continue to be the most important of all the pursuits of the farmers of the great West, does not admit of a doubt; hence any suggestions that may tend to foster that interest and render it more remunerative to those engaged in it, is quite legitimate for an agricultural paper.

The improvement of the breed is all important, as may be seen by noticing the sales of either fat cattle at our stock yards or the prices paid for blooded animals, as breeders, whether it is for cattle, horses, hogs or sheep —and I shall add poultry. You and every farmer are aware that it costs no more to feed this kind of stock, than it does to feed the inferior breeds; in fact, some of these slab-sided, cadaverous, long shanked animals are perfect cribs for stowing away corn and fodder. I used to have to feed some of that kind of hogs when a boy, and upon my honor I always found them eating or squealing, and often both at the same time. The improvement of this kind of stock has been very great, and will continue until the old breed, like the aborigines of this country, will be known only in history. The improvement in neat stock and horses is not so rapid; nevertheless it is onward.

Now, grass and corn are the greatest staple products upon which the great interest is to be sustained; neither of these will bear transportation to any great distance, especially at present rates of railroad freights; therefore would it not be found more profitable to put this gross cheap freight into good beef or pork, such as will sell at the upper figures—say 4¾ to 6 cents for beef, and 4 to 5 cents for pork—when corn is only 42 to 56 cents per bushel, and hay $15 to $18 per ton? Now as freight has to be paid according to weight, corn is not worth one cent per pound as a general thing, and hay only about ¼ of a cent; hence either will not pay for shipping, except short distances, and by water; while beef and pork are over four times as valuable per pound, and are shipped at a low rate of freight.—*Rural World.*

WEAK LAMBS—FEEDING SHEEP.

A correspondent of the Utica *Hearld*, commenting upon weak lambs, asks if it may not be owing to breeding from graded stock, and adds:—This has an influence. Where sheep are well kept, not over-fed or pampered but kept on "good hay," with some grain, thus ensuring, with good care soundness and strength, a condition favourable to propagation results. At least we have been led from experience, to this conclusion. A healthy male, not overtasked, and of pure blood, whether old or young, avoiding the two extremes of age, is safe with a flock of sheep, the ewes strong and healthy, well taken care of and not worried, nor exposed to wet snows and rains. In such case and with care at the lambing time, keeping the ewes in warm, dry, sufficiently ventilated stables, success is to be expected, and it is, so far as our observation extends, generally secured. It is the weak, unfit sheep, exposed to the weather, hooked about by the cattle, and the lambs, when dropped, left to take care of themselves, save what the mother can do for them, that produces the weak lambs, and hangs the trees and fences with their carcasses, as has been so much the case and is yet to a certain extent, always among the negligent farmers.

Severe cold chills weaken a lamb, if dropped in a cold winter night, unprotected and unaided by the farmer. Sometimes they are found dead in the morning; sometimes very nearly dead, beyond recovery, and sometimes, by taken to a warm place, they can be saved. Cold has been a general slaughterer of these innocents. Hence it is that there is better success where the lambs come late, when the winter and the cold rains and the wet snows of spring are over. Lambs are not only then quite or nearly all sound, but, if dropped in pasture they grow at once and rapidly, showing in the fall equally a good stock for the butcher or to keep over as the early brought lamb.

From this let it not be inferred that we are in favor of late breeding. We are not, save so far as where care is relaxed, and sheep are not kept as they should be, but left negligently, to take care of themselves and their young. Where early cut hay, particularly clover cut in blossom and well cured, is fed freely, with grain to aid it if needed, roots substituted for grain at the lambing time to favor milk, and if good quarters are provided, not only during the winter, but the fall, and particularly late fall, the flock uncrowded, undisturbed and satisfied, with warmer quarters for the mothers at the yearling time—when all this is done, as we set it among our best sheep men, it is better to have the lambs come, say in March. The growth then, with care, will go right on, and there will be lambs for the butcher early in the season when prices are usually at their best.

It has come to be so now, in the keeping of our stock, that winter is no more an impediment, or need not be. Our stables can be given a temperate climate, avoiding the two extremes of winter and summer, and hay cut when green and tender—grass dried—with the aid of the succulent root crops, (a summer feed,) and grain to strengthen when need be. In this way, there is even an advantage over summer, unless soiling is adopted, which is pretty much the same as the winter's keep, the feed now cut for soiling being more or less direct, the last views of respectable authorities favouring complete drying, as for winter hay, thereby securing greater concentration, which our coarse fodders will bear.

ON BREEDING SHEEP.

The larger a sheep of any given variety, the stronger and longer of its class must the wool be; and to accord with this greater length and strength of the wool there should be that squareness and size of carcass rendering the animal symmetrical, and ensuring a proper correlation of muscle, fat and wool. The weight and size of the animal must also correspond with the quality of the pasture. This axiom (for so it may be called) is also found in Allen's "American Farm Book." The quantity of wool and flesh will correspond with the quality of the sheep, provided always the farmer proportions the size of his flock to the amount of pasture. A large framed sheep with short, fine wool is an incongruity. Such sheep are more or less common when French Merino sheep were all the rage. Many seem to have the idea that the Spanish (or as Randall calls them the American) Merinos were too small for profit. They accordingly selected the coarse-boned, out-of-shape specimens of French sheep, and attempted to breed mutton and fine wool. On trial however, these sheep were found not to be healthy; they were of uneven size, and there yield of wool was not in proportion to the size. Those that bred them (I mean ordinary sheep farmers) soon got disgusted with the so-called French Merinos, and went back to the Infantados again. Small carcasses, short or medium fine wooled-sheep, present normal conditions. They are always profitable in large flocks on dry lands, and given maximum of yield with a minimum of care and feed.

The Leicesters, as improved by Bakewell, were not perfect sheep, though of great value. As the saying went, Mr. Bakewell neglected to fleece. The fleece of the Leicesters, as he left them, was open; but this is easily accounted for. He bred almost entirely for flesh. The market for mutton was of far more value to him than the demand for wool. As the symmetry of the sheep was increased, the weight of fleeces lessened, but the quality was rather improved. Bakewell accomplished very much, although the Leicester as now breed, is not exactly the same Leicester left by him. The writer goes on to say:

"It is necessary to breed within a variety, or to persistently cross with one variety through many generations until the blood of one variety entirely dominates over and extinguishes that of the other, accommodating itself to the physical conditions of the locality, and creating a distinct class, or race, under this influence."

A cross or two for the butcher may answer, but cannot be continued without damaging results. Mind you, I cannot say that Cotswolds, Leicesters and Lincolns cannot be crossed properly, for they can and are every year, but it is only for the purpose of raising lambs for the butcher. But for breeding purposes, I claim that no cross-breeding should be allowed under any circumstances. Each breed (variety) has now its peculiar characteristics and good qualities, and the general rules of breeding hold good here as elsewhere; *i. e.*, a cross-bred animal inherits the bad qualities instead of the good ones of its progenitor. And, if such animals are bred, the progeny is uncertain in size, quality and hardiness.

Senior Alemas thinks that the Lincolns, Leicesters, etc., can only be reared profitably in a flat, low country. Our Canada farmers have proved to the contrary. They raise as fine and as large sheep as are raised in England. But if a flock is examined it will be found that if the lambs are even in quality and size, and the sheep are healthy and hearty, the flock is either pure Leicester, or Cotswold, or Lincoln. Purity of blood in every variety is absolutely essential to pecuniary profit for the breeder who expects to keep or sell his lambs for breeding purposes. I do not know but I am saying too much on this subject, but I think it a matter of vital interest to our breeders. We now have excellent, profitable flocks of the different varieties of sheep. Let these be bred together, *indiscriminately*, and what sort of sheep would the next generation get? Such men as Bakewell would have their hands full, and such presistent, far-seeing men are few and far between.—*Erie, in National Live Stock Journal.*

FATTENING CATTLE GRADUALLY.

Every farmer who makes the feeding of animals an important part of his business, ought to know that their unremitting growth is the only true and successful way of treating them. This the course which the most successful pork-raisers pursue in feeding their hogs regularly and fully, through winter and summer, till they are sufficiently fat in the autumn. Many intelligent persons are accustomed to suppose that poor animals may, in a short time, be changed into fat ones by stuffing them with rich food. The more food they can make them take in a day or week the quicker they suppose they will become fat for the market. But this is a false opinion, as experiments clearly show. The over feeding is always wasteful; for after all the animals gain but little fat, and the owners begin to think that the fattening of them for market is an unprofitable business. An owner may withhold the proper quantity of food from his hogs and cattle, and even half starve them for months; and then may change his mode of treating them, and glut them with excessive food, and thus hope rapidly to put them in a fat condition; but the attempt will prove abortive, as the growth of the animals from the earliest period of their existence, and their increasing in fat and flesh must continue on without interruption till they are marketable. Careful observations prove that the profits of raising and fattening cattle and hogs are realized only when they are regularly fed from day to day with neither too scant nor too heavy feeding.

Some object to this mode of treating their animals. They wish to finish the fattening process in two or three months, and think it is too expensive to continue it for two or three years. This would be the case if their way of feeding was the correct one; but it is not, for heavy feeding is not requisite to keep up the continued growing condition of the animals.

We have in mind an observing farmer living in Central New York, who carefully weighed every animal he was fattening every week. To a fine steer he gave daily four quarts of barley meal, and he found the increase in its weight to be ten pounds per week. He then tried the experiment of feeding eight quarts per day, and he found that the weekly increase of weight was less than when four quarts were given. Twelve quarts were now given daily, and at the end of the week there was no gain in flesh. These facts teach all persons who feed domestic animals that there is such a thing as feeding their stock so largely or heavily that the profits will be less than if the stock were to receive smaller allowances. When a portion of the feed passes away without having been digested, it is a reliable indication that feed is not consumed as profitably as it should be.—*Exchange.*

SCOURS IN SHEEP.

For ordinary cases of diarrhœa in sheep, change the food and give the sheep all they will eat of a mixture of equal parts of Glauber salts (sulphats of soda) and common salt. This may apparently increase the difficulty at first, but will usually effect a cure. Where there are only one or two sheep affected, and is probably caused by weakness, give a pint of fresh milk made into a porrage with a tablespoonful of wheat flour once a day. If this does not effect the cure, give two ounces of Glauber or Epsom salts and 20 drops of laudanum, and in five hours give ten drops more of laudanum. If the sheep is very weak, give half a pint of warm ale with a little ginger or gentian.—*Am. Agr.*

BUTTER IN FRANCE.

If our dairymen need a spur, an eye-opener a lesson which speakes volumes in three words, here is one of the head of this article. Butter is actually brought from France and sold by the New York dealers. And this is thus because there is an actual scarcity in the market of good butter put up in attractive shape for small consumers. When we know that one dairymen gets $1.15 a pound for his product; another $1.60 and another 75 cents the year round, at his dairy door, it is easily seen that it will pay to bring butter across the ocean, from France, if it is only good and shapely enough to suit the fastidious purchasers who will have something nice whatever it may cost. All this butter is made from choice cows, choicely fed on clean sweet food; the milking is done in the cleanest manner. The milk is handled as carefully as though it was nectar; the cream is churned with the utmost care by clock and thermometer; the butter is worked with skill, and is made up in shapely cakes which do not require to be cut when brought to the table. Compare, then, this cake—hard golden yellow, sweet, fragrant, and tempting to all the senses—with an unsightly chunk, which is cut out of a greasy keg, and smells of old age and rancidity, and is made from ill-kept cream from cows filthily lodged and carelessly milked, and is churned anyhow, and the difference is amply accounted for.—*N. Y. Tribune.*

IMPORTANCE OF PURE WATER FOR CATTLE.

Dr. Jenner, who conferred that great blessing on mankind—the cow-pox innoculation—considered the giving pure water to cows of more importance than persons are generally aware. There were farmers in his neighborhood whose cows, while they drank the pond water, were rarely free from the red water or swelled udders, and the losses they sustained from these causes, together with the numerous abortions the cows suffered, increased to an alarming extent. One of them at length, supposing that the water they drank had something to do with producing their disorders, sunk three wells on different parts of the farm, and pumped the water into troughs for the cattle. His success was gratifying; the red water soon ceased and the swellings of the udder subsided, and the produce of the renovated animals increased both in quantity and quality. Other farmers followed the same practice, and in less than six months not a case of red water, swollen udder or abortion was heard of in the neighborhood.

SHEEP AND COWS TOGETHER.

A correspondent of the *Practical Farmer* writes:

I have been farming and keeping sheep nineteen years. During the last seven years I have been keeping thoroughbred Southdowns, carefully selected from some of the flocks in the country. My lambs have averaged me $10 apiece, and the wool $2 for each sheep. I think I can keep one sheep and one cow to every acre, on a given amount of pasture land, just as well as to keep the cow alone. In regard to alleged injurious effects affirmed by some of keeping sheep and dairy cows in the same pasture, I will state that I have never observed them. And if there were any injurious effects resulting from the practice, it would be confined to the short space of time intervening between first turning to pasture and harvest, say from the middle of May to the first or middle of July. Sheep prefer and will cling to the old pasture, while cows are continually seeking and longing for new.

SHADE FOR COWS.

It has been contended that cattle graze more when there are no shade trees in the fields, and that, therefore, cows will make more butter, and cattle put on more flesh when exposed to the scorching rays of a summer's sun than when protected by shade trees. At the Ninth Annual Convention of the American Dairymen's Association at Utica, Mr. Blodgett, in speaking of this, says that cows graze more when they have no shade trees to shelter them, but it is also true that heat affects their health and the quality of their milk. Mr. B. also contended that grain feeding improved the milk and butter, increases the quantity, improves the manure and enables the dairymen to keep more cows on the same number of acres and makes a better net profit. He recommended protection by shade and feeding meal or other food to avoid the necessity of exposure to a broiling sun to gather food.

The grasshoppers that invaded north-western Iowa last season, destroying the crops, and leaving the settlers destitute of the means of subsistence, also took in a few counties in south-western Minnesota, and there are said to be six hundred families in that section suffering for the necessaries of life. The Governor of Minnesota has presented an appeal for State aid to the Legislature, which will doubtless be heeded. The Iowa Legislature will also take measures to relieve the destitution in that State.