

light sowing of nitrate of soda is beneficial and adds to the general health and strength of the plant.

POTASH.

Potash, which is of the greatest importance in orchards of bearing age, comes chiefly commercially from unleached wood ashes, which contain from five to eight per cent. of potash. Aside from the fertilizing element it contains it adds a certain mechanical property to the soil. Forty to fifty bushels of wood ashes per acre are recommended, being about one bushel per tree, worked into the soil in the late autumn.

Muriate of potash contains about eighty per cent. of muriate of potash or about fifty per cent. of actual potash. This is the most reliable source of securing potash at the present time. About 250 to 300 lbs. per acre—a portion applied in late fall, the remainder in early spring, cultivating thoroughly into the soil—is the usual amount applied. Kanite is an impure form of potash, being one of the reformed potash salts, bearing from 12 to 14 per cent. of potash. The value of all potash salts is determined by the potash these salts may contain.

PHOSPHORIC ACID.

The phosphoric acid of our commercial fertilizers as used in fruit growing comes principally in the forms of phosphates, superphosphates, and in bone compounds. The former are obtained from mineral phosphate rocks, which are ground, and contain from 20 to 30 per cent. phosphoric acid. Only a part is available as plant food at once. In superphosphate we have an immediately available food, which should be applied in the spring at the rate of 250 lbs. per acre, working it into the soil.

Bone meal or ground bone is the form of phosphoric acid found in general use. The finer the product is ground the better, consisting of from 20 to 23 per cent. of phosphoric acid, with 2 to 3 per cent. of nitrogen. This compound should be applied in the late fall, as it is made up of available and unavailable parts, requiring a certain amount of decomposition to make the whole available. From 500 to 800 lbs. per acre usually proves a satisfactory ration.

Thomas' phosphate powder is a waste product of steel factories, comprising a basic slag now coming into use as a substitute for bone meal and the superphosphates, and is meeting with approval and good results. Used as a fertilizer on nursery grounds and lawns at the Wolfville Fruit Station, it has taken the lead in competition with other brands of phosphate fertilizers in a series of plot tests. This fertilizer contains from 20 to 22 per cent. phosphoric acid, readily available and well suited for clayey and heavy loams. The ration used in common practice is from 300 to 500 lbs.

The fertilizers just described are those most common in use to-day, all of which are subject to Government inspection and sworn guarantees, excepting wood ashes.

Whatever substance is used to fertilize the orchard, the readily available form is best. From experience covering a period of three years, a number of fertilizing experiments have been carried on in Nova Scotia orchards in different stages of growth, where commercial fertilizers only have been used, bringing orchards into a most thriving and productive condition. The following formula applied yearly has proved effectual in most cases:

150 lbs. nitrate of soda.
250 " muriate of potash.
800 " bone meal.

These orchards are planted on the intensive plan, with large and small fruits growing together, utilizing every available foot of land.

In orchards where the extensive method has been followed a less food ration has been used, as follows:

100 lbs. nitrate of soda.
200 " muriate of potash.
550 " bone meal.

Where the growing of nitrogen-feeding crops has been substituted as a source of nitrogen, the following ration is meeting with good results where the Thomas' phosphate powder has been used:

200 lbs. muriate of potash.
450 " Thomas' phosphate powder.

These formulas have been modified but slightly, covering a large range of soils, returning most satisfactory crops, by far exceeding in yield similar orchards where yard manures were used.

In conclusion, then, in soil fertilizing of all orchards the converting of raw material into plant food requires thought, judgment, experience, and skill in the utilizing of the principles revealed pertaining to soils—their necessary drainage, tilth, and fertility, which forms the basis for the production of satisfactory crops, giving nature an opportunity to put into effect her vast powers.

The Use of Onions.

A well-known medical authority on nervous diseases says: "Onions make a nerve tonic not to be despised. No other vegetable will so quickly relieve and tone up a worn-out system, and they should be eaten freely, particularly by brain workers and those suffering from blood or nervous diseases." The strong flavor of onions that is so objectionable to many is removed if they are soaked for a short time in warm salt water before being cooked. It is claimed that if, after eating uncooked onions, one eats a sprig of parsley dipped in strong vinegar, no unpleasant tell-tale odor will annoy.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

REMEMBER THE ADDRESS.

Notwithstanding the constant intimation at the head of this department requiring the names and post office addresses of enquirers, letters frequently reach us in which this is overlooked. We do not insist upon this in order to publish them, but as an evidence of bona fides. In writing this office the name and address should always be given. A nom de plume will be used in publishing when desired. We have now before us an enquiry about irrigation, and another about diseased fowl. If the enquirers will send in their names we will cheerfully answer these questions to the best of our ability.

Recently "W. C., Simcoe Co.," wrote asking what treatment should be prescribed for a weed, an incomplete specimen of which was sent in, but of which we particularly desired a whole plant, including root. Without the address we could not write for it. "W. C." and others to whom this applies will therefore understand how it is their queries have not been dealt with. We spare neither trouble nor expense to obtain and give our readers trustworthy information; but in order to do so we desire full particulars in the statement of the questions, on whatever subject.

Legal.

BUILDING PATENT FENCE.

P. G. IRELAND, Northumberland Co., Ont.:—"Can a man legally build a patented fence on his own farm without paying the man who holds the patent for the privilege?"

[Assuming that there is a bona fide patent, no.]

CHattel MORTGAGE—AGISTMENT.

K., York Co., Ont.:—"In August, 1895, A left with B a colt to be pastured and kept by B at a fixed price. B has kept the colt ever since. A has now gone away to the States to remain. In the spring of 1896 C came to A and said he had an interest in the colt, but did not say what interest, but in fall of 1896 he told A he had a chattel mortgage on the colt. A now has kept the colt for two years, and has not received anything for it in any way, and has never worked the colt, but has relied on getting his money by retaining or selling the colt. C now threatens to close his chattel mortgage and to take the colt from A. What are the legal rights of the parties?"

[Unfortunately for B he is not entitled to a lien for the keep, and C can take the colt. B of course has a valid claim against A for the money due to him, but this remedy is probably worthless since A is out of the country; but C would probably be held liable to B for reasonable charges of A for the keeping of the colt since that time when C found out that A was keeping it and did not disclose his exact position. B should have the chattel mortgage examined by a lawyer, and see that it really includes the colt, and that it has been properly renewed, and is a bona fide transaction.]

BULL BREAKING INTO FIELD.

G., Oxford Co., Ont.:—"In October, 1896, my neighbor's scrub bull got over the line fence and served two pure-bred cows of mine. I then sent the bull home, and my neighbor promised to keep him tied up. In November the bull broke through him tied up. In November the bull broke through and served two pure-bred heifers, and it has caused me considerable damage. My line fence is a good and lawful one. Have I any remedy?"

[Yes, you have a good action, and should recover all damages sustained, at all events subsequently to the first trouble in October.]

NOXIOUS WEEDS.

G., Middlesex Co., Ont.:—"A has a farm on which there are noxious weeds, and he is doing all he can to destroy them. B on the adjoining farm allows the weeds to go to seed, and he pulls them and throws them over the fence on the farm of A. What remedy has A?"

[By statute the owners of farms are required to cut and destroy certain noxious weeds. If the weed in question is one of those named, A can proceed against B under the statute, but in any event it is a trespass by B to throw his weeds on A. And for that A can recover damages, and have B restrained from doing it by injunction, and B would be ordered to pay all costs.]

STALLION AT LARGE.

M., Algoma, Ont.:—"1. A stallion followed my horses from an Indian Reserve to my gate. I left the horse on the road, and he went to a neighbor's and got into his field. My neighbor then tried to shoot the horse, but failed. If he had injured the horse would anyone be liable for damages, and who? 2. Are hogs allowed to run at large in an unorganized district?"

[1. Your neighbor, no matter how much aggravated, had no right to shoot and injure the horse, and he would have been liable. 2. Yes. Unless there is some restraining by-law or provision having local effect in the district referred to.]

Miscellaneous.

MILKWEED—PRIMROSE—CINQUEFOIL.

P. G. ROBSON, Northumberland Co., Ont.:—"I enclose you herewith three plants for identification."

[The plant with the bright orange flower is one of the milkweed family, *Asclepias tuberosa* or butterfly weed; grown on dry spots in Canada and the United States. Not troublesome so far as we know.]

The plant with the yellow flower is *Eriogonum* biennis or common evening primrose; common in fields and waste places in Canada and the U. S.

The third plant is *Potentilla norvegica* or cinquefoil. A larger specimen of the same weed was sent in by another reader, Mr. Wm. T. Gibbons. See reply to his enquiry.]

WANTS TO KNOW ABOUT CROSS-BREEDING CATTLE.

ENQUIRER, Icelandic River, writes:—"1. I should like to hear the opinion of any who have tried crossing Holstein bulls on common cattle, as to the results, and whether such a cross is an advisable one to make? 2. Has any one tried crossing the Shorthorn with the Holstein? Should also like to hear the result of such cross."

SWEEPSTAKES HOGS AT ONTARIO FAT STOCK SHOW.

T. B. MONCK CO., Ont.:—"Will you kindly answer through the ADVOCATE which breeds of swine have won the sweepstakes over all breeds in the sow and barrow classes at the Guelph Fat Stock Show for the last six or eight years?"

[We can only find the records for the last five years. In some of these years some breeds were not represented, and in some the sweepstakes prizes were not open to pure-bred animals, but were for the best grade hog. In 1892 the sweepstakes for best barrow was won by a Yorkshire shown by Mr. Pike, and for sow by a Chester White owned by Mr. Harding. In 1893 the sweepstakes for best barrow was won by J. G. Snell with a Berkshire, and that for best grade hog by Mr. Austin, breeding not stated. In 1894 the sweepstakes for best grade hog, any age, went to J. G. Snell for a Berkshire grade. In 1895 the sweepstakes for best grade hog was won by Mr. Agnew for a Berkshire and Yorkshire cross. In 1896 the sweepstakes for best pure-bred barrow, any age, was won by H. Daddels, Kossuth, with a Yorkshire, and that for best pure-bred sow, any breed, by J. G. Snell, Snelgrove, for a Berkshire.]

POTENTILLA NORVEGICA—SPECIMEN PLANT REQUIRED—WILD MUSTARD.

WM. T. GIBBONS, Renfrew Co., Ont.:—"1. Will you kindly identify enclosed weed and advise as to its destruction? 2. Give life habits and method of destroying wild tares. 3. Do charcoal and wild mustard belong to the same family?"

[1. *Potentilla norvegica*, or cinquefoil, found in old fields and thickets. Deep cultivation in dry weather and increased fertilization recommended. Should not prove troublesome.]

2. As there are several plants of the genus *Vicia*, differing very greatly, yet commonly called "tares," to attempt to answer this question without having a specimen of the plant to which Mr. Gibbons refers before us would be largely guess work. Would he oblige by sending us one at an early date?

3. Charlock, wild or yellow mustard (*Brassica Sinapistrum*) are one and the same.]

YELLOW CLOVER.

J. W. H., Peterborough Co., Ont.:—"Find enclosed a weed which I find growing on my farm. Be kind enough to let me know in your next issue of the FARMER'S ADVOCATE what it is—if a bad weed or hard to get rid of?"

[The plant received is *Trifolium procumbens* (yellow clover), usually found in dry soil. It is not considered troublesome, and ordinary cultivation should remove it.]

Veterinary.

ARTHRITIS.

AN OLD SUBSCRIBER:—"I have a Standard-bred colt which was foaled ten days before time and was apparently all right. About three weeks ago it started swelling at gambles and stifles, and can only get up by being helped. Has always been stabled at night, and never had any showers on it. Have kept it stabled these last ten days. Please advise me through your paper what to do for it."

[Your colt is suffering from a form of arthritis, caused by pyæmic or septic infection. The germs of the disease are supposed to enter the system through the unhealed navel. It is a disease quite common among colts, and is usually fatal. The treatment consists in the administration of antiseptics and tonics, such as hyposulphite of soda and quinine, with the application of an anodyne liniment to the affected joints. Proper attention to the navel at birth would to a great extent prevent this malady; i. e., cleanliness should be scrupulously observed, and a strong solution of carbolic acid, say one part acid to three or four of water, applied two or three times to the raw parts.]

MARE WITH COUGH—COW LOSING SALIVA—PARTIAL PARALYSIS IN CALVES.

SUBSCRIBER, Wentworth Co., Ont.:—"1. I have a four-year-old mare that has had a bad cough for this month past; is on pasture when idle and at night."

"2. A cow seemingly in good health, but chewing the cud makes the saliva run from her mouth,