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teen bushels less in the hundred. This must make a distinct difference in the feeding quality, and, of course, an average yield of thin-hulled oats is worth as much or more than a heavy yield of the thick-hulled variety. I admit that I feel rather absurd talking in this profound way about matters that I know so little about from experience, but there is one point about farming that I never lose sight of, and that is how to get the largest amount of result with the least amount of work, and this information that Mr. Scarf was giving me seemed right along the line of my hobby. He further encouraged me by telling of a boy who got first place in South Carolina for raising corn. He produced two hundred and twenty-eight bushels from one acre, which was more than his father produced on twelve acres. Now, it hardly seemed possible that that boy could have put in twelve times as much work on his acre. I must investigate this point further.

On thinking over what I learned from Mr. Scarf about the objects of these field-crop contests, I couldn't help wondering if there is not an unrecognized difficulty that prevents the highest achievement. For generations past the ambition of almost every farmer has been to get as much land as possible under cultivation. This, no doubt, is a result of the experience of the pioneers who found that it was only necessary to tickle the land, and it would laugh with harvest. The fertility of the newly-cleared land has largely disappeared, and it would be a good thing if the ambition to get every possible acre of land under cultivation disappeared with it. To make this change, however, it would perhaps be well to change the method of giving awards. In the field crops I understand that entries are not allowed for less than five acres. This seems to me to be a 'concession' to the wrong methods of farming. It seems to be admitted that the farmer must put in a big field, and instead of putting it in as well as possible, he probably puts it in less badly than he used to. Would it not be better to offer a prize for the best acre, or even half acre, of any variety of grain? The contestant would then work it as carefully as the South Carolina boy worked his acre of corn. Another year, if a man had taken a prize for an acre, he could show what he could do by applying exactly the same methods to five or ten acres. In this way he would be progressing from good farming on a small scale to good farming on a large scale, instead of trying to make the practically impossible jump of changing from bad farming on a large scale to good farming on a large scale. All progress seems to be by growth, and I am inclined to think that there would be a greater growth of good farming if prizes were given for the smallest possible good beginnings.

The chief lessons to be learned from Mr. Scarf's conversation and accounts of his experiences, were undoubtedly those taught by the one stiff head of Clawson wheat, and the one pound of barley that in three years produced nine hundred bushels. They showed progress in the right direction. The other method seems to me to be much as if we should try to produce one good head of wheat from ten acres, or one pound of barley by working back from the nine hundred bushels. Besides I like the idea of making small beginnings. They involve less work, and, if they turn out well, all the work done is likely to yield results.

The Meadow Lark a Useful Bird.

A United States bulletin says of the meadow lark: "In many localities the meadow lark is classed and shot as a game bird. From the farmer's standpoint this is a mistake, since its value as an insect eater is far greater than as an object of pursuit by the sportsman. Both the boll weevil, the foe of the cotton grower, and the alfalfa weevil are among the beetles it habitually eats. Twenty-five per cent. of the diet of this bird is beetles, half of which are predaceous ground beetles, accounted useful insects, and one-fifth are destructive weevils. Caterpillars form 11 per cent. of the food, and are eaten in every month of the year. Among these are many cut worms and the well-known army worm. Grasshoppers are favorite food, and are eaten in every month and almost every day. The vegetable food (24 per cent. of the whole) consists of grain and weed seeds."

Two species of meadow lark are common, eastern and western, but their habits are very similar. Recent studies reported by H. C. Bryant of the California Experiment Station, show that while the western species may do considerable damage in destroying sprouting grain, it also consumes large quantities of destructive insects, and when the benefits are balanced against the injuries there remains no doubt that it deserves protection and encouragement. Its value as a destroyer of injurious insects far exceeds its detriment as a destroyer of sprouting grain. The value of a

western meadow lark living, to one dead, is as five pounds of insects (mostly injurious) and half-pound of weed seeds is to one and three-quarters pounds of grain, a considerable part of which is made up of wild oats and waste grain. Another important point in favor of the birds is that they turn their attention to the insect most abundant, thereby increasing their efficiency at the time of an insect outbreak. They bear an important relation to grasshopper outbreaks, and to other insect outbreaks as well.

A strong point favoring the protection of the western meadow lark is to be found in the fact that the only real damage caused (that to sprouting grain fields) can be largely prevented by planting grain deeply and drilling instead of broadcasting, two measures highly advocated by all agricultural experiment stations as favoring larger crops.

A Weed for Identification.

Identify the enclosed weed. How can it be killed?
Middlesex Co., Ont.

C. H. SCOTT.

The weed is the perennial sow thistle, one of the worst pests we have to fight. In some sections of Ontario it has been very bad for



Tamworth Boar.

Champion of the Royal Show, Bristol, Eng.

several years, but by a process of clean cultivation it has been kept in check. In some sections east of Toronto considerable of it is in evidence this year. If allowed to spread it will soon gain such a foothold as to crowd out all other plants, and fields of grain are sometimes seen so badly infested that one could scarcely tell what the crop is. It is very persistent and grows best in rather wet seasons and in damp rich soil. It spreads from seed and root stocks, and thus requires thorough cultivation to rid the land of it. As it is now just in bloom in many sections, a description of the plant is not out of place, even though it has been many times written about through these columns.

There are several sow thistles, viz., common annual, spring annual, and the perennial. The former are, compared with the perennial species quite harmless where anything like good cultivation is carried on. One of the surest methods for the average person to identify the perennial variety is by flowers, which are bright yellow, one-and-a-half inches across, and which come out full size during the early morning and close in very strong sunlight. The stalk on which the flower is borne is covered with bristles and long glandular hairs. The stems grow from one to five feet in height, the one which our correspondent sent in being four feet from root to flower. The stems are hollow, and the leaves are long

(about six to twelve inches) some of them on the stock sent in being good twelve inches. They are deeply lobed and the edges are marked with soft spines.

The flower of the common annual as distinguished from that of the perennial is a very pale yellow and the flowers are much smaller, being only about one-half to one inch in diameter. The scaly bracts surrounding the flower are not bristly as in the perennial. The spring annual may be identified by its very prickly nature and less deeply-lobed leaves.

The seed of the perennial variety is described by "Farm Weeds" as about 1/16 in. long, dark reddish-brown, oblong, closely and deeply ridged lengthwise, the ribs wrinkled transversely, giving the seed the appearance of being ridged both ways, bearing at the top a tuft of white, silky, persistent hairs which spread in drying and enable the seed to be carried long distances by the wind.

To absolutely eradicate it, once a field is badly infested, is a task. Fields were noticed this season which were under hoed crop last summer, and were thoroughly cultivated several times, and well hoed twice, and still quite a sprinkling of the weed is in evidence. Some farmers say that hoeing seems to strengthen the growth of the

weed. One thing is certain the plants which escape death in a good hoed field make remarkable growth the following season, but the writer remembers well a four-acre field of very rich low ground, which, was very badly infested, and which was practically cleaned in one year by the thorough cultivation given a crop of turnips; only a few stocks remained, and never since has this particular field had a great deal of the weed, although this year a few patches are noticeable. It always pays to wage war unto the death when dealing with this pernicious pest. If a few stocks remain after a hoed crop or summer fallow, grub them out of the next crop, root and branch. It is a difficult matter to get them all, and if the weed has ever been well established a continuous fight is required or its foothold will soon be very strong. Owing to the fact that the seeds are attached to a fluffy down a few mature heads often seed acres. Thus it is necessary that whole neighborhoods fight the weed. It is little use for the man to clean his farm only to see it reseeded with weeds from that of his shiftless or careless neighbor.

The weed is usually first noticed in small patches, and where this is the case no time should be lost in grubbing out all the roots and thoroughly destroying each and every plant. Pieces of rootstocks distributed from place to place in a field take root and grow, so care must be exercised that none of these cling to farm implements, and thus spread the pest to new fields, or to clean portions of the field in which the patches are found. If the weed is established in the field it is wise to summer fallow, giving careful and frequent cultivation, using the broad-shared cultivator to keep all roots cut, and allow no growth to appear above ground. Early this fall after the grain or hay crop has been removed from the field plow lightly and use the cultivator frequently. Plow again late in the fall, going down quite deep. This will expose the roots and



Lincoln Shearling Rams.

Champion pen of five at the Royal.