

The following questions based on this article.

Taking the Bite Out of Potato Blight

From

Science, Nov. 29, 2002 issue page 1702.

Note: Several copies of this article can be found under my name at the circulation desk of the South Campus Library. Note, The Journal, Science can also be found at my city and other local libraries. These questions will be covered on your First Examination.

1. This article starts off with a description of Potato blight in what country?
2. According to the article, how does this disease rank in terms of agricultural diseases on the world scene?
3. Generally speaking, how is this disease “handled” in the countries of North America and Western Europe?
4. Harold Platt contends that there are two reasons for concern about this disease even in the “high tech” agricultural operations. What were those two reasons?
5. It is generally believed that the origin the Late Blight problem is the country of ____ and within that country, the ____ valley. Although the potato is a New World crop, the current thought is that the microbe that is responsible for the problem of Late Blight, the microbe itself did not “leave home” until the ____.
6. It was noted in the article, that most infections outside of Mexico were caused by a single type of the pathogen known as (A-1). This type can reproduce only ____ and survive only if _____. The article noted that in the 1980s another strain of the pathogen escaped out of its “ancestral home” This strain is known as the ____ strain. Sexually reproduction is possible between these strain and the result is the production of thick walled _____. These bodies can persist ____ of the host plant.
7. The article notes that in the future, attempts to combat the pathogen will take the form of genomics. This genetic manipulation could take two different approaches. What were the approaches noted in the article?
8. According to the article, what is the largest group that is currently addressing the problem of dealing with the pathogen via molecular genetics?
9. What is the major problem (noted in the article) involved in using standard crossbreeding approaches to transfer resistance genes from wild potatoes to the modern cultivated variety?
10. What is the reason (noted in the article) that the experience of the Irish in the 1840s in dealing with the problem of Late Blight was not more common in Europe in years immediately after the entry of the pathogen?