

Rural Economy.

GRAIN FARMING IN EASTERN PENNSYLVANIA. III.

Almost every State has its distinct phases of agriculture, occasioned by its soil and climate, or by its first settlers. Grain growing, which is the leading business in the husbandry of the best portions of Eastern Pennsylvania and New Jersey, is secured by the peculiarities of the soil mainly. The soil which is under the plow is easily tilled, and comparatively free from boulders or large stones. There is nothing to interfere with the plow, the harrow, or the cultivator. For the most part, corn is not touched with the hand-hoe after planting, and even the planting is often done by the drill. Lime is almost everywhere cheap, and with the small quantities of manure made, serves to keep up the fertility of the land with very moderate applications. The farms underlaid with limestone are said to be subject to drought in summer, making them unreliable for pasture. Rye or wheat, oats and corn, are easily raised, and probably pay better than dairy farming. They take less capital, involve less labor, and require less skill. The rotation, corn on a limed soil, oats or a summer fallow, manure, and winter grain, either rye or wheat, clover, and timothy are common, making a five or six years' course. There is a uniformity in following this course, without much regard to the nationality of the original settlers.

We come upon the characteristic PENNSYLVANIA BARN, long before we enter the State at Easton, travelling by the Morris and Essex railroad. It is planted if possible, upon a side hill, and has one or two stories below the barn floor, where the hay and grain are delivered. The best model has stone gables, and the walls of the lower stories are of stone or brick, laid in mortar, and made rat proof. The entrance to the main floor is directly from the ground on the upper side, or by a broad drive-way of gentle ascent where this is necessary. It is of large capacity, frequently 50 by 100 feet, and will hold several hundred tons of hay and grain. There are deep bays on either side of the floor for hay, and immediately beneath the floor is the granary into which the wheat, oats, and rye are received, when they are threshed. The threshing and cutting of straw, corn fodder, and hay, is all done by horse power. The cut feed is conveyed by a shoot to the stables in the basement, where it is mixed with meal, and fed to the animals. The whole basement is occupied with stalls for cattle and horses. There is a large cistern in the side hill, catching all the water from the barn, and furnishing an abundant supply for the stock. A pipe brings the water from the cistern, immediately in front of the feeding stalls, so that little time is lost in watering. Sometimes a neighboring spring, instead of a cistern, furnishes the water. There is one grand defect in this style of barn—the want of some means near the stalls for the preservation and composting of manures, and with this supplied, we do not know that it could be changed for the better. Manures are not prized so highly as they are further East, and for this perhaps the time is at fault. It is a great labor to clean out the stables in this kind of barn. The manure is carried out by wheel-barrow or other contrivance, and deposited in the open yard, where, mixed with straw, it lies exposed till the annual clearing out comes in August or September, for the oat stubble or summer fallow. A barn cellar underneath the stables would save largely in labor, and in the value of manure. We think, on many of these farms, from two to five hundred dollars are lost every year for want of a cellar. Pork raising is quite an important item in the business of the grain farmer. The pigs are sometimes fed in clover through the summer, but quite as frequently run at large, and the manure is wasted. They are generally fed upon raw corn, and in large inclosures when shut up for fattening. We did not find the small pen well filled with muck or loam, upon which the eastern farmer relies for several cords of his best manure. We believe it pays to have swine sheltered, and to feed with ground and cooked food.

MUTTON AND WOOL.

When the whole community of sheep raisers is running wild, almost, after fine-wool sheep, it may seem strange to some that we should continually advocate mutton breeds. Perhaps it would not be so if these were the favorites of the speculative class of breeders. We can, and do, raise as good mutton in this country as they do in England, but our people are not such mutton-eaters, and, though mutton raising pays quite as well, in fact better usually, than beef-raising, yet our market is not a discriminating one, and the most profitable sheep to buy and fatten are fine-wools, if bought with judicious care. There is always a sale for South-down and Cotswold mutton, and the difference in price is not what it ought to be, though remunerative. Of late there has been a remarkable change in the value of the combing wools. They have increased in price, while fine wools rule scarcely any higher than in specie times, and, were the quotations reduced to the gold standard, they would be lower now than for many years. The reasons for the high price of long wools are several. A class of manufacturers has come in vogue which requires these combing wools, and the supply from Canada is, in a good measure, cut off by the operation of the new Tariff, while in England, the home demand keeps prices up, and the wool chiefly at home. The small amount of combing wools raised in this country is not, it seems, sufficient for the demand. There seems to be an overstock of goods made from the finest wools, and manufacturers are buying, but very limited quantities, hence the general depression of the fine wool market.

A few years ago long wool sold according to quality—length, fineness, strength and gloss—at 25c. to 35c. per pound. Now it sells at 50c. to 75c. The clip of a flock of equal purity and excellence recently sold, unwashed, at 50c. to 55c., which is equal to 75c. to 82c., according to the usual calculation—deducting one-third as loss in washing. It is not to be expected that these relative prices will continue, but it is certain that these beautiful combing fleeces have gained, and will hold, a value far above carpet wools.

For the real wool-raiser, no doubt the best policy will ever be to raise the finest and best wool, free from excess of grease; but for small farmers who have rich farms on which a few sheep, 50 to 100, will do well, none present so great attractions now as do the Cotswolds. They grow to an immense size, Christmas mutton carcasses weighing over 200 pounds being almost every year brought to New York, and sell at the highest prices. They make early lambs. The grades, half-bred, are very strongly marked, and the three-quarters pure are often hard to tell from the full-blood Cotswolds, except by the accurate and distinctive marks of purity of blood.—American Agriculturist.

ABOUT WEEDS.

There can be no specific that will kill an undesirable plant—or weed—and not injure the desirable plants of the crop. Therefore, all applications, be they salt, plaster, ashes, or what not, merely to kill weeds are simply absurd. Cultivation consists solely in giving the plant that we wish to grow an advantage over other plants. In an uncultivated field, where everything is left to itself, it becomes a "struggle for existence," and the strongest—which is usually the most worthless—gets the best of it. In all our cultivation, the aim is to give the crop we wish to grow sole possession of the soil, and all our cultivators, horse-hoes, hand-hoes of all kinds, etc., are used to destroy every plant except a particular one that we wish should have full possession of the soil. Now we know of no help for weeds, whether in garden or in field, except a mechanical one. If one finds a few Canada Thistles in his lawn, cuts the stems and puts some salt on each, and thus destroys them, it is no exception to the general rule. Had he put an equal amount of salt all over his lawn, he would have killed everything upon it. We have but little sympathy with a gardener who lets the weeds get the better of him. His soil should have been kept so constantly stirred that weeds could have no chance. Whoever is not able to keep down the weeds by the use of the rake, or the many weeding-hoes, has more garden than he can properly care for. If weeds have got the mastery, use some of the various weeding-hoes; rake them at once from the ground, and if there is a sign of a flower or a seed upon them, do not let them go to the manure heap—it is all nonsense to talk of destroying their vitality by fermentation—but just spread them where they will dry, and then, with the accumulated brush and other combustible garden rubbish, burn them. With a little care, ashes, so valuable as a fertilizer, may be made in considerable quantity from properly dried refuse of the garden.—American Agriculturist.

THE BEST WAY TO RAISE POTATOES.

A new way of planting potatoes has been adopted in England, and to some extent has been tried in this country, with good success: The seed is planted under straw, being simply dropped on the ground, and a thick layer of straw spread over it, which takes the place of manure in several ways: First preventing the escape of ammonia, and thus governing the growth of vegetation, as is seen where brush is allowed to remain on the ground in grass land; second, by keeping the ground moist and pliable during the hot season, and third, by furnishing through its gradual decay a large amount of actual nourishment. The crop requires neither cultivating nor hoeing, as the growth of weeds is entirely smothered, the rank vines penetrating through the straw, which is impervious to the weaker weeds, that have no strong pulp to force them along. The crop on the removal of the straw is found lying on the ground, almost as clean as if it had been washed, as indeed it has been by all the rains of the season. It is stated that a thousand bushels to the acre have been raised by this process.

Scientific.

AN OHIO STEAMBOAT RUN BY PETROLEUM.

A successful experiment was made last week on the Ohio river with petroleum as a substitute for coal in navigation. The Cincinnati Gazette says of the new method of raising steam: "The advantages of this arrangement are so obvious that it seems almost superfluous, yet we cannot resist pointing out at least a few of them. First of all we have the economy of the fuel itself—twenty dollars' worth of petroleum being equal to fifty dollars' worth of coal. Then there is the economy of weight and space, which is as one to ten. In addition to this we have the saving of wages of firemen and coal heavers, the saving of time in taking the fuel on board, and above all the perfect control of the engineer over the fire, and the complete absence of danger from sparks. The explosive qualities of petroleum have hitherto been the great bugbear by which our enterprising steamboat builders and machinists have been scared off. We are not at all surprised at this, for steam itself had to struggle hard ere it could assert its supremacy over every other power in use, and we feel satisfied that coal will give way to petroleum as the towpath gave way to the railway. But let us look a moment at the conditions required to make petroleum ex-

plosive. They are three: a pent up space, a mixture with atmosphere, and the actual living flame. It will not explode in an open vessel; it cannot explode unless it is first turned into gas, and a red hot iron immersed into the oil will simply communicate to it its caloric and cool off. Any one of the above conditions being lacking, the oil is perfectly harmless. In this respect it does not differ from alcohol, whisky, turpentine, and a hundred other substances with which constant use has familiarized us, and which consequently we consider perfectly safe. Nay, even coal itself is more dangerous than petroleum, for while the former is subject to spontaneous combustion, with the latter it is simply impossible. Again, while with coal there is danger in every direction—above, below, around—the danger with the petroleum is only above. If a lump of burnt coal falls on the floor, it will singe and burn in every direction; let petroleum be spilled on the floor and catch fire, a lurid flame will shoot up and die out in a few seconds, without even scorching the floor. Hence we have nothing to guard against but its inflammability, and this has been admirably accomplished by Mr. Saroni, in employing the principle of Sir Humphrey Davy's Safety Lamp. A fine wire gauze covers every opening, through which the flame could possibly get access, and by this simple arrangement explosion is made next to impossible.

STORM OF BLOOD AT ALBANY.

Masses of gelatinous matter, containing minute granules arranged in it with some regularity, were found in the streets early yesterday morning. Viewed through a microscope, the small, brick-colored bodies were somewhat of the shape of grains of wheat, and the gelatinous matter seemed to be connected to each one as a separate covering. They were, apparently, separate cells, very uniform in size, being 1-10th of an inch long, and 1-25th of an inch thick, filled with granular particles, from which they derive their color. The gelatinous envelop and their appearance gave them, at first, somewhat the character of one of the single-celled protophytes, resembling most the Palmogloia, one of the humblest kinds of vegetation. That they were not these was proved by their behaviour with iodine, and their containing a distinct cell wall.

Several persons claim to have seen them, falling as a shower, and they were not found under trees or shelter. They have probably been carried for a great distance by the wind. They are more likely to be the germin cells of some marine growth, perhaps the fungus platycarpus, which they resemble. The presence of chlorides of iodine (sea salt), which is found largely in the gelatinous envelop, is corroborative of their marine origin.

Dust storms and blood rains, so called from the character of the dust which they deposit, usually occur in the spring or fall, though they have been observed during every month of the year.—Albany Argus.

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