STIMULATING BARREN SOILS

BY O. B. PRICE.

The loss of soil fertility through the removal of crops can be very definitely determined by chemical analysis. This is one of the important methods of plant food removal and is one that is more or less under the control of the farmer.

For every pound of grain, hay, straw or produce removed from the soil there is a certain loss of plant food elements. When the crops are sold from the farm the loss is equal to the total amount of plant food taken up by the crops. When the crops are fed to the live stock on the farm the loss is somewhat smaller, for much of the plant food is returned to the soil in the manure. Farm manures are an important and valuable by-product of the farm. Extreme care should be practiced in the production, handling, storing and utilization of manure.

Whenever feed is consumed by stock there is a certain loss of plant food elements that go to build up the body tissues of the animal. The amount of these elements used by the animal depends on the kind of animal, the age of the animal, and the use of the animal. For this reason farm manures have a wide variation. The average composition is about ten pounds of nitrogen, five pounds of phosphoric acid, and about ten pounds of potash per ton of manure. Sheep manure and chicken manure are the more concentrated manures. Horse manure is more valuable than cow manure. Where large amounts of highly concentrated feeds are used, as in the case of the dairy cow, the manure is more valuable. It contains more plant food. When the moisture content of the manure is low, as in the case of sheep manure, the plant food per ton is usually higher.

PHOSPHATES MUST BE ADDED.

In the metabolic processes of animal nutrition, a certain percentage of the plant food elements are retained by the animal. The loss of nitrogen and phosphorus is greater than potassium, the nitrogen and phosphorous being about equal.

Since the composition of manure shows a low phosphoric acid content and since the loss in digestion of the feed given the animals is about the same for nitrogen and phosphoric acid, it can be seen that some phosphates must be added to the manure to balance the plant food for the soil. Manure is a valuable plant food but must be reinforced with phosphoric acid.

An application of eight tons of manure per acre will only add about eighty pounds of nitrogen, about forty pounds of phosphoric acid, and about eighty pounds of potash. A fifty-bushel crop of corn, with the stover, removes about eighty pounds of nitrogen, nearly thirty pounds of phosphoric acid, and about fifty-five pounds of potash. Other crops remove other amounts—some more, some less. Unless the manure is applied at the above rate each year, the plant food removed in crops will be greater than that returned in manure. Enough manure is not produced to meet the plant food requirements because large amounts are sold from the farm through the crops. Much of the manure that is produced is lost by improper handling around the barn. Under the best system of handling manure about forty to fifty per cent. of the nitrogen originally contained in the feed is returned to the soil in manure. The loss of phosphoric acid and potash are some less, but they too, are high.

IMPORTANCE OF BEDDING.

The kind of bedding used is also an important factor in the composition of the manure as it is taken from the stalls. Straw is most generally used. Oat straw is better because it contains more plant food than the other straws. When straw is not available other materials may be used such as corn stover, muck, shavings or sawdust. The two latter materials are not as good as straw because they are slower in decomposing and liberating the plant food. Some forms of bedding should be used, however, to conserve the liquid manure which is a valuable part of the manure. About thirty-five per cent. of the nitrogen and fifty-five per cent. of the potash is in the liquid manure. Liquid manure only contains a trace of phosphoric acid.

The value of manure is dependent on the crop increase it will produce. This will vary according to the type of soil, and the system of soil management as well as the actual composition of the manure. Based on the prices of nitrogen, phosphoric acid, and potash in commercial fertilizers, manure is worth about $2.10 per ton. The value of the increase in crop production may be more or it may be less, but it should all be saved and used.

Just because the supply of manure is low is no reason to worry over the future crop production. By conserving what manure there is on the farm, by using leguminous green manuring crops, and by the proper use of commercial fertilizers, crop production can be maintained or increased with profit.

Admiral of Fleet Earl Beatty is shown in the funeral procession of the late Vice-Admiral Sir Michael Culme-Seymour, Bart, second sea lord of the admiralty, which took place at Rockingham recently.

HOME BRIGHTENING TIME.

By ALICE C. HOFFMAN.

After the heavy work of housecleaning is out of the way, brightening the home is a labor of love for the homemaker. It puts a soul, as it were, into what might otherwise be mere drudgery. It requires little or no outlay of money, yet saves much actual expenditure later.

If curtains are sunburned and cannot be persuaded to return to their original whiteness, give them a bath in water to which a solution of saffron has been added. They will emerge in a pretty ecru shade and deceive the family into thinking they are new.

Instead of mending curtains that have become thin and worn at the bottom, turn them upside down and cover the torn parts with a pretty valance, which will serve to brighten up the curtains as well as to hide their defects.

Faded reps or silk curtains, used as draperies at doorways, amply repay the time and expense of coloring. Gold or silver threads put on in a running stitch around the sides and bottom will give the erstwhile dowdy looking draperies a chic appearance.

Nothing adds more to the cheery aspect of a room than pretty lamps. These need not necessarily be expensive. If electricity is used in the home, effective lamp bases that are excellent in taste may be made from vases or from crocks inverted and mounted on a circle of wood. Frames and materials for making shades can be bought at ten-cent stores. Directions for the work may also be obtained there. Any electrician can fit up these lamps in a short time, or possibly there is a boy in the home who would delight in such a job.

Proper containers for plants and cut flowers are always worth serious consideration. Possibly a rose in an old tin smells as sweet as one in a neatly painted flower pot, but it certainly does not look as well. Paint flower pot green, and if a note of individuality is desired, let the children stencil suitable borders around the top and bottom. These stencils may be bought at a bookstore.

Provide plenty of suitable containers for the cut flowers which the garden will soon offer in lavish profusion. Hunt that old pottery pitcher, even if it is cracked and no longer holds water. Find a glass that will fit inside. Keep it filled all summer long with long-stemmed cut flowers, and you will have added a note of beauty which an artist's soul might envy. Crocks or bean pots are fine containers for the masses of flowers brought home from a motor trip.

JUST FOR FUN

BY MARIE FLAACKE.

When Bobby Bluebird and his pretty little wife established themselves in a nest high up in a grand old cherry tree, they thought housekeeping the greatest fun two birds could indulge in.

They flew in and out among the green leaves, singing their sweetest notes, chatting lovingly together in their comical manner, without ever thinking of saying an unkind word or of quarrelling and scolding, as some birds do.

But, after awhile, cares began to mingle with pleasures, and though Bob and his wife thought just as much of each other as they did at first, two little birdies now demanded so much time and attention that they kept their parents busy from morning until night.

Yet Bobby never grumbled nor wished he had remained an old bachelor, and his wife was too sensible and loving to complain because she had so much to do.

So days passed, and soon the wee birdies were almost old enough to learn to fly and get their own dinner. The fond parents were very proud of them, and declared they never before say such pretty, knowing young birds.

"Dear me, wife!" exclaimed Bobby, one bright morning, "how those little fellows eat! Really, at this rate I'm afraid they'll devour every worm in the ground. Don't you think it quite time for them to get their own food? I'll bring in a good supply for dinner, and this afternoon we'll teach them to fly. They are such sturdy fellows that in a short time they will be quite able to help themselves."

So it was arranged the first lesson should be given that day, and, after bidding his little family "good-morning!" Bobby flew away to do his day's marketing.

Straight to the river banks, down through the orchard he flew, for it was there he always found the largest, plumpest worms.

He had been there so many times without being disturbed by rude, naughty boys that this morning he was considerably startled to find a group of them there, fishing.

However, after a careful survey, he did not feel so much alarmed, for they did not appear to be idle, vicious fellows, though, of course, in any event, it was best to keep out of sight.

But, so busy was he in searching for food that he forgot to be cautious, and indiscreetly exposed his bright plumage to the gaze of the youthful fishermen.

"Hi!" exclaimed Joe Brown, dropping his rod and line, "look, boys! there's a fat bluebird! Give it to him! Out with your shooters!"

No sooner said than done. Bags of beans and bean-shooters were hastily tumbled out of half a dozen pockets, and then began a cruel assault upon an innocent, unoffending little bird.

Bewildered by the sudden attack, Bobby tried to escape. He could easily have done so, had there been only one or two enemies to contend against, but there were too many.

One shot struck him on the back, another grazed his throat, and dazed and alarmed, he tried to seek refuge in the clump of bushes.

But even as he flew to cover, a large hard bean struck him right on the side of his dainty little head, and poor Bobby fell, lifeless, to the ground, his bright eyes forever closed, his sweet voice forever hushed.

His cruel murderer did not take the trouble to pick him up; for as one boy coolly said, the other bird would come in search of him, and they'd kill her, too.

In the meantime, Mrs. Bluebird waited, patiently at first, but finally impatiently, for Bobby. At last she grew quite provoked at his delay. The little ones, half-starved, chirped and cried for food, but she disliked to leave them alone, and gazed anxiously about for tardy Bobby.

As time went on, the little nestlings cried the more; so she concluded to go in search of her husband.

Giving her children many instructions about curbing their impatience and being good during her absence, she flew down to the river, expecting to find Bobby there.

Hither and thither she flew, uttering sharp, shrill notes of recall. No answer came. She began to be alarmed. Could anything have happened to him? Perhaps—hark! What was that? She looked down from the bough where she was perched. She felt a sudden, sharp pain in her side—another in her wing; then a cruel stone came whizzing through the air. It struck the poor little bird and she fell to the ground.

Alas! the wee birdies at home in the pretty nest were orphans!

"Cheep, cheep, cheep!" all through the long afternoon they cried.

The sun disappeared over the hilltops; the blue sky grew dark and dreary; gray clouds swept the horizon, bringing with them breezes too strong and cold for the little, downy things shivering in the nest.

"Cheep, che-e-p, ch-e-e-p!" and when the bright sun peeped through the green leaves the next morning, the wee birdies were dead.

So those thoughtless boys murdered four little birds, just for fun. Perhaps they were not wicked, cruel boys, but they did not stop to think. I wonder if they would do such heartless deeds if they thought it was wicked? And is it not?

Some Points on Bobbing Your Hair.

If you have a "settled" look, if your hair is turning gray, or if you wish to look dignified, don't bob your hair.

So say clothing specialists and style authorities. One of them, when asked if bobbed hair was here to stay, replied that "from the standpoint of fad and fashion, nothing is here to stay." She believes that long hair will surely be in fashion again.

"There is quite a difference of opinion among authorities on whether bobbing is good for the hair," the specialist continued. "If hair is bobbed and properly cared for, authorities agree that bobbing is not injurious. Here are the dangers: A lack of any care at all, or the other extreme, overshampooing, excessive and inefficient curling, and the use of a tight, heavy, unventilated hat of the type usually designed for the short-haired head.

"If you think you can cut off your hair and forget it, you are wrong again. It will have to be washed, brushed, and properly waved, the same as long hair. And, in addition, short hair will have to be trimmed about every two weeks. You do, however, save at least a part of the time spent in doing up long hair.

"Observe your profile and head line, then choose a good barber before you decide to part with your locks. If you are short and very stout, the chances are against you. You may number a good many years and still wear a bob beautifully, but, remember, a bob doesn't go with a 'settled' look, nor gray hair, nor does it ever add dignity."

The girl whose hair is very thick should be warned against having the clippers used on the nape of the neck. While it does not always follow, there have been cases where the use of the clippers was followed by an abnormal growth of hair, very unruly to manage and unsightly to behold. In some cases this condition has followed that peculiar style of cutting children's hair which leaves the hair fairly long over the top of the head and clipping from a point somewhere across the middle of the back of the head, down to the nape of the neck. This is a disfiguring style for any child and one for which there can be no possible excuse.

Brightening Paint and Varnish

When housecleaning time arrives, a search through the attic will generally bring to light one or more pieces of useful, perhaps valuable, furniture, which may exactly fill a long-felt want somewhere.

It may be a quaint old chair, table, bureau, desk—perhaps a nice old four-poster bedstead, secretary or highboy that has been laid away.

While trying to restore some prized and ancient family relics recently, I found the task most tedious until a friend, who is rather an expert in this line, told me that much labor would be saved in removing old paint and varnish if I would simply cover the object to be restored with a heavy coat of paint remover, applied with a good paint brush, and let the remover remain untouched for at least fifteen minutes; then a layer of sawdust should be sifted over the remover.

A coarse piece of cloth, which has been well soaked in denatured alcohol, should next be used to rub the surface thoroughly until the piece is cleaned down to the bare wood. The remover sticks to the sawdust, so one application is all that is usually needed.

Before applying the new finish the wood should be thorughly cleaned with cloths well saturated in the alcohol.

Dry Cleaning at Home.

Outer garments of wool and silk, lace, Georgette, kid gloves, and garments which do not need to be ripped for remaking may be cleaned successfully at home with gasoline. Be sure the gasoline is perfectly free from dirt and moisture. To test, place a small amount in an earthen dish. It should evaporate quickly, leaving neither dirt nor moisture. If dirt or moisture remains after evaporation takes place, strain the gasoline through a thick cloth.

Rub grease spots with a soft cloth saturated with ether or carbon tetrachlorid. Place the garment wrong side up on a folded towel, and, in order to avoid a "ring" begin rubbing around the spot, working toward the spot gradually. Rub well, and if necessary rub on the right side, also; then place in the gasoline bath.

Place the articles to be cleansed in a vessel deep enough to hold them and cover with the gasoline. Allow to stand for thirty minutes, then squeeze out and rinse in fresh gasoline. Hang in the sun and air to dry. The odor will evaporate. If garments are badly soiled, add to the gasoline a dry-cleaning mixture which is on sale at drug stores.

As gasoline is highly inflammable, the work must not be done in a room where there is either fire or light. The better way is to do the work outdoors on a warm, sunshiny day. Used gasoline can be left to settle, and the clear, top portion poured off, to be used again.

GRACEFUL MODE FROM PARIS.

Typical of the simplicity of the clothes every girl wears is this lovely long-waist frock, simulating the popular tunic effect with round neck and kimono sleeves. Would be pretty developed in one of the figured materials with lower section of skirt plain. Narrow string belt and edges of tunic neck and sleeves bound with plain material furnish a simple trimming. Long sleeves are provided. Ladies' dress No. 1004 cut in sizes 34 to 44 inches bust. Size 38 requires 4½ yards of material 36 to 40 inches wide if made with short sleeves; with long sleeves ½ yard additional material is needed.

HOW TO ORDER PATTERNS.

Write your name and address plainly, giving number and size of such patterns as you want. Enclose 20c in stamps or coin (coin preferred; wrap it carefully) for each number, and address your order to Pattern Dept., Wilson Publishing Co., 73 West Adelaide St., Toronto. Orders filled by return mail.

Apple Borers.

Apple borers are among the most difficult insects to control, and in sections where they are plentiful the orchardist must keep up a lengthy and costly fight.

The principal difficulty in handling this insect arises from the fact that its attacks continue over a considerable period each year, the eggs being laid mostly in May, June and July, but a few of them up to September. This makes a long period over which the orchard man must be on the watch and applying remedies.

Another difficulty is the fact that the work of the insect is inconspicuous in the early stages and that the final damage is very serious indeed. If apple scab injures the foliage or fruit of your trees this season you can make a new start next year in its control with an even chance of success; but if you fail to control the borers their injury is a grave menace to the trees attacked and to a large extent cannot be remedied.

Three or four general lines of attack are open to the orchard owner.

Keep all trash, weeds, grass or suckers away from the trunks of your trees. The adult insects are of a retiring disposition and like to operate under cover of some protection. They are much more likely to be troublesome in sod than in cultivated orchards.

Use some sort of repellent wash on the trunks of trees to keep the female insects from laying their eggs. Kerosene emulsion sprayed on the trunks three or four times from early May to late July is fairly effective; or a wash made of soft soap and a solution of washing soda so as to make a thick paint, with about a pint of crude carbolic acid added to each ten gallons. This has to be applied with a brush, which is one of the objections to its use. Whatever wash is used, it must be applied from the bottom of the trunk up to and including the base of the main branches.

Dig the borers out. This always has to be done, no matter what other measures may be used, for some borers will get in, in spite of any precautions. Watch for small holes or sawdust castings and when discovered cut in and locate the borer. Do this very carefully or you'll do more harm than the borer will. A wire to punch into the burrow may obviate some cutting.

Wool Grading and Its Value.

Although the grading of wool in Canada has hardly been practiced a dozen years, its effect has been to increase the reputation and value of the product to such an extent that the supply runs short of the demand. Graded wool easily sells better than ungraded, a fact that to their own advantage Canadian farmers are more and more recognizing. In his bulletin (No. 41, New Series) entitled "Sheep Husbandry in Canada," Mr. J. B. Spencer points out the advantages that have accrued and the further benefits that have followed from the method of co-operation that has resulted and was made possible only by grading. The system is in charge of the Dominion Live Stock Branch, which provides official wool graders for co-operative shipments. In dealing with the matter our author alludes to sundry things that affect values. One of these is lack of uniformity due to indifference in breeding and tending. Another is the presence of foreign substances, a third is late shearing, and a fourth is the tying up of fleeces with binder twine, a practice against which many manufacturers and dealers strongly protest because in untying the fleeces it is impossible to avoid leaving some of the fibres in the wool. Wool should be tied with small, hard twine that will not rub off. Relative to late shearing, if the operation is delayed until after the beginning of warm weather the fibres tend to separate at the body, the bulletin points out, and a new growth commences which pushes its way up into the fleece. The presence of short wool is a nuisance to the manufacturers.

Dip the Sheep—Kill the Ticks.

Kerosene Emulsion, a simple remedy easily prepared at home, is effective.

Prepared as follows: 2 pints of coal oil, 1 pint of milk.

Mix thoroughly in an old dash churn—dilute to use by adding 8 gallons of soft water to each gallon of concentrated emulsion. If milk is not available, then use laundry soap, as follows:

One-half pound of laundry soap in gallon of hot soft water, then add 2 gallons coal oil (while hot), churn up well and then dilute by adding 8 gallons of soft water to each gallon of concentrated emulsion.

Dip the sheep after shearing and repeat in two weeks to get the pupae.

To Prevent Wear on Ropes.

Farmers who unload hay through a door in the gable should make a wooden roller, three and a half or four feet long, and two and a half or three inches in diameter. A canvas roller from an old binder will do. Erect the roller on the door sill so that it will be flush with the weatherboarding and in the centre of the doorway. Make two triangular blocks as supports for the roller and bore small holes in the tops of the blocks so you can oil the axles of the roller. Be sure the roller is higher than the blocks. This will protect the trip rope from wearing out by drawing it over the timber and it will be much easier to pull the fork back.

Things It Pays To Know.

In every household we are apt to follow a beaten path and be blind to little changes and short cuts which might lessen the monotony of our work or meet an emergency.

Have you ever thought of:

Using white of egg for glue.

Stretching a small steak for extras, by cutting into inch-by-two-inch strips, wrapping in slices of bacon, browning in a hot oven and serving with a creamed white sauce over all.

Mixing flour, a little baking powder and milk together when there is no beaten egg for dipping.

Making a substitute hot-cake syrup from white sugar, vanilla and a little butter when there is no brown sugar or molasses.

Using an old deep kitchen bowl for flowers, setting a holder inside so the flowers will spread out.

Rolling chops or chicken in flour or cornmeal, in place of cracker crumbs.

Filling an old rubber glove with chipped ice in lieu of an ice bag, turning down the wrists twice and holding in place with strong paper clips.

Rolling out a few biscuits or one pie or a meat crust on a piece of clean paper, which may be quickly rolled up and burned afterward, saving the labor of scraping the large board.

Adding a tablespoonful of flour to all fudge just before removing from heat. This assures a fine texture.

Using the same quantity of flour, well sifted, as usually of cornstarch in those puddings. Makes a much smoother result.

Adding an egg white when the cream seems a little thin for whipping. Whip together after chilling.

Mixing a little canned milk, oil and vinegar together, seasoning with salt, pepper and payrika, for a quick mayonnaise.

Using salt to clean an iron skillet.

Panning pork chops in the oven after searing on both sides, a slice of tart apple laid on top of each.

Attract Food for Fish.

Electric lights over the water in fish hatcheries have been found to attract insects, and aid in feeding the fish.