



First prize Sussex Bull, Royal show, 1906. Bred and owned by the Earl of Derby.
(See letter press for description of Sussex cattle.)

Our English Letter

Weather, Crops and Stock—Wheat Growing and Electricity— Carrots and the Color of Butter—Sussex Cattle—Items

October 6, 1906.

The gentle soaking rain of the beginning of this month came as a welcome, and in one sense of the word, as a pleasant change in the weather. Everywhere rain was needed, and it has done an enormous amount of good, but we still want more of it, and it is not unlikely that the present month will fully replenish the springs and wells. In various districts water has to be carted long distances for stock, while the heavier soils need a thorough soaking to bring them into even a moderately workable condition. Under such conditions as we have experienced during September wheat sowing is more than usually difficult. There is apparently no chance of sowing in mud as our old sows direct, and the problem is complicated by the extraordinary hardness of the sub-soil, which seems as solid as a rock, and would probably prove impervious to the heaviest rainfall. Wheat thrives in a moderately stiff bottom, but this is too solid for anything, and probably many who would now be usually thinking about drilling wheat will prefer to await the winter's frost rather than entrust anything to ground in so intractable a condition.

Stock-breeders' prospects for the coming winter are assuming a very serious aspect, so much so as to affect the price and demand for milch cows. In thousands of cases it is absolutely essential that these should be purchased, as too many of the milk contracts are so absolutely binding that the dairyman has no means of extricating himself, and to keep up the supply will entail a very heavy loss. On the majority of farms it means a terribly long winter for thousands of cattle which in a good average season would have taken care of themselves up to the middle of November, but will be put on winter rations almost at once, and most of the foods to be purchased are at a high level of prices.

WHEAT GROWING AIDED BY ELECTRICITY

Wheat grown by the aid of electricity was one of the remarkable products on view at the recent bakers'

exhibition. The grains of the wheat were remarkably large and well flavoured, and we were told that the cost of treatment was more than covered by the increased yield. In addition to this we were assured that the nitrogenous content was greatly enhanced, an ordinary English grain proving to be of such strength as to be satisfactorily worked alone.

The system under which it was grown was that running across the top and bottom of a fifteen acre field, at a height of 15 feet from the ground, were thick cables charged with electricity, while stretched lengthwise between the two, and about 12 feet apart, were smaller cables. Electricity was thus discharged into the air over the entire area of the field, taken up and absorbed by the plant and conveyed by the roots to the soil. The result was that the growth was stimulated, the grain ripened earlier, and the crop was some 30 to 40 per cent. larger. We are promised more data later on, but the flour made from the wheat was so white that it almost appeared to have been bleached. The authorities at one of the universities are taking an interest in the experiments, and further light will be thrown on the matter as soon as definite results are assured.

CARROTS AND THE COLOR OF BUTTER

An experiment was carried out at Wye College to ascertain (1) how long a period it takes before a change in color becomes marked; (2) what is the minimum quantity of carrots required to alter the tint; (3) will a mixture of carrots and mangels answer the same purpose; (4) what effects have carrots on the churning character of the cream, the quality of the butter and the percentage of fat in the milk.

For the experiment four Lincoln Red Shorthorn cows were picked out, the animals having calved down a few months previously. Two of the animals were fed upon 28 lbs. of carrots and their ordinary allowance of cake meal and hay. Two others were fed in a similar way, mangolds being substituted for carrots. The records were taken in February and March,

and the feeding reversed, i.e., carrots being substituted after the first month of the trial. A brief summary of the results is as follows: Length of time before the effect on the color of the butter is apparent. Butter made from carrot-fed cows, first week very slight difference compared with that of mangold-fed cows. Second week, difference more marked, less time occupied in churning and better grain and flavor. Third week, a very good high colored butter considering the time of the year.

On reversing the order of feeding it was noticed that the color was maintained in a diminishing degree over two or possibly three weeks, whereas the cows that had previously had mangolds responded slightly to their change of food, and would no doubt have done much the same as the other cattle. The experiment did not last long enough to finally answer the question as to how few carrots will give the required tint, but it may be said that half carrots and half mangels gave a more saleable quality of butter than those getting a full ration of mangels. The change of food had the effect of slightly lowering the butter fat in the milk of one cow, but it practically made no difference in the other. In no case did it fall below 3 per cent.

THE MERITS OF SUSSEX CATTLE

The Sussex Herd Book Society has published an interesting booklet on "The Merits of Sussex Cattle." Few breeds, if any, trace back their origin further than the Sussex. As long ago as 1790, when Arthur Young wrote his remarkable series of letters, published in his "Annals of Agriculture," they were recognized as a well established breed of very high repute, and were in the hands of the best breeders, for he reports an experiment in feeding which proves that the breed then had a remarkable proclivity for rapid fattening. Summing up their merits he declared that "Sussex oxen were remarkable for the fineness of their hides as they are for the closeness and delicacy of their flesh." The breed is in great favor on the heavy walden clays and the heavy sands of Sussex, Kent and Surrey, comprising as this does all qualities of grazing land from the poorest to the strongest. It is on the former that they are mainly bred and on the latter finished off for the butcher.

In the olden time, indeed down to a very recent period the steers were largely used for draught purposes in cultivating the land and clearing the produce of the woods, for which these powerful oxen were admirably adapted, as with their constant and steady pull they were able to move great weights with few breakages. It is probable that as the cattle were so much used in their native districts for draught purposes that early breeders did not endeavor to find buyers from outside. In fact, it may be said that at home they had such a ready market at remunerative prices for all the cattle they could produce. An advantage, and one that the expert breeder should fully realize, has resulted from the practice which prevailed until the middle of last century of breeding Sussex cattle largely for draught purposes. It being necessary that they should have been bred for ages with the object of producing an animal capable of withstanding the rigors of cold and exposure and of furnishing a good carcass of beef after its working career.

Absolutely red in color they are esteemed one of the finest of our breeds, and for their ability to thrive and do well under the most unfavor-

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