tobacco as well as cotton from the world at large, leaving to us in Canada the unrestricted privilege of growing our own tobacco at least, and flax as a substitute for cotton.

The Agricultural Association of Upper Canada has so far patronized tobbaco as to offer in their premium list three prizes for the raw material and two for manufactured tobacco, in all amounting to thirteen dollars, and a volume of their "Transactions."

To prove that the soil and climate will answer, I grew a small quantity last year, which was very fine, and my neighbours grew many acres as fine as I ever saw growing in the United States.

Fifteen years ago I grew some, and found it answer well so far as its growth, but then there was no market for it; the price everywhere was low, and we had not a manufactory in the country. On the contrary, at that time wheat seldom or never failed to yield well, and brought a good price. I would not say a word in favour of tobacco now, much as I like to smoke, if it were not for the loss of our wheat, at least along the lakes; for I believe back ten or fifteen miles the midge has not yet appeared to any great extent. I have been informed that an acre of good tobacco, near Toronto, is worth $100, and I don't believe that it costs one dollar more per acre to cultivate than Swede turnips. One grand feature about it is, that it does not require the farmer's attention until his whole crop is in the ground, even his turnips, except the preparation and sowing of a seed-bed, which should be done early in May. The planting out need not take place before the 1st July, and can be as easily done, as planting out a field of cabbages, requires no more trouble and care, and is not liable to be cut off with the grub.

If this letter should induce any one of our farmers to try the growing of tobacco, and you will allow me space in a future number, I will be happy to furnish the best information in my power in reference to the cultivation of the plant, the kind of soil best suited for its growth, quantity of seed or plants required per acre, and the best mode of preparing it for market.

RICH'D L. DENISON.

Dover Court, Aug. 3, 1864.

NOTE BY EDITOR CANADA FARMER.—We are much obliged to Mr. Denison for the foregoing communication, and shall be glad to afford him the "space in a future number" which he bespeaks, for a renewal of the subject. It is our impression, however, that the same difficulty stands in the way of the successful cultivation of tobacco, which interferes with the profitable growth of wheat. Our great staple fails us chiefly because of the exhaustion of those elements in the soil on which its perfection depends. In other words, we do not maintain the productiveness of our farms in a sufficiently high degree, to yield remunerative crops of wheat. A fertile soil gives the wheat plant a quicker, stronger growth, and does much to secure it immunity from its enemies. Now, tobacco requires if anything, a richer soil than wheat. The land must be prepared by a previous course of high culture, in order that the plant may do well. Fresh, or partially rotted dung, especially that of horses, imparts a rank, disagreable flavour to the leaf, such as would quite unfit it for our correspondent's much loved pipe. For no crop is thorough preparation of the land more needed than for tobacco. Persistent endeavours to grow it without liberal manuring have transformed many once fertile lands of "the sunny South" into barren wastes. Assuming, then, that the same preparation of the ground will qualify it alike for wheat and tobacco, we confess that we should prefer to see our farmers raise the grain, rather than "the weed." We are not of the class referred to in the above letter, who are ready to cry "shame" on a grower or a smoker of tobacco, and yet other things being equal, we had rather that the farmers of Canada should produce the staff of life, than that their labour should end in smoke. Despite all the discouraging circumstances connected with wheat-growing, we see no reason why Canada should abdicate its high position as a wheat producing country.

Our correspondent seems to think the tobacco plant has no insect enemies. We have heard opponents of the pipe make capital of this idea, and denounce tobacco as a vile poison, which no animal but man would touch. However, unluckily for their eloquence, and for this part of our correspondent's argument, there is a "grub" that revels among the green fibres and fresh juices of the tobacco plant. Constant care is necessary to prevent the growing crop from being cut off by the tobacco worm—the only creature which *naturally* takes to this vegetable production. With man the taste is acquired.

Clover and Clover Hay.

BOTANISTS give the names of 59 sorts of clover (*trifolium*), yet only four or five are cultivated, and as generally understood, only two - the white and red. A kind called yellow clover is a weed pest. Until lately, clover has not been highly esteemed by American farmers. It is now considered excellent for all stock by many who have tested its value thoroughly. It has been cultivated in America about a hundred years. As a renovator of worn out soils, clover has no equal. As food for cows in a milk dairy, clover stands ten per cent. ahead of timothy. We may judge something of its value from Professor Way's comparative analysis, showing the following results:—

GRASS.	Water.	Fleshy Matter.	Fatty Matter
Timothy	57.21	4.86	1 60
June Grass	67.14	3.41	.36
Orchard Grass	70.00	4.66	.94
Red Clover	81.01	4.27	.69
White Clover	79 71	3.80	.89
DRY.			
Timothy		11 36	3.56
June Grass		10.35	2.63
Orchard Grass		13.53	3.14
Red Clover		23.55	3.67
White Clover		18.78	4.38

It will thus be seen that timothy is best when green and clover when dry.

One of the reasons why farmers have not grown clover for winter forage to a greater extent, is that it is considered difficult to cure. Part of this difficulty is purely imaginary. "The modes," says a writer upon the subject, "of curing clover hay widely differ in the same neighbourhood. Some let it go to seed before cutting, then dry and turn it till many of the leaves and blossoms are shaken off, and lastly cart the dry and bulky clover sticks. Others cut it when the blossoms commence to show, fork it the same day into small cocks, and then let it stand several days, either with or without hay caps, till dry enough to cart. Latterly it has been found safe to cart it the same day, or as soon as wilted, being careful only to avoid artificial moisture, and to fill up the bent or mow within three or four days, or before it begins to sweat. Hay is improved by sweating and changing colour, like tobacco. When it begins to sweat it should not be disturbed till the sweat is over. The moisture and steam will go to the top, no matter what the height, and the top is the only part in danger. A foot of straw on top absorbs the moisture and saves the hay.

"One farmer cut 12 to 14 tons of mixed timothy and clover, and carted as fast as cut, without regard to weather. Straw was placed on top to absorb moisture. The straw rotted but the hay turned out good. Another cut four or five acres of clover, raked and cocked it all in one day. Threatening rain caused its hurried cartage the following day. It occupied a bent and a half in the barn. The full bent came out bright and good, except about 18 inches of the top. The half bent was partially injured by adding other fodder, and thus keeping the steam in. Another knew of 30 to 40 tons of hay being cut and carted the same day. The mow smoked, sweat, and generated toad-stools, but only the top was spoiled. The balance was sweet and good, the blossoms were unchanged, and the cattle lapped it down like meal."

THE CHAIRMAN—I have lately conversed with a man who had just finished the cutting of 35 acres in Norwich, Con., and sold the crop at $12 a ton, taken from the cock in the field. At that price would clover be a profitable crop? Several members said yes, if cured in the manner stated in the article just read.—SOLON ROBINSON—*Proceedings of Am. Inst. Farmers' Club.*

DRILL AND BROADCAST SOWING OF WHEAT.—In the Department of Agriculture Report for April and May, the two practices of sowing wheat are spoken of as follows:—

"There is a marked difference in loss by freezing between the drilled and broadcast sown. The cause of the injury varied in different localities; in many it was by upheaval, in others the roots were killed by exposure to intense cold without any protection, and in others by being covered with water, which froze so intensely as to destroy the roots of the wheat. The most marked difference in favour of drill sowing was in the first of these causes. But these returns so connect themselves with the information communicated by letter, that we reserve further comment until the next report.

Of this the Commissioner, in his introductory remarks, says:—"With the fact before him that drill-sown wheat is much less injured than broadcast, how can any farmer reconcile it with his interest to continue broadcast, because he may have good crops by that method when there is no freezing out?"—*Maine Farmer.*

Curing Corn Fodder.

A CORRESPONDENT of the Boston *Cultivator*, who claims to have had considerable and successful experience in the matter, gives the following directions for curing corn fodder:—

"All that is requisite in curing Indian corn is, simply to get the water out of the leaves and stalks. It is the water, or sap, that causes it to mould and spoil in the stalk or mow. The stalks need not pass through any fermentation, any more than clothes, after they are washed, in order to dry them. The stalks need simply to be dried. That is all that is necessary. Now, if one has an abundance of barn room, let the stalks be bound in small bundles and carried to the barn as soon as practicable after being cut, and let the bundles be set up, all about the barn. In a few weeks they will be so thoroughly cured that they will not spoil if put in a solid mow.

To cure fodder corn in the field, set the bundles in long shocks, so that the sun may shine in the former part of the day on the east side, and on the west side in the latter part of the day. When a storm is approaching set them round in stooks, and bind the tops neatly, with several bands, and cover them with hay caps. Should there be prospects of fair weather for a few days, set them again in long shocks for a day or two. In about a month or so, they will dry enough to be moved or stacked. If one has any caps, the stalks may be cured in the field with very little labour, and without any loss.

☞ To preserve meadows in their productiveness, it is necessary to harrow them every second autumn, amply top-dress and roll them.

NO WEEDS TO PULL.—Stir the ground often, and they will never get big enough to pull. A loose top-soil can be stirred up a half-dozen times with a hoe in the time required to go over it once in the pulling process.

STUBBLE GROUND.—To destroy the seeds of weeds, harrow all stubble ground as soon as the harvest has been secured, or pigs have eaten all the gleanings—the first rain will then cause all seed to germinate, and the next ploughing will turn under the green crop as manure.

COMPOST FOR LIGHT SOILS.—On light sandy soil that is liable to suffer from drought, a compost of half muck and half barn-yard manure can be applied to great advantage. Now is the time to throw up the muck while the swamps are dry. Thirty loads of such a compost per acre will greatly improve such land, rendering it more retentive of moisture and promoting a more vigorous growth of vegetables.—*Genesee Farmer.*

SHRINKAGE OF FORAGE PLANTS IN CURING.—John Wells, of Dorchester, a distinguished agricultural writer of his time, said the loss of weight in drying green herbage will be found to vary essentially as compared with that of Scotland. It should be premised, that the time of cutting the several grasses, &c., in the following statement, was that usually practised by husbandmen in this commonwealth. Of 100 lbs of forage plants cured in 1822, the product was as follows:—

100 lbs.	of green, white clover,	gave of hay,		17½	lbs.
100	" red clover,	"	"	27½	"
100	" herds' grass,	"	"	40	"
100	" fresh meadow,	"	"	38	"
100	" salt grass,	"	"	39	"
100	" mixed, 2nd crop of rowen,	"	"	18¾	"
100	" corn stalks,	"	"	25	"
100	" " " cut in milk with ear,			25	"

It should be observed, that the weight will vary, from ripeness and other causes, such as wetness of the season, shade, thickness of growth, kind of soil, &c. The above statement will be read with interest at this time.—*Boston Cultivator.*

RELATIVE VALUE OF MANURES.—A correspondent in the neighbourhood who has lately been experimenting for the purpose of testing the relative value of different manures writes that he has used inch bones along with good cow-dung on seven different sorts of potatoes; the same mixture on cabbage, turnips, and oats; and also applied guano and cow-dung, bone-meal and cow-dung and ashes to other lots of the previously mentioned crops. He expects to see the crop raised by the bonemeal and cow-dung far beyond those raised with the admixture of Peruvian guano. On the 22nd inst. he found, on measurement of the cabbages raised by means of the bonemeal and dung, the following sizes:—64, 61, 58, 55, 49, and 45 inches from point of one leaf to the other, since which time they have grown considerably. The potatoes raised by the same manure have the strongest shaws he has ever seen, and the oats are equally strong and healthy. Tares raised in the same way are valued by competent judges at £15 to £17 per acre, and our correspondent is sure that they will be worth, when cut, £5 to £6 more.—*Ayrshire Express.*