

Vitality of Wheat.

A correspondent of the *German Town Telegraph* asserts, giving details, that a smoke-house was built in eastern Pennsylvania in 1790; that during the past season, in repairing the building, a head of wheat was found embedded in the cap of the gable; that five of the grains thus found were planted, and four of them grew "in bare ground," after having been embedded in mortar 82 years.

New Breed of Sheep.

Some years ago France received great benefit from the introduction of merino sheep, and an experiment of acclimation of a similar nature is about to be made at the park of La Tete d'Or, at Lyons, from which are expected results equally advantageous. There are now daily expected at the menagerie of Lyons several specimens of a breed of sheep hitherto unknown in Europe. They give almost as much milk as goats, and produce in addition as much wool as the merinos, and they are claimed to furnish as good meat as any now in use. This rare breed of sheep is to be found only in some of the Cantons of Algeria.

Cows in the United States.

The last census showed that there were 10,303,500 cows in the United States, which were valued at \$29,408,983. Most of these were of a very inferior kind. The average yield of milk, in the North-West, was only 2,530 lbs. per cow, but a dairyman in New York has succeeded in getting a yield of almost 8,000 lbs. per cow from a herd. Mr. Fish, of Herkimer Co., N. Y., by judicious selections, obtained a herd of cows that averaged 834 lbs. of cheese per cow, each year. The cow "Red Rose," gave 2,956 lbs. of milk, from Aug. 1st to Sept. 15th, and one day gave 76 lbs. An Ayrshire cow, "Lass," gave in the same time, 2,746 lbs. and bred till she was 19 years old. The cow, "Nettie," gave 1364 lbs. in July, an average of 44 lbs. daily. The cow, "Beauty," belonging to E. T. Miles, of Mass., gave, in 1870, 9,011 lbs. of milk; in 1871, 7,922 lbs.; in 1872, 7,553 lbs. At the last date she was 11 years old, and weighed 985 lbs.

Two or Four Rowed Barley.

The *Rural Home* calls the attention of farmers to the comparative advantages of two-rowed or four-rowed barley intended for the American market. It alleges that from ten to fifteen cents more is paid for the four-rowed than for the two-rowed in the United States. Maltsters, it is said, prefer the four-rowed because it is better adapted to making light ales, and especially lager-beer, than the four-rowed. It gives a brighter and clearer color to the liquor than does the two-rowed barley, and this quality is highly essential, in making lager especially.

For making heavy or dark colored ales the two-rowed is better. In the United States, light ales and lagers are far more popular and are consumed more extensively than heavy and dark ales—hence there is greater demand for the variety of barley which will best produce them.

Planting Timber.

Dr. John A. Warder at the Ohio Agricultural Convention, offered five resolutions, the gist of which are contained below:—

The first recommends farmers to plant their hill-sides, ravines, and broken lands with timber; the second advises that at least one-tenth of every farm be devoted to groves and shelter-belts; the third urges the legislature to encourage, by suitable enactments, the planting of artificial forests and the setting of useful and ornamental trees along highways and railroads; the fourth asks local and other societies to aid in this matter by the offer of suitable premiums; and the fifth urges the propriety of the managers of the agricultural colleges giving "special attention, as far as may be practicable, to the planting of an arboretum for the production of every tree that can be grown on the college farm, to be so devised that each kind may develop its native character, and also to the planting of an artificial forest of useful trees so arranged that it may afford the most valuable instruction to those in attendance and to visitors."

Rustic Boxes.

These can be made from hollow tree trunks, taking care to retain the bark, and when spring comes be filled with rich earth. After warm weather has set in, and all danger of night frosts is over, these boxes may be planted with bloated Petunias, Verbenas, Lantanas, Heliotropes and the like, and set in suitable places around the yard. They should not be placed where they will receive the drip of overhanging trees. A very pleasing effect may be produced by combining with these flowers some of those plants which have crimson, purple, or variegated leaves.

European Agriculture.

(From *Drill's Weekly Messenger Feb. 24.*)

The agricultural intelligence which comes to hand from the French departments is generally favorable, snow and frost having exercised a happy effect on vegetation rather than otherwise. The markets are not over supplied; and, notwithstanding the quiet tone of affairs, prices remain well supported, especially in the departments of the east and the south of France. At Marseilles transactions have not been very extensive, stocks having become much reduced; but prices have strengthened, and have even experienced a slight advance. Switzerland and South Germany have continued to make purchases, and the milling trade has again been purchasing, in consequence of the scarcity of the article which it has to work up. At Bordeaux and Nantes, farmers, without expressing serious apprehensions on the condition of the growing crops, show themselves very reserved, and only make extremely moderate purchases. In Germany, the grain markets have been quiet, but prices have not exhibited any serious fall. In Holland, the tone of the grain trade has not varied. In Italy prices have exhibited a hardening tendency.

The Hop Trade.

The price of hops is at present highly remunerative, and if the statements of a great American hop-buying firm are to be relied on, the demand for hops is likely to continue good. Messrs. Charles Green & Co. in their "Facts for Brewers" say:—

"Those brewers who have a good stock of New York hops in their breweries for summer use may consider themselves fortunate. No other hops will keep their flavor as well. The English and Bavarian hops will not stand the hot climate of this country. Soon as the hot season commences they will begin to lose flavor and strength. The English hops which come to this country, generally are of the poorest quality grown. They have little more than half the strength of American hops. When the summer heat comes on them the little strength they have will evaporate, and beer made of them will not stand our scorching summer weather. They will do better work in England where the weather is comparatively cool. We were compelled to furnish them to our customers last summer as we had not enough New York hops. They gave poor satisfaction, but we could do no better. We shall be compelled to send to our brewers again as our stock of New York hops will be exhausted earlier than last year. Our supply of early purchases will all be shipped before the end of the present month. Then we must depend on the scattering lots which we can find. These will not offer in sufficient quantities for the demand, and we can do no better than furnish English or such other foreign hops as are in the market."

Artificial Butter.

A new kind of butter is about being offered for the acceptance of the public. The process of making it is as follows:—Fresh beef suet is first mechanically cut up by means of circular saws fitted to a cylinder, and is next placed in a vessel containing water, carbonate of potash and fresh sheep's stomachs previously cut up into small fragments. The temperature of this mixture having been raised to 45 degrees, the joint influence of the peptine of the stomachs and heat, causes the fat to be separated from the cellular tissue. The fatty matter floating on the top is decanted, and after cooling, submitted to very powerful hydraulic pressure. The stearine is used in candle-making and the semi-fluid oleo-margarine is used for making the artificial butter in the following manner: 50 kilos of the fat are poured, along with 25 litres of milk and 20 litres of water, into a churn, while there is added 100 grms. of the soluble matter obtained by soaking for some hours in milk from cows' udders and milk-glands. A small quantity of annatto is also added, and the operation of churning

is then proceeded with. The butter thus obtained is well washed with cold water, and if required to be kept for a long time, melted by a gentle heat to eliminate all the water. According to the reports of sanitary committees, this artificial butter is averred to be an excellent substitute for the genuine article.

Drainage and Steam Culture.

Mr. Bailey Denton has long been known as perhaps the highest agricultural-engineering authority in England, and as the able advocate of deep drainage. In support of his views, a Yorkshire gentleman, Mr. A. S. Milbank, has recently addressed a letter to the *London Times*, of which the following is an extract:—

"The home farm at Barningham-park is situated in the narrowest part of England, in the north-west of Yorkshire, about 35 miles between sea and ocean, at an altitude of 600 ft. No less than 50½ inches of rain fell there during 1872, equal to over 5,600 tons of water to the acre. These conditions are not very favorable to autumnal wheat cultivation, yet, in spite of 5½ inches of rain in October, I was enabled on my heavy land to sow 40 acres of wheat. It is rare this year to find any wheat sown in the north of England. My wheat has come up well; and now in the latter part of January, it is the general observation, how promising it looks. To what cause, then, do I owe so successful an issue to my venture after a downfall so unexampled? Without doubt, primarily, to thorough deep drainage on Mr. Bailey Denton's system—drains 11 yards apart, four and a half feet deep, assisted by previous deep stirring of the land by Fowler's double steam engine apparatus. Thus, by the rapid filtering of the rain through the soil, a 24 hours' north wind enabled me to "catch" a season. I was not slow to avail myself of the opportunity, and concentrated the whole staff of the farm upon the 40-acre field. True, our haste required the Suffolk drills to be set aside, and all done by broad-cast sowing in double-quick time; nor was such speed unnecessary, for hardly had the drills covered the seed before that steady downpour was resumed, which has ever since hindered farm out-door operations. I feel how much my success is due to the two systems in combination—those of deep-drainage and steam cultivation. Not only is the water never stagnant, but airing the soil, and perhaps even manuring it with the gases of the atmosphere above, prevents the plants from rotting."

Forest Culture.

Mr. Andrews, American minister to Sweden, has made a report to his government on the Swedish system of managing the forests of that country. In it, he says:

"The forest land in Sweden embraces 30,000,000 acres or about three-fourths of the entire surface of the country. Government exercises authority over 5,000,000 acres, which territory is divided into six districts, with a forest inspector and six foresters or masters for each district. Forest regulations were issued by the Swedish government as early as 1647, previous to which private owners were required by law to plant and protect from cattle two timber trees for every one cut. In 1838 government established the Royal Forest Institute, which is located at Stockholm. The course of study at this institute occupies two years, tuition being free, and the graduates are designed for positions in connection with the administration of forestry laws in the different districts of the country. Besides this institute there are six forest schools, chiefly supported by the government, located in each of the different divisions into which the forest lands of government are divided. In 1867, 21,850 pupils in the common or "folk" schools of the country also received instruction in horticulture and tree planting. Great attention is given to the cultivation of the oak, larch, beech and pine; and in 1850, the chief director of the Forest Institute said that if forest growing was properly attended to in the country, its export of timber would return a greater revenue than the export of iron—which is everywhere acknowledged to be of superior quality. To show the minuteness of detail of the legislative enactments, it may be mentioned that trees on government lands which are to be felled are divided into twelve classes, of which the following are a part: trees for masts, for beams, for larger saw-timber; for smaller saw-timber, wind-fallen trees for various purposes, trees that have been damaged by fire, &c., even down to the trees used for the production of tar, charcoal and potash are all regulated in the several legislative enactments. The pine forests of Canada are fast disappearing before the merciless invasions of the woodman. When shall we have a national system enforced, for planting new forests in their room?"