

AGRICULTURAL.

WHEAT.

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[We recommend to the attention of the practical farmer the following article, from "The Complete Farmer." The culture of winter wheat, if introduced into Nova Scotia, would lessen materially the hurry which now necessarily attends the Spring work.]

It is well known that our lands, where the soil is at all suitable, will produce good crops of wheat when first cleared from their native growth of wood; but after having been tilled for some years, they generally yield wheat with difficulty, and it is often impossible to raise it by any of the modes commonly adopted for wheat culture. In most parts of Massachusetts, and in some parts of New Hampshire and Vermont, the farmers scarcely ever attempt to raise wheat, and still more rarely succeed when they do attempt it. Yet, we believe, wheat was a common and profitable crop in those places in the early period of their settlement. In process of time, however, the land became exhausted of its wheat-bearing faculty, and our farmers were forced nearly to forego its cultivation. The same variations and appearances have likewise been observed in Europe. Wheat countries, by continued cultivation, have become almost incapable of yielding wheat. The cause and remedy of this partial barrenness, thus falling off, with regard to particular plants, was alike involved in obscurity, till modern discoveries in chemistry threw light on the subject. It has been found the texture of every soil is defective unless there is a mixture of three kinds of earth, viz., clay, sand, and lime; and that lime, in some of its combinations, exists in wheat, both in straw and kernel. In some soils, fertile in other respects, lime may either have no existence, or be found in very minute portions, and be exhausted. If lime be a necessary constituent of wheat, and is not in the soil where we attempt to raise wheat, it must be supplied by art, or wheat will not grow. Or if native lime exists in the soil in small quantities, the land may bear wheat till the lime is exhausted, and then become incapable of producing that plant, till a fresh supply of lime, marl, pulverized bones, or some other calcareous substance, is added. Mr Young says (Letters of Agricola, p. 299), 'It cannot be denied, that since the plentiful use of lime has been adopted, lands in Europe will produce wheat which otherwise were incapable of bearing it;' and quotes several instances in proof of this assertion. Dr Anderson likewise gives an account of a field which had a top-dressing of lime for the purpose of raising wheat, but the lime, by accident, was not applied to a small patch of the field, and in that patch there was no crop, while every part of the field to which the lime was applied produced wheat luxuriantly. It would be easy to adduce many more instances to prove that lime, in Great Britain, is considered not only useful, but indispensable for the production of wheat. A British farmer, we believe, rarely undertakes to raise wheat without the use of lime, and an American farmer as rarely undertakes to raise it with the use of that substance for manure.

If the foregoing premises are correct, it would seem not impossible, and indeed scarcely improbable, that by judicious use of lime, or other calcareous substances, wheat may be as well raised in New England as in the western states. The subject is certainly of very great importance, and deserves repeated experiments.

It will be objected against the use of lime, 1st, that it is too dear to be used for manure; and, 2dly, that our farmers do not know how

to apply it, and, as it is a powerful substance, it may do more harm than good, unless in the hand of a chemist, or one practically acquainted with its operation. With regard to the dearth of lime, we are informed that there is no want of limestone in almost every part of the United States; and probably, by proper search, many more limestone quarries might be discovered in New England than are at present known. And the price of lime would, doubtless, be diminished by increasing the demand, because if great quantities were wanted for agricultural purposes, a greater number of persons would find their account in making a business of manufacturing it; improvements would be introduced in the process connected with its manufacture, and of course it would be afforded cheaper. Besides, small quantities would alone be needed for the purpose of furnishing that calcareous matter which nature inclines to incorporate into the substance of wheat, clover &c., and probably a top-dressing of two or three bushels to an acre would be of essential benefit, doubtless more would generally be preferable. Mr Young says 'a small quantity of quicklime scattered on the surface of lands newly cleared will prove highly beneficial during the whole length of time they remain untilld. Thirty bushels of shells [lime fresh from the kiln] to the acre, slacked into a fine powder, will produce the most surprising effects, if not on the first crop of wheat, at all events, on the verdure, luxuriance, and quality of the future pasture.*' A writer in the *Museum Rusticum*, an English work, says, 'that he sows his wheat without laying on any manure, but, early in the spring, gives a top-dressing of twenty bushels of lime, pulverized, and mixed intimately with forty bushels of sand; and if the weather be dry, he doubles the quantity of sand.' We are disposed to believe that at least lime enough for light top-dressing might be easily procured by almost every cultivator in the Union. And such light dressings, if our theory is correct, would be all that is indispensable to the production of wheat.

With regard to the mode of applying lime, nothing can be more simple. It should be evenly spread, after being water slacked, on the surface of the soil, and not ploughed in, or if ploughed in, it should be with a very shallow furrow, because its tendency is to sink below the reach of cultivation. If used in a quick or burning state, it will be safest to mix it with about double the quantity of sand, loam, clay, or some other material may be made to correspond with the wants of the soil to which it is applied. Thus, if the soil has too much clay, mix sand with your lime; if to much sand, mix finely pulverized clay, &c.

It is said the British farmers apply lime in great quantities directly from the kiln in its most caustic state, even to land which is replete with putrescent or vegetable manure, and run the risk of consuming or wasting the manure by its corrosive qualities. But the soil of Great Britain is generally wetter than ours, and of course the lime soon becomes mild. Besides, there is a great difference in the strength of lime, and that the United States may be, generally speaking, stronger than the English lime. In short, we should advise every farmer to use quicklime as manure, in small quantities at first, mixed with a large proportion of earth, or some other substance, to dilute it, and thus take care not to burn his seed, his fingers or his growing vegetables. And with these precautions, we would make use of it for wheat as a top-dressing in spring. We would likewise try it mixed with wood ashes, together with earth; for we have been told by a practical farmer, that ashes, and lime

* Letters of Agricola, by John Young, Esq.

from a union much more valuable than either separate.

In an article on culture of winter wheat, by R. H. Gardener, Esq. of Gardiner, Maine, the writer observes, 'The cultivation of winter wheat is preferable to that of summer on a great variety of accounts. It is sown and the ground prepared in a season of much greater leisure. One of the great disadvantages of our northern climate is the extreme shortness of our spring, so that it is difficult for our farmers to complete the work which is absolutely necessary to be done, after the frost is out of the ground, and before the season of planting is over. If, therefore, any work, as the sowing of wheat, can be advantageously postponed till the autumn, it is of great importance. The winter wheat is less liable to injury from insects than the summer; mine has never suffered from them. It affords good fall feed, and the large quantity of roots and stubble to be ploughed in makes the land in a better state for the next crop. The grain is heavier, and the same number of pounds will yield a larger quantity of flour, and of a much superior quality. From my experience, I should recommend that winter wheat should not be sowed later than the middle of September, that the soil on which it is sowed should be of a light loam, and that about five pecks of seed be sown to the acre. I have also found the use of plaster on wheat advantageous, as also rolling the wheat, after it is well up.'

[The Essay on Wheat, will be concluded next week, with a chapter on Rust and Mildew.]

Too much pains cannot be taken to have root crops early cleared of weeds; a chief cause of failure is owing to a neglect of this care.

GOVERNORS' SALARIES.

THE following comparative view of irresponsible or monarchical government, with responsible or republican government, is given as a sample. The same or even greater difference would be found to obtain between them, in regard to all minor offices in the public service.—ED. BEE.

Governors of the U. States.

States.	Governors.	Salary
Maine,	Robert P. Dunlap,	\$1500
N. H.	Isaac Hill,	1000
Vt.	S. H. Jennison,	750
Mass.	Edward Everett,	3666
R. I.	John B. Francis,	400
Conn.	Henry W. Edwards,	1100
N. Y.	Wm. L. Marcy,	4000
N. J.	Peter D. Vroom,	2000
Penn.	Joseph Ritner,	4000
Del.	Chas. Polk, acting,	1333
Md.	James Thomas,	3500
Vir.	David Campbell,	3333
N. C.	David L. Swain,	2000
S. C.		3000
Geo.	John Schley,	3000
Ala.	C. C. Clay,	2000
Miss.		2000
Lou.	Edward D. White,	7500
Tenn.	Newton Cannon,	2000
Ken.	J. T. Morehead,	2000
Ohio.	Joseph Vance,	1200
Ind.	Noah Noble,	1000
Ill.	Joseph Duncan,	1000
Mo.	Daniel Dunklin,	1500

British Colonies.

Colonies.	Governors.	Sal. Sterling.
L. Canada,	Lord Gosford,	£10,000
U. Canada,	Sir F. B. Head,	5,000
N. Brunswick,	Sir J. Harvey,	3,000
N. Scotia,	Sir A. Campbell,	3,000