

little admiration for the Lincolnshire variety, and some go so far as to question its utility. Lincolnshire breeders, however, are not likely to follow a will-o'-the-wisp, and they realize that it is better to have some sort of pedigree and endeavor to grade up the cow stocks of the country, rather than proceed on haphazard lines. In Lincolnshire there is a wealth of big-framed, fleshy cows, with good bags, nearly all of a sound red color. It is little wonder that, having bred these for generations, the average farmer in Lincolnshire should not feel justified by experience in throwing them over, particularly as he is strongly convinced that no variety of the Shorthorn possesses such constitution as the Lincoln Red. It must not be forgotten either that some of the best strains of Coates' Herdbook have found their birthplace in Lincoln, the Nonpareils being a prominent example.

Instead, therefore, of cavilling at the divisions of the Shorthorn, it is, we think, a hopeful sign of the times that breeders are realizing the advantages of pedigree, even although it may split up the breed into one or two sections. These divisions would be inevitable in any case, as, of course, Coates' Herdbook could not be opened up more than it is at the present time. Under these conditions it is, we think, the most prudent policy of Shorthorn breeders in general to work up registration as a means of improving the different varieties of the Shorthorn. The contest at the Grantham show the other day was signal proof of many men having many minds, and the fact that a pure Shorthorn has been beaten in public competition for the championship by a local variety will do much to increase the interest in, and, perhaps, secure a wider sympathy for those varieties of Shorthorns which are none the less true blue in breeding, although their pedigrees have not been recorded. The Shorthorn is too cosmopolitan to be limited and entirely governed even by one association; and, after all, if one takes the number of pedigree Shorthorns in the country, and compares the number of unregistered animals of Shorthorn type, the pure-breds only represent a small fraction of the whole. Yet the influence which they exercise is world-wide, and the more influence the breed as a whole possesses by the adoption of registration, the better we think it will be for the Shorthorn, and certainly it will place breeders in a more powerful position to fulfil modern requirements. We, therefore, think that nothing but good can come out of the extension of registration, even although it is not immediately allied to the parent volume. It is the recognition of a principle which everyone with a generous thought for stock-breeding in this country will support. Let us, therefore, do nothing to discourage its adoption.—[Farmer and Stock-breeder.

Soiling Cattle at the Central Experimental Farm.

We do considerable soiling on the Central Experimental Farm, since we have only about 25 acres of pasture for about 80 head of cattle large enough to go on the grass. Our system is as follows:

Milch cows are turned out on the best pasture, which consists of about 14 acres, as soon as that pasture is in first-class condition. It is not necessary to give them any other feed for from one month to ten weeks, according to the season. The young stock are put upon another field, about ten acres in size, by themselves. They receive in addition ensilage, and about $\frac{1}{2}$ lb. of bran each per diem. If ensilage alone is fed they lose in flesh. The dairy cows, about the 1st of July, receive in addition to the pasture, ensilage, some green clover, and a mixture of peas and oats, which will have been sown expressly for them in April or May. Most of the feeding is done inside, as there is a great deal less waste when cattle are fed in stables than when fed upon the pasture. The soiling with peas and oats and ensilage continues till nearly the end of August, when the new corn is ready to feed, and they receive what they will eat of the corn until the fall feeding begins. The corn is fed whole as long as they will eat it up clean, but as soon as they begin to leave the stalks it is cut, it being necessary to cut every second day in order to have the feed in the best condition. The best soiling crops that we can sow, we have found to be a mixture of peas and oats, which should be sown at the rate of about three bushels per acre, and which may be sown usually about the 25th of April, about the 1st of May, about the 10th of May, and about the middle of May, in order to have it in best of condition during as long a period as possible. The best soiling crop that can be grown is alfalfa; but a dry, well-drained, fertile, well-tilled field is necessary if it is hoped to succeed with this crop.

The area to devote to such crops will, of course, depend upon the kind of crop and the season, but it is always better to have too large than too small an area. A fairly safe rule would be to allow one acre of all sorts of crops during the season for each six cows. To illustrate, a farmer with 18 cows, likely to require supplementary feeding during the summer, should devote about three acres to the growing of soiling crops of various kinds.

A good plan for a farmer in Ontario or Eastern Canada, with say 24 cattle, would be as follows:

1. Sow as early as possible on $\frac{1}{2}$ an acre, $1\frac{1}{2}$ bushels oats and peas, equal parts, and 5 lbs. red clover. Clover might give a crop in September.
2. Repeat a week later.
3. Sow one week later $\frac{1}{2}$ an acre oats and vetches, $\frac{1}{2}$ bushel vetches and $1\frac{1}{2}$ bushels oats on the half acre,

5 lbs. red clover, 4 lbs. timothy, for soiling the next year.

4. Sow as early as possible $\frac{1}{2}$ acre selected Leamington corn.

5. Repeat No. 4 two weeks later.

6. Sow in July $\frac{1}{2}$ acre white turnips.

7. If no alfalfa has been previously sown, I would advise any farmer to prepare a small piece of land (as per full directions given in bulletin available from the writer) and try some. J. H. GRISDALE, C. E. F., Ottawa, Agriculturist.



Two-shear Leicester Ram.

First prize Royal Show, 1905. Exhibited by Mr. G. Harrison, Gainford Hall, Darlington.

FARM.

Growth and Care of Timber.

The forestry report, recently issued by the Director of Forestry for Ontario, contains a strong paper by Mr. C. W. Nash, on the advisability of farmers reforesting portions of their farms. Much has been said on this subject during the past few years, and yet little has been done. It is hard to get men to do anything that does not yield an immediate profit, and there is a general opinion that the planting of trees is, so far as the present generation is concerned, a profitless undertaking. Mr. Nash, however, draws attention to the fact that an actual profit in fence poles, firewood, and such small timber, may be reaped in from 10 to 15 years after saplings have been set out, and from that time onward, steadily. He shows, too, that by exercising care, such woodlands as are at present standing may be made a source of revenue, and still remain practically uninjured. In the Black Forest, and other places in which the forests are judiciously cared for and harvested, timber has been taken out for many years, and yet the forests remain undiminished in value. This was very fully and clearly brought out in the fine series of papers by Dr. Judson F. Clark in the "Farm-



Champion Yorkshire Boar.

Winnipeg Exhibition, 1905. Owned by Geo. Dunn, Neepawa, Man.

er's Advocate" early this year. The main thing is to keep cattle from browsing and destroying the saplings, and to see to it in removing the timber, that the growth of that which is left is encouraged in every way possible. The supply of saplings will, where there is a sufficiency of seed trees, be kept up by natural seeding.

Leaving aside the direct profit made in this way, there is a much more important profit which is too likely to be overlooked, but which is, on that account, none the less real. In any country which is well wooded, even by detached groves of comparatively small trees, the melting of the snow in spring is somewhat

gradual, while the porosity of the ground soaks up the water, passing it gradually to an underground level, where it does an incalculably useful work in giving to the earth above it the necessary moisture, and in keeping up, by a more or less retarded process of filtration, the supply of water in springs and streams. Where the country has been denuded of trees, on the contrary, the snow melts rapidly, and runs over the ground in rills, which carry off much of the fertility of the soil, and often no small amount of the soil itself. This alluvia is dumped into the nearest stream, which, increased to a torrent by so many tributaries, proceeds to hurry it as quickly as possible to the nearest lake. On the lower lands disastrous floods may possibly ensue, and still more of the good of the land be swept out into the lake, where, possibly, by the year A. D. 125,492 a stretch of rich alluvial land may have been built up. For obvious reasons, however, consideration of this last may be postponed.

In the meantime, while the snow water is being thus hurried away—subsequent rains following for the most part in like manner—springs are drying up; streams, during the hot weather, are becoming smaller and smaller, and the farmer has a never-failing "job" waiting for him in that continual cultivation or stirring up of the parched soil which is each year becoming more necessary.

For time saving in this last respect alone it would seem that farmers should be willing to undertake—and as speedily as possible—the work of reforestry. Yet nothing is done, and, according to present indications, will not, it appears, unless the thing is made a matter of Government. That something will have to be done sooner or later seems patent. Year by year our climate becomes more extreme; damaging winds are more prevalent—even cyclones having appeared of late years in Ontario; and lightning becomes more destructive. All of these effects have been directly traced to the deforestation of the country, which has been carried to an excess rather appalling to those unacquainted with the statistics. In Southern Ontario, only about 9% of the land is in woodland, 80% being under cultivation, and the remaining 11% in waste areas, which might well be put to good use by reforestry. Eastern Canada, having thus disturbed the balance of nature, may well look to what has been the fate of countries similarly depleted. Palestine, Mesopotamia, Greece, Sicily and portions of France have, as Mr. Nash points out, by a similar process, been reduced from among the most fertile of lands to comparatively bare and poverty-stricken ones.

For the benefit of farmers who see the necessity of beginning the good work, Mr. Nash emphasizes the fact that it is not necessary to use the best parts of the farms in reforesting. Rocky or stony portions, steep hillsides, the banks of streams which it is necessary to preserve from erosion, fence borders and waste corners, swamps, roadsides, and spaces about buildings, may all be advantageously replanted. Broad wind-breaks, too, along the northern sides of farms, will be found of incalculable benefit in shielding from cold north winds and frosts, while cattle are invariably benefited by shade trees in fields where they must pasture.

Re the growth of trees, Mr. Nash gives much information. The following has been condensed from his report: Elm, taken from the woods as a sapling of 8 feet in height, was found in 45 years to have attained a height of 60 feet, with a circumference of 8 feet and diameter of 30.6 inches at 3 feet from the ground; red oak, in 48 years, showed a height of 50 feet, with a circumference of 5 feet 8 inches, and diameter of 22 inches at 4 feet from ground; maple, in 48 years, height 60 feet, circum. 6 ft. 5 in., diam. 20.7 inches; butternut, in 48 years, height 75 ft., circum. 6 ft., diam. 23 in. at 4 ft. from ground; ash, in 50 years, height 60 ft., circum. 6 ft., diam. 23 in. at 3 feet from ground; white pine, in 50 years, height over 60 feet, circumference 5 feet, diam. 19 inches at 4 feet from ground; black walnut, successfully grown as far north as Lindsay, in 14 years from the seed showed a height of 20 feet, circumference 18 to 21 in., diam 5 $\frac{1}{2}$ to 6 $\frac{1}{2}$ inches; Lombardy poplars, in 22 years, gave circumferences from 6 feet to 8 feet 4 inches.

For wind-breaks, Mr. Nash recommends planting Norway spruce, native white spruce, white cedar and European larch; and for lightning protectors, he specifies elms, maples, etc., planted at such a distance that, when full grown, the branches will not touch the buildings. Willows will be found best for binding the soil on steep hillsides and stream banks.

It is sincerely to be hoped that the circulation of the director's report, and such letters as this which Mr. Nash has written, may find issue in action. The farmers of Eastern Canada should scarcely need so much