choice cheese of American dairies, while we mutter and grumble over a pot of the whey. Europeans rejoice over the rich, sweet American butter, while we are so unaccountably stupid as to be satisfied with the buttermilk. Our farmers dig, and delve, and r' e, and scrape their grain-fields, meadows and pas- s, to get phosphatic fertilizers to send to Europe to produce big crops of turnips; and then grumble and denounce their own land as good for nothing, because their turnips refuse to grow as they do in Eastern countries.

"The truth on this point is, American farmers must save and apply more manure to their impoverished land; especially must they save bones for growing a crop of turnips. As soon as we can produce a bountiful crop of turnips on a wheat soil, we can grow wheat. Wheat and turnips in England go hand in hand.

"There is a volume of truth in the old maxim:

> 'No bonedust, no turnips, no turnips, no wheat,
> No wheat and no turnips, no cattle, no meat,
> No turnips, no cattle, nor manure in the yard,
> Make ba's for the doctors, and farming go hard.'"

—*American Artizan.*

What is Economy?

This is a subject which is now all the rage among our farmers, and it is amusing to see how well some of them understand it. Their economy and economizing is like that of the man who seeing that his cider barrel was leaking at the spile, turned it over to tighten it, but did not notice that the bunghole was open and under.

Let me draw you a picture of some of our farmers who are economizing (and there are by far too many such.) He cannot apply any lime this year, because he must economize and can't afford it; or, in other words, cannot afford to spend one dollar now that it may produce ten in a year or two.

He cannot afford to hire a man, and so his corn goes unworked and the crop is materially shortened, his ground is only half ploughed, because he has not time to do it well himself, and thereby loses several dollars to save one.

He does not place his manure under shelter in the spring, because he cannot afford to hire a man to do it, and has not time to do it himself; and yet will tell you if asked that one load of sheltered manure is worth two of that not so taken care of.

He discontinues taking (if he ever did such a thing) an agricultural paper, and thus places his finger in the spile and leaves the bunghole wide open, with a vengeance.

He cannot afford to buy plaster for his clover and corn, although he knows that it will do much to increase his crop; whereas if he were to apply plaster to his grass, he would double or treble his money in a very short time, and the surplus might go toward hiring a hand.

The fact is that he began his economy and economizing at the wrong end. He breaks up more ground, and spreads the same amount of manure—and less labor—over a larger surface, and lies under the impression that he is thereby obtaining larger crops, whereas, if he would cultivate no more ground than he has manure and labor for, he would be the richer for it.

The mainspring of economy in agriculture is increasing the amount of manures; this is the very item which our economizing farmer omits. Everything which will make manure should be thrown into the barn-yard or pig-pen; the size of the compost heap should be increased; but have all the help you need, for that is or should be the last thing to decrease on the score of economy.

There are hundreds of ways in which farmers may economize if they will, and only go at it in the proper manner. If I were going to adopt a more rigid system of economy, I should hire an additional hand, and make him pay his own and his fellow's wages, even if he did nothing else but collect materials for manure. Our farmers are only just beginning to understand the meaning of these two words, Economy and Economizing.—*Cor. Germantown Telegraph.*

Coal-Ashes as Fertilizers.

It is generally conceded that the ashes of anthracite coal are of but little use as fertilizers. In the cultivation of field-crops or grain they possess no value. In grass-lands a dressing of pulverized or fine ashes, early in the spring, has been of some effect; but the results are not very striking. A writer in the New York *Tribune* recommends the best use for them in making *walks*.

"An excellent walk can be made of sand or gravel rounded up and covered with coal-ashes. If no gravel is at hand, use the ashes alone, putting them on thick. The walk should always be rounded to turn water, and be higher than the ground alongside. Make such a walk before winter sets in, and see if the comfort, health, and satisfaction of always having dry feet, to say nothing of having mud kept out of the house, does not much more than compensate for the labour, even in a single season. We have seen the sidewalks of unflagged villages kept in a very respectable condition by each person spreading ashes along his front."

Mr. L. W. O. Beam, of Croxton, Ohio, sent a letter to the Farmers' Club, American Institute, in June, 1865, giving a note of his small experience in the use of coal-ashes.

"In the spring of 1862 I ploughed up an old meadow, somewhat of a *clay* soil; afterward hauled out and spread on a part of it coal-ashes; planted it in corn, and found that where I used the coal ashes I had at least double amount of corn. In 1863 had the same result in wheat. In 1864 I cut a crop of clover off it in June, and still it doubled; but in the fall of 1864, which was very wet, the difference was most marked. I have no hesitation in saying that I had five-fold on that part—as it was lodged on that—while on the other, not five feet distant, there was scarcely anything, it being dry after the first crop was cut. The same result was perceptible where coal-ashes had been applied some years previous."

The same subject came up before the Farmers' Club at another time, and the following opinions were expressed:

Mr. John G. Bergen: "Some years ago I remember my father used to put coal-ashes on wheat in early spring. He supposed there was some virtue in them. I also saw a field which produced a great growth of oats after being heavily dressed with coal-ashes; but I have tried the same thing, and found no benefit."

Dr. Trimble said: "I use coal-ashes for garden-walks, and they appear to prevent rather than promote the growth of vegetation."

An analysis of coal-ashes showed this result: Silica .53, Alumina .36, Sesquioxyde of Iron .5; Magnesia .1, Lime 2.8-10, and other minor proportions made up 100.

Solon Robinson said: "Here were ninety-four hundredths not worth carting across the street. As top-dressing, they might probably be of some benefit to grass-land; they would answer a good purpose as mulch about plants or trees, and it is of some value as a deoderizer in outhouses."

Seeding to Grass Alone.—I have found, from experience and observation, that when ground is laid down to grass, and the seed sown alone, the best and most surely successful time is early fall—say first of September. The ground is then in a much better condition, if it has been occupied with a tilled crop; if not, it can be much better prepared, to give the seed an opportunity to catch and grow, than it can possibly be made, in season, for sowing in spring. When sown in September, a handsome mat or turf is formed before winter sets in and the young grass gets well established, and attains such a growth as to afford protection for the young roots. If the seeding is liberal, such is the effect; otherwise, less advantage is derived from fall seeding. Here soil and circumstances must govern: for on a soil that the frost loosens very much, the young roots do not get so firmly established that they are not apt to be thrown out, and many winter-killed. In such soils, spring seeding with some light grain crop is the safer course.—*Country Gentleman.*

Hay Getting Wet.—Dr. Voelcker, in a recent paper on hay making, states that rain may fall for days on newly cut grass without injury to it, provided the grass is left untouched; but that when it has been repeatedly turned, causing the crop to become more or less bruised, rain washes out the sugar, gum and other soluble matters, and causes fermentation, which leads to further loss. For this reason, says the *Scottish Farmer*, recently cut grass should not be turned in showery weather, more than is absolutely necessary, and in all circumstances the crop should be handled as lightly as possible, so as to avoid bruising the plants:

"In order to subject the value of hay which had been damaged in the field by rain to a practical test, some experiments were tried in feeding sheep with clover hay made in wet weather, and which had lain long on the ground before it was carted and stacked. Experiments made by Messrs. Lawes and Gilbert had shown that sheep fed on well-made hay alone increased in weight, but in the course of Dr. Voelcker's experiments with bad hay—the experiments being continued for more than three months—the animals lost weight. The results show the folly of supplying animals with bad hay alone; and also that bad hay can be deteriorated by rain, long keeping, and frequent turnings in the field, to such an extent that any amount which sheep will consume is barely sufficient to maintain their original weight, while with ordinary allowances, such as 14lbs or 2 lbs. per day, the loss of weight is considerable."

Veterinary Department.

"Scratches" in Horses.

This disease, called also "grease" in England and in some parts of this country, often attacks the heels and legs of neglected horses, and though easily prevented, is difficult to cure, if of long standing. It commences with inflamation of the oil glands of the skin about the hind feet. These vessels, named *sebaceous* glands, supply a fluid to soften the skin and prevent its cracking. These glands are especially needed and very active about the hind feet of the horse, where, by frequent exercise of the parts, the skin is subject to almost constant alternate wrinkling and expansion. The toughest leather would soon yield under such treatment, unless kept well softened by oiling. The oil glands may become inflamed by sudden cold, as when a horse after exercise over wet roads is allowed to stand in the stable without cleaning and drying the hair about the feet. The animal being warm, moisture rapidly evaporates and carries with it the heat from the neighboring parts; congestion ensues, and inflammation commences. It may be slight at first, but by neglect it will be likely to extend and affect the surrounding surface, and also the deeper seated structures, resulting in a disorder disgusting in its appearance, and painful to the horse. Or it may be caused by standing on a filthy stable floor in wet straw and excrements, the moisture from which not only produces cold, but from its nature irritates the skin, thereby inducing the disease.

As it progresses, the hair drops off, the heels swell, the skin assumes a glazed appearance, is covered with pustules, and emits an unctuous discharge which soon becomes very offensive. Unless properly treated, the leg half-way to the hock is crusted over with thick, horny scabs, divided by deep cracks, when the affection is scarcely curable. Prevention is found in clean stables, and in thorough drying and rubbing of the legs after the horse has been used. Close clipping of the hair which ordinarily grows long about the legs, deprives these parts of their natural protection, rendering them more liable to the scratches, and is therefore objectionable.

If the disease unfortunately appears, Herbet recommends to clip off all the hair from the affected parts, and thoroughly cleanse them with warm water and Castile soap. Then apply a flannel bandage evenly over the limb, and frequently moisten it with warm water, allowing it to dry on the part. To soften the skin, apply an ointment of one drachm of sugar of lead in an ounce of lard. If there are cracks, wash them with a solution of four ounces of alum in a pint of water. Feed the horse on bran mashes, carrots, and green feed, and if there be much inflammation after a day or two, administer a ball of four or five drachms of aloes.

If the disease has reached the second stage, three doses of physic at intervals of two days will be needed. The best application to the heels will be a poultice made of boiled and mashed carrots, put on tolerably hot. It can be conveniently applied by drawing an old stocking leg over the leg, confining it at the fetlock joint, and filling it from above with the poultice. When this is removed, anoint the heels with an ointment of one part of rosin, three parts of lard melted together, and one part of calamine powder, added when the first mixture is cooling. *Am. Agriculturist.*

Petroleum for Horses' Shoulders.—Joseph Harris, in the *American Agriculturist*, says that the best thing that he has tried for sore shoulder in horses is crude petroleum. He discovered its healing properties while applying it as paint for tools, by means of a rag held in the hand, which was accidentally sore. He now uses it for sores on all kinds of animals, and for some distance around the sore. Those who complain of the high price of drugs and medicines, may be satisfied as far as the healing properties of this remedy goes, for it may be bought for twenty or thirty cents per gallon, by the barrel, and whatever there may be left, after its medicinal application, will be excellent for putting on all wood articles to prevent them from decaying—such as ploughs, harrows, wheel-barrows, carts, wagons, hoes, cultivators, spades, drill machines, mowers, and reapers, horse rakes rollers, &c. Use what is termed the light oil, which will penetrate the pores more perfectly, and exclude water and air. It is excellent for roofs, sides of barns, and out-houses generally, and may be applied with a small, new whitewash brush.