

Our advice then to the agriculturist is to visit at least one good show every year. In fact it becomes almost a necessity to do so in order to keep thoroughly in touch with what is best in the line of agriculture. The farmer who remains at home year after year, and does not know what is going on in the agricultural world around him, cannot expect to be a leader in his calling. Then be sure to let the boys on the farm spend at least one day at the fair. It will be money well spent and will tend to brighten the lad's understanding and to widen his views in regard to what can be produced on a farm if the very best efforts are put forth. Where can the embryo farmer get a better training for his future calling than in visiting the live stock exhibits at a leading agricultural fair? Encourage them to take notes of what they see and question them as to the merits of the different animals. An early training of this kind will prove invaluable to the boy as he develops into manhood and will inspire him with more enthusiasm for his calling.

Education for Farmers.

In an address on this subject before the students of the Maryland Agricultural College, the Hon. James Wilson, United States Secretary of Agriculture, made this statement:

"The uneducated man earns on the farm from \$10 to \$20 a month; the educated man easily earns from \$50 to \$100. An improved pasture will sustain an animal to the acre; an unimproved pasture requires several acres. The native horse, without blood or development, in some of our North western States, is valued at \$10 a head; a well bred, well developed horse is worth from \$100 to \$1,000. The native cow in some of our newer states yields \$7.50 worth of products in a year; the improved cow in the hands of a skilled dairyman yields \$75 worth of products in the same time. Corn in Iowa, some years, is worth 10 cents a bushel where it is the one crop of the farm; but the skilled feeder makes it worth 40 cents a bushel. The native pineapple weighs from three to four pounds, and sells for 10 to 20 cents apiece; the scientist hybridizes the same pineapple and makes it weigh from eight to twelve pounds, and sells it for 75 cents to \$1 apiece. The uneducated laborer produces cotton as his sole crop, and sells it for 5 cents a pound; the educated laborer diversifies his industry, and puts high-selling products on the market."

A great many farmers have a totally wrong conception of what a farmer's education should be. They conclude that to be educated means to have a wide knowledge of "reading, writing and arithmetic," and some of the higher branches. These are all well enough in their place, and are a necessary part of every man's education. They form what may be called the fundamental part of a man's education, but should not be looked upon in any sense as completing it. After a training in these is acquired a much wider field opens up to one; a field in which everyone may educate himself along a line that will best fit him for making the most out of the calling which he has chosen. The farmer has to do this as well as the professional man. It is just as necessary in these days that the young man, who is going to remain on the farm, should receive a training that will help him to follow his calling intelligently and profitably as it is for the young man entering the medical profession to receive a training that will enable him to practise it.

The practical value of an education for the farmer in the sciences pertaining to his occupation is shown very clearly by Secretary Wilson in the above extract. The farmer who does not know anything about the higher branches of agriculture or has not received a training in the best methods of practising his calling will not make the very most out of his farm. In fact, there is a tendency to retrograde, and, instead of becoming more valuable, the farm will lose its productive power if proper methods are not followed in maintaining and keeping up the fertility of the soil. There is no branch of farming that will respond to skill and advanced training in the best methods more than the dairy. The cases which Secretary Wilson gives of one cow producing \$7.50 worth of products, and another \$75 worth, are things of everyday occurrence. The reason for this difference in returns is that, while the owner of one

cow knows practically nothing about dairying, the owner of the other cow has received a thorough training in the breeding, feeding, and caring for the dairy cow and is enabled thereby to make her produce to her utmost capacity. The same reasoning applies to all branches of farming, and no farmer should expect to make the most out of his calling unless he first perfects himself in the knowledge that will enable him to carry it on in the very best way.

Skill in Breeding.

There can be no stronger evidence of skill in breeding than that shown in the development of the race horse. It is only a generation ago since a mile in 2.40 was the limit of speed for racers in harness. Since that time there has been remarkable progress along this line and now we have the almost incredible record of a mile in 1.59¼. This record was made by the noted horse, Star Pointer, at Glen Falls, N.Y., last year, when the previous record of 2.00¼ was reduced by a full second and the world's championship for speed won. When this wonderful record was made it was said that it would be a long time before it was equalled; but only a week or two ago this same horse paced a full mile in his record time of 1.59¼ without a slip or break at Columbus, Ohio.

All this has not been brought about by chance. The very fact that this horse has made the same record this year as last is conclusive evidence that he is the product of some person's superior skill and good judgment displayed in horse-breeding. To some extent, the superior qualities of Star Pointer, as a racer, may be accounted for by his individual training, but it by no means accounts for all of his good qualities in this regard. That horse was some breeder's ideal of what a race-horse should be. To realize his ideal he did not attempt to breed a race-horse from animals that had not been developed for that purpose. He simply followed the laws governing general horse-breeding, and selected as the sire and dam of his ideal animals that in themselves possessed the qualities that go to make a race horse, and the marvellous work of his ideal is a living testimony of his superior skill and intelligence as a breeder of the highest type of animal, the race-horse.

There is a lesson in this for every breeder and farmer in the country if it is properly applied. Whether it is a horse, a cow, a sheep or a pig, have some ideal before you, and then breed for that ideal. Don't attempt to breed a dairy cow from animals not developed for that purpose. The bacon hog cannot be produced unless the dam and sire partake of some of the characteristics of what the bacon hog should be. In short, follow the lines laid down by the successful breeder of race-horses, and always remember that like produces like. Before starting be sure that your ideal is right. For the farmer, the ideal animal should be the one which the market requires, and which will give him the best returns.

Curing the Fall Cheese.

One of the chief difficulties that many cheesemakers have to contend with in curing the fall cheese is the lack of proper facilities for controlling the temperature so that the cheese may not be subject to wide variations of heat and cold. To cure a cheese properly it should be kept at an even temperature (about 65°) from the time it is placed upon the curing-room shelf till it is shipped. This can be done quite easily where the maker has a curing-room that has been built for the purpose, and has in it proper heating apparatus. But how many of our cheese factories have all that may be desired in this respect? We venture the statement that there are not more than one-quarter of the factories in Canada equipped with curing-rooms and heating apparatus of a kind that will enable the maker to cure his cheese as they should be cured.

When the majority of the factories now in operation were built not much attention was paid to the

curing of the cheese other than to keep it from freezing or from coming in contact with the weather. But many changes have taken place in the process of making since that time, and to-day a high quality of cheese is demanded, and this cannot be produced unless the cheese can be properly cured. Makers and others should remember that the curing process is a very important part of the making. No matter how good a quality of milk has been received, or how carefully and skilfully it has been handled in the process of making, a really first-class cheese cannot be made out of it if it is placed in a room to be cured where the temperature fluctuates between 40° and 80°, and factory-owners should not expect a really fine cheese under such conditions. In fact the maker would be amply justified in refusing to be held responsible for cheese that had to be cured under any but very favorable conditions.

The favorable conditions necessary for the proper curing of fall cheese are a well-built curing-room so fitted up that the temperature can be controlled at all times. To maintain an even temperature a coal stove is more to the purpose than a wood stove, as a more steady fire can be maintained. There are furnaces made for heating curing-rooms, and factory owners should not delay in getting one. Where a coal or wood stove is used a suitable jacket should be placed around it to prevent too much heat from reaching the cheeses on the near-by shelves and to distribute the heat in all parts of the room. Where proper facilities such as we have described do not exist, factory men should lose no time in making the curing rooms in a fit condition for curing this fall's cheese properly.

Co-Operative Pork Packing.

In discussing this subject in last week's issue we stated that co-operative pork factories have been in operation at Stouffville and Bowmanville since the early spring. We have now been informed that this statement was not correct and we desire to rectify the mistake at the earliest opportunity.

Early last spring we made particular enquiries regarding the movement at that time for co-operative pork-packing establishments and were supplied with a fund of material by responsible parties at both of the above-named places, showing that arrangements were completed for going ahead with the work. In fact, in one case, the rules and regulations governing the operations of the company were sent us and statements showing the basis upon which hogs would be received from farmers and others and we gave our readers the benefit of them. It is needless to say that it is a great surprise to us to learn at this late date that these organizations formed last spring have not yet commenced operations. The fact that these co-operative concerns have not yet got under way bears out our contention in last week's issue in regard to the great risk and outlay involved in the establishing of co-operative pork factories. Had it been an easy matter to equip and place these factories on a working basis they would no doubt have been in operation ere this.

Hired Help on the Farm.

The following extract from *The American Cultivator* is along the line we have taken in discussing this question on former occasions:

"The ideal way to hire farm help is to have suitable houses built so that each hired man may marry and keep house, with a sufficient piece of land so that some fowls may be kept, and vegetables and fruit raised for family use. Such farm tenements can usually be rented for enough to pay interest on the buildings and the value of land thus set apart. In most cases farms on which this convenience for farm help belongs will increase in market value more than the cost of the buildings put upon them. It is such farms that wealthy men who are desirous of country life part of the year are always looking for. Nobody wants to buy a large lot of land with few improvements on it. So long as the improvements are made judiciously they are apt to add more to the selling value of land than their cost. We do not make enough of rural life. What is needed is some