

make their cows pay is only a living, wide illustration of the low standard by which the cow is measured. As an example select some farmer who keeps, say, 14 cows, and devotes them to butter-making. We will suppose that he is a fairly-posted dairyman, understands the value of good care and plenty of feed, and knows how to sell his butter after he has made it. Ask him for the points that govern him in the selection of a cow for his dairy, and in a majority of instances he will tell you he considers size and ability to lay on flesh one of the chief considerations. His reason for this is that when he dries off the cow he can sell her for as much more for beef. That is a general-purpose dairyman. If he buys, it is from a general-purpose standpoint. If he breeds, it will be from a beef rather than from a butter or cheese standpoint. Now, that man is a type of a large proportion of the men who own the cows of Wisconsin. He is the man I desire to take issue with. First, I want him to look over the cows his ideas have produced, and whose record I have given, and then I want him to tell me if he thinks such ideas will ever give us better cows. The cows we have he has bred, and their record is the best answer I can give to that question.

"One of the greatest hindrances to the improvement of the dairy cow is this beef notion that so widely prevails among our dairymen. They have only to turn to records of breeding to see the absolute fallacy of it. No reputable breeder dares to mix purposes in his breeding. If we study the history of our domestic animals, we find that, by natural selection, they are divided into specific lines and purposes. This is the universal tendency of Nature, and the intelligent breeder conforms to it. The breeder of the thoroughbred or racing horse would laugh at us if we should ask him if he did not think it would increase the speed of his horses to mix in a little Clydesdale or Norman blood. Yet the lines of purpose are not more distinct in the horse than in the cow. It is only in this way that the principle of 'like begets like' can be preserved. The question is, are these ideas correct, and if they are, can any dairyman, whose best profit should be the line of his closest study, afford to ignore them? He shows partial obedience to them when he says he would like a heifer from that best cow in his herd; yet ignoring the fact that she has no regular line of parentage, one consequence of heredity, he breeds her in a no-purpose manner, and expects the calf will prove as good as the mother. Because she has individual excellence, he erroneously thinks that she will breed from her udder rather than from her own parentage, and that of her mate. It is strange to me that, with all the discussion that has been had on the laws of heredity, our average dairymen should so generally set them at defiance, or even show indifference to them.

"It is only by adhering to a strict construction of the laws of heredity that anything like a certainty of result can be obtained in the production of a good and profitable animal. The race-horse breeder knows it; the draught horse breeder knows it; the fine-wool breeder knows it; the mutton breeder knows it; the breeder for beef knows it; all intelligent breeders for milk know it. All these are religiously obedient except the average dairyman, the very man of all others to whom a profitable cow is a prime object. He shuts his eyes to law and sound practice, and goes in for confusion, worse confounded. He must believe in his practice, or else he would not so tenaciously adhere to it.

And further on he adds:—

"There is not a farmer in Wisconsin that has ever had a chance to observe the results obtained from the Jersey or Guernsey cow in

butter, the Holstein or Ayrshire in flow of milk and cheese production, the Shorthorn, Hereford, or Polled-Angus in beef, but must see that the best and most profitable results can only be obtained by adhering to these long and well established lines; then let him measure his 'all-sorts,' 'general-purpose' cow with these, and how does she compare? Still farther, suppose he attempts to improve her progeny, will he select a male of her kind? This shows us, gentlemen, the value of right ideas, and how much influence ideas, either good or bad, have on the result of our labor. Specific purpose, not general-purpose, has given us the magnificent breeds of cattle I have mentioned."

The results of general-purpose breeding and specific breeding are summed up and compared as follows:—

"Look now at the sharp contrast in result. The general-purpose cow of Wisconsin yields an average of 150 lbs. of butter a year. The very best may possibly reach 300 lbs. The best specifically bred butter cow in the world yields 803 lbs. of butter in 328 days, and 38 lbs. of butter in one week. The general-purpose cow of our average dairies yields an average, say, of 300 lbs. of cheese a year, or a milk flow of 3,000 lbs. a year (and I very much doubt if she does even this). The best specifically bred cheese cow, a Holstein, astonishes us with a yield of 23,870 lbs. a year, which, if made into cheese, would make at least 2,000 lbs."

People are very apt to ask if much could not be done in the way of perfecting the cows we have. They remind us that some of them are deep milkers and some give very rich milk, but Mr. Hoard answers this with the following:—

"If I were asked to define what I considered the chief excellence of a prime dairy cow, I would answer, the power to transmit her qualities, with a good degree of certainty, to her offspring. I can find thousands of good cows who have individual excellence, but they were not bred for any specific purpose, and their excellence will die with them. Right here is seen the value to a dairyman of correct notions concerning breeding; right here, in the question of offspring, is where 'blood tells.'"

HORSE-BREEDING IN CANADA.

No one who knows anything about the history of the trotting horse of America can entertain a reasonable doubt as to the industry and zeal of the veteran editor of *Wallace's Monthly*. Mr. Wallace has bestowed much time and thought upon the work he has in hand, and though the results of his researches as published in his trotting stud book and his magazine may not be in all cases accurate, they will nevertheless be found of very great value to the future student of trotting horse pedigrees. After a time, when the various families of trotters shall have become sufficiently consolidated and in-bred to constitute a fixed and consistent type from which definite results in breeding may be confidently looked for, the shadowy legendary data upon which Mr. Wallace has built some of the most startlingly grotesque theories will all be found of value as furnishing definite foundations upon which superstructures in the shape of accurate and properly attested pedigrees may be reared. As an equine genealogist Mr. Wallace unites to many admirable qualities one serious fault. Instead

of patiently and carefully studying the facts as he finds them and then evolving the theories to which these facts logically point, he evolves his theories from his inner consciousness and then goes about collecting facts, guesses, hearsays, probabilities, and possibilities to prove them. The material thus collected is not weighed and estimated so much by the evidence which supports it as by its attitude toward the theory Mr. Wallace happens to be trying to establish. If it be hostile to that theory it is too apt to be rejected as valueless, while if favorable, no matter how flimsy the foundation upon which it rests, it becomes crystallized in trotting horse history. One of Mr. Wallace's pet aversions is an admixture of thoroughbred blood in the trotter, and this not only warps his views on that particular point, but causes him to become "hot in the collar" whenever the idea is advanced that the blood of the race horse can possibly be of any value except for the production of race horses. As an evidence of this last-mentioned idiosyncrasy we will quote from an editorial in the March number of *Wallace's Monthly* headed "Horse-Breeding in Canada," and referring particularly to an article that some time since appeared in *THE CANADIAN BREEDER* under a similar heading. He says:—

"Among our exchanges which come across the border, there is a new candidate for public favor, called *THE CANADIAN BREEDER*. It comes out in a handsome dress, is printed on good paper, and shows marks of enterprise and brains in its management. We are sorry we cannot say as much for some of its competitors. The horse department is edited by a very young man or a very old one, and we don't know which, but whichever it may be in years, he seems to take great comfort in thrashing the same old straw over again, upon which men who know nothing about the horse, in his common-sense aspects, have been pounding for a hundred years. It is the same old racket of firing in the air and shouting 'Don't breed to mongrels.' Now, if our esteemed contemporary will sit down and study the history of the horses bred in Canada that have made themselves a name and fame in this country, he will find that they were the very worst type of mongrels. Of all the horses that Canada ever produced no one of them ever was so valuable and so famous as Old Pacing Pilot. Of all the breeds, tribes, and families of which Canadians ever boasted there has been no breed, tribe, or family so valuable as the Tippoo strain, and he was a mongrel of the mongrels. Scores and scores of the most unshapely mongrels have been brought across the border and here left a mark that will endure, in their descendants, for all generations. What horse, not a mongrel, was ever brought from Canada that proved himself worth a sixpence for stock purposes?"

Now, as a matter of fact, we have said again and again to our farmers in Canada, "Don't breed to mongrels," and if Mr. Wallace will take the trouble of informing himself as to the present condition of the horse-breeding interest in Canada and the present state of the Canadian horse markets he will hardly think such advice "firing in the air" or ill-timed either. Our farmers in this country are too apt to disregard everything except the cheapness of the services of a stallion, and in this way many of them breed to mongrels of the worst type and sterner