The Potato Disease.

At a recent meeting of the Smithfield (England) Club, Mr. J. Dent, M. P., reported that the Committee had received, and had to lay upon the table the Report of the judges who were appointed to award the prize offered by Earl Cathcart for the best essay on the potato disease and its prevention, and after considering the recommendations made in that Report, they begged to give notice that at the next Council they would ask for a grant of £100 to carry out the first recommendation of the judges They proposed that a special Committee, consisting of Lord Cathcart, Mr. Whitehead, Mr. Jabez Turner, Mr. Wakefield, Mr. Brandreth Gibbs, Mr. Brown Jones, Mr. Algernon Clarke, and Mr. Carruthers, be appointed to consider the suggestions 2 and 3; if they think it desirable, to draw out in detail a scheme for farther investigation into the growth of the potato, and the incidence of the potato disease, and to submit such scheme to the Council. The Committee further recommended that the Royal Agricultural Society of England should carry out its own independent investigation, but as far as possible in concert with the other national societies.—This Report was adopted.

The following is the Report of the judges on the competing essays; The judges appointed by the Council of the Royal Agricultural Society to examine the essays competing for the prize of £100, offered by Earl Cathcart, for the best essay on the potato disease and its prevention, have the honour to report as follows:—They have examined ninety-four competing essays, and have carefully re-examined twenty-three selected from the total number They are desirous of expressing their recognition of the great pains bestowed upon the preparation of some of these essays, especially in the collection of facts relating to the history of the potato disease, and to the various theories that have been promulgated as to its cause and prevention. The theories most frequently advanced by the essayists, either for affirmation or contradiction, may be stated as follows:

CAUSE	PREVENTION
1 Degeneration of the tuber	Use of new sorts for planting
2. Fungus on the tuber.	Steeping, or kiln-drying the tuber previous to planting
3. Wet weather and generally superabundant moisture	Use of lime as a manure
	Clumping, tumping, or hilling growing Drawing haulm downwards, clear of the tubers by rolling upright to stakes, or growth of sorts having erect stalks
4. Peronospora infestans attacking the foliage.	Dressing haulm with sulphur, chlorine, &c
	Cutting off tops on appearance of disease.
	Sowing disease-proof sorts (neither specially mentioned, or generally, as very early and very late vigorous sorts)
5. Electricity.	Use of lightning conductors of various modes of construction
6 Plethoric, excitement, or diseased condition of the plant caused by the use of specific manure.	Avoidance of the use of certain manures

A number of other theories were also advanced, but it is not necessary to particularize them. Like the foregoing they have, probably without exception, been for many years familiar to those acquainted with the practice of potato growers, or with the literature of the subject. Amongst the ninety-four essays abundant evidence may be collected both in support and in contradiction of any of the foregoing theories, and it is especially noticeable that the essayists generally consider it sufficient to assign a cause and a mode of prevention of the potato disease, without giving any scientifically accurate theory of their proposed remedy, or sufficient experimental proof of the accuracy of their statements. The judges, are, therefore, unable to admit that any essayist has established the truth of his theory, particularly as the first condition attached to the offer of the prize is, that "all information contained in prize essays shall be founded on experience or observation."

Like the theories of the cause of the disease, the practical suggestions made with a view to its prevention do not go beyond those with which agriculturists and horticulturists were previously familiar, and, as regards the botanical part of the subject, it must be confessed that all the essayists appear to be in arrear of the present condition of scientific knowledge

The judges have, therefore, but with much regret, come to the conclusion that, in accordance with one of the conditions on which the prize was offered, they must recommend the Council not to award it to the writer of any one of the essays that have come before them.—*Farmer.*

A Cedar Swamp.

WHAT CAN BE DONE WITH IT.

Mr. Joseph Day, of Wenham, some years ago, bought a small farm, on which was a cedar swamp of three acres. The value of the swamp was reckoned at $50 an acre, about the value of the wood on it. It was connected with a pond whose surface was but little below that of the swamp A thinking, industrious man, Mr Day believed he might make this swamp, apparently of no value, a source of great profit, and about ten years ago laid his plans accordingly. He worked at his trade as shoemaker in the forenoon, and spent the afternoon on his land, as much time as possible on the swamp He first cut off the wood, selling it for $40 an acre. He then lowered the outlet of the pond so as to bring its surface seven feet below the swamp, and cut ditches through it to drain it thoroughly He dug out the stumps of the trees, many of them the remains of trees cut off years ago, and thus secured wood enough to supply his family for years. He took off two feet of mud, making about six hundred cords to the acre, which he has sold for $1.50 a cord, or at the rate of $2,700 for the three acres. Some of the mud he burned with pieces of stumps, and sold for $5 a cord. After the mud was removed he planted cranberry vines, and this year took off three and a half bushels to the rod, selling them for $4 a bushel, or at the rate of over $2,000 an acre. The mud has not been as yet all removed, and but a small part planted with cranberry vines, but next spring he will plant an acre, and in two or three years have the swamp entirely changed to a cranberry meadow He had so far sold to the amount of $2,000, mainly from the mud When done he expects an annual income of $6,000 from the cranberries.

It should be added, what is certainly remarkable, that all the labor, three days' work only excepted, has been done by Mr Day's own hands. We know of no better example of what one man can do with a cedar swamp.—*Cor Mass Ploughman.*

The Guano Question.

What is to be done to supply the place of Peruvian guano, the source of which appears to be fast working out? "Find other deposits, of which there are plenty in many parts of the world," is the reply that would be made to the question But the quality of the Peruvian article, which renders it so exceptionally valuable to the farmer, is due to the almost entire absence of rain in that country. A shower fell a few years ago, to the amazement of the inhabitants, those under seventeen years of age having never seen such a phenomenon in their lives, an interval of that extent having elapsed since the previous shower. Copious night-dews are the substitutes provided by Providence to supply the place of rain, but it must be evident to any one that the absence of rain must have a powerfully conservative effect upon the materials or elements of which Peruvian guano is composed, and which are peculiarly liable to the deteriorating influence of water in the shape of rain falling upon it from time to time. This *alone* causes the difference existing between the properties and, consequently, the increased value of one—the Peruvian—over all other kinds which have hitherto been discovered; no other possessing the amount of azote or of phosphates of the Peruvian, and we believe there is no hope of discovering any country in which the absence of rain is coupled with the immense and marvellous clouds of sea birds, which are the immediate producers of the guano. However, the stock is so reduced in the Chincha Islands that the purchaser must now be satisfied with a simple guarantee that the guano is delivered pure and unadulterated. Such is the present condition of the Peruvian guano trade, which, during the few years that it has lasted, has produced almost a revolution in the application of manure to the land, and helped, by the collateral operations arising from it, to spread a general knowledge of agricultural chemistry and of the application of its principles in the management of the land.—*Mark Lane Express.*

The Object in Applying Manure

This is a question too little discussed and too frequently ignored by the every-day farmer. Too many work in a somewhat aimless manner in the application of fertilizers. If a definite object is had in view, there seems to be an indefinite idea how that object is to be attained with a considerable class, and thus they work less understandingly, and oftentimes to a considerable loss in several ways. One man has in view the permanent improvement of the productiveness of his soil, while at the same time he is desirous of immediate returns from the present crop. Another has in view the growing of the largest possible crop, leaving the permanent improvement of the soil as a secondary consideration; and so on to the end of the chapter. The varieties of soil—sandy loam, light sand, clayey loam, or clay, stony gravelly loam—are differently constituted, and each is better adapted to some special crop than the other; some of them are what we term "light" soils, while others are "medium" or "heavy" Now the cultivator of each of these varying soils wishes to attain a specific object in its culture, and to that end he applies fertilizers and grows a crop which he finds, from experience, that his soil is adapted to. Scarcely any one at all experienced would think that the same object would be attained by applying manure in the same state, in the same manner, to each and all of these varying soils. Local experience and a knowledge of local farming and circumstances always best determined the matter of application of manure, and in the discussion of the subject all these matters should be considered; but my questions remain: What is the object in applying manure? Should we let any other object take precedence of the present crop? One crop is certainly all we are assured of. If we apply manure to ploughed and hoed ground, it cannot be done without in some way permanently improving the same, for the aeration causes the manure and soil to act chemically producing the improvement.—W. H. WHITE, *Country Gentleman.*

About the Sweet Potato.

The sweet potato is one of the most widely distributed cultivated plants of South and Central America, and it, as an article of food, passes back to the earliest historic period. In Brazil it is called *Jetica*, in Mexico *Camote*, words, the original roots of which belong to the original tongue of the country. The name *Batatas* is a corruption of potato. Even upon the Antilles this useful plant was found cultivated as early as the year 1526. Columbus brought it with other novelties to Europe, and presented it to Queen Isabella; the consequence was that this plant, which is suited to the climate of Spain, was immediately cultivated there. C. Clusius mentions that as early as 1601 he had eaten it in Spain.

The sweet potato was first brought by the Spaniards to Manilla and the Moluccas, and thence by the Portuguese distributed over the entire Indian Archipelago. This plant soon reached China and India, although when and how is not known. There is a Chinese as well as a Sanscrit name for this plant. It has ever been believed by some to be of Asiatic origin, or that the American and Asiatic plants are to be considered as different species. Neither of these suppositions are probable, on historical grounds, and on account of the fact that fifteen species of this genius hitherto known, are peculiar to America, four of which only have also found their way to other parts of the world The sweet potato has not been found growing wild by any one, although the tropical portion of America is to be considered as its native country, with most show of probability *Ex.*

Wire Fences.

The wire generally used for fencing is No 9, which weighs one pound to the rod, and costs about twelve and a-half cents a pound. The cost of a wire fence put up substantially with posts one rod apart, will not be far from $1 per rod. Eighty cents might cover the cost under favorable circumstances Five wires should be used, the upper one of which should be 4½ feet above the ground. The distance of the wires apart would be 14, 12 10, and 10 inches, counting from the top downward, and the lowest wire 8 inches above ground. There should be straining-posts well braced every 60 rods or 300 yards, or less, according to circumstances. These are strongly braced, and the wires are stretched upon small wooden rollers, upon which the slack is wound up. When the wires are sufficiently tightened the rollers are held in their position by an arm in each, which rests upon a pin in a hole in the post. When the wires are stretched, the staples in each post through which the wires pass are driven up tightly, and they keep the wires firmly in their places. For pastures, wire fences are often very dangerous to horses or cattle, which, not perceiving the wires, are apt to run against them at full speed and become seriously injured. This danger may be obviated by using bars or rails in place of the upper wire. These should be spiked upon the top of the posts, and in addition to this advantage they act as braces to the posts and render the fence firmer. One of the chief advantages of the wire fence is that it does not encourage snow drifts, which the board fence does, and for roads it is much more preferable to any other.—*N. Y. Times*