill.

During the war 568 V.C.'s were won in the field, and two V.C. bars. A total of 16,329 decorations were conferred on the British Armies by Allied Powers.

Moving a Stove.

Here is how my neighbor moved a big stove alone. He made a plank frame for the range to rest upon. Underneath the frame he fitted a roller crosswise, just a single roller. In moving the range he simply placed the device under it and balancing it upon the roller it was moved through the yard upon the wagon over boards, and unloaded similarly. With this device one man can do more than four men lifting at the corners.—W. E. F.

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