Manure Prevents Winter Killing

LAST spring one of the editors of Farm and Dairy called on Mr. Geo. Beech, of Cowansville, Que., and, in looking over his farm, was much impressed with the results of an experiment on spring versus fall top dressing of clover. The portion of the field top dressed in the fall and winter was a 100 per cent stand. The portion top dressed in the spring was badly "winter killed." Why the difference? "Kimball's Dairy Farmer" explains the value of fall and winter top dressing so fully and clearly in a recent issue that we reproduce their editorial in full as follows:

"Have you ever heard of clover or alfalfa freezing out? Surely you have. But have you ever stopped to think how seldom it is that either of these most valuable plants really freeze out because of severe cold weather? You know they do not freeze out in the far north as badly as they do farther south, where winters are not so cold. You know that alfalfa grows successfully in Siberia and that it does not freeze out there.

"But you also know that both clover and alfalfa winter-kill. If they did not, they would be raised more generally on every farm where cows are milked; and, with more alfalfa and clover, milk and butter-fat production would be more profitable. Cows would yield a greater quantity and keep at it more persistently throughout the year. Less protein foodstuffs would have to be purchased. Fields would remain richer. Prosperity would be greater than it already is.

'What is the trouble? If these plants do not freeze up what does happen to them?

'They are heaved out.

Winter Killing Explained.

"When spring comes, after the plants have lived all winter, the sun shines brightly and the surface of the ground thaws. At night it freezes again, it cracks and heaves. The tiny root of the alfalfa and clover is broken and naturally the plant dies. This is the usual procedure that ruins the fields of these useful legumes. Where one plant is really frozen out by severe cold weather, thousands are killed by alternate thawing and freezing. In climates where cold weather and snow continue until late in spring, when the snow gradually thaws and then the frost leaves the ground, to stay away until another winter comes, little trouble is experienced from winter-killing of clover and alfalfa. This teaches a valuable lesson. If we can keep the frost in the ground until spring has come to stay, we can save clover and alfalfa. This can easily be done by top dressing fields now when they are frozen, especially where they are covered with a few inches of snow.

"The covering will hold the snow on the ground until long after snow that is not covered has melted. It will hold the frost in the ground until long after the frost has left ground that is not covered.

"The crop will not only be saved but the fertilizing ingredients of the manure that will leach into the soil surrounding the roots of the plant will hasten growth when spring rains come and the sun warms the soil. Profit enough greater to pay for this top dressing of the land will result even though the plants would have lived without these extra precautions.

An Enjoyable Springtime Task.

"Best of all, the habit is formed of hauling and distributing the manure daily from around the barn. There are very few days in most climates when it is impossible to spead manure on meadows, pastures and fields, and once it is there, fuller fertilizing value will be secured from it than though it were allowed to accumulate in piles in the barnyard to give inconvenience all winter and a big job next spring.

"Not on one dairy farm in a thousand do conditions justify permitting manure to pile up at the barn when it could be serving such commendable purposes so well if spread out where it belongs."

There may be room for discussion as to the relative merits of daily versus spring spreading of the manure on corn ground. For top dressing clover, however, the argument is closed; winter applications are advisable.

Gathering the First Crop of the Season.

A vat or barrel on the front bob saves many steps in gathering the juice of the maple. A scene in the sugar bush of Geo. H. Montgomery, Phillipsburg, Que.
—Photos by an editor of Farm and Dairy.

Is the development of milk veining on the belly of the dairy cow a reasonably accurate indication of producing ability? Prof. R. R. Graves, of the Oregon Experiment Station is investigating the subject. He tied the milk veins of a pure-bred Ayrshire cow so that no blood could pass through those we ordinarily see extending forward from the udder. No ill effects came to the cow.

Home-Made Maple Vinegar

T. H. Mathison, Grey Co., Ont.

IN the pioneer days, when the thrifty housewife had not so much money to spend as she has at the present time, she was keen to take advantage of any scheme that might suggest itself for effecting a saving in her household expenditures. One of the ways commonly made use of was the manufacture of her own vinegar. Nor was this in any way a hardship. The product which she made was much superior to much that is retailed over grocery counters at the present time, and the trouble and expense she was at in making it, was not great enough to be a serious consideration.

It may seem mysterious to some that materials so different as maple syrup and vinegar, can be made from a common source. The process, however, is comparatively simple. Small organisms change the sugar of the sap into alcohol, and the alcohol in turn is changed by bacteria into an acid, in this case into acetic acid.

Where a considerable amount of maple syrup or sugar is made, an abundant supply of vinegar can be obtained from what would otherwise be waste products. The washings from the pans, strainers, etc., which have been used during the making season, can be collected in a barrel placed there for the purpose. The last few days' flow of sap, usually having a disagreeable taste, and, therefore, unsuitable for sugar making, can also be utilized. The ordinary sap can, of course, be utilized as well, and when used for vinegar making it should be reduced by boiling to one-seventh of its original volume.

The alcoholic fermentation will usually set up of its own accord in the barrel which contains the sap or washings. It proceeds best at a temperature of about 50°f. If the process is not fast enough, it can be hastened by an addition of a little yeast, a cake or two of ordinary compressed yeast being suitable. This fermentation should be complete in about two weeks.

After the completion of the alcoholic fermentation, the material is strained into the vinegar barrel. The mother of vinegar is then added. This greyish, slimy mass consists of innumerable bacteria, which attack the alcohol that has been produced and change it into acetic acid. A temperature of 70 degrees is most favorable for the working of this form of bacteria. Besides the favorable temperature, a liberal supply of air is required. This is best secured by laying the barrel on its side and boring two holes, one at either end, through which the air can pass freely over the contents. The holes should be covered by screens to prevent the access of flies or other insects.

Maple vinegar, properly made, is one of the very choicest of all vinegars. Its flavor is far superior to most of the commercial varieties, and it is regrettable that no more of it is made. Any farmer having a few maple trees in his wood lot, or along his fence, can easily put up enough to supply all the needs of his household during the entire year.

The Old Country live stockman develops his young stuff. He doesn't have to see the weekly or monthly cheques from an animal before he gets interested in it. It is for this reason largely that imported cattle win over our home-bred stuff—their early development. A case where good feeding and management gets its reward.