Ever since the potato was introduced in Britain in the sixteenth century, it has been an important part of the diet of every one, rich or poor, and has vied with bread as the main source of energy in the daily ration. At first the potato seems to have been grown mainly as a garden crop; with the growth of the urban population, however, during the industrial revolution here in the nineteenth century it became a very important field crop, as it still is. The two world wars served to emphasize its value to all.

For a very long time it was well known to practical growers of potatoes that a stock of a particular variety gradually degenerates under ordinary field conditions, and formerly the only course taken was to accept this fact, scrap the run-out variety and hope to replace it with a similar sort newly raised from a seedling. The new variety would run for a shorter or longer period before it, too, had to be scrapped. This was an unsatisfactory state of affairs, even though it led to some exciting gambling in new varieties. Various speculative theories were put forward to explain the well known degeneration which eventually took place with all stocks, but more slowly in some parts of Britain than in others. It was realized early that some parts of the country could carry stocks for a longer time than others, and that in general the more northerly land was better in this respect than the more genial south. On this finding was based the considerable trade in Seed Potatoes that has been carried on by farmers in Scotland for a long period, and not without profit.

Scottish Seed Shown Superior

There has been some interesting speculation how the superiority of Scottish seed potatoes came to be realized in the South. One theory is that, about the middle of last century, when farming in Britain was beginning to enter a period of depression, a number of Scottish farmers migrated to England to try their luck in the more kindly climate of the south. They took, among their other possessions, some potatoes for seed to their new farms, and soon found that the resulting crop was much heavier and healthier than those of their neighbors. They also soon found that this superiority did not last for many seasons, and they had to get fresh supplies from home every few years, in order to maintain the yields. Whether this is the right explanation or not of the spread of Seed Potatoes from Scotland, it is certain from our records, that the trade has been well established for the past hundred years. It was, too, a very welcome trade in this and many other areas, as it was soon recognized that the best ground for the raising of good seed was rather high and cold, suitable in the main for the raising of stock and fodder for the animals during the long winters. A cash crop would be very useful in such areas, and so it is no wonder that farmers there went into the growing of seed potatoes with all the enthusiasm and skill at their command.

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Now, although it was known that some districts could produce healthy seed crops over a long period of years, it was also known that even there a stock would eventually degenerate. For a long time no satisfactory reason for this degeneration was forthcoming despite many ingenious theories. Indeed it was not until a little more than thirty years ago that virus diseases were shown conclusively to play a great, if not the whole, part in the decline of stocks. Since then a very great amount of research work has been done on plant viruses in all parts of the world, and a great deal has been found out about their effects on potato and other plants and stocks. There is still much to ascertain about the actual viruses themselves, and the findings are likely to be very important scientifically. On the practical side enough is now known of their effects and ways of working to be of great help in maintaining and improving our stocks of potatoes. Of the viruses themselves, it is enough to realize that they are extremely small infective agents, so small that they cannot be seen under the highest powers of an ordinary microscope. They can multiply only in living cells, and so cannot be grown and studied, (as can bacteria) in artificial media. They can increase in a plant very rapidly under favorable conditions, and when once in a plant—which also includes the tubers—the virus can never be eliminated without killing the plant. Their effect on a plant can range from death to symptoms so mild that they cannot be seen by the naked eye. They can in some cases pass from plant to plant very easily, whereas in others they need some definite means, such as a particular species of insect, to cause infection.

Seed Inspection Started

At the end of the first World War, when ideas from all countries could be brought together and considered once more, it was finally accepted that virus infection was the main, and indeed only cause of deterioration in potato stocks. At the same time it became apparent that there was a world wide danger from the spread of the wart disease, *Synchytrium endobioticum*. It was known that a large number of potato varieties were immune to this fungus pest, but at the same time even the best seed stocks sometimes contained "rogues" of other varieties that might be susceptible. The Department of Agriculture for Scotland therefore started an inspection scheme to check the varieties in seed crops and to insure that varietal purity was established and maintained. This project entailed training teams of inspectors on behalf of the Department, and of "roguers" to help the farmers. In a very short period of years remarkably pure stocks were established. Soon their health became of more importance and the seed grower gradually had "Virus" forced upon him. In the early days the diseases were classified by symptoms, and we had to cope with leaf roll and an impressive array of mosaics, ranging from rugose and leaf drop streak, through severe and mild mosaics to the mottles, and petering out with the negligible mottle, together with a good deal of argument with inspectors and on occasion, high feeling! Looking back, it seems that all the different classifications lead to confusion of the main issue, although it is difficult to see how the system could have been bettered, and the results were good without doubt. Part of the confusion arose from the fact,