

# THE CANADA FARMER.

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## The Field.

### Salt and Ashes for Wheat—Red Clover—Canada Thistles etc.

EDITOR CANADA FARMER.—Would you be so kind as to give your advice on the application of salt and wood ashes on wheat. Also your idea of winter-fallowing for red clover, the best way to smother Canada thistles, and the best kind of artificial manure for use on heavy clay loam in good state of cultivation?

P. B.

Fenwick.

Salt is beneficial to nearly all soils, especially those that have been cropped for many years. Its effect on wheat is to increase the weight of the grain, prevent rust and to stiffen the straw. The best way to apply it to winter wheat would be to compost it with the manure that is applied. The quantity that would be most beneficial can only be told by experience or after a chemical analysis of the soil. The best way is to experiment with a small quantity, and increase it as is found to be most profitable.

The effect of salt mixed with manure is to render the manure more quickly available for plant food. About one and one-half tons of salt to thirty tons of manure is about the usual proportion. Applied alone, salt should be scattered broadcast before the crop is sown—immediately before, if for winter wheat; late in the fall on newly-ploughed land, if for spring crops. Anywhere from two and a half or three bushels to the acre up to four times times that quantity may turn out to be the right amount.

Wood ashes also vary in value according to the condition of the land to which they are applied. We should not sow them on winter wheat, but compost them with the manure. Unleached ashes which contain a great quantity of potash, a principal constituent in all plants, are of more value than leached ashes.

We do not quite understand the expression "winter-fallowing for red clover." The right way to go about it is to harrow the land as soon as the crop is off, and allow all seeds in the land to germinate. Then plough lightly. When the weeds have got a good start, manure the land, plough and harrow. Sow timothy seed about the middle of September, and the clover quite early in the spring.

The best way to "smother" Canada thistles is to cut them down persistently. This is actual smothering, for a plant breathes through its leaf surface. If a plant be not permitted to form leaves, then it dies perforce.

The best kind of artificial manures for use on heavy clay loam would be fine bones, or superphosphate.

### Effects of Electricity on Vegetation.

EDITOR CANADA FARMER:—I have thought that some extracts from an article contributed by me to the *Sugar Cane* may be of some interest as well as afford some useful hints to readers of the CANADA FARMER, of which valuable periodical I am a constant reader. If, by the wonderful stimulus of electricity, double crops can be obtained, it requires, one would think, but little pressure to induce a series of experiments. Still, it will be found that the land will undergo a corresponding exhaustion, and must be renewed by the application of suitable fertilizers. But half the quantity of land and labor will be required and as much produce raised in one year as now is raised in two. I am, respectfully, a well-wisher to Canada.

Exeter, England.

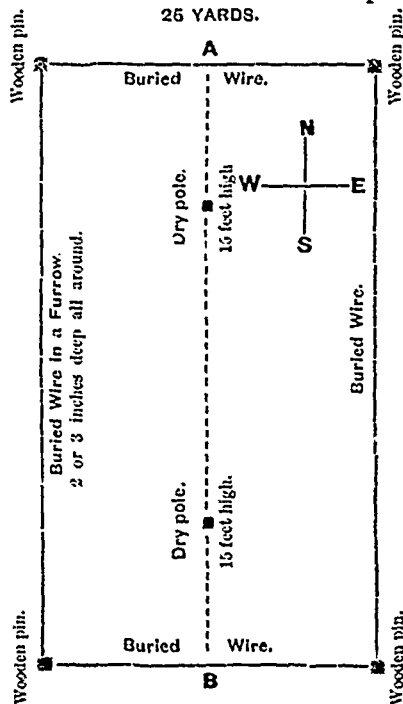
J. F. WILKEY.

The extracts alluded to are as follows:—

"The collection of facts and opinions goes far to establish the theory as a rule. I am inclined to think that the silent collection of electricity by the trees from the atmosphere, and thus conveying it to the ground, has much to

do with the growth of vegetation independently of moisture. We may water the plants in our gardens in very dry weather, and keep them alive, but a humid air with a sultry, electrical state of the atmosphere, even without rain, seems to produce more fertilising effects. I remember reading many years ago of an experiment made, I think, by a Scotchman, which illustrates this principle. A parallelogram of ground was bounded by a furrow, ploughed two or three inches in depth, and in it a stout iron wire was laid, two dry poles, fourteen or fifteen feet in height, were planted along the axis of this parallelogram, and another iron wire was stretched over the two poles, and its ends were led down to the ground and secured respectively to the centres of the wires occupying the furrows at the ends of the parallelogram. The wire in the furrows was secured by stout wooden crooks, and covered by the soil. This was tried in a field prepared for the growth of barley, and the result was said to be that the crop within the

25 YARDS.



A, B, Strong hooked pegs to fasten the connecting wires that pass over the tops of the poles.

RESULTS.—104 bushels barley per acre, of 54½ lbs. per bushel. Weight of straw 9,300 lbs. per acre. Cost of electric apparatus, twenty shillings per acre, which will last for twenty years. As the area increases the cost diminishes.

#### Cost of the Experiment,

6 lbs. of iron wire, at 4d. per lb. for buried wire,	2 0
4 lbs. ditto for suspended wire.	1 0
2 poles of dry wood at 6s. each.	1 0
Labour, &c.	1 0
	5 0

enclosure was about double the quantity per acre of the rest of the field. I can suppose that this plan may be improved by having pointed wire forks at the tops of the poles, and pointed wires suspended on the connecting wire, for the purpose of more fully collecting the electric fluid from the adjacent atmosphere.

"I have frequently noticed that, when some portions of the brushwood, from clippings of hedges, are suffered to remain in the field, the grass beneath these thorny branches appears to grow faster than that which does not come under its influence. This is also perceptible under the wire fences, now so common in the division of paddocks, &c., as though a current of electricity collected by the railings, played from one support to another, and stimulated the growth of the herbage.

"Perhaps sufficient attention has not been paid to the vitalising effects of electricity in plant culture, and that

the systematic application of some mode, on the principle I have alluded to, may be found productive of advantage even where the rainfall is not supposed to be adequate to the requirements of the plant.

"Probably an affinity or coincidence of electricity and vapor exists, so that these conductors of electricity, whether in the form of trees or of iron wires, may be found to bring the one with the other. I would further add that I believe it is admitted that all bodies which evaporate become electrified, generally negatively, but sometimes positively; and that the vapor is in the first case positively, and the last negatively.

"The operations of nature appear to take the form of endless circles, and thus whilst during the day the heat of the sun abstracts from the perspiring leaves of the trees the positively electrified vapors; at night they are returned, yielding to the comparatively negated trees, through their pointed and serrated leaves that amount of moisture and electricity which is necessary to maintain the equilibrium of health.

### Leaves from Farm Experience—No. 2.

#### Stock Medicines.—Hints on Management,

I can not press too much on the necessity of properly feeding, watering and housing all cattle. Look every day if any are sick, and supply a remedy. The diseases of cattle ought to be studied, and the common medicines kept in store, such as turpentine, crude antimony, aloes, sulphur, saltpetre, bluestone, beeswax, alum and resin. The farmer should also possess an instrument for giving medicine by the mouth, and an injection gag; also a good book on the treatment of the diseases of cattle, horses and pigs, also of sheep and poultry. He should have a place for everything, and everything should be in its place. By doing this he will escape untold trouble. Every tool should be in good working order and in its place, to prevent the need of hunting for it.

#### Horse Collars.

See that the collars fit the horses tight and that no dirt is sticking to the inside of them. Some men are so lazy that they leave the harness on the horses in the middle of the day. The harness should be taken off and the collars cleaned and dried. The horses' necks ought to be often washed with soap and water, or alum and water, or urine. Have no broken skin on your horse's shoulders. Nothing grieved me more than to see a horse of mine with a sore shoulder.

#### Ploughing and Seeding.

Use a subsoil plough every rotation, and steel mould-boards on your ploughs. An implement called a "land-presser" was much used in Scotland at sowing time. Many preferred it to the sowing machine. No doubt it is of great service in sowing dry land. Less seed will do, and all is covered about two inches deep on a firm bottom. It will be described again.

#### Manure.

After stumping and draining, the difficulty is to get manure enough the cheapest way. Sixteen to eighteen tons of yard manure is wanted on an acre, every four years, supposing the cattle are fed with hay, grain and roots, and bedded with cut straw. But when milch cows are kept, and young cattle raised, there must be restored all the inorganic substances carried off the field in the milk of the cows, and bones of her calves and something more, and also in the animals sold. If you sell the hay and grain, and do not buy an equivalent for them, you will have no manure, then no crop and no cattle. In a few years an acre that gave four tons of hay, or eighty bushels of oats, would barely feed a sheep. Competence is in every farmer's power. Try to be the best for cattle, butter, cheese and wheat and other crops. Every crop needs about the same kind of manure, but in very different quantities, and that makes a rotation of crops necessary. My experience