

Thirty-four head of sheep, consisting of 22 Leicester rams, and 10 ewes of the same breed, all from some of the principal breeders in Yorkshire; and two Southdown ewes from Mr. McConnell, Dumfriesshire, bred from the Duke of Richmond's stock.

Of pigs, two sows and one boar of the Yorkshire breed, about six months old.

Poultry, about a dozen of the best Dorking and Black Spanish fowls.

Adulteration of Manures in France.

The adulteration of artificial manures and guano has attracted the attention of the French government through the efforts of M. Adolphe Bobierre, who has been appointed chemical analyzer of manures for the department of the Loire Inferieure, an institution established by the government. The gentleman has addressed a detailed report, in the highest degree interesting, to agricultural science and to the body of cultivators. He was the first to call the attention of the authorities to the flagrant frauds perpetrated in the manufacture of manures, and to the numberless deceptions to which the trade gave rise. In consequence of his representations, the administration, in order to protect the ignorant and credulous husbandman, founded the institution alluded to, and justly appointed M. Bobierre the first analytical chemist; and the report that distinguished savan has drawn up fully justifies the selection. In it he has laid bare the fraudulent tricks of the manufacturers to deceive both the analytical chemists and the agriculturists. For instance, in the article of animal charcoal, they profess to sell as containing 40 per cent. of phosphate of lime. They send the article *weighed*, in a dry state, to the chemist, who accordingly finds it contains the alleged proportion. But with the same material the merchant mixes water, according to the tenderness of his conscience, and then sells it *by the hectolitre (or measure), instead of the kilogram (or weight)*; and thus the buyer and the chemist are both mystified beyond any redemption. But, in order more effectually to conceal the fraud, light, spongy substances, such as carbonized peat and other similar substances, are mixed with the animal black, and absorb the water, making it impossible, without another analysis, to detect the fraud, which, as shown by M. Bobierre, reduces the proportion of phosphate of lime to 19 per cent., instead of 40. We trust this report will be translated into English, and circulated through the agricultural journals, amongst the farmers, who cannot be too much instructed as to the set of harpies by whom they are assailed, and the shape of artificial manure manufacturers. *Mark Lane Express.*

To Improve Sandy Soils.

The defect in such soils is chiefly of this sort: They are mechanically defective, being so light and porous that they cannot retain moisture, or manure, if applied. Besides, they are generally wanting in various important elements of plant growth. Therefore, to improve them, we must endeavour to supply these radical defects. The first point can be gained by spreading a coat of clay over the surface and dragging it in. This will improve its texture, and will also impart fertility. Adhesiveness and strength having been gained, manure from the barn yard may be applied as fast as it can be procured. Another method is to dress such lands with rough composts. Prepare the heaps at leisure, in the barn-yard. The ingredients may be such as these; ten loads of stable dung mixed with five loads of clayed soil, twenty bushels of ashes, and the same amount of lime. After these articles have been well incorporated, let the mass lie for a month or two; then it will be ready for use. Such a compost, it is easy to see, will be more enduring, and better in all respects, than the same bulk of barn-yard manure. It will improve the quality of the land permanently, and will enrich it with a fertility which will be very lasting. On every farm of the kind here supposed, there should be one or more compost heaps of some sort *constantly* building—*Agriculturist.*

An Agricultural College Bill in the United States.

The recent U. S. Congress has passed three important acts for the encouragement of agriculture. These are the Homestead bill, the Bill creating a "Department of Agriculture" and the recently passed Bill providing for the establishment of Agricultural Colleges.

The latter bill in brief is as follows. It provides a grant of public land to be proportioned to each State, in quantity equal to 30,000 acres for each Senator and Representative in Congress, provided that no mineral lands are selected or purchased under the provisions of the act. The proceeds of these lands go to the "endowment, support, and maintenance of at least one college in each State, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." The further provisions of the act are, that the capital of the fund shall remain forever undiminished, and the annual interest be regularly applied to the purpose above