What is Pure Blood?

The following remarks were made by President Welch, of the Iowa Agricultural College, at the recent Short-horn Breeders' Convention:

While coming here to-day, I was thinking of the important subject—how long shall a thoroughbred animal be bred by crossing with a scrub before becoming pure blood? The English rule is, to cross four times with the female and five times with the male. We take half-blood and cross with a pure-blood, and we have a quarter-blood, and at the fifth cross we will have an animal that has thirty-one parts pure blood to one part scrub—that is, if we compute the crosses airthmetically; but when we take into consideration the fact that the pure-blooded animal is prepotent over the scrub, then the animal has but a minute portion of scrub blood. When a pure-blooded Short-horn bull is crossed with a scrub cow, the result cannot be computed arthmetically, for the prepotence of the thoroughbred animal over the scrub controls, to a greater or less degree, the value of the progeny. The future beef and butter of the country depend on the value of crossing. I crossed a common cow, a poor milker, with an Ayrshire bull, and the result was an Ayrshire calf, resembling his male parent, and with not one perceptible point in favor of its mother; thus the scrub was almost lost. It is impossible to say that a certain number of crosses will produce arithmetical results. The Short-horn bull is the most prepotent animal on earth, not particularly, but generally; and for example we will take the seventeens. Suppose there have been nineteen crosses since the importation of 1817; at the present time there would be one two-thousandth part of scrub blood in a straight seventeen (that is, if it was computed arithmetically); but when you take into consideration the prepotence of the pure-blood over the scrub, you would have an animal as near perfection as it is possible to get. Where are the excellencies of the Short-horn, but his merit and power to transmit that excellence and merit to his progeny? I recognize, also, the value of strains of families. The value of a strain is, that particular family produces the best Short-horns. We often find that, by reversion, a very homely or inferior bull, if he be of good family, will breed back to some of his ancestors, and produce them. The principle that like begets like, seems to be the true doctrine.

Hungarian Hay for Horses.

There are many conflicting statements as to the effects of Hungarian hay on horses and other animals, and we are inclined to believe that when it has seemed to prove hurtful it was too far advanced when cut, so that the seeds were developed. Cut, as timothy is by our best farmers, when in bloom, and we question whether it would do any harm. A farmer of Western New York, H. S. Dodge, communicates his experience: "I have sown Hungarian grass every season for the last four, and have never failed to raise tremendous crops. I can show positively that I have raised five tons of cured hay to the measured acre, although the ground on which I raised that quantity of hay had not been manured for years previous. I own a good many horses, and many of them I have wintered enterely on Hungarian hay, from December to April, they not having had a mouthful of anything else, and in all the wintering of horses that I ever did I never had them do as well or look better in the spring than those fed on this hay. I continue to sow Hungarian, and now consider it the most profitable grass crop that I can sow. My farm is a flat, mucky soil, with a stiff clay subsoil, below the depth of the plow. I think this wholesale denunciation of so valuable a farm produce is not right.—*Rural Home.*

Cement for Cracked Hoofs.

Mr. Defay has discovered a preparation, by means of which sand-cracks or fractures in hoof or horn may be durably cemented up. Even pieces of iron can be securely joined together by its means. The only precaution necessary for its successful application is the careful removal of all grease by spirits of sal-ammonia, sulphide of carbon, or ether. Mr. Defay makes no secret of its composition, which is as follows;—Take one part of coarsely-powdered gum-ammoniacum and two parts of gutta-percha, in pieces the size of a hazel nut. Put them in a tin-lined vessel over a slow fire, and stir constantly until thoroughly mixed. Before the thick, resinous mass gets cold, mold it into sticks like sealing-wax. The cement will keep for years, and when required for use it is only necessary to cut off a sufficient quantity, and re-melt it immediately before application.—*English Live Stock Journal.*

The Dairy Cow.

A writer in the English *Agricultural Gazette* says of dairy cows and their treatment, that, taking quantity and quality as the test of excellence, cows are most productive from their second to their fourth calf. The milk from old cows usually contains a greater percentage of water than that from cows in their prime. Old cows are held in light esteem for the purpose of the grazier, and when fat, the meat is of less value than that of younger cattle; hence, on the score of economy, it is a bad practice to retain cows in the dairy much beyond their prime. All inferior milkers, and any who may have lost a quarter, we would at once draft out of the herd. Depend upon it, the milk trade will gradually effect a great improvement in the cattle of this country. The quart-pot test daily lays bare all shortcomings and imperfections, and places them prominently before the notice of the farmer. Where practicable, cows drafted from the herd should be fattened off on the farm.

One important desideratum in the dairy economy of this country is an improvement of the farm buildings. The practice of storing large quantities of hay in the sheds or shippons prevails to a large extent. We cannot conceive anything more injurious to the health of cattle. We maintain that every animal requires a certain cubic area of free breathing space, in order that the ordinary functions of life may proceed unimpeded; a free circulation of air and an even temperature are conducive to health.

Cows in milk are pasticularly susceptible to atmospheric changes, hence the cow-house should be warm, but well-ventilated. Low temperature reduces the flow of milk, hence cows in full profit should never be turned into the pastures during the winter months; gentle exercise and a liberal supply of pure water is conducive to the health of all pregnant animals; we should therefore recommend that all in-calf have daily exercise, though not too many hours' exposure during severe weather. No animal more readily resents harsh treatment than the cow. This is practically demonstrated by the yield of milk that can be obtained by different individuals from the same animal. It is a curious fact that all excitement, whether arising from the stings of gad flies, hunting with dogs, or racing to the milking fold, considerably lessens the yield of milk. I have mentioned this to remind you that kind treatment is of pecuniary value.

Stabling Cows the Year Round.

The great question among farmers is how to derive the greatest amount of profit from that noble animal, the cow, which, of all animals, is the most neglected for health and comfort. My remarks will be alike applicable to the village man with his one cow, or the farmer with his herd of five, ten, or fifty. Is it beneficial for the cow, after she is milked at night, to turn her out in the field again? I say it is not; for the reason that all she gets is injurious to her health, for all the poisonous atmosphere, called dew, that falls on the grass is taken into the stomach, and then she has to lie down on it and the cold wet ground. The result is that nine out of ten have the scours in the morning, and are turned out the next night, and so through the season to take this poisonous stuff into their stomach, that should be left on the grass to make it grow, and the cow in the stable chewing her food that she has eaten through the day; then, in the morning, she will be ready to commence her day's work with a good appetite. But you farmers may say the cow must eat nights, as in hot days she will lie in the shade. If observation and experience are of any value, they teach that cows stabled nights will eat all day, and what they eat is then free from all poisonous dews and in its most perfect state for the stomach of the cow, who is ready when returned to the stable at night, after being milked, to lie down and give a larger mess of milk, leave two or three hard droppings for the manure pile, instead of it being scattered all over the stable, as is the case when they lay out nights—or left in the field to create flies, worms, and bugs to annoy them as they come near it and eat, the manure which is lost from the 1st of May to the 1st of November.

Six months cows lay out nights, and during this time each cow will make two good loads of manure, worth to any farmer $3 per load to apply on his farm, for if I pay $1 per load in the city, and draw it eight miles, it costs me $3, and then it is not half as good. Twenty loads of manure which you would get from your cows by stabling would make a fair top-dressing for two acres fall wheat, or four acres meadow, worth $60. "From little acorns big oaks grow."

If farmers generally would save their manure by stabling their cows they would not have to discuss the question how to enrich their farms, but would find their farms enriched and their cows improved in condition also. I mentioned the fact of flies eating sores on cows. In the fall of 1870 many cows were sore from shoulder to hoof, and, if I mistake not, some died from the effects. Now, flies annoy the cows from 5 or 6 o'clock p. m. till 9 or 10 o'clock at night; hence if stabled at 6 o'clock, and the stable well ventilated, they are free from their annoyance. And another saving, the boy or hired man and dog have not got to get up at four o'clock a. m. and begin their rounds to find the cows, some here, some there, some in the woods, and some off in that other lot, till more than one half day's work is gone, and fifty cents gone in the bargain for his work.—*Chautauqua Farmer.*

Canadian Horses.

A report from Montreal speaks of the exportation of a considerable number of Canadian horses for the English market. It should be understood, however, that most of these are from Ontario, a considerable number of them having been sent from the county of Oxford. Some doubt has been expressed as to the question of profit as attending such operations. A contemporary appears to dispose of the question satisfactorily as follows: A good common roadster, of bone and substance enough to draw a four-wheeler, and six years old, is worth in England $350. Here he costs $150. Freight, forage and insurance against absolute loss mount up to $75; expenses here and there of man and beast to $25; and the venture nets $100 per head. A buyer who knows the class of animals wanted in England by the moneyed classes can do even better. A long, short-legged, weight-carrying horse with safe action, and, to insure some speed, got by a thoroughbred sire, can be obtained in Canada for half the price he is worth to a wealthy country gentleman in England. A hundred guineas is there no great sum to ask for such a prize, while fifty is the biggest figure he could sell for here. But the most important feature of the business is that the English market cannot be possibly oversold, while the supply in Canada is illimitable. On this account stock raisers will be safe in adopting a system that will not only be of profit to them personally, but will at the same time add materially to the export trade of the Dominion.

More Milk With the Cream.

It is the practice with some butter makers, when skimming milk, to remove as little milk as may be practicable, while others prefer to take in bulk about as much milk as cream. C. L. Smith writes, in connection with other topics, that when the milk is put in the pans in a heated condition, and placed in a warm room, perhaps many of the butter globules were exploded by the heat, and that they mingle with the milk like alcohol with water, but to churn all the milk would be to get more butter. There are times when the milk sours before all the cream has risen; yet the milk must be nearly if not quite as good from the same cow that is being fed the same food in a warm morning as it is in a cool morning. But we often get twice the amount of cream in the cool days that we do in the warm days, and the quality is better. Take, for instance, a sultry day of August, when the cream will hardly pay for the labor. Now take a good, cool day, when the milk will yeild a nice cream. Is it to be supposed that there is that difference in the milk produced from the same cows on those days, when the cows are fed on the same pasture, that there was in the amount of butter made from their milk by skimming the cream only? My judgment is, that by churning only the cream, the dash of the churn must injure the butter globules, and make the butter salvy, as the friction is more directly applied to them than would be the case if milk was mixed with the cream. From observation, I believe too many butter makers do not skim as deep or churn as much milk as they ought.—*Interior.*

THE SLOPS.—How common is it for the kitchen authorities in a farm-house to throw the slops upon the ground, just outside the kitchen door, and perhaps within six feet of the well. I have known of a boarding house epidemic of diarrhoea which could be traced to no other source than the contamination of the well water by a shallow pool of sun-exposed, foul-smelling slops. A cemented cistern should be built about 75 or 100 feet from the house, and at a distance from the well, and to this all the kitchen slops, vegetable waste, &c., should be conducted through a suitable pipe or conduit. From the cistern these matters may be fed to the pigs, or thrown upon the ground at a proper distance from the house.