

Roving Farmers.

From the Colonial Farmer.

There is a class of farmers who are constantly on the lookout for a better place to go to. Their farms are always "for sale," and they dream of luxuriant lands in some other part of the country which can be bought "for a song," where they imagine they would be more prosperous, and enjoy life better than where they now reside. Many of these men own mortgaged farms; and for such men to desire to remove where they can own a free farm, though it be far, far away, is but a natural manifestation to better one's condition, which the human mind cannot resist. But where can these men go, after selling their farms, and be contented? This is a serious question, which no man can answer of his own knowledge. Suppose they can sell out, and command a thousand or fifteen hundred dollars after paying all their debts, and they start for "the West," Kansas, Missouri, Iowa, or some other State. Eighty acres of land, with a comfortable house or log cabin on it, can be bought for from \$5 to \$10 per acre. The land is all right, as good as "lies out of doors;" but, alas, for the surroundings. Neighbors are scarce, society is a myth, and the poor, frail housewife who follows her husband without a murmur pines for friends. The children have to go two miles or further to school, and in the winter time they cannot attend much of the time on account of the storms. Churches are "few and far between," and the people are generally a mixture of various nations; and the result of all is that many an Eastern farmer who goes West is unhappy and wishes himself back on his old homestead. So if one goes South, or anywhere, he will not find things just to his mind. If one thing is better than on the old place another is worse; and taking all things into consideration, but few farmers change their residences, who are able to make a living on the old place, that better themselves by removing to a distant State. One may obtain rich lands at a low price where there is no market for what he grows; and he may get into an unhealthy locality, and soon he may bury his wife and children, and what then?—a gloomy world for him.

Cheap and Easy Drainage.

There is in use in some parts of the country a very cheap and practical method of underdrainage, which farmers properly circumstanced can employ to advantage, but which is seldom mentioned in the agricultural papers. The plan is most effectually adopted wherever, at a depth of a few, or perhaps several feet, a strata of clay or hard-pan, through which water will not penetrate, overlies gravel or other porous substance, when, if a shaft is dug through the clay formation and into the gravel or sand below it, a vast amount of water will find a natural subterranean and perfect outlet at a very light expense. Several members have stated at the Batavia Farmers' Club that in instances where they found a low place on their land, where water was inclined to stand, they, in a dry time, dug a hole as for a well down through this clay, then filled the hole with any refuse stone and removed the excavated earth so as to let the drainage into this pit, and after that no water was ever seen standing there any more. The same plan was practised in Batavia village, where, on Main St., water in wet times had flooded the surface for rods, and it was thought to be a difficult and expensive job to properly drain it away; but as the corporation extended it chose for Street Commissioner a farmer who had practised the method described, and he had a hole sunk at the lowest point on each side of the street, which, after filling with stone and leveling, secured the perfect drainage desired. Thus, at an expense of a few dollars only, was obtained a result which it might easily have cost a few hundred dollars to have effected in any other way.—H. I., *Genesee Co., N. Y.*

New Rules for the Barley Trade.

The Committee on Grain of the Produce Exchange held a meeting lately, at which new rules for the grading of barley were established as follows: Extra Canada barley shall be of a bright natural color, plump, sound and well cleaned, weighing not less than 49 pounds to the measured bushel. No. 1 Canada barley shall be of a bright natural color, plump, sound and well cleaned, weighing not less than 48 pounds to the measured bushel. No. 2 Canada barley may be slightly stained, otherwise sound, reasonably clean, weighing not less than 48 pounds to the measured

bushel. No. 3 Canada barley may be stained, but shall be sound, reasonably clean, fit for malting, and weighing not less than 46 pounds to the measured bushel.

No. 1 State barley, four-rowed, shall be of a bright natural color, plump, sound and well cleaned, weighing not less than 48 pounds to the measured bushel. No. 2 State barley, four-rowed, shall be plump, sound, reasonably clean, but may be slightly stained. No. 3 State barley, four-rowed, shall be sound, reasonably clean, fit for malting, otherwise unfit for No. 2.

No. 1 State barley, two-rowed, shall be bright, natural color, plump, sound and well cleaned. No. 2 State barley, two-rowed, shall be sound, reasonably clean, but in color not good enough for No. 1. No. 3 State barley, two-rowed, shall be sound and fit for malting, but in color and in cleanliness unfit for No. 2.

Rejected barley shall be such as is for any reason unfit for No. 3.

No. 1 Western barley shall be plump, bright, sound, clean and free from other grain, weighing not less than 48 pounds to the measured bushel. No. 2 Western shall be sound, bright, not plump enough for No. 1, reasonably clean and free from other grain, weighing not less than 46 pounds to the measured bushel. No. 3 Western barley shall include shrunken or otherwise slightly damaged barley, weighing not less than 41 pounds to the measured bushel.

Rejected Western.—All Western barley which is damp, musty, or from any cause is badly damaged or largely mixed with other grain, shall be graded Rejected Western.

The above rules go into effect immediately.—*N. Y. Herald.*

Lime as a Constituent of Soils and Plants.

Dr. A. S. Heath read a paper before the American Institute Farmers' Club, from which we abstract as follows:

Different plants vary in the quantity of lime required. To give a comparative idea of the quantity usually contained in grain, grasses, etc., the following table was given, which represents the amount of lime in ash of

	Grain.	Straw.	Total.
	lb.	lb.	lb.
Wheat, 25 bushels to acre, contains lime.....	1	12	13
Barley, 40 bushels to acre, contains lime.....	1½	15½	17
Oats, 50 bushels to acre, contains lime.....	3	19	22
Rye, 26 bushels to acre, contains lime.....	1½	15½	17
Beans, 25 bushels to acre, contains lime.....	2½	34	36½
Turnips, 20 tons to acre, contains lime.....	46	71	118
Potatoes, 8 tons to acre, contains lime.....	8	31	39
Red clover, 2 tons to acre, contains lime.....	—	77	77
Rye grass, 2 tons to acre, contains lime.....	—	30	30

Indian corn ash contains about the same as oats; timothy hay contains about two-thirds as much as red clover. Peas and beans, when the soil is well limed, will always boil soft. In fact, peas and beans will not yield well without a generous supply of lime. Meadow hay contains 22 per cent. of lime in its ash, and Sprengel estimates 22 per cent. of lime in the ash of white clover; Nesbit gives 15 per cent. of lime in the ash of hops; of apple trees 63 per cent., and of the cherry tree 35 per cent. Of the following woods lime forms of their ash the remarkable percentage, viz.: oak, 75; elm, 47; linden, 29; beech, 63. The pine tribe of woods contain in their ash from 30 to 46 per cent. of lime.

Lime is the most beneficial the second or third year after its application, and its good effects are said to continue for many years. It should be frequently applied, as it does most good near the surface of the soil before it is washed by the rains out of reach of the roots of plants. But for lime the grasses and grains would not have sufficient strength and substance of stem to stand erect while growing, as is proven in soils deficient in lime by the prostrate condition of these grasses and grains, and by the fact that on these same

soils, after liming, they stand stoutly up. In reply to the objection against liming soils, that lands lose their strength faster than when no lime is used, Dr. Heath said the charge is sustained by fact; however, that is only one side of the case. The larger the crop the sooner not only is the lime exhausted, but also all other fertilizing substances contained in the soil; but the value of the excess of the large crop more than compensates and will amply pay four fold for the new supply of fertilizers which the heavy drain upon the soil demands. There is both rhyme and reason in the couplet:

Lime and lime, without manure,
Will make both land and farmer poor,

Transpose the rhyme and still maintain the truth:

But lime and lime with good manure,
Makes wealth of land and farmer sure.

Marl, bone phosphate, gypsum, and other substances containing lime are included in liming soils. Composts are the most convenient and economical form of applying lime. The analysis of plants gives not only one inorganic substance—lime—but potash, soda, salt, &c. Composts comprising most of these substances, together with nitrogenous matters, vegetable moulds, barn-yard manures, &c., are therefore urged to be annually applied in quantities suiting the needs of the soil. By this method excesses will be avoided and over-liming need not be feared. These mixed manures will prove valuable for the past as for future crops. Let something be supplied every year. This bank never fails to pay its depositors both principal and interest. For the convenience of farmers not versed in chemistry Dr. Heath gave a number of receipts, among which was the following for top-dressing to sow broadcast on spring wheat or on meadow, early: Bone-dust, 250 pounds; lime (air slacked), 125 pounds; wood ashes (leached), 300 pounds; powder leaf mould, 500 pounds.

Underdraining with Gravel.

Under all circumstances where underdrains are required, and the gravel can be obtained as economically, or at a cost not much exceeding that of other draining material, I prefer it as a draining material in all soils, and for main drains as well as laterals, and I have found it decidedly preferable to other material when quicksands are encountered.

Containing or "mingled with" sand, it will act as well as draining material, if the quantity used is increased proportionately, on account of the presence of the sand. But it is almost a reflection on the intelligence of the enquirer, to state that it is more economical to screen out the sand at the pit or quarry, as its removal reduces the weight of the same bulk just the amount which the sand weighs, and a less bulk of gravel will form a more efficient drain. This will not reduce the bulk of the gravel to be handled and hauled, but will materially reduce the weight, and proportionately lessen the excavation required in opening the ditch.

For ordinary laterals or side-drains, I rarely find that the quantity of water to be conducted requires more than one-fourth of a square foot, as a section of the gravel in the bottom of the drain, or six inches wide and sixth in depth. I have, in my experiments, found that a gravel drain, formed of pebbles from the size of a kernel of wheat to that of a partridge's egg, six inches by six inches, will convey in a level ditch four feet in length, as much water as will flow through a section of two-inch drain-tile, four feet in length, said pipe also to lie on a level bed. This rule may serve as a guide to the inexperienced. I have, however, used a similar gravel in main underdrains, a cross-section of one foot six inches each way. When shavings are convenient I use them on the gravel, but unless the soil returned on the gravel is a very friable alluvial or muck soil, no covering is required before the earth is returned. In case the veins break out of the bank higher than six inches above the ditch bottom, the depth of gravel should be increased so that it will receive the lateral water directly in the gravel, instead of in the soil over-laying it. The reasons are obvious.

Until latterly, I have found more difficulty in maintaining intact the discharge ends of main gravel underdrains than I have where stones or tile are used, but I am now able to make them equally as durable as with other material.—*J. W. in Ohio Farmer.*