

Rot in Sheep.—I thank "N. D. D." for noticing what I said respecting the rot in sheep. By what he says at p. 323, little is known as to how the fluke gets into sheep's liver, or, in other words, the cause of the disease. What "N. D. D." has related about the origin of the fluke and sandore is very interesting; but, may I be allowed to make a few remarks on one or two of his observations? He almost hints that the animal called the fluke, which is said to cause the rot in sheep, might arise from spontaneous generation, and "that it has never been found out of the sheep's liver or that of other animals." As regards the latter, there must be a mistake, for he quotes from Cuvier that the "fluke has been found in the eye of man." A friend of mine, who has had much experience in the disease in sheep, told me he has often found the fluke in sheep's gall. As to spontaneous generation, it is a term often applied when a thing cannot be traced to its proper origin. I mentioned a plant called the Rot-weed, which is blamed for causing the rot in sheep, and observed that they might eat the plant containing eggs, or larvæ of insects which produced the animal found in their liver; but it appears that is wrong, for "N. D. D." mentions that the fluke and sandore are not produced from insects—"they are perfect animals forming a genus of the second class of the radiated animals." May not wet food encourage the growth of the fluke, and, as "N. D. D." observes, render them "drowsical and finally kill them?"—*J. Wighton.*

Manures, and Steeping Seeds.—Some of your readers may be amused at the style, as well as at the matter of the following quotations from "The Curiosities of Nature and Art in Husbandry and Gardening," published in 1707. They show that the value of the inorganic parts of manure, and the advantage of steeping seeds, were well known at that time. "The whole secret of multiplication consists in the right use of salts. Salt, says Palissy, is the principal substance and virtue of dung. A field may be sown every year, if we restore to it by stercoration what we take from it in the harvest." . . . "Seeing all multiplication depends on salts, the main business is to get together a great quantity at little expense, that the profit may be the greater." The author then describes a method of making liquid manure, in three old casks, into which objects are separately thrown, according to the ease with which they decompose. He further urges the importance of burning all wild plants, and of carefully dissolving the soluble parts of their ashes, and then proceeds—"Take as many pounds of saltpetre or nitre as you have acres of land to sow. For each acre dissolve a pound of saltpetre in twelve pints of the water that sank from the dunghill. When the saltpetre is quite melted, throw in a little of those salts of plants (i. e. ashes) according to the quantity you have of them. This liquor is then called the 'Universal Matter,' because nitre is truly the universal spirit of the elementary world. This is the main point of the whole secret of multiplication. We will for the future call the water that is got ready in the casks, *Prepared Water*, and the water from which the salts are extracted from plants, and the nitre, *Universal Matter*. For one acre, take twelve pints of the prepared water, and mix with it immediately the universal matter, in which there ought to be a pound of dissolved nitre. The vessel into which you put these liquors must be large enough to contain the corn which you design for one acre. Then strew in your corn into these liquors; there must be two inches of water above the seed. Leave the corn to soak for twelve hours, and stir it up and down every two. If by that time it do not swell, let it lie longer till it begin to plump up considerably. One third less of seed than usual will serve for an acre; nay, you may safely use but half as much, and mingle among it some straw cut very small, that the sower may take it up by handfuls and sow it in the ordinary way, as I have said already." The explanation the author offers of the use of soaking seeds is whimsical. He says that the first action is to "cut the covers that infold the sprouts," and that the second action is "to serve each grain of corn, as it were, instead of a loadstone, to attract the nitre of the earth, which the subterranean fires have reduced and driven into steams and vapours in the low and middle region of the air, for the nourishment of vegetables and of animals. This is not a vain imagination, a chimera, or empty notion."—*C. Darwin.*

Agricultural Weeds.—It must be well known to every cultivator of the soil that these are of a more hardy and vigorous nature than the plants which require the care of his fostering hand, and are apt to gain the superiority, and appropriate to themselves vegetable aliment not intended for them. Hence it is of the greatest importance to every cultivator of the soil to prevent, as far as practicable, the growth of every kind of vegetable, except those which he cultivates. The number of plants known as weeds is very great; they are either annual, biennial, or perennial; the first two die the first or second year, i. e. as soon as their seeds are perfected, and are propagated by their seeds; the latter are not only multiplied by their seeds, but also by their roots, which remain inactive during winter, and put forth new plants in spring. The seeds of some plants germinate as soon as they get moisture, although they are not in immediate contact with the soil; others, again, do not succeed unless they adhere to some kind of earthy substance, and enjoy the reviving influence of the atmosphere. Many seeds, however—even those of the most diminutive size—will remain inactive for a long series of years, and vegetate afterwards, i. e. as soon as any accident has placed them in a favourable situation; seeds which have been proved to be not less than 1800 years old have

germinated, and produced thriving plants. Again, many seeds are accommodated with some kind of wing or feather, by which they are conveyed from their place of birth, and disseminated over the fields; for instance, the seeds of the Dock tribe have little wings, somewhat resembling those of a bat, by which they are often conveyed to a considerable distance in high winds; others are furnished with still better means of travelling, and are able to take advantage of the slightest breeze for shifting their position. It is proper that all Grass-fields, hedge-rows, and waste ground, be kept perfectly free from unprofitable herbage. The negligence which occurs in this respect in many places, is often the cause of the foul state in which neighbouring lands are to be seen. Pastures are sometimes so closely overrun with weeds, that the cattle can scarcely pick up a mouthful of pure herbage, and the vegetable food applied, which should nourish wholesome pasture, is consumed by useless weeds.—*J. McI., Hillsborough.*

Turnips.—I am a dealer in Turnip seeds, and am frequently put to considerable inconvenience by the various names by which my customers are pleased to designate the sorts which they may require. It is this inconvenience, with the view of obviating the same, for the benefit of myself and others similarly situated, that has prompted me to trouble you with the annexed list of names, trusting that you or some one of your numerous correspondents will furnish, in an early Number of your valuable Paper, a descriptive list with definite names (other names being considered as synonymous) of the different varieties; which may be a means of preventing error, to a great extent, both to the seedsman and the sower.—*West Briton.* [With this communication came a list of the names of 48 varieties, which we do not now publish, in the hope that a mere notice of the important subject referred to, will succeed in eliciting from our farming correspondents descriptions of the appearance and merits, with the names of the different varieties they may grow.]

Fencing.—The following method of making, in a very cheap and expeditious manner, a fence to inclose ground, I have observed adopted in this neighbourhood:—First, take some sapling Oak poles, about five or six yards long, cut them into lengths of something more than a yard, and cleave the thickest part into four, and the middle into three, to produce stakes. Dig a trench two spade-grafts deep, and make a bank with the sods, of two spade-grafts high, breaking them as little as possible; cut the sods sloping, not perpendicular to the surface of the ground, and lay them sloping in the same direction for the bank, so that, from the top of the bank to the bottom of the ditch, shall be one sloping line; let the sods of the second spade-graft be placed on the top of those of the first, but let the joinings be like those of bricks in a wall, the joining between two sods above over the middle of the sod below, and let all the earth of the second spade-graft be thrown so as to back the fence. Drive the stakes, well pointed, through the sods of the upper layer, and considerably into those of the under layer, at about the distance of half a yard from each other. Then take the straggling Furze, stubbed for the purpose, and thrust the heads of them very forward into the face of the bank, contriving that the two main branches of the Furze shall be one on each side of the stake. Over all this wind the longest Blackthorns, and the fence will be sufficiently strong without binders.—*W. H., Reading.*

Small Farms.—Seeing by your answers to correspondents in your last, that some questions have been put to you on the best plan of cultivating a small plot of land, so as to keep the greatest quantity of stock, I hope it will not be thought out of place if I detail to you the plan I follow on a field of $4\frac{1}{2}$ acres. The land is good, being a free light soil, on a chalky bottom. Of course I have not neglected Lucerne, but have devoted one half acre to this, sowing it in drills 9 inches apart, and hoed each time of mowing, which I am able to do five times in the season. The remaining 4 acres I divide into four equal parts, and cultivate as follows:—To make my plan clear, however, I must begin my rotation where most rotations end, viz., with Wheat. Say, then, that I have my field well prepared for Wheat; this grain is accordingly sown in drills, with very little seed, and in the following spring has Clover and Rye-grass harrowed in with it; next year these are mown three times, and after the last mowing I give a good top-dressing of well-rotted dung, which produces, next spring, a very early and plentiful crop, chiefly Rye-grass; this is either mown for stock, or for Hay; and on the half first cleared I plant Potatoes, without dung, on the other I sow Swedish Turnips, which have a dressing of guano; the Potatoes are planted from the 1st to the 20th of May, and the Swedes are in the ground in the same month. The following year the Potatoes are succeeded by Mangold Wurzel, dressed with guano, and the Swedes by Carrots, with dung. This forms my preparation for Wheat, as before alluded to, and I do not know that I could raise a greater quantity of more valuable produce for the feeding of stock by any other plan; it is also as little expensive as possible, three dressings only in four years being required. If I introduce Tares, as you recommend, on one half of the Wheat-stubble, another digging is required, and though I am not insensible to their superiority over Clover and Rye-grass as an improving crop, I think it is much overbalanced by the extra digging and the price of the seed. I have also a strong partiality for Rye-grass as food for stock—nothing is so much liked by horses, and on no green crop whatever will they do so much work: I mean this, however, to apply to it in its early growth; when it gets old, and ripens its

seed, the ground might as well bear a crop of Corn, and stock would relish straw quite as much. As it seems a general opinion that Potatoes do best when left in the ground all winter, I propose to try the effect of covering them up with stable litter, raking off the long straw when taken up, and digging in the short dung. In such case, a dressing of guano would be saved for the Mangold Wurzel which follows.—*Seneca.*

Societies.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.
[Report of Proceedings of the Weekly Councils of May 15 and 29, concluded.]

The Right Hon. Earl Spencer, President, in the chair. PRIZE ESSAYS.—Mr. Pusey, M.P., Chairman of the Journal Committee, reported to the Council the unanimous decision of the Judges, in assigning the Society's Prize of 50*l.* for the best Essay on the Agriculture of Cheshire to Mr. Wm. Palin, of Stapleford Hall, near Chester; and the liberality of Mr. John Arkell, of Hollow Farm, near Gloucester, who, in announcing himself as the author of one of the highly-commended Essays on the Discrimination of Soils, had presented his Essay to the Society for whatever use the Journal Committee might think proper to make of it, in promoting the objects of the Society.

SHREWSBURY MEETING.—The stipulations entered into by the authorities of Shrewsbury with the Secretary of the Society, in reference to the condition of the resolution at the last Monthly Council, deciding on Shrewsbury as the place of the annual country meeting of 1845, were laid before the Council, and having been read were unanimously adopted.

DYNAMOMETER.—Mr. Clyburn, director of the Earl of Ducie's iron-works, in Gloucestershire, addressed to the Council a letter on the subject of the trial of Dynamometers recommended by the Council, on the report of the Judges of Implements, at the Derby meeting, in the autumn of last year, to be entrusted to the Duke of Richmond, the Hon. Capt. Spencer, and Mr. Jaques, with a request that after the successive trials they had each made of the Dynamometers sent to them, they would report to the Council their respective merits when applied to the draught of agricultural implements; the instruments being submitted in the first instance to Mr. Parkes, the consulting engineer of the Society, for the purpose of having their mechanical adjustments, and graduation of scale under the strain of given successive weights, duly ascertained previously to the trial. Mr. Clyburn stated that one of his self-recording Dynamometers having been completed for the trial, was now forwarded to the Society, with printed instructions for its use. The Dynamometer sent by Mr. Clyburn, would record a strain of draught up to 12 cwt. Its principle of action being self-recording, was different from that of other Dynamometers, the box containing the instrument being supported on wheels, which communicated, by their axle, a progressive revolution to the recording cylinder within it as the draught proceeded, and its registration was made continuously by the pencil moving over its ruled surface: the average amount of draught being obtained by inspection of the indications thus obtained of the momentary variations during any given time and space. The Dynamometer of Messrs. Cottam and Hallen had also been duly forwarded for the trial. This instrument in its original form is described and figured in Mr. Handley's paper on Wheel and Swing Ploughs, (Journal, i. 143), and its improvements detailed by Mr. Pusey in his paper on the Draught of Ploughs (Journal, i. 219). Mr. Slaney having informed the Council that he had tried a very simple and cheap Dynamometer, made by Messrs. Drummond, of Stirling, with very satisfactory results, the Council agreed to recommend the purchase of this instrument, at the next monthly meeting, for the purpose of adding it to the others for trial. The Council resolved, that, as much time and care would be required for the proposed investigation into the practical merits of these instruments, and the estimate of their relative value accordingly, the trial should be postponed until the autumn of the present year.

DESTRUCTION OF RATS.—Captain Forbes, R. N., having called the attention of the Council to the damage and loss sustained by farmers, in consequence of the ravages effected by the common rat and other injurious animals, Mr. Meyer addressed a letter to the Council on this subject. He stated, that having for the last twelve years devoted his attention to the study of the natural history of the rat, as found in different countries of Europe, he had arrived at a complete knowledge of the sagacity, nature, and peculiar habits of that destructive animal, and of the preparations applicable, under all the circumstances, which would lead to its entire extirpation. He proposed to the Council, that various farms infested with rats should be selected for the trial of these preparations, in order that he might have an opportunity of proving their practical value, and of entering afterwards into any general arrangement with the Society or its members. He had already extensive contracts with the principal West India merchants for cleansing their estates and plantations. He referred to the certificates then submitted to the Council, in evidence of the successful result of his proceedings at Buckingham Palace and Gardens, Windsor Castle, and Frogmore Lodge, at the Mansion House, Newgate, Macclesfield Workhouse, and at various other public and private establishments in this country; and to those given to him by the officers of the Royal Households of the Emperor of Russia, and the Kings of Prussia and Denmark.—Colonel Challoner stated that, having received from the Hon. Mr. Murray and other parties connected with Her Majesty's Household, the most undeni-