

### The Wools of Commerce.

Wool is one of the most important textile industries in this country, and America is the greatest wool-growing country in the world. It is therefore of importance that we should know every practical detail of the qualities of sheep's wool, of the progress made in sheep farming in various countries, the comparative increase in the weight of and profits on wool, the modes of tending, shearing, washing the fleeces, baling, taking to market, boiling down the carcass, and steaming for tallow—all of which points are deserving of notice and attention. Of all domestic animals except the dog, the sheep is the most really modified in form, size, or quality of fleece.—There is, for instance, the coarse wool of long-wooled breeds like the Cotswolds, furnishing what is called "combing" wool, and employed in the manufacture of coarse worsted goods; and there is, again, the short fine wool of Merino sheep, ready to spin into the finest threads. Corresponding to these varieties of fleece possessed by different breeds, there are accompanying varieties of form, size, disposition. Some breeds are fitted for rich, easy pasture, and fatten at an early age, while others snatch a precarious living by traveling over a wider range, exposed to bleak winds and the perilous storms of mountain wastes.

From this it is evident that, in introducing sheep into a new country, it is of the utmost importance to select the breed which experience has proved to be the best adapted constitutionally to the climate and soil.

Another point to be noted is the sort of food on which they are nourished, for as tillage land may be made, by the aid of fertilizers, to produce forty per cent. more than its usual yield, so may sheep be made to give forty per cent. more wool by having their food adapted to the special formation and growth of that article. Now, one of the chief constituents of wool is albumen; hence those cereals which contain the most albumen make the most wool when given as food to sheep. A glance at the following table will show this:

1,000 pounds of potatoes, raw, with salt, make 6½ pounds of wool; of mangold wurzel, raw, 5½; wheat, 14; oats, 10; rye, with salt, 14; rye, without salt, 12; barley, 12; peas, 16; buckwheat, 10.

From this we see that peas, wheat, and rye, which contain the largest percentage of albumen, produce the most wool, giving about twice the number of pounds that roots of equal weight do. Indian-corn meal, oil-cake, and similar gross substances, are the best food if tallow is wanted; but if the object is the most and best wool, the sheep-owner must rely on hay and water, with a daily allowance of the best grains, and some potatoes or carrots, or green food.—*N. Y. Economist.*

### Short Horn Sales of 1873.

This year is probably the most notable, thus far, of any in the history of Short Horns in the United States. For several years past the increase of Short Horns in numbers, their improvement in quality, their rapid extension over our vast country, and the popularity they have reached among intelligent and progressive agriculturists, have been unprecedented. The capabilities of the Short Horn in the dairy are also being recognized. This breed now absorbs by far the greatest degree of public attention, although the Herefords, the Devons, the Ayrshires, the Holsteins, and even the Scotch Galloways, among our Canadian neighbors, find many advocates of their merits on soils to which they are better adapted than the Short Horns. The capabilities of this breed as meat-producers, on a good soil, and with plenty of forage, are acknowledged to be unrivaled.

Short Horns may be divided into two classes: 1. "Fashionable" Short Horns, combining blood, breeding, and quality. Many of them trace

ed ancestors, one hundred years, and some even one hundred and fifty.—High quality in figure, flesh, and general style of the animal is also indispensable; and perfection in this respect, together with approved pedigree, constitutes the acme of choice breeding. The small number of such choice animals, in comparison with the vast aggregate of the breed, causes them to sell at prices which to persons unacquainted with Short Horns seem vastly disproportionate to their intrinsic value. A noted lover of fancy trotting horses expressed surprise in our presence, the other day, at the result of a late auction sale where some fine Short Horn bulls and cows brought from \$1,500 to \$3,000 each, and exclaimed, "but these bulls and cows can't trot!"—He did not, however, consider a trotter dear at \$5,000 to \$15,000, and a gelding at that. We explained that, although for *steer* breeding, such prices would be extravagant, these bulls can beget thousands of others inheriting their valuable qualities, and the latter can beget equally good beef stock upon less valuable cows. The choice meat of these steers will be one hundred per cent. greater in quantity and much more valuable than that obtained from common stock.

We may presume that at present there are twenty to thirty thousand well-bred Short Horns in the United States, but among all these there can hardly be counted a single thousand which would be acknowledged of the very highest merit; yet the offspring of the thousand will be better than the ordinary Short Horn, and they, in turn, will improve the native stock. The men who pay these high prices make money by selling cattle to other breeders, and are not governed by mere caprice in their purchases of extra stock. At this year's sales many herds containing several choice animals have sold for average prices hitherto unprecedented. Many animals sell low, but when the average for herds of thirty to sixty animals runs from \$400 to \$900, several among them are bought by experienced breeders at extraordinary prices.

2. The cheaper Short Horn bulls, which are bred mostly for crossing upon the natives, and are usually of good pedigree and quality. They have been as honestly bred, their blood may be as pure, their pedigree may be of as long and untainted descent, but not having been crossed with aristocratic bulls, nor reared with the same care, they will not sell for as high prices.—*Live Stock Journal.*

### How to Introduce Queen Bees.

If your bees are in a common box or straw hive, drive them out in the usual manner into an empty box or hive, then shake them out on a sheet, seek for and remove the queen, and return the bees to the empty hive or box. Let them remain undisturbed, until by their restlessness they show that they have become aware of their queenless condition. Then fumigate them with tobacco, sprinkle them with sugar water, and introduce your new queen among them, gently and uncaged, having previously besmeared her with honey taken from the hive from which they were driven. She will be readily and gladly accepted. Let the bees and queen remain together thus confined in the unfurnished hive twenty-four hours. Then shake them out on a sheet and run them into a movable comb hive, into which the combs have been transferred.

If your bees are in a moveable comb hive, remove the queen, take out the combs in rotation and shake all the bees down on a sheet. Set the combs in one empty hive, and run the bees into another, letting them remain till they show signs of queenlessness. Then proceed as above, and after twenty-four hours' confinement, run them into a hive in which their original frames and combs have been inserted. They will be content to feed themselves after their prolonged abstinence, and will not injure the fertile queen.—*Bee Journal.*

**CROPS IN IOWA.**—The Iowa Homestead estimates the wheat crop of Iowa at not more than 10 bushels per acre, with an acreage one-fourth greater than last year. Northern Iowa gave the best yield. Of other small grains it thinks the average will be about as usual. Corn promises a fair yield but not equal to that of last year, and with one-fourth less acreage.

### For the Willamette Farmer. Chinese Immigration.

It seems hardly fair for the American people to refuse to listen to both sides of any question that may concern them. Our boast has been our free speech, our free opinions, our free country. Are we getting beyond this, or behind it, when any party or organization of the people propose to stop the immigration of any nation by the oppression or abuse of its people, or the persecution of our own countrymen for thinking differently from themselves on any given question? For many years the nations of the West have tried by every means in their power to open the gates of the East, hoping to get gain by trade in silks, teas, and Eastern wares, and to establish great houses for commerce and exchange in the cities of China. After a vast amount of diplomacy and expense, they have done this, and today Americans can go to China, trade and get rich, and bring away their wealth, with no hindrance.

But, in opening the gates of China to get in, we have unfortunately left them ajar, and the poor, miserable, hungry heathen have slipped out, in search of food, gold, and, perhaps in some cases, peace and truth. We will not contest for the truth of the latter clause of our assertion, lest we fail to prove our position. The consequences of our own deeds already seem bitter to many on this Pacific coast, as the incoming flood of cheap laborers threatens to take the gold from the poor white man, and give it to the poorer Chinaman. The unfortunate Celestial has been compared to a sponge, in that he takes all the gold he comes in contact with and keeps it, or sends it back to his starving family on the other side the ocean. We will not dispute the justice of this comparison altogether, though many a Chinaman's hard-earned dollars now draw interest in the hands of China merchants in the cities of San Francisco and Portland, but we will suggest that there may be many American sponges in China, and also many of our own nationality here to whom the name would apply. As an example, we need only to cite railroad companies who are constantly sending large sums of money away in the payment of interest; and merchants who absorb our last dollars and send them to the East, to Europe, and even to China, in payment for goods. While asserting that the China sponge sends all his money out of the country, would it not be well to except the amount paid for vegetables, butter, eggs, chickens, and other articles of food, also the amount paid out for exorbitant rents for miserable quarters, and the licenses he pays, as well as his wood and water bills?—Have we considered the amount of hard and dirty work done for us?—work that we could not get on well without, and work that none but the lowest and most ignorant class of men will ever do. The Chinaman has also done much of the hard work that women would otherwise have been obliged to do. In the absence of trained servants of our own nation, or European servants, they have done much to alleviate the sufferings of the overburdened wives and mothers of our land, who have thereby, in many instances had their lives preserved and prolonged.—We think the question remains an open one whether our society would be improved by the immigration of an ignorant, low foreign population, the scum of the cities of Europe, such as usually come, to do this dirty work for us, having the power to vote for that man who would give them the most gold or whisky, and to people our streets with ragged children who grow up into American citizens, but little or better than the "heathen Chinese." We believe this state of things to be our only alternative. In the case of a crowded population, as in San Francisco and a few streets in Portland, the question of health is important, but we believe that it can be managed without injustice to any class, and as for dirt, we have seen camps of Irish laborers in fair New England as filthy

as any Chinese quarters could possibly become. Should the immigration from China continue, we have the opinion of some intelligent Chinese that their own countrymen will do all in their power to put a stop to it. Already they feel the decrease of work and wages, and they have sent word to their coming brothers that they will have trouble if they come here where they are not wanted. As to those of our own people who oppose their immigration and employment, we presume they have a right to their opinions, but they have no right to try to enforce them upon other people. We think the whole matter is viewed in an exaggerated light, which has probably been thrown on the subject by designing politicians, who wish to make popularity for themselves, and who have succeeded in arousing the passions and evil blood of the lowest and most excitable classes, which will perhaps end in worse evils than have been brought by all our previous Chinese immigration.

CATHAY.

### Recent Meteoric Investigations.

On the tenth of the present month, the earth passed through the first of the two great rivers of meteors which intersect its orbit; and on November 13 or 14 it will encounter another shower of shooting stars, of equal magnitude. The band recently traversed, known in ancient times as the Tears of St. Lawrence, is about 10,948,000 miles in its greatest diameter, and 4,043,350 miles wide at the point of the earth's crossing.

Probably the most recent investigations into the nature of the erratic masses which constitute these vast belts are those made by Father Ferrari and others in the fall of last year, recently published in *Les Mondes*.—They are based principally upon the observation of a remarkably brilliant aerolite, which fell near Ornino, in Italy, during the latter part of August, 1872. The course of the body was from the southward and eastward, it appearing at first quite small and emitting a reddish light which gradually increased in brilliancy, leaving behind a misty train. Suddenly the bolide flamed up apparently as large as the moon, and then instantly disappeared, a long cloud of serpentine form, remaining in its place. About three minutes after, a violent explosion was heard, followed by two others of less intensity. From the point of first observation to that of its disappearance, the meteor traveled over a trajectory of 62 miles, and its altitude at the beginning was measured at 30°, corresponding to an elevation of about 114 miles. The first detonation took place at a height of 10.2 miles, and the final bursting into small fragments at a few hundred feet above the earth. The velocity of the mass was calculated at 32.2 miles per second.

In order to determine the amount of heat developed by the aerolite after entering our atmosphere, Schiaparelli's investigations were employed. That astronomer has demonstrated that, if a meteor enters the limits of the earth's atmosphere at a minimum velocity of 9.6 miles per second, when it arrived at a point where the atmospheric pressure is at .36 inch, it will have already lost  $\frac{10}{11}$  of its velocity, and  $\frac{100}{111}$  of its *vis viva*. It is evident, therefore, that so great a proportion of lost motion must be converted into enormous heat. Applying suitable formulae to the case in point and assuming the specific heat of the body to be .22 of 1° centigrade, which is not far from the truth, it has been found that the augmentation of temperature, after plunging into the earth's atmosphere, would be 3,468,107.8° Fahrenheit, a degree far more than sufficient to explain the phenomena of light and heat, as well as of the explosion or total dispersion of immense masses.

A number of fragments of the meteorite above referred to, quite small in every instance, were picked up and subjected to careful examination. The mass was crystalline, and formed

of various substances. An angle was polished with difficulty, owing to the extreme hardness. An abundance of malleable granules of nickeliferous iron was recognized. The interior of the fragments appear porous, but outside they were covered with a pellicle of vitrified matter. Beyond the iron above mentioned, the greater part of the mass contained soluble silicates, principally those of magnesium and iron. From the fact that it has been noted that the meteors of the August and November showers, traveling at the rate of from 30 to 40 miles per second, find an insurmountable obstacle in the atmosphere.—Schiaparelli has pointed out that only bodies of an enormous magnitude would be able to penetrate it and reach the surface of the earth in a fragmentary condition. Ferrari observes that, from this, it may be considered that the meteor he describes, having a velocity nearly equal to the above, must have been of tremendous size, and he notes, as a remarkable fact, that an unusual number of these bodies, ten in all, fell in Europe between July and September of last year.

The author states the result of his observations to accord with the following conclusions previously enunciated by Schiaparelli: 1. The intimate correlation between the comets, shooting stars, and meteorites is now placed beyond doubt, and the immense velocity observed in some meteorites renders it impossible to ascribe to them a planetary origin; consequently the hypothesis of a stellar origin is the most probable. 2. From this supposition, the masses come from no single body, since divers cases demonstrate the fact that they arrive from totally different regions in stellar space. 3. The hypothesis admitted, it must follow that the chemical and molecular structure of the bodies of the universe, situated in different positions, must be of similar nature to that of the meteorites themselves.

The below given views regarding the mineralogical structure and composition of aerolites are ascribed to Danbree, and are the results of examination both by spectral and chemical analysis by the most eminent chemists prove that meteorites contain no simple body unknown to our globe. 2. There have been recognized with certainty twenty-two elements, given below in the descending order of their importance: Iron, magnesium, silicon, oxygen, nickel, cobalt, chromium, manganese, titanium, tin, copper, aluminum, potassium, sodium, calcium, arsenic, phosphorus, nitrogen, sulphur, chlorine, carbon, and hydrogen. It is very curious fact that the three bodies which predominate in nearly every meteorite, iron, silicon, and oxygen, are also those which predominate in the earth. 3. Meteorites have also many peculiar mineral compounds, principally native nickeliferous iron and of nickel (schreibersite) and sulphide of iron (troilite). There are also common to the meteorites of the earth a great number of combinations, similar not only in chemical composition but even in crystalline form.—4. Meteorites indicate in a measure the temperature at their formation, and that by which they are caused to disintegrate. 8. Lastly, these bodies demonstrate the existence of innumerable masses disseminated through the remotest regions of space, which would be completely unknown were it not for their sudden and splendid apparitions.—*Scientific American.*

**LANDOR'S RECOGNITION OF GENIUS.**—Lord Houghton says of Walter Savage Landor in his "Monographs," "I could give many examples of the rare and generous delight with which Landor ever welcomed the apparition of genius; it was as a fresh metal to the mineralogist, as a new planet to the astronomer; the ardor was some times excessive, but often more than justified by the event; and those who are now received with the trumpets and shawms of popularity look back with deeper gratitude to the prescient praise of the young-hearted veteran who decorated them from the laurels and myrtles of his own classic garden."

THE story is told of a woman who freely used her tongue to the scandal of others, and made confession to the priest of what she had done. He gave her a ripe thistle top, and told her to go out in various directions, and scatter the seeds one by one. Wondering at the penance she obeyed, and then returned to her confessor. To her amazement, he bade her go back and gather the scattered seeds; and when she objected that it would be impossible, he replied that it would be still more difficult to gather up and destroy all evil reports which she had circulated about others. Any thoughtless, careless child can scatter a handful of thistle seeds before the wind in a moment, but the strongest and wisest men cannot gather them again.