

FARM

Topics for Discussion

In recognition of the fact that valuable hints always are obtained from men engaged in actual farm work THE FARMER'S ADVOCATE has adopted the "Topics for Discussion" column, in order that our readers may see an open channel through which they may inform their brother farmers as to practices that are worth adopting and warn them against methods that prove unprofitable. Not only do we wish our readers to discuss the topics announced for the various issues, but also we desire that they suggest practical subjects on which it would be well to have discussion.

This notice appears under the "Farm" department, but the questions dealt with cover all branches of the farming industry. Letters should not exceed 600 words and should reach this office 10 days previous to the date of issue. They are read carefully and a first prize of \$3.00 and a second prize of \$2.00 awarded each week. Other letters used will be paid for at regular rates to contributors.

October 5.—Have you ever used a sub-soil plow? Do you think the use of the sub-soiler would increase the water-holding capacity of the average soil, by breaking up the "hard pan" that forms at the depth at which land is ordinarily plowed and opening a larger area for the roots and moisture? In what kind of soils is sub-soil plowing necessary? Would it pay?

October 12.—What is your method of wintering the farm horses? Do you keep them in the stable, winter them in the yard, or let them rustle? What comments have you to make on the wintering of work horses on the farm?

October 19.—If there are practical objections to having calves come in the fall, what are they? Have you ever had the cows come in in October, November or December? If so, how did it turn out? Did you make as well from the cows as you would had they calved in the spring, and what kind of calves did you raise? Is the practice advisable?

October 26.—What success have you had raising chicks this year? Were results sufficiently promising to induce an increase in operations next season?

Soil Fertility: An Important Discovery

(OUR ENGLISH CORRESPONDENCE)

What was described by Prof. Hall, of the Rothamsted Station, as the most important contribution to the knowledge of soils that had been made since the discovery of the fixation of nitrogen, was the subject of a paper at the British Association meeting at Sheffield.

The paper was a summary of the results of experiments made by Drs. Russell and Hutchinson, at Rothamsted, to determine the part played by micro-organisms, other than bacteria, in the production of fertility in soils. It appears that when soils are sterilized by heat, or an antiseptic such as toluene, a large increase of productivity follows. Soon after treatment plant food is formed by bacteria at an increased rate and the bacteria themselves increase more rapidly. This improvement is not owing to greater vigor of the bacteria, because that is lessened by the treatment.

Thus it appears to be a question of environment. Should untreated soil be added a detrimental effect follows after a time. There is something in untreated soil that is against bacterial growth, and the experiments lead to the belief that such soil contains organisms, probably protozoan in character, capable of checking bacterial growth. At present only about 50 per cent. of the nitrogen applied to soils in manures of various kinds is recovered—the balance is lost. If by some process of sterilization injurious organisms can be destroyed it may be possible to recover 75 per cent. or 80 per cent., and this would be an enormous gain to farmers. At present the whole matter is in the experimental stage. Fertility in soils was the subject of another interesting paper by Prof. Hall. The

paper dealt with the theories that have been advanced as to what constitutes the fertility of the soil. Prof. Hall stated that there was no simple solution of the question; no one cause, but many of the fertility of the soil. Many factors enter into the matter, any one of which might at a given time become a limiting factor, and determine the growth of the plant. One indispensable requisite was a supply of combined nitrogen.

The science of agriculture was so very young that it was unsafe to be dogmatic. The magnitude of crops was more often limited by want of water than by any other single factor.

INTEREST IN SUGAR BEETS

Seeing that sugar beet culture has been frequently discussed of late in England, it is not surprising that much interest was taken in a paper on that subject. Some 4,000 experiments have shown that sugar beets can be successfully grown, and with a higher sugar content than on the continent. The principal question seems to be the amount of profit. One estimate was £6, 10s. an acre.

Prof. Hall in discussion, said that the growth of sugar beets would not effect a great revolution, because it meant the displacement of existing crops. There would be no more cattle food in the country because mangolds would be displaced, and the greatest advantage would be in having an additional crop to sell. Sugar beets have been grown at Rothamsted for many years in succession on the same plot. Few crops would stand growing on the same land year after year so well.

AGRICULTURE NOT DEPRESSED

Prof. Hall does not agree with those who describe British agriculture as depressed. It is far from depressed in his opinion. It has its depressed spots and its backward practitioners, but the industry as a whole is in a quietly prosperous condition.

Access to agricultural land is a live subject in Britain nowadays, and the political parties are taking advantage of the land hunger to bring forward various schemes. One of the latest is sponsored by the Land Union, and is designed to settle various classes of pensioners, such as retired policemen, soldiers and sailors, on small farms as owners. While it is desirable to increase the number of people living on the land the success of such settlers as these, with absolutely no experience of land culture, is more than problematical.

Men are needed with a knowledge of farming methods, and there are thousands of such men inside the agricultural classes who could successfully run small farms if they were only given reasonable facilities to acquire land. The desire shown by the numerous applicants under the Small Holdings Act is for leaseholds rather than for ownership. Only a very small percentage of the applicants wish to purchase land. Their capital is usually limited, and they prefer to use it for equipping and working holdings under municipal control.

MORE SHOWS HELD

The Cheshire Agricultural Society has an

ideal show ground at Chester, and this year's show was favored with good weather. In the purely agricultural departments there was an increase in entries. Cheshire is a renowned dairy county, so the display of cheese was a fine one, and competition keen. The first honors for uncolored cheese were taken by Geo. Watson, of Knightby. First for colored cheese, and the Duke of Westminster's cup for best cheese in the show, were awarded to Joseph Jones, of Doddleston.

Dairy cattle made an exceptionally fine display, and there were many good heavy horses. Sheep and pigs were both good sections.

The Royal Dublin Show had fewer entries this year than last, but there was no falling off in quality. The keen demand in the last few months for horses for continental armies was no doubt responsible for the decreased entries. The young hunter classes had some very promising animals—good in bone and limb, and showing capital action. The older and heavier hunters were not so good owing to the recent numerous sales. The most successful horse at the show was an eight-year-old gelding bred in county Cork—John Ferguson's "Grey Man." He took the champion gold medal for best hunter (four years old and upwards); the Hunter Champion Cup; and the society's silver medal for best horse suitable for hunter. John Kerr, of Herts, was a successful English exhibitor. His well known harness horses, "Loudwater Diana Vernon" and "Rob Roy," won the Milward Cup; the society's silver medal; and the first prize for best pair of carriage horses driven in double harness. Mr. Kerr was also a winner in two of the single harness classes.

SALE OF SHORTHORNS

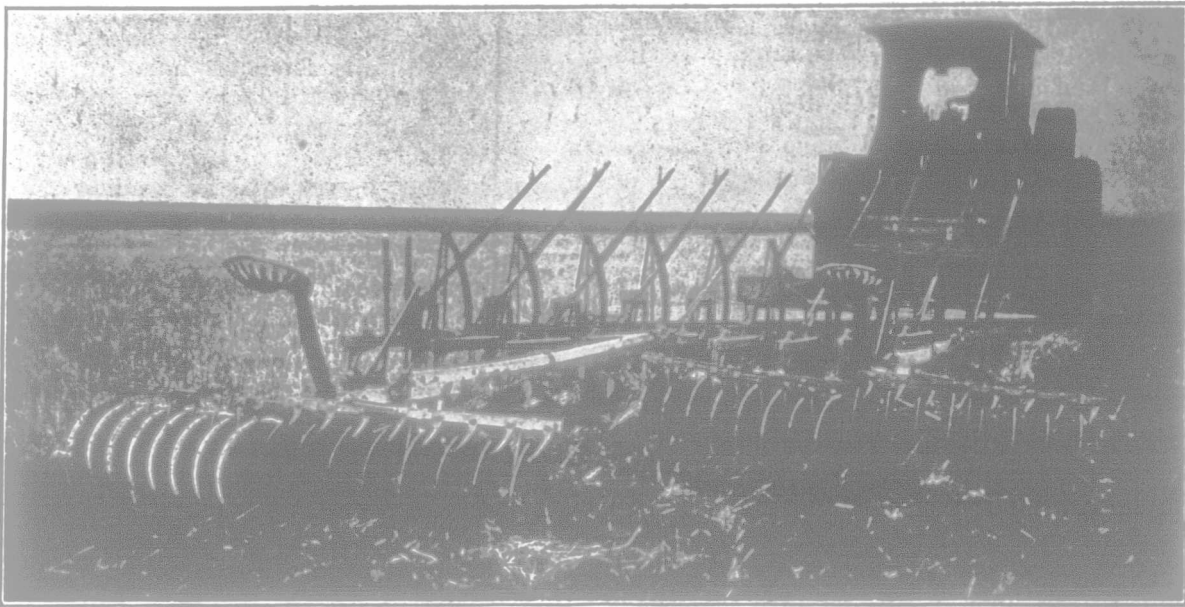
The autumn Shorthorn sale at Birmingham brought out far fewer entries than usual, and the sale was finished in one day instead of two. The quality of the animals was below the average, and in the absence of foreign buyers home farmers were the principal buyers. The highest price was 160 gs. for the young bull, "Damary Pearlfinder." Most of the sales were at about 30 gs.

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The stoppage of stock shipment to Argentina played havoc with the sale of the Lincoln Sheep-breeders' Association. Though the quality of the sheep was high the demand was poor and prices low. At last year's corresponding sale 294 rams sold at an average of £14, 7s. 4d. This year 260 were sold at an average of only £11, 3s. 10d. The best average of the sale was made by C. E. Howard, who sold ten at £19, 3s. 2d. The top price was 50 gs. for one of J. E. Casswell's rams.

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At the Quarrington sale of F. Ward's Lincoln rams, 98 rams were sold at an average of £10 15s. 10d., which is only about half of last year's average. Henry Dudding paid the top price, 72 gs. for a handsome ram. At the Kirmington sale 49 rams were sold, average being £14, 6s. 8d., and top price 48 gs., paid by Henry Dudding.



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