

Notes of the Garden and Farm.

ORIGINAL AND SELECTED.

MULCHING.—The past winter has removed every doubt, if any such had still existed, of the necessity of mulching in the fall all lately planted trees. Wherever this most important work was neglected, the trees have invariably perished. We have ourselves experienced the advantages of mulching. The mulching we have used for some years for fruit trees and all trees not more than a year planted, we can recommend to others. It has never failed us. Cover the surface round each tree with a sod, the grass turned under. In the fall we invariably pursue this method. In the fall of 1874, we mulched fruit and shade trees of twenty different varieties, and now, after the winter, one of continuous severity for an unusually long period, not one tree has been frost-killed, or frost-injured. The mulching I fork into the ground in the spring. Strawberries covered with leaves of trees have come out all right.

ZIZANIA AQUATICA, known in this country as Canada Rice, is coming into use for the making of paper. It grows in vast quantities on the shores of Lakes Erie, Ontario, St. Clair and others. From the great quantity grown on Rice Lake the lake has got its name. It is said that a supply of 100,000 tons annually can be obtained from these sources. The grain is largely used for food by the Indians, and in flavor is superior to most other cereals. It grows in shallow streams, swamps and ponds, where it attains a height of 7 to 8, and even sometimes of 12 to 14 feet.

THE Mark Lane Express speaks in this wise of farm-yard manure:—"Year by year we are more than ever convinced of the superiority of farm-yard dung to any other manure for grass land. Guano, bone-dust, nitrate of soda and other similar fertilizers sometimes produce very valuable results, but they also often fail in consequence either of unfavorable weather after they have been sown, or from their not being adapted to the soil, or from some other circumstances, whilst on the other hand we never knew an instance where the first named had not a perceptibly good effect. We wish more care were taken with the manure heap."

A GOOD YIELD OF OATS.—The harvest of 1874 was noted for the large yield of oats, in the north of Britain especially. Its average weight was 41 to 43 pounds per bushel. One of the best returns of which we heard was 11 quarters, 6 bushels, the produce of an acre and a half (Scotch m.) and this though the crop, before being cut, appeared to contain a large portion of green stalks.

THE TOAD.—The *American Garden*, or its editor, at least, has a lingering fondness for the toad, and this is the way he talks about him: "The toad—almost universally despised and upbraided for his ugliness—is, yet, a useful, good-natured, quiet fellow, who recognizes his friends and those who are kind to him. We have some half dozen of them in our small garden, and among them one old patriarch who, when we are digging or hoeing, will sit winking and blinking at us with his pretty eyes, and often compel us to lift or drive him aside to get him out of harm's way. He will stay by us for hours, evidently feeling that he need fear no hurt. Like the sparrow, the toad has been considered a nuisance, and in some sections exterminated; but the exterminators have been only too glad, afterwards, to get him back by the expenditure of large sums of money. So useful are toads in gardens that they are sold in France by the dozen, for the purpose of stocking gardens to free them from many injurious insects. The toad lives almost entirely on winged insects, and never does harm to the plant."

CLOVER TURNED UNDER.—Mr. J. Gregory, a few years ago, moved from Tennessee and bought a plantation in Murray county, Georgia. The land at the time he purchased it, with a good season, would produce ten bushels of wheat per acre. In October Mr. Gregory sowed broadcast fifteen acres of white Boughton wheat, one bushel to the acre, and in February following he sowed the same ground in red clover, sowing broadcast in two ways, one bushel to eight acres. He harvested ten bushels of wheat per acre, and cut a fine crop of hay the same season. The next year he mowed two crops of good clover hay, averaging two tons per acre.

The third crop grew up from four to eight inches high, and in October he plowed the clover under, plowing deep and subsoiling; sowed one bushel of white Boughton wheat per acre. The result was an average of thirty and one-half bushels of choice wheat per acre. Thus, you will see, that the only manure used to improve the land and get thirty and one-half bushels of wheat where he could only raise ten, was to plow under deep a good crop of clover and subsoil. *Rural Southland.*

DAIRY PRODUCTS FOR NEW YORK.—From an article on the subject, in the *Tribune*, we learn that during the season the New York and Oswego Railroad ran one train per week loaded with butter and cheese, besides a few cars, daily on other trains; 300,000 pounds of cheese and 200,000 pounds of butter were the load on that train. About 150,000 pounds of butter were daily received from Chicago and the far west, by way of the Pittsburgh and Western Railway refrigerator cars. By way of the Erie Railway, forty cheese cars and seven to ten butter cars were received daily, carrying about 1,000,000 pounds of cheese and 200,000 pounds of butter. The Delaware, Lackawanna and Western Railroad brought in daily about 15,000 pounds of butter from Sussex County, N. J. Nearly all that came by the three first mentioned routes was consigned to wholesale and commission dealers, while that from New Jersey, and large quantities from Northern New York and the priver counties, went, much of it, into the hands of small traders and retailers. It was found impossible to ascertain, even approximately, the amount of butter and cheese that went directly to consumers or to the small retailers. Large quantities are sold in New York for export, but where it all comes from was not ascertained. None of the butter exported was "extra," the consumptive demand of the city absorbing all the extra butter received. *Country Gentleman.*

Agricultural.

Farming in Wales—A Good Example.

From the *Mark Lane Express* we copy the following sketch of the farm of Major Hughes, of Ystrad, Wales, who was awarded the silver medal offered by the Agricultural Society.

"The farm of Major Hughes, of Ystrad, is fast becoming a model farm, and after a more practical manner than attaches to most of those which go by this name. There is some extra expense incurred for appearance sake in the buildings near the hall, but the profit and loss sheet is evidently kept well under eye. The farm is a light dry soil, and consists of 343 acres, divided into thirteen fields, 88 acres were in wheat, 33 oats, 25 turnips, 12 mangold wurzel, 2 cabbages, 30 mowing, 95 clover, and 40 grass, pastured with cattle and sheep. All the crops were remarkably good except the turnips, which had utterly failed through the dry weather, but had been re-sown and were now making a fair start. The stock consisted of 9 farm horses, 24 dairy cows, 40 heifers and bullocks, and 24 calves. The milk of the cows is churned by steam power and made into butter, and from 24 to 30 calves are annually reared on the farm. The sheep flock consists of 250 breeding ewes, supplemented by about 200 wethers, bought in the autumn and sold out in the following spring, 6 breeding sows and about 30 store pigs. House feeding is largely followed with the horned stock. All clover and vetches used green are passed through the chaff-cutter and mixed with brewer's grains, bean meal, oilcake, &c. No hay or straw sold. This system yields a large quantity of manure, and places it where it can be most economically and advantageously dealt with. All the field labor, both team work and manual, is done by the piece, and a bonus is given for success in rearing lambs, poultry, &c. This system is worthy of more thought from farmers than it yet obtains. Wherever it can be applied it must be the fairest way of rewarding skill and industry in the laborer, and of stimulating and sustaining him in his efforts to rise both socially and morally, and by adopting it the farmer must get equal value in labor for his wages; and have his work done more quickly and equally well with proper supervision. Major Hughes says the plan works admirably, but he combines the practical with the theoretical on his farm more than most men, and carries out his plans with all the system and discipline of a soldier. His farming must have a beneficial influence in the neighborhood, in showing both what can be done and how to do it."

Beet Root Sugar Culture.

Our correspondent who asks us to give in the *FARMER'S ADVOCATE* some information respecting the sugar beet and beet root sugar, will see in the following extract a succinct article on the subject. The sugar, even for stock feeding, is a most profitable crop. It is not exhaustive, as it absorbs a portion of its nourishment from the atmosphere with its broad and very porous leaves, and does not feed, unless when quite young, on the rich surface soil, but sends its long tap roots down to a good depth for its mineral food.

The seed, after being soaked in water, is planted by hand or machine, using from 15 pounds to 17 pounds per acre. If planted by hand, the seeds are placed 14 inches apart, and if by machine, 8 inches apart, in rows 20 inches apart. In the latter case 28,500 to 30,000 plants could be raised to the acre. A large space around each plant favors the development of the roots, and is not desirable, for large beets are watery. As soon as the roots have attained a length of from three to four inches, the process of thinning out commences. The soil around the young plant is frequently loosened and the roots kept carefully covered, until the leaves have acquired their proper development in June. There are three distinct periods in the growth of the beet, viz.: the development of the leaves, which closes usually in the first half of June; the formation of the roots, which is accomplished by the middle of September or first part of October; and the production of the seeds, which takes place in the second year. When the outer leaves turn yellow and dry, which in different seasons and localities may vary from the early part of September to the first of October, the harvesting of the sugar beet root commences. The amount of sugar in the sugar beet is largest when the root has just attained its ripeness, as subsequently it diminishes gradually, in consequence of advancing growth. The manufacture of sugar begins usually in the latter part of September, and the beet roots are carried daily from the fields in such quantities as the factory can dispose of. As soon as frost becomes imminent, all the roots are gathered. After the removal of the leaves they are buried in pits without loss of time.

We now come to the question of profits. From Great Britain only an isolated case is furnished. A beet root sugar manufacturer started a factory at a cost of £10,845. The total expenses per annum were estimated at £13,980; the receipts, £20,480. The profits had, at the time of publication, been £6,490, or 27.75 per cent. on the first outlay; 6.5 per cent. of crystallized sugar had been the result; had it been 8 per cent. of sugar, the profit would have been 48 per cent. This is a proof of success. In Germany they get 8 per cent. of crystallized sugar, or 1,520 to 2,270 pounds of sugar per acre. The expense is from \$132 to \$133, of which the Government takes, in the form of taxes, \$45 to \$46. In France the average expense per acre is \$161 to \$162, of which the Government draws for taxes, \$50 to \$75. The leaves are used for fodder and manure. For the former they are salted down in pits, as in their fresh state they can be fed in small quantities only. The value of this preserved leaf mass per acre is estimated at \$6.35, with hay at 100 pounds to the dollar.

From experience in France and Germany, it appears that by proper rotation of crops sugar can be raised on the same lands continuously without reducing their value, and also that the introduction of their culture has acted beneficially upon farming generally. The following may be reckoned the value of the various products of an acre of sugar beets: Sugar, 1,500 lbs., at 7c., \$10.50; molasses, \$2.90; press cakes, \$13.60; preserved leaf mass, \$6.30; manure (about two tons), \$3.50. Every cent of increase in the price of sugar would be equal to \$15 additional profit per acre, and every half per cent. increase in the crystallized sugar from every 100 pounds of beet root worked, would add 115 pounds of sugar to the yield, or \$8 additional profit per acre. *Condensed from The Grocer.*

The Best Soil for Potatoes.

Years ago, when the old-fashioned Mercer or Neshamock was the leading market potato, farmers learned that this variety did best on sandy or light gravelly soils. From this fact originated the idea that sand was adapted to potatoes, and the theory was not dispelled when the Peachblow superseded the Mercer. For years the great bulk of potatoes for market was grown on sandy soil. Many city people would not buy potatoes on heavy soil, and I have known farmers on such land to

not grow enough of potatoes in within two or three potatoes, equal or have been produced about the superior were I buying from rather a heavy or artificially dra taste is not a men on substantial re

It is a curious most largely grow the best yield on true of the Pearl watery, while it moderately rich cannot well be to Late Rose, or Pe Peachblows are a be wet. If my Peerless on sand cause? May it ments, especially are apt to be def considerably "r and this inferior due to the absen like a careful ches of potatoes roots are deficien rot has been arro lime of potash o another form.

If these theor tato rot be corre it by increasing ures and decre Fermenting stal lent growth, esp and if there be the quality and Those varieties ble to injury tha not suppose tha potash or lime t Peerless. The sult quite as mu ricty, and differ different soils. or has that any varieties to soil queries suggest fitable experime

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Among the puzzled the he when man was the sweat of his be a few ques settled, so that "Deep or shall on the surface milk or cream and wet or dry curing it fast o seem, ought t settled; but th affected so mu with them tha rules can ever them. One o potatoes whole to select from for the next and smoothest into pieces co planted in drill to fifteen inch is the Early R year for trial of late varieties success, but v have a large small piece w nish abundan starts, and it the small seed little strength towards matu to feed from t it. If the va stance would late potatoes form new pot time to gain form, while, "now or neve