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#### Ploughing and Ploughing Matches.

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use in the spring, and the leaves are stripped off for pigs and dry stock all summer long, only a moderate tuft being left at the top of each. They grow rapidly; the yield of fodder is large, while in point of nutritive value it is highly esteemed. Roots occupy an important place in the agriculture of the Channel Islands, and it is hard to say which is most cultivated—parsnips, carrots, mangels, Swedes or turnips. Trenching is much practiced in preparing the soil for parsnips, but as it requires so much labor, and as this has of late to be better paid than formerly, the practice is falling somewhat into disuse and a less area of land is given to this crop. Ground that has once been trenched is of course free from stones, and may be worked cheaply and deeply with ordinary subsoil plows and deep tillage cultivators. When this is learned by the Jersey farmers, it may result in the raising again of more parsnips and carrots and less turnips.—*Cor. Country Gentleman.*

#### The Potato Crop.

The universally large crops of potatoes throughout the West, in the early part of the season, reduced prices in all the great centres of trade to such a degree that they were dull of sale even at nominal prices. It has already had the effect to cause such waste of the crop, that prices may next spring be fully adequate to warrant them shipment 200 or 300 miles. Of course early varieties, as Early Rose, will be unsaleable, but Peachblows will, we think, command fifty cents per bushel in Chicago.

The supply of early sorts, which only are raised in the vicinity of Chicago, and which until lately has fully supplied the demand, are so far exhausted as to command 40 cents per bushel now readily. The present heavy crop will pay a fair profit at 20 cents per bushel, thus leaving 20 cents for freight and commissions. They will probably go higher, and those farmers living out too distant should be prompt to take advantage of the rise, for early sorts are not sought in the spring, except during a dearth of late varieties. Certainly none should waste the late good varieties.

Whatever surplus there may be of early roots, they are worth saving for stock. For fattening hogs they are not available without cooking, and this but few feeders are prepared to do. When corn is plenty and cheap, as it is this year, it will not pay to cook potatoes for stock except perhaps as a change. But for all other farm stock, and for stock hogs, they are valuable fed raw in connection with dry food. Thus one-half bushel per day may be fed with profit to each milch cow, or fattening steer, and for sheep, especially ewes in milk, they are equally valuable.

As food for fowls of every kind, there is nothing better boiled and mixed with meal and fed wet. With a warm shelter and proper resting places, hens thus fed will lay during very cold weather. For fattening poultry they are also very valuable.

Thus there are a variety of ways in which this crop can be economically used. At all events the potato crop should not be wasted, especially marketable late varieties. They will be wanted before potatoes come again.—*W. Farm Journal.*

#### The Manurial Value of Leaves.

The following, republished by the *Country Gentleman*, from its columns of fifteen years back, is as good now as when it was first written:—

Leaf manure has long been held in high estimation by gardeners and floriculturists, as affording one of the best substances known as food for plants. Many, however, regard it as a purely vegetable substance, whereas it is rich in mineral matters, which have a direct and powerful tendency to improve the constitutional texture and character of any soil to which they may be applied. The alimentary substances which contribute to the maintenance and growth of vegetables are, for the most part, taken up in a state of solution by the roots. In this connection, all the mineral ingredients discovered in plants are introduced into the system—such, for instance, as silicic acid, lime, potassa, magnesia, alumina, &c. The sap, which is the medium of this transmission and assimilation, passes into the leaf, where the watery particles are thrown out by evaporation through the minute spiracles on the upper surface of the leaf, and the mineral matters retained and distributed through the plant, and in part through the vascular structure of the leaf itself.

To illustrate more fully the truth of the position assumed, we present the following analysis of the leaves of the pear tree, plucked in May, immediately after the falling of the blossoms:

Carbonic acid, 11,560; silicic acid, 1,750; phosphates, 25,000; lime, 4,715; magnesia, 4,500; potash, 18,950; soda, 15,190; sulphuric acid, chlorine and organic acid, not determined; total, 81,715.

By comparing the results of the analysis of the same tree made in the spring and fall, it will be found that the older the leaf is, the greater will be the amount of mineral matter contained in it. It will also be found that the foliage of trees contain more mineral matter than the solid wood of the trunk.

In the matured foliage of the elm (*Ulmus Americana*), upwards of 11 per cent. of earthy matter—ashes—may be found, while the solid wood contains less than 2 per cent.; the leaves of the willow more than 8 per cent., while the wood has only 0.44; those of the beech, 6.67, the wood only 0.25; those of the European oak, 4.06, the wood only 1.22; those of the pitch pine, 3.13, the wood only 0.27.

These facts demonstrate conclusively that the application of leaves as manure must be succeeded by advantageous results. Every leaf applied in this way restores to the soil something of which it has, in the process of vegetation, been deprived. In this way the mineral ingredients of the soil are forced through a certain routine, and a constant circulation or reciprocity of action, is kept up between the soil and the vegetable beings it supports and perfects.

Entering the sap in solution through the mouths or spangoles of the terminal rootlets, they circulate through the system, and are ultimately deposited in the substance of the leaf, which in due course of time falls to the earth, and by its decay, restores them once more to the soil, and in a condition the more favorable for again traveling the circuit in which they are destined endlessly to revolve.

The soils of our forests, it is well known, never run out, or are so far depreciated as not to be able to supply abundant aliment to the gigantic vegetation they are found to support. The reason of this is obvious. They annually receive back the greatest portion of the mineral constituents of the trees, together with no inconsiderable quantity of organized matter, derived from the atmosphere.

Were the leaves to be removed every autumn from the forest lands, the same as grain, grass and root crops are removed from the arable soils, the impoverishment consequent upon such a course would be no less obvious in the one case than the other; they would "run out"—the vegetation would be weak and sickly, and to support it we should be under the necessity of applying, annually, large and increasing quantities of manure.

Leaves unquestionably afford a rich material for manure, and no farmer who has a wood lot in the vicinity of his farm should neglect to accumulate large quantities, to be used as a litter for his animals during the winter, or as a crating for his yards and other enclosures where animals are confined, and where the leaves will be in a situation readily to absorb the liquid voidings, and thus be reduced more speedily to the condition of ailment for growing crops. No compost heap should be formed without them, where they can be obtained, and compost made exclusively of them and other decomposable matters, will be found not only an economical, but efficient aid of fertility on any and every soil.

#### Fall Treatment of Grass Lands.

The prevailing practice is to pasture meadows in the fall, and never top dress with any material whatever. Stock is turned in to eat off the protection which the plants unaided would supply. If this cropping is continued late, as it generally is, the field is left bare, with exposed roots, when winter sets in, and the following spring the owner wonders why his grass has frozen out so badly. On wet meadows the trampling of stock has a most injurious effect, and they always select the best of the grass, leaving the worthless wild species to flourish and obtain the mastery.

It must be remembered that the whole process of raising hay is an unnatural one. When nature manages a grass crop without interference, re-seeding goes on every year, and young, fresh, vigorous plants are coming forward constantly to replace those that have fulfilled their mission. There is a constant growth, shading the ground and

protecting the roots from summer's drouth, and, falling down in the fall, furnishes a protecting blanket during the winter, and a rich top dressing in the spring. We cannot hope to work successfully against nature in any undertaking, and hence the man who never returns to his grass lands an equivalent for what is removed, and who annually crops his meadows early and late, finds them "run out" in a short time, and he is compelled to renew them at the expense of very much more time and labor than would be necessary to preserve them. The practice of one of our successful farmers will commend itself to every one. He top dresses every year liberally, and then feeds in the fall, according to circumstances—if the aftermath is light, he does not turn it in at all; if very heavy and likely to impede the growth of the succeeding crop, he pastures it to a corresponding extent. In regard to the material to be used in top dressing, more will be said at another time. Any fine fertilizer—barn-yard or road scrapings, lime, ashes, compost, plaster, etc.—which you have on hand, or can be obtained readily, should be applied without hesitation or unnecessary delay.—*Ohio Farmer.*

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