

stage, and that the "brush" of to-day will be the large timber trees of the future.

In one respect the owner of a wood-lot has a great advantage over the owner of large tracts of forested country—the absence of danger from forest fires. But if fire does occur in the wood-lot its results are as disastrous as in the case of larger areas—the destruction of the young growth; the burning of the fallen leaves, the natural manure of the forest; the exposure of the soil and consequent greater evaporation; and the injuring of the standing timber by burns through the bark which not only lower the value of the butt-log but allow access to rot-producing fungi.

(To be continued.)

THE HORSE.

The Heavier the Better.

We were pleased, in reading one of the articles published in our Young Farmer's Department, to note that the writer had found, from experience, that the heavy horse, and the heavier the better, was the most profitable horse on the farm. He did not go into the question of breeding value, but simply mentioned the fact that for heavy haulage and the heavy farm work the horse with weight and substance is most economical and accomplishes the work to better advantage than lighter animals, more of which would be required to do the same hauling of implements and loads. The heavy horse is bound to weather the competition of automobile and tractor to far better advantage than is the light horse. Of course, some consideration must be paid to the light horse stock of the country, and this should be improved, but, for the farmer with land to work and loads to haul, weight is important. And, bringing up the point of the value of the animals as breeders, the heavy horse is always in better demand than the light horse in boom times as well as in periods of dullness in the horse market. The heavy mare can be managed so as to do her share of the farm work and at the same time raise a colt, and just at this season of the year and more especially when feed is high in price and scarce, it is important that we emphasize the feeding of the draft colts and young horses on the farm. If any of the horses must be "skimped" this winter, let it not be the younger animals, particularly the colts recently weaned. If they are to go on and reach the desirable weight for their respective breeds, it is important that during the first and second winters at least, and particularly the first, they get a sufficient amount of suitable feed. Do not withhold grain. Give rolled oats in sufficient quantities to keep the colts growing and thrifty. An occasional root, carrot or turnip preferred, will help, and feed liberally but judiciously on good clover hay. Exercise is important as it tends to keep the colts healthy, thrifty and growing well. Give them four or five hours each fine day in an open yard. Remember that weight is important, and to get weight the colt must be kept growing. To keep the quality right the animal must be judiciously fed and exercised regularly for a considerable time each day. Because horses are not as ready sale as they might be at the present time, and because feed is high in price, are not sufficient reasons to neglect the colts. Keep them growing.

The Brood Mare.

Much of the success with foals next spring depends upon the care and management of the brood mare during the winter season. We must emphasize exercise. No brood mare can do justice to herself and her offspring if tied by the neck in a narrow stall day in and day out. If she is to raise a strong, healthy foal next May or June, perhaps earlier or later, she must get a reasonable amount of exercise, and the more of it she gets the better, provided it is regular. Each day, if there is no light work or light teaming for her to do, she should be turned out in a yard, not with younger horses or those likely to kick in play, but where she can exercise quietly and unmolested. Four or five hours a day, when the weather is right, will do her good but if she is to be turned out when the hard weather comes she should be kept sharp shod, at least in front. Almost as surely as a mare falls an abortion results. This must be prevented and precautionary measures must be taken early in the season. Some keep their mares shod all around, but, sharp shod behind, there is some danger, particularly with a mare that is inclined to be cross when with foal, of other animals getting kicked. Good rolled oats and clean hay are as good feed as can be given, but the grain ration should not be heavy. Keep the mare in good thriving condition. Some claim that adding a little wheat to the oats helps, but this year wheat is so high in price that very little could be profitably used. Give the mare some roots each day; a good big turnip at noon, or carrots if you have them, will tend to keep her digestive tract in a healthy condition.

Write your member of parliament or the Minister of Agriculture and state your objection to oleomargarine.

LIVE STOCK.

Have the stables been cleaned, disinfected and freshened for another winter's feeding period?

Every load of manure drawn to the fields this fall and winter is that much done towards the spring's work.

Almost any man with tools and lumber can make a colony house for swine. Such will be found a very handy thing on the farm.

There is now an excellent opportunity to derive some revenue from our rough, yet good grazing land. The world-wide shortage of sheep emphasized in articles in this department should act as a suggestion to many. Farm flocks and small ranch flocks should result remuneratively to any with some knowledge of sheep husbandry.

A clean, dry barnyard has many advantages over the wet, miry kind too often seen. Put the manure in a compact pile, or haul it to the fields. Drain the barnyard either with tile or open ditches and if possible fill up the depressions with gravel. Concrete is an excellent thing, but it is rather late now, on account of frost, to put it down.

The Sheep Question in Great Britain.

The sheep-breeding industry of this country is certainly now in a position which calls for "a long pull, a strong pull, and a pull all together" on the part of breeders in order to restore it to the place it once held in the pastoral husbandry of Great Britain. We have been aware for some time that a decline in sheep has for many years past been a world-wide movement, and that the decline has been both absolute (i. e., in actual numbers) and even more so with regard to population. But few persons, however, were, we think, prepared for the startling facts brought out in the latest figures which we have had from the Board of Agriculture, and which show us that during the past forty years the numbers of sheep in England and Wales have decreased by 14 per cent., or from 21,628,896, on the average of the five years 1871-75, to 17,259,694 in 1914. In this period we have thus lost 4,369,000 head of sheep in England and Wales, while in the same period the population has increased from 22,712,266 in 1871 up to 36,075,269 in 1911, or by 13,363,000 souls.



Early Training.

Taking 100 as representing the numbers in 1876-80 of sheep in the quinquennial periods following, and of the population in the census years, the relative numbers are thus given by the Board of Agriculture:

Average for the years	Sheep	Population
1876-80.....	100.....	100.....
1881-85.....	88.....	114.....
1886-90.....	91.....	—.....
1891-95.....	95.....	128.....
1896-00.....	92.....	—.....
1901-05.....	88.....	143.....
1906-10.....	93.....	—.....
1911-14.....	86.....	159.....

Sheep breeders would, we think, do well to study these figures carefully and try to realize what they mean. In all their nakedness the figures tell us that while our sheep stocks in England and Wales have decreased by 14 per cent. absolutely, they have decreased no less than 73 per cent. in their proportion to the population. This is the bald and not very pleasing fact which a very simple arithmetical calculation deduces from the above table of Board of Agriculture figures.

There is one thing that must not be forgotten in connection with these figures, and it is a fact that somewhat mitigates their force. The sheep bred to-day are much superior to those of forty years ago, and by early maturity alone probably produce nearly as much mutton in a given time as did the larger numbers in the late 'seventies. We mention the point only to show that it is not overlooked.

No doubt the causes for this decline in sheep husband-

ry have been both varied and cumulative, and this would open up a subject into which we shall not enter except to touch upon it very briefly. As long ago as 1887 the decline had commenced, and the matter was discussed in the Agricultural Returns for that year. The causes for the decline shown in England were then given as the severe winters which had at that time been experienced, and which caused much mortality among sheep; the reduction in flocks owing to so much land being thrown on owners' hands, and who had not the money to stock it; and to forced sales owing to shortage in keep owing to some summer droughts. No doubt these and similar causes—natural causes they may be called—have had some influence in bringing about the reduction.

An economic reason is put in the forefront of the causes for the world-wide reduction in the number of sheep in the report on the meat situation which has been recently issued in the United States. This reason is the tendency all over the world to smaller farms—a tendency which, it is claimed, is antagonistic to sheep, animals which do best of all on a large range for grazing. In this report the view is expressed that sheep—though they produce both meat and wool, and so are distinctly dual-purpose animals—are not economic stock on small farms, such as pigs are. In America, where the farms have superseded the range, sheep have enormously declined in numbers, and this appears to be a common result in the development of farming in countries where density of population is increasing. In contradistinction to this the report points out that pigs invariably increase with small holdings, and "the economic strength of swine has been demonstrated by forty centuries of agriculture in China, during which time the reduction of farms to an area of very few acres has permitted the pig, alone of meat animals, to survive."

But, whatever natural or economic causes have combined to bring about the reduction, the actual result is to be deplored and calls energetically for alteration. One thing is very certain, and it is that the smaller holdings tendency has not gone far enough in England and Wales to prevent our vales, downs and hills from being stocked at least as extensively as they were forty years ago, and the actual capital needed to bring our flocks back to that level need not be great. We have now some 7½ million lambs in England and Wales each year in June, and if sheep farmers would but add 2 per cent. of the lambs to the number of ewe lambs now kept for breeding, this should add (in round numbers) 150,000 sheep a year to our stocks of about 6¼ million breeding ewes, and this over and above the numbers now kept to maintain stocks. Very few flockmasters would miss this from their profit and loss account of their flock, and it would be a very simple and easy way to bring back our sheep stocks to their old level.

There can be little doubt but that such an act of thrift will pay well. However deplorable the figures we have quoted may be with regard to the past, they are full of brilliant hope for the future. With stocks as they are in relation to our growing population, there can be no fear that prices for either mutton or wool will be unremunerative for a good many years to come. Breeders should take advantage of this, and not only bring the numbers in their flocks up to the higher level we have indicated, but also improve their quality by the use of the best stud animals available. Patriotism calls for this as the sheep farmer's contribution to the national food supply. When this is backed up by self-interest as well, there ought to be no difficulty in securing the result desired.—Live Stock Journal.

Wool and Textile Manufacturers Regret the Decrease in Sheep.

Some interesting figures and information are to be gleaned from the Conference, conducted under the auspices of the Philadelphia Wool and Textile Association at that city, on November 23 and 24. All the speakers told the story of a once-paying industry, now vanished or rapidly declining. Professor C. S. Plumb, of the Ohio State University, with regard to wool production said: "If all the wool grown in the United States last year were made into pure, all-wool cloth, and the cloth were cut and divided equally among the men and women of this country, there would be about forty-four square inches of such cloth allotted to each person, and if the present decline in wool production continues for a few years longer there won't be enough to make a respectable breech cloth per capita. He presented the following chart, which sums up the condition in brief form.

Year	Farms	Sheep	Sheep per farm	Sheep per capita
1850	1,449,073	21,773,220	15	.93
1860	2,041,077	22,471,275	10.9	.71
1870	2,659,985	40,853,000	15.3	1.05
1880	4,008,907	40,765,900	10.1	.81
1890	4,564,641	44,336,072	9.7	.70
1900	5,739,657	41,883,065	7.2	.54
1910	6,340,359	51,638,590	8.14	.56

The causes of decadence were enumerated by Professor Plumb under the following heads: First, he placed the fact that our American people as a people do not love farm animals. We keep live stock merely as they fit into our farm plans, but have never regarded them with the same affection as do European farmers, and sheep have been the first to suffer. The second reason was dogs; third, the price of land; fourth, unpopularity of mutton as a food; fifth, stomach parasites;