AGRICULTURAL.

RECLAIMING WET LANDS.

We have more than once advanced the opinion that most people were altogether too shy of wet lands, as we find them in the unsubdued districts of Iowa. Some of these lands have been persistently neglected and shunned, but a few years hence they will prove to be among the most valuable possessions in the State.

The proprietor of Tiptree Hall farm, Mr. Mechi, has succeeded in subduing what in England is termed "bog land," and a recent writer in an English paper says:

It was a treat to go over the farm and hear what we may well call "the old man eloquent" expatiate upon the conditions under which he contrived to make a barren waste to "bloom and blossom as the rose." No merely figurative words are being used when we say this—they are sober truths, as a portion of the unreclaimed common at the other side of the hedges of one or two of the fields will show. From a swamp, over which snipe were wont to flutter and be brought down by the gun of the now owner some thirty years ago, an ornamental water has been formed, upon which a pleasure boat can row, where pike and roach and tench breed, and trout might have been kept but for that "fresh water snake," with the long nose, mentioned first. The draining of this bog relieved the adjoining farmers of their surplus water; it enabled Mr. Mechi, while doing a good turn for himself, to confer benefits upon others. Those who had too much water upon farms about him got rid of it; those who had too little in farms lying below Tiptree Hall have greatly expressed their thanks for the surplus water his capital intelligently applied, distributed to them in dry seasons Tiptree Hall, where only a century ago furze and neather and wee ls grew in no stinted way, is now surrounded by fine trees and shrubs of marvelous growth. It is as sheltered a nook as the most retired country gentleman could desire to occupy, and yet these umbrageous stems have been planted since the time the owner attained middle age. This shows what energy, along with money, can accomplish in a short space of time. Mr. Mechi attributes this speedy development to deep cultivation, and to the manner in which he applied the manure to the roots of the trees. He shows, with justifiable pride, in his green house, a camelia of beautiful growth, whose bearing powers are as great as its dimensions, and he ascribes the merits of the plant entirely to the fact that he had taken care to see that the liquid manure applied had penetrated to the roots. Surface operations are not, in Mr. Mechi's opinion, of any account. The expenses of such applications are great, but the returns altogether unsatisfactory. More than eighteen centuries ago, a notion similar to that which Mr. Mechi now holds, was expressed. The roots of the tree must be cared for if the branches are to flourish.

To come more particularly to the farm, we must say that the cropping is as judiciously distributed and grown as skill combined with capital can make it. With the penetration, which has all along distinguished Mr. Mechi in his agricultural operations, he resolved to effectually drain the land he had acquired; and it was his wish that the farm should, if possible, possess the material advantage of a constant and unfailing supply of water. The system of irrigation, introduced into Tiptree, is very effectve. Numerous hydrants are distributed over the farm, each of which irrigates eleven acres, and with the success that was the reward only of unceasing and expensive perseverance, Mr. Mechi has managed to extract from a cold marsh a stream of translucent water, whic hat present gives him a supply of no less than twenty-five gallons per minute. The field upon which this exceptional and valuable adjunct to the farm was discovered, was formerly bog land composed of twenty varieties of soil; at the present time it is bearing a very good crop of wheat. Mr. Mechi states that his mode of cropping is invariably to take barley after wheat. Last year, the average of barley was about six quarters per acre, and of wheat the product—in the previous year, a bad one—averaged five quarters per acre. The sheep are ultimately folded, after the wheat stubble, with Indian corn and cake, but if this is not done, home-made manure is put upon the land. Instead of taking barley after wheat on the clover hay, red wheat is taken after white wheat, because, as Mr. Mechi rightly surmises, "it would not do to take the same sort of wheat twice." In exceptionally favored years the yield per acre amounts to as much as seven or eight quarters- a clear proof, Mr. Mechi thinks, of the advantages of thin sowing and liberality in the use of manural substances. Rye grass is then sown in the barley, and after two years gives way to peas, which are sown very early in the spring. Peas are followed, in the same year by the ordinary white turnips, fed often with sheep on corn and cake. In December wheat is again sown. Once in eight years Mr. Mechi takes red clover. In order to save as much time as possible—and it can easily be imagined that a fortnight will be of infinite value to the owner of Tiptree—the haulms of the peas are taken off the land to the cattle yards. While the land is being cleaned, therefore, the pea haulms thus undergo a process of hardening in the yards which enhances their value, and enables the land to be cleaned for the next crop. This year the crop of blue peas has realized Mr. Mechi £26 an acre net, the haulms going back to the land.

Subsoiling has been one of the great advantages which, Mr. Mechi contends, Tiptree received. Most farmers believed it impossible to extract any valuable ingredient from the under soil of a plastic clay such as Mr. Mechi's is; but they would, we imagine, be forced to admit that the subsoiler has effected an incalculable benefit to the poor land constituting this wonderful farm. The pan Mr. Mechi said, was hard and bare: "I broke up the gravel stuff and the hard pan, and the consequence was that things don't dry up and burn as they used to do. With drainage," the hospitable Tiptree farmer added, "the basis of my success has been the depth of cultivation." The subsoil plow in use is simply an ordinary iron implement without the moal board. The land is first ploughed with two horses, and two and sometimes four animals following in the track of the first plough, draw the subsoiler. —*I. Homestead.*

ONIONS FROM SEED.

To grow a good crop of onions from seed requires considerable care. The seed must be got in early, so that it can have the benefit of the cool, wet weather of Spring. The soil must be rich, clean and in good condition every way. The onion makes its growth early, before hot weather, and in this section if the buds are not well formed and the crops are not pretty well secured by the middle of July, it may be considered a failure. This shows the necessity of early planting, and a rich soil that will induce growth. The kind usually grown in this country for a general crop are the large red, a large, flat, dullish red onion bulbing well and producing a good crop, thought to be a little coarse, but a very good onion, and a few years ago about the only kind grown in this section. The large yellow, very much like the large red except in color. It was formerly called yellow Dutch. The Wethersfield red has somewhat superseded the large red. It is bright in color some earlier, and every way a good sort. The Danvers yellow is an excellent onion, smooth, pretty early, and growing bulbs readily. A white, foreign onion, white Portugal, is now somewhat extensively grown on account of its color. It does not usually bulb so readily as the others, though we have seen excellent crops under favourable circumstances. It has always been considered next to impossible to grow onions from seed in the South, the hot weather checking their growth before bulbs are formed. The usual method in the South is to grow from bulbs.

JUNE GRASS AND BLUE GRASS.

Some writers in the agricultural journals have been discussing the question of the identity of these two somewhat similar grasses. That they differ, is certain; and this difference is important practical, however slight it may be theorteically. Blue grass starts earlier in the spring than June grass does, starts more vigorously, yields more feed in a season for pasturage, and continues its growth much later. And for hay, it yields a larger and better crop. Moreover, it stands drouth better.

Aside from the difference in stem and seed stalk, and the difference in bulb and tuber, the Kentucky blue grass has a faculty of spreading by its roots, to the crowding out of all other grasses, not even excepting fine grass and quack. And, like white clover, it also has the peculiarity of coming in where it has never been sown. On the Western prairies, where the foot of man and his domesticated beast tread, little patches of green mats of blue grass mark bright spots of a peculiar green that one's eye may detect as far off as he would recognize a familiar friend; and that spot will spread and crowd out prairie grass and weeds, and other green spots will rise, far and near, to cheer and keep it company. Other grasses—even quack and June grass—don't do this.

But blue grass is significant in its name. The stalk near the base has a hue corresponding to this name, not found in the June or quack. On my own premises, within the same square foot, I have dug as intruding weeds, the past season, unmistakable quack grass, genuine June grass and veritable Kentucky blue grass, and no observing eye could be at a loss to discern the difference and recognize each and all. The June grass and quack were old settlers; but the blue grass has never been sown or cultivated in the region, and is a new comer with me, without visible cause for its appearing, as it is found introducing itself into the West.

I would like to hear from *Rural* readers elsewhere on this unsown and unknown appearance of so welcome a stranger. Facts and not the theory that inaugurates it, are what is called for.

My soil is a shale or slaty clay—quite dissimilar to that of its native Kentucky or its adopted prairie aliment; and its peculiarities of early and late verdure and unrivalled richness for pasturage, and its driving out capacity over all inferior grasses, cannot fail to win for it the desire of dairymen and herdsmen to make its better acquaintance,—*Rural New Yorker.*

TWENTY YEARS' EXPERIENCE IN GROWING RED CLOVER AS A FORAGE AND RENOVATING CROP.

By Hon A. A. Boyce, Loda, Wis.,

For the last fifty years writers of agriculture, both in Europe and America, have given to red clover great prominence among farm crops, and within that time it has steadily increased in favor with the farmers of the United States. My experience with it, confirms me in the belief that red clover is the cheapest and best manure that we can apply to our lands—"the one thing needful" to restore the exhausted fertility of the grain fields of Wisconsin, and to those who intelligently cultivate and manage it, it will prove a mine of wealth.

Our yield of grain, the supplies of meat, wool, and dairy products, will depend largely on the clover plant and the place we give it among our crops.

The Hon. George Geddes, says:

"There are two well defined and distiuct varieties of red clover. The large clover is of slower growth. It does not start so soon in the spring. It has coarser stalks and fewer leaves than the small variety. It seldom produces two full crops in a season; that is a hay followed by a seed crop. This variety is preferred by many for pastures and manure. For a mixture of clover and timothy for meadows is preferable to the small variety, as it matures with the timothy.

The small variety of red clover commences its growth early in the spring; starts into growth so ner after being fed off or being cut for hay. It has finer stalks with more branches and more leaves than the large kind. It blossoms nearly two weeks earlier, and when sown makes better hay than the large clover. It can be cut for hay by the middle of June, and after that mature a full seed crop the same season.

Quantity of Seed

The quantity of clover seed required to seed an acre depends much on the quality of seed and the time of sowing, but more on the condition of the soil as to fineness or mellowness so as to secure proper covering of the seed and perfect germination. The best results on my farm have followed sowing eight pounds of seed per acre; but thicker seeding is generally recommended and is advisable unless all the attending circumstances are favourable for perfect germination of the seed, and the protection of the young plants.

For several years I have practice l seeding with clover, nearly all the ground sown with wheat, oats and barley. I think it holds both the weeds and the chinch bugs in check, besides furnishing a large amount of cheap manure, even though it be ploughed under the following fall.

Value for Pasture.

The value of red clover for pastures is well understood. The only objection to it is that it occasionally produces hoven in cattle when turned on the fresh clover. To prevent or lessen the danger from hoven, the clover should be free from dew or wet when the cattle are first turned to pasture. Cattle should not be turned with empty stomachs. They should not be salted within a day previously to being turned in the first time. They should be gradually accustomed to the change of feed by keeping them in only a few minutes the first time, a little longer the next time, and so on till they are accustomed to the change. After that they may be allowed to remain in. I do not consider it safe at any time to turn cattle with empty stomachs on to fresh clover.

I know no other forage plant equal to red clover in nutritive qualities. The cheapest pork I ever made was from a lot of late fall pigs kept in thriving condition, and turned on the clover in the spring, pastured on clover entirely during the summer, fed corn a few weeks in the fall, and sold when about a year old. The cost of the pork was about three and one half cents per pound, calling the corn fed to the pigs worth forty cents per bushel.

Value of Clover Hay.

Writers on agricultural chemestry and the best practical farmers agree as to the superiority of the red clover hay, in nutritive qualities, over timothy or meadow hay. In most of the statements made they say that 75 pounds of red clover hay is equal in nutritive qualities to 100 pounds of meadow hay. These statements are disbelieved, especially by those who regard clover hay as a "humbug," and fit only for manure. But science and practical experiments in feeding have proved their truth.

Even greater difference in favor of the manure from clover hay over that made from timothy is given as the results of practical tests.

Joseph Harris, in one of his statements of the relative valle of different manures says: "The manure made from a ton of clover hay was worth $9.64; the manure made from a ton of timothy hay was worth $6.43; and the manure made from a ton of corn was worth $6,65."

Clover as a Renovating Crop.

The very great value of red clover asa renovating crop is admitted by all who have tried it. The system of rotation in crops that I have adopted with the view of increasing the fertility of the land, is to have the land in clover one year in three; follow the clover with corn, applying nearly all the manure made to the corn crop; follow the corn with spring grain and seed with clover; sometimes varying with two crops of small grain, wheat oats or barley after a clover crop.

When a crop of clover *seed* has been taken off with this system I think the land grows richer and the weeds are held in check by the frequent use of the cultivator and mowing machine.

HOW MANURES WERE COMPOSTED THIRTY YEARS AGO.

We are not too old to learn yet, and may ask some foolish questions, but perhaps our good friend J. M. Smith will excuse us if we do. I see he answers questions understandingly, and I do not believe it will be a very easy matter to swamp him by any questions we may ask.

I would like to tell how we used to make manure 28 years ago in the vicinity of Waltham, Mass., on a milk farm where there were kept 25 to 30 cows, 1 yoke of oxen 3 horses and from 4 to 6 of the best breed of pigs that could be found. Although we had no Poland-Chinas then, I think we had other breeds nearly as good. I will here say that farmers then, even in those days had farm buildings constructed for the purpose of making and saving all the manure possible. By the way, no man then was thought to be a farmer unless he had all the fixtures necessary to work the farm as to make farming pay.

Great quantities of muck were dug in the fall so as to be got at and hauled to the stables and yards in the winter months and mix with the manure. At the stables, yards and pens the manure that had accumulated through the summer and fall was all forked over and hauled out to the fields where wanted, and placed in large piles and heaps for use in the spring. The grounds under the stables and the yards were then covered from one foot to two feet in depth with muck so as to absorb all the manures from the stables.

The cow yard was made lowest in the middle so that all accumulations should be saved. The cows were stabled and fed in the summer seasons, that nothing in the way of manure should be lost. The profits from the pigs I should not dare here to estimate. They were kept in the cellar under the horse stable, fed regularly with two quarts of corn meal each per day and a pail of water. They were fit for the butcher at any time, and would weigh from 350 to 400 lbs. each at one year old, and then, what piles of manure were taken from the cellar, and that, too, of the best quality.

The question may be asked to what crops was the manure applied? It was applied to the corn ground, spread and plowed in. It was applied to the root crops, of which large quantities were grown. It was applied to grass grounds which in those days would produce from three to four tons of hay to the acre. It was applied to the orchard, seeded to clover, and that orchard of less than fifty trees would produce over 400 barrels of Baldwins and Greening apples that sold at that day in Boston market for $1.00 per barrel. I will here state that no manure was allowed to be spread, or used upon the grounds or crops of that farm unless first composted with muck.

Large quantities of stable manures were yearly bought at the city stables at from $4 to $8 per cord and hauled to the farm and thrown upon the compost heap. The large Pennsylvania market waggon was not allowed to return home from the market empty.

I will here state that the receipts of that farm of 100 acres would foot up at $5,000 yearly, of which amount the milk from 25 cows sold for $2,000 at 6 cents per quart.

Now I have watched the farming operations of Ogden Farm, the Walks and Talks in the American Agriculturist, and the farming operations of John Johnstone, and some of the