

## Report of the (U. S.) Commission of Agriculture.

Hon. Isaac Newton, commissioner of agriculture, in the United States, has made his fifth annual report to the President. A considerable portion of the report is occupied with the subject of the depressed condition of agriculture in the Southern States. Among the best means recommended as a remedy for the evil, is the introduction of a more varied system of agriculture, in place of the plan hitherto pursued of depending almost entirely upon a single crop. "As an illustration," (we quote from a notice of the above report in the *Prairie Farmer*) "it is stated that the cotton crop of Georgia, almost the sole Agricultural product, amounted only to \$30,000,000 in 1860, while the butter of New York, one of the several products of the dairy, amounted to \$60,000,000 in 1865; and yet New York had but 370,914 farm laborers, while Georgia had 316,478. To make the contrast still more striking, the other products of the New York dairy, together with the ordinary farm crops, are put down at \$205,000,000.

"A very encouraging picture is given of the condition of agriculture in the Northern States. At no previous time has it been more flourishing. High prices, accessible markets, and crops of average abundance have insured good profit; and as a result mortgages have been paid, farm buildings erected, permanent improvements accomplished, farm implements and machinery obtained, and in thousands of instances, a surplus invested in government funds. The operations of the experimental farm are considered interesting and suggestive, and valuable results are anticipated. Fifty-five varieties of winter wheat have been sown, of which six are regarded as worthy of mention. The Premium White Mediterranean, sown October 9, was harvested June 29, and produced forty-eight bushels per acre. The Red Bearded Mediterranean yielded nearly at the same rate. Both proved of fine quality, and are recommended for general cultivation. The Tappahannock and Russian 'Scheffel' wheats succeeded admirably.

"Sixty-seven varieties of Spring wheat were sown, sixteen of rye, seventeen of oats, and seventy of peas. Of a large number of varieties of potatoes, both from home and abroad, three native seedlings, the Orono, Samaritan and Early Goodrich, proved the best.

"The production of wheat in the Northern States for 1866 is estimated at 143,000,000 bushels, and of corn 880,000,000 bushels. The number of horses for the same States is put down at 3,740,933, mules, 247,553, cattle 12,840,721, sheep 28,747,279, hogs 13,075,887, the estimated value of the whole being \$1,102,884,344."

## The Schrader Brome Grass.

A new fodder plant has lately been introduced from the United States into France, where it is attracting considerable attention. The name of this grass is "Schrader Brome;" it is a native chiefly of North Carolina, and has been for some time known to botanists, but its value to the Agriculturist has only recently been brought into notice, by M. Alphonse Lavallee, who read a paper on the subject before the Imperial and Central Society of Agriculture of France, at their sitting on the 5th of February last.—This gentleman has experimented on the grass for six successive years, during which, he says, he has not been able to detect any deterioration in its valuable qualities. The grass is a perennial of hardy constitution, early maturity, and wonderful productiveness. It comes in, and is fit to be cut for fodder by the end of April, according to the experiments of M. Lavallee, so that it is considerably earlier than rye, and four successive crops may be secured in one year. These four crops yielded an aggregate of 14½ tons to the acre for the year's produce. It seems to flourish well even upon poor soil, and may be expected, therefore, to yield still better results on richer ground. It may be used as green feed, or made into hay, and in either state proves superior to any other kind of fodder, especially for milch cows. Of the

comparative value of the plant for cows, the following experiment was made:—A certain number were fed on lucern for a month, the milk exactly measured, and the quantity of cream per cent, ascertained by the galactometer; three succeeding days being taken, during which the quantity was precisely the same. The same cows were then fed with the brome grass, and the first day there was an increase of 18 per cent. of milk, which on the following day was reduced to 10 per cent. at which it stood for fifteen days. At the end of that time they were again fed with lucern, and in forty-eight hours after, the quantity of milk was again reduced 10 per cent., or to the same measure as before. It is proper to state that the weight of each food given to the cows was exactly the same. There was no material difference in the quantity of cream; but the density, and consequently the value of the milk, was much greater, as was acknowledged by the dairy maids employed in making butter and cheese. The former was much firmer, kept better, and had a finer flavour, although made in very warm weather.

The growth of the plant is very rapid; it comes up quickly, forming large tufts standing separate from each other, but filling up every vacant space, and destroying every other plant. This latter property is one of its peculiar merits, as no weeds will thrive under its culture.

## Improved Barley Screen.

Among Barley as it comes from the threshing-machine there is always a large percentage of bruised and broken grains, and if these could only be sifted out, the quality of the sample would be greatly improved and enhanced in value. By a most ingenious but yet simple device, Mr. Boby of Bury St. Edmunds, (England,) has succeeded in getting rid of these damaged kernels. His plan is to make the whole grains pass over a sloping, reciprocating screen of perforated iron plate, while at the same time, the broken or half grains drop through. The secret consists in bending the plate so as to form it like a succession of steps. Thus the grains in tumbling over each ledge fall endwise or perpendicularly upon the screen, and passing through the holes that their length would otherwise cause them to travel over.

Messrs. Ransome & Sims of Ipswich accomplish a similar result by a new machine which they have recently brought out. The barley passes over the face of a sloping screen of flat perforated plate, and at the same time under a succession of vulcanized indiarubber rollers, placed across it; and the rubbing action not only upturns the grains so that the broken or half grains can drop through the small holes, but also clears the holes of wedged grains. With a number of fine screens one below another, this machine effects some half-dozen different separations of dust, smut, chaff, light corn, barley, and oats from wheat, tares from rye, and so on, in the most perfect manner.

## Drainage and Sewage.

Increasing attention is yearly paid in England and many parts of the continent to the effectual and innoxious drainage of large cities. An important improvement has recently been introduced by which solid and liquid portions of the sewage are separated, by means of a filter provided for the purpose. The liquid portion is thus rendered innoxious, and may be allowed to empty itself without detriment into the nearest river or watercourse, while the solid part retaining all the important ingredients of the richest manure is collected in a filtering apparatus, which is surrounded by a deodorising agent and may be removed, and the contents utilized on the neighbouring farms. The inventor of this system, Mr. Austin, thus sums up the advantages which it secures:—

"The accomplishment of the process of filtration; the sewerage having passed into the filters before the solid parts are decomposed. The preservation and consequent possibility of utilisation of the greater portion of the fertilising ingredients. The facility afforded for the innoxious transport of the solid sewage, which, when it is taken from the drain, is confined in a portable vessel, and surrounded by a deodorising medium. The disposal of the fluid portion, which, being rendered innoxious, may be allowed at once to escape into the nearest waterway, or used in any situation for purposes of irrigation; thus dispensing with the construction of large and costly conduits for conveying the fluid to distant outlets. The comparative economy of first construction in every part of the system. The facility of adapting this to any other existing system of drainage."

## Reappearance of Rinderpest in England.

We regret to find that the hopes entertained with regard to the total suppression of the Cattle Plague in England, have proved premature, and that not only has it broken out anew, but there are serious apprehensions that it will again prove troublesome. The *London Times* of Dec. 13th says:

Our old friend (enemy?) the Cattle Plague is once more, we deeply regret to say, assuming an unwelcome prominence in our columns. The experience of all other countries warranted the Commission in their expectation that a return of the disease, more or less serious, might be expected in the winter months. The minute particles by which contagion is communicated, when placed in sheltered situations and protected from sun and rain, retain their deleterious qualities for a time incredibly long. When the cattle come to be placed close together in sheds, the disease must be expected to appear in its original malignity, and requires just as much care and anxious attention as when it first appeared among us. The Cattle Plague has reappeared in Lancashire, Yorkshire, and Cheshire, and we must not be surprised if we find it revisiting other localities in which it has raged and been apparently extinguished. The same intelligence reaches us from Eastern Europe. In the countries adjacent to Russia, which are now within four or five days by railway of our shores, a considerable increase of the disease is announced.

The *Times* thinks that the stringent regulations about the holding of fairs and shows have been relaxed too soon, and that it is better to err on the side of extreme caution, than on that of presumptuous and hasty confidence.

**BIRMINGHAM POULTRY SHOW—IMPORTANT CHANGE.**—At the recent Poultry Show, held in Birmingham a change which seems to have given great satisfaction was introduced in the mode of exhibiting poultry:—The old pen of cock and three hens has disappeared, to make room for rows of single cocks and pairs of hens and pullets. By this means the convenience of purchasers has been greatly advanced, as they can now procure only what they want, and are relieved of the embarrassing necessity of purchasing, at greatly increased expense, the whole pen, which have most probably been selected from one family, and consist of the most unfavourable of all relationships for breeding—a brother and sisters,—while the exhibitors have also been relieved of a frequent difficulty in making up their pens consequent on the necessity of matching birds.

**COMING STOCK SALES.**—We call attention to two sales of thorough bred stock, of which notice appears among our advertisements. The first on the 21th., of the present month, at Mr. Miller's of Markham, by Mr. S. Beattie, who offers for sale by auction his well known thorough-bred horse "Promised Land," a Short Horn bull, and other stock which we believe to be of superior excellence. The other sale is advertised for the 30th., of the month, by Mr. Snell, of Edmonton, and will afford our more enterprising farmers the opportunity of purchasing some of the finest animals in the province. Short-Horn and Galloway cattle, Leicester sheep, Cheshire and Berkshire hogs are comprised in the catalogue.