

THE FARM

Good Roads and Automobiles.

Editor "The Farmer's Advocate":

Don't you think you are a little too severe on the automobilists? I am not financially interested in the manufacture of automobiles, nor an agent or owner, therefore can hardly be accused of having an axe to grind when I say that the complaints made in late issues of "The Farmer's Advocate" against them admit of some modification, at least as far as this locality is concerned. Here the autos do not use chains on the tires, or run when the roads are soft; consequently, I cannot see that they make any ruts in the road, as the iron, narrow-tired wheels of the farmer do. Of course, they get rid of road material by removing the dust, but I rather think that this is a kind of automatic vacuum cleaner for which the farmer should be thankful. It is the iron tires that grind the road material into dust, and I cannot see that dust serves any useful purpose on the road; it will be washed off clean by the first heavy rain, anyway, and if light rains prevail is turned into mud to decorate the clothing and vehicles of every passing traveller with the tenacity of a "stick-tight," and producing dire results. And if there is no rain, the effects of the dust are almost as bad. I would ten times rather have the vile, germ-laden stuff on my orchard and garden and farm than on my clothes, horse, harness and vehicle. The former are the more proper places for it, as it is a fertilizer of no mean order. Anyway, it is only the lawns and houses and orchards near the road that the dust nuisance can seriously affect, and every farm should have an elevated tank, with hose, for watering the lawn. It is only in a dry season like this that it would be much of a detriment to crops or pastures, and the addition of the extra fertility would far more than compensate for any damage done. As for frightening horses, they are rapidly getting used to the autos. I can remember when every third horse would frighten at a fur robe. Bicycles were another menace, but now neither are noticed by any horse. It is only a matter of a few years till the auto will replace the "driver" on the farm. Small ones are already almost as economical, everything considered. It is the iron tires and iron shoes of the horse that produce the dust in the first place. Contributing causes are the narrowness of the tires and the presence of stones on the road surface. The latter, in my opinion, are the contributing causes of dust and bad roads generally under all conditions, and serve no useful purpose whatever, unless it be for the schoolboy to use in knocking down signs of the whiskey and tobacco manufacturers. Every time an iron-tired vehicle drops over a stone, its grinding power is increased—will some scientist tell us how much? I cannot imagine that a pneumatic-tired vehicle of the same weight could have one-twentieth the grinding force. If there is really a dust nuisance, the remedy lies with farmers themselves. Adopt wide tires for wagons, and keep all stones larger than a wheat grain off the road. Mix a little cement and water with this fine gravel or sand, and roll. Do a certain portion every year on the roads leading out of the towns, and issue debentures to pay for it. There is no reason why posterity should not help to pay for the comforts which they will enjoy. They will certainly appreciate their blessings all the more when they cost them something, as they are likely to have a much better and easier living than we now have.

Perth Co., Ont. J. H. BURNS.
[Note.—Our worthy correspondent, on the subject of automobiles and roads, is cultivating a cheery outlook that should soon enable him to extract sunbeams from cucumbers. He can also be grateful that his township is visited by such an easy type of motors, but, unfortunately, for several of his views the facts are against him.—Editor.]

Preparing for Oats.

Editor "The Farmer's Advocate":

As we had a very dry season this summer, it makes us think how we would manage better next year. I have a field of corn this year on medium low sand-loam, well drained. It being a clover and timothy sod, manured at the rate of nine loads to the acre last winter, that has stood the drouth very well. Now, I want to put it to oats in the spring. If you were putting them in, tell how you would do it. After the corn is off this fall, if it were cultivated twice, then worked up in the spring again, or would it be best to fall plow it? It was plowed about four or five inches deep last spring, and has been well cultivated this summer. How would it be if some of the older readers tell their best methods of preparing for oats?

[Note.—Good suggestion. Without disposing of the subject, we throw it open for discussion.—Editor.]

Sunflowers and Moral Atmosphere.

Editor "The Farmer's Advocate":

I saw two inquiries in a recent issue regarding sunflowers for silage. Having had experience with them before my silo burned down (I have not replaced it, using sorghum as a succulent feed), I will give it for the benefit of those who find themselves in doubt as to what to do, and not gaining, perhaps, much positive or practical advice in the answers published in last issue. I considered sunflowers greatly improved the silage, even the stalks. I had them of immense size, but after going through the box and the blower they were made much finer than the cornstalks; being hollow and brittle, they were battered out of all identity to the original stalk. At that stage of maturity I do not think "woody nature" applies in the least to the sunflower stalk; that characteristic develops as they ripen and dry. I do not think your inquirers need feel the least alarm in having them go into the silo stalk and all, along with the "corn." The greatest objection to sunflowers with corn is indeed caused by the heads. They are so bothersome to get through the box. If the feeder is a man addicted to the use of big words, it kind of spoils the moral atmosphere about the premises. EDGAR M. ZAVITZ.

Middlesex Co., Ont.



New residence of Wm. Butler, Lambton Co., Ont.
A most completely equipped house, with excellent situation.

Disinfection and Disinfectants.

The University of Wisconsin Agricultural Experiment Station some time ago issued a bulletin on "Disinfection and Disinfectants," which is intended to help ordinary people to understand how disease spreads, and how its spread may be prevented.

Contagious diseases are caused by minute organisms popularly known as germs, which enter the body in various ways, and there multiply and produce disease. They are thrown off during disease by being coughed up, as in consumption, discharged from the intestines or kidneys, as in typhoid fever, or from the skin, as in smallpox or scarlet fever. It is, therefore, of greatest importance to destroy germs in all matter discharged by the sick.

Many germs form spores which are very tenacious of life; no amount of cold yet tried injures them, and they will even resist boiling water for a few minutes.

Fortunately, most disease germs do not produce spores, and are easily killed, exceptions being those of anthrax, lock-jaw, and blackleg.

Bi-chloride of mercury (corrosive sublimate) is one of the most powerful germicides known. It is, however, a deadly poison, and must be used with great care. Tablets of this drug can now be bought at any drug store, with full directions for making a solution of any desired strength.

Almost all germs which do not form spores are killed in a half hour by a solution of 1 part to a thousand parts of water. To kill spores, a 1 to 500 strength must be used, and one hour of time allowed.

Carbolic acid, well known to everyone, has many good qualities to recommend it. Though it cannot be depended upon to kill spores, yet it will quickly destroy all other disease germs. It does not injure any articles of clothing or metals. It is poisonous, however, and must be used with care. A 5-per-cent. solution is useful for the disinfection of sputum from consumptives, and for the discharges of typhoid fever, lime is one of the

cheapest and most useful disinfectants that we have. It will destroy bacteria and also organic matter, and for this reason is very useful in the disposal of bodies of animals who have died of infectious diseases. Such should be buried deeply, and covered with quick lime.

For disinfecting purposes, milk of lime—lime first slacked, and then thinned with water, is very valuable, acting quickly on discharges of sick people, and, being cheap, can be used freely in outhouses and barns, where it is best applied with a spray pump. Fresh lime should always be used as slacked lime has no germicidal power.

The burning of sulphur is one of the oldest means of disinfection known, but has been displaced largely by newer and more reliable methods. It is very destructive to animal life, killing insects and vermin, and is especially useful in destroying contagion by such agencies. What is known as the pot method is the best way to use sulphur. Place the sulphur in a flat iron pot, which is in turn put in a tub of water, resting on its feet or on bricks. Light the sulphur with hot coals, using five pounds of flowers of sulphur for each 1,000 cubic feet of space. Close up all cracks, and keep room closed for twenty-four hours.

Besides these, there are preparations sold having coal-tar basis, all much alike, though sold under different names. These are nearly all valuable disinfectants when mixed with water and sprayed or brushed on.

Formaldehyde is another of the substances which has lately come into prominence, not only as a fungicide, but also as a disinfectant. It can be obtained from druggists in various forms, with instructions. The simplest and most effective method of using formaldehyde gas is to mix it with permanganate of potash. This causes a violent reaction, and formaldehyde gas is given off rapidly. For each 1,000 cubic feet of space, place five ounces of permanganate in a deep bucket set in a shallow pan of water, and pour over it ten ounces of liquid formaldehyde. The gas generated

sometimes takes fire, hence it is well to watch the room for a few minutes before closing it up. Formaldehyde gas is probably the most useful disinfectant for general purposes known. It is irritating to the eyes and throat, but is practically non-poisonous, and is non-corrosive, not injuring even the most delicate fabrics.

The Ultimate Problems of Soil Fertility.

Editor "The Farmer's Advocate":

It must be self-evident to every reading and thinking man that something more must be done in our teaching and methods, even in the case of our best farm practices, if an economical, permanent soil fertility is to be maintained. The practice of largely selling from the farm its yearly produce, without making ample provisions to restore to the land that which has been taken, cannot be much longer continued without seriously affecting the future yields of our farms.

But even if we take the most advanced practices, those which are followed by our up-to-date farmers, namely, of recognizing the necessity of feeding all that is grown on the farm, of grain, hay, clover and alfalfa, to some kind of stock, and returning with the least waste the manure so made to the land, we must see that there is still a large gap left between what has been taken by the crop and that which has been restored. Both scientific agricultural experimentation and practice point to these facts that the elements of nitrogen and phosphorus, together with the humus contents of the soil, on all normal soils on this part of the continent, both in Canada and the United States, which has been largely affected by glacial action, are the things which are most likely to be wanting on soils which have been for fifty or sixty years yielding up of their original store in crop production. To replace this in the most economical way, and to prevent further exhaustion, should be the first aim and greatest problem before our agricultural teachers and experimentalists.