

APPOINTMENTS FOR TWO MONTHS.

[For the following announcements we have to thank the Secretaries of the respective Societies.]

- April 3.—Royal Dublin Society's Spring Cattle Show.
 April 7.—Borehambridge Agricultural Society.
 April 7.—Stallion Show at Bedford.
 April 8.—London Farmers' Club Paper on "Sheep—their Breeding and Management," by Mr. Robert Russell, Hertsford, Kent.
 April 11.—Royal Agricultural Society, Bedford, Kent.
 April 11.—Hanover Square, Council Meeting at Noon.
 April 21 and 22.—Newcastle Farmers' Association Show at Ayr.
 April 23.—Shropshire Chamber of Agriculture, Committee Meeting.
 April 30.—Gloucester Chamber of Agriculture.
 May 2, 3, and 4.—Oxfordshire Agricultural Society's Annual Meeting at Banbury.
 May 3, 4, 5, and 7.—Metropolitan Dairy Show and Congress of the British Dairy Farmers' Association, Agricultural Hall, London.
 May 5.—East of Berwickshire Agricultural Association, Berwick-on-Tweed.
 May 7.—London Farmers' Club Paper on "Agricultural Machinery as Illustrated at the Philadelphia Exhibition," by Mr. J. Coleman, Secretary, York.
 May 12.—Shearing Match at Bedford.
 May 10.—Newcastle Farmers' Club.
 May 21, 22, and 23.—Devon Agricultural Association's Show at Tavistock.
 May 23 and 24.—Oxfordshire Agricultural Society's Annual Show at Banbury.
 May 26.—Shropshire Chamber of Agriculture, Committee Meeting.
 May 28.—Gloucester Chamber of Agriculture.

THE

Agricultural Gazette.

MONDAY, APRIL 2, 1877.

THE CATTLE PLAGUE has appeared during the past week in the extreme west of the metropolitan district—having thus somehow skipped the enormous interval lying between Bethnal Green and Shepherd's Bush. It appears from the report of the Cattle Plague Committee of the Metropolitan Board of Works, to which reference is made in our Market Supplement, that the infection in this instance may possibly have been carried by a quack veterinary practitioner who had been going from hand to hand throughout the metropolitan district in the pursuit of his occupation as an incubator for pleuro-pneumonia. Whether this is so or not, it is, we need not say, of the greatest importance that every cowkeeper, whether in town or country, should be his own veterinary inspector—resulting in maintaining the strictest quarantine for himself. No stranger should be allowed access to the cowhouse on any pretence whatever. If the man most interested—the owner himself—be not careful of his property, what likelihood is there of Government superintendence ever proving serviceable?

Two contributions, which appear to-day under the heading "SCROFULA AND IN-BREEDING," deserve the careful attention of every breeder of every variety of domesticated animal. The statement of our great naturalist, that "conclusions drawn from the one kingdom may fairly be applied to the other," is entitled to the respect which the writer has earned for all his assertions, by a lifetime spent in the intelligent, laborious, persevering endeavour to discover truth. Yet it must be maintained that although to widen the field of observation may help to ascertain the general law, it does not necessarily indicate immediately the safest method for the special practitioner to pursue.

Mr. DARWIN'S work on *The Effects of Cross and Self-Fertilisation*, and the cognate remarks with which he now favours our readers, are, of course, most valuable contributions to a full discussion of the subject, "In-breeding, its advantages, disadvantages, and consequences." Yet under the pressing difficulty—"How far may an acknowledged tendency to scrofula be disregarded by the breeders of animals to be used as food?" our second contributor gives even more immediate

help, though he does not offer us such a far-reaching illustration of the position.

There are two different questions involved in the point raised in these columns. The first is—How far is it for the interest of the community at large that a "scrofulous tendency" should be tolerated in meat-making machines? The second—How far breeders of such animals are promoting their own interest by "sweeping the dirt behind the door," rather by clearing it out of the house altogether and then cleaning up afterwards.

It must be assumed that "a scrofulous tendency" has been proved to exist in closely-inbred stock. Let it also be premised that all the possible ill-effects upon the health of the eaters, of the condition of the thing eaten, must here be disregarded. The assumption is necessary, not only because our space is limited, but also because the attributing "a scrofulous tendency" to this or that herd or flock is quite unwarrantable, unless it be "on evidence" that such a tendency is an established fact. And the necessary matter—how far scrofulous creatures can be wholesome food—must be referred to the medical papers, as being appropriate rather to them, or else to the different Local Sanitary Authorities.

Accepting these reservations, there still remains to be considered if it be for the interest of the public, or of breeders generally, that the presence of "a scrofulous tendency" in high-bred animals should be ignored. And as the interest of the public in Great Britain is held to be more important than the interests of any one class, large or small, we may confine what remarks we have room for to-day to the former question—*i.e.*, Do the public gain by buying up—before it has received something like a satisfactory handling—a discussion which a correspondent, after the fashion of an *enfant terrible*, had evoked.

The existence of what our second correspondent of to-day defines as "a deficiency or feebleness of that vital power which tends to resist the invasion of disease" is not a matter to be trifled with! When contagious diseases of several kinds are—as by our artificial social condition they must of necessity continue to be—from time to time circulated among us, a vigorous constitution, in home-bred animals, "enabling the creature to endure and to hold on to life, and eventually to recover and to throw off the results or effects of the malady, and to gain health," is an attribute with which no thing nor style nor fashion should be allowed to tamper.

It seems to us that, if the presence of rinderpest on our shores be a matter—as it is—which the Imperial Government, even at a time of a European crisis, is not justified in allowing so much more are minor authorities, such for example as the Royal Agricultural Society of England, bound to examine whether the freely-handled about assurances that this or that fashionable sire or dam has succumbed to hereditary disease—be more than the ill-natured detection which "gnaws at the heels" of successful men. We do not mean to suggest that the Society, which occupies so good a vantage ground, should use it for anything like inquisitorial purposes on private property. But we do mean that it is worth the Society's while—that, indeed, it is the Society's unquestionable duty—to exert itself to acquire accurate knowledge, and to disseminate sound notions, and especially to enforce a sufficient inspection of all the animals in their own showyard, not only as now to detect contagious diseases, mis-statements as to age, but in addition as to whether any symptoms of "congenital scrofula" be present. Both our correspondents of to-day distinctly confirm the popular belief that a scrofulous parent involves incalculable risks in the future. And if this be so, surely this vitiated constitution is at least as

important as a pedigree which had been tampered with; and a "scrofulous manifestation" in bull, stag, or boar ought not to be treated ever as glanders, curb, or broken wind in a stallion.

We shall be very glad to do what lies in our power by publishing every really authenticated statement of scrofulous parents which have left unsound, or sound progeny.

— The Spring Show of the ROYAL DUBLIN SOCIETY, which opens to-morrow, promises to maintain the high standing of its predecessors. The entries are, indeed, hardly so numerous; but, as usual, the best Short-horn herds of the country will be represented. The class of yearly Short-horn bulls contains 120 entries, or three less than last year. The older bulls are 37 in number, some 20 fewer than in 1876. The cow classes and the smaller classes of other breeds stand, very much as they did last year, and there is, as usual, a large show of implements.

OUR LIVE STOCK.

SCROFULA AND IN-BREEDING.

To the EDITOR of the AGRICULTURAL GAZETTE.

DEAR SIR,—You ask my opinion as to whether the deployment of a bull supposed to be scrofulous is consistent with the ultimate interest of the breeder. As a general rule I should defer to the judgment of any one who had experience on such a point, supposing that he was not biased by interest or prejudice. But in this particular instance we have such good evidence of the inheritance of constitutional diseases, such as scrofula, consumption, &c., that it seems to me very rash to breed from an animal thus tainted. In all probability a large majority of the offspring from a scrofulous bull, paired with a perfectly sound cow, would be to all appearance sound, but it can hardly be doubted that the evil would be latent in many of them, and ready to break out in subsequent generations.

I will venture to add a few remarks on the general question of close inbreeding. Sexual reproduction is so essentially the same in plants and animals, that I think we may fairly apply conclusions drawn from the one kingdom to the other. From a long series of experiments on plants, given in my book *On the Effects of Cross and Self-Fertilisation*, the conclusion seems clear that there is no mysterious evil in the mere fact of the nearest relatives breeding together; but that evil follows (independently of inherited disease or weakness) from the circumstance of near relations generally possessing a closely similar constitution. However little we may be able to explain the cause, the facts detailed by me show that the male and female sexual elements must be differentiated to a certain degree, in order to unite and give rise to a vigorous progeny. Such differentiation of the sexual elements follows from the parents and their ancestors having lived during some generations under different conditions of life.

The closest inbreeding does not seem to induce variability or a departure from the typical form of the race or family, but it causes loss of size, of constitutional vigour in resisting unfavourable influences, and often of fertility. On the other hand, a cross between plants of the same sub-variety, which have been grown during some generations under different conditions, increases to an extraordinary degree the size and vigour of the offspring.

Some kinds of plants bear self-fertilisation much better than others; nevertheless it has been proved that this is proved greatly by a cross with a fresh stock. So it appears to be with animals, for Short-horn cattle—perhaps all cattle—can withstand close inbreeding with very little injury; but if they could be crossed with a distinct stock without any loss of their excellent qualities, it would be a most surprising fact if the offspring did not also profit in a very high degree in constitutional vigour. If, therefore, any one chooses risk breeding from an animal which suffered from some inheritable disease or weakness, he would act wisely to look out, not merely for a perfectly sound animal of the other sex, but for one belonging to another strain which had

been bred during several generations at a distant place, under as different conditions of soil, climate, &c., as possible, for in this case he might hope that the offspring, by having gained in constitutional vigour would be enabled to throw off the taint in their blood.—CHARLES DARWIN, *March 22.*

[For the following letter we have to thank a correspondent whose large professional experience enables him to speak with confidence on the same subject.]

I HAVE read with interest the letters that have appeared in your paper lately on the subject of cattle breeding, and particularly with reference to the diverse views which it is evident are held with regard to the desirability of using a bull of fashionable family, even though, being in-bred, he has what, for want of a better term, are known as scrofulous tendencies.

It is argued by "Sheldrake" that the use of such a bull is harmless if the cow served by him is of good constitution and of no relationship. I cannot agree with this proposition; and, if you will allow me, I will endeavour to show by analogy with the human being in what way I consider the interests of the cattle breeder and meat producer would be endangered by such a practice. In the first place, let us clearly understand what is meant by the term scrofula. The

ment-and, perhaps, supuration of the glands of the neck or jaw. Swelling and ulceration of the intestinal glands, constituting one form of mesenteric disease, may occur from a trifling and often obscure cause. There is also great proneness of the mucous membrane to congestion and consequent secretion of altered mucus; which, mixed with the decomposing epithelium, gives rise to the fætor of the breath, which is frequently observed in creatures of the scrofulous constitution. We might fairly define inherent congenital scrofula as a condition of system unduly prone to deterioration and death; and often associated with imperfect development, defective innervation and malnutrition. The active and tangible manifestations of scrofula, namely, glandular tumours, abscesses, enlarged joints, tubercular deposits, &c., are obviously only the result, in one or other of the tissues or organs, of an exciting cause occurring in a creature endowed with the scrofulous constitution.

What can now be said as to the cause of the scrofulous constitution? Undoubtedly in-and-in breeding will give rise to it. Why? It is the penalty attached to the violation of a natural law.

Want of light, want of pure air, want of wholesome and sufficient food will cause it; and want of exercise, intemperance in its many forms, will give rise to what may be described as special rather than general manifestations of the scrofulous constitution; for it almost amounts to a law that an organ that is diseased, or artificially injured, in the parent, is found to be weak and prone to disease in the off-

"LADY SALE OF PUTNEY."

WHEN Cesar ventured on a certain well-known saying respecting his wife, he only illustrated a universal law—i.e., that very small reasons serve men in power as sufficient excuses for doing what they like. And possibly he was also conscious of another law, even more generally acknowledged among rulers—i.e., that a fine-sounding piece of clap-trap is as useful an appendage to an administration as is a brass band. Anyhow, on the sceptical eve of the 20th century, men must give up counting about the necessity of being "above suspicion." No one but gets suspicion cast on him, certainly not American specimens of the Shorthorn tribe of Princess. For several recent seasons American visitors have been not infrequent among the throngs in English showyards; and almost every one has had a story or two to tell about the Shorthorns at home. A very large share of these stories have been about the "Princess" cattle in the States. What the value of these anecdotes may be it is not given to an outsider to determine. It is plain enough to any one who has eyes, that there is a very marked difference among the specimens recently imported into England. Some, as the subject of our portrait, are very beautiful cattle indeed; with marks of high-breeding about them which sufficiently confirm their lineage. Others require cautious criticism, like that of Mr.

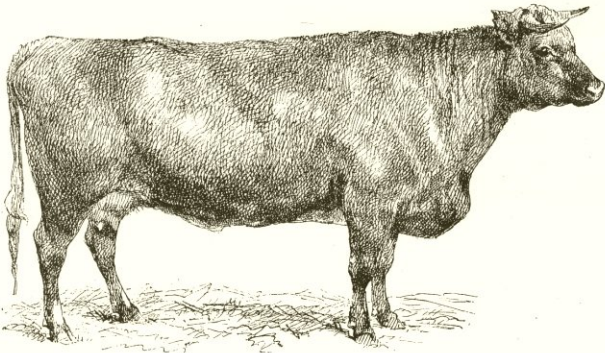


FIG. 56.—THE EARL OF BECTIVE'S SHORTHORN COW, "LADY SALE OF PUTNEY."

word is derived from "scrofa," a sow, on account of the supposed special liability of swine to swellings and tumours. What I understand by the term scrofulous is a certain constitutional condition, either of a human being or animal, in which the following characteristics are present, either in a latent or active form.

Firstly, and most important, there is a deficiency or feebleness of that vital power which tends to resist the invasion of disease, and which, when disease occurs, enables the creature to endure and hold on to life, and eventually to recover, and throw off the results or effects of the malady and to regain health. This *vis mediocris nature* is probably due to perfect integrity and power in the nerve centres; for defective innervation (nervous supply) causes unequal or defective nutrition of a part; for example, fat may be formed in the place of muscle, in other words an inferior formation in the place of the normal one. This tendency to deterioration, i.e., the formation of a tissue of a lower and less vital and complex organisation, is well illustrated when disease attacks a scrofulous subject; for example, the serous exudation in pleurisy would more readily become purulent, and therefore the disease pleurisy is more fatal in a scrofulous constitution than in one that is not so.

In the scrofulous constitution there is a great tendency to swelling and low inflammatory action in the glandular system, on the least provocation; for instance, the irritation of teething will cause enlarge-

spring. For example, a tailor and a seamstress both follow a sedentary occupation; yet neither of them use their lungs as nature intended they should be used, viz., expanded in walking, running, &c. The offspring of such a couple will be exceedingly prone to scrofulous manifestations of a special kind, i.e., tuberculosis of the lung. Witness, again, Shakespeare's remark applied to a weak-minded youth, "Surely, young man, thy father begot thee while he was drunk."

Now, if what I have written is correct, and I believe it to be so, it is sound reasoning to say that if one healthy and one scrofulous parent be better than two scrofulous ones, certainly two parents free from scrofula are better still; and therefore "Sheldrake's" assertion that one healthy parent is sufficient cannot be maintained. In other words, I contend that the use of a bull of scrofulous constitution will entail on his offspring, in a greater or lesser degree, a tendency to those characteristics and predispositions which I have briefly and imperfectly described as belonging to the scrofulous constitution. We do not want cattle prone to disease, and unable to live through it when it attacks them. We do not want animals with a tendency to form fat rather than muscle. Let this be remembered by the breeder when tempted to employ a fashionable bull of doubtful constitution. Let our Shorthorn judges also bear it in mind, and not be too fastidious in the matter of fine muzzles, thin, soft skins, &c.

* Sound lungs are more than fancy points.

And healthy glands than Duchess Muzzles.

Bret Hart's narrator of the adventures of "that ar' filly Chiquita," and should be dismissed with some safe remarks, equivalent to those of his—that "boys will be boys," and "horses be horses."

The American and Canadian Shorthorn breeders, we learn from Messrs. Bailey & Muir's *Shorthorn Reporter*, subdivide the members of this tribe into several families, which trace to three or four imported animals. The best esteemed families would seem to be the *Red Rose* and the *Lady Sale*. The latter has the merit (if merit it be) that comparatively little fresh blood has been added in the States to that old *Lady Sale* by GIBBERT SALES, bred at Wolverton. This cow's blood is almost identical with that of Mr. McIntosh's *Lady Sale*, and of the *Princess* cow which went from Mr. Adkins to Mr. Cheney. To this family belongs the fine cow whose portrait we give to-day. This is *Lady Sale of Putney*, who formed one of our early importations from beyond the Atlantic to Leicestershire pastures. She was sold at one of the Godley's auctions to the Earl of Bective, to join the noble herd at Underley. She is a slight cow of grand outlines, and of an intense red, which seems as if it would stain your fingers.

At Underley *Lady Sale of Putney* finds herself in the company of "Princess" cows and heifers of several different families; yet can hold her own in favour with her master and with his visitors. In her importer's hands she bred a bull; and she bred two heifers in the two first years of her coming to Underley—the elder having been sold to Sir John Swinburne. She has in her pedigree but two