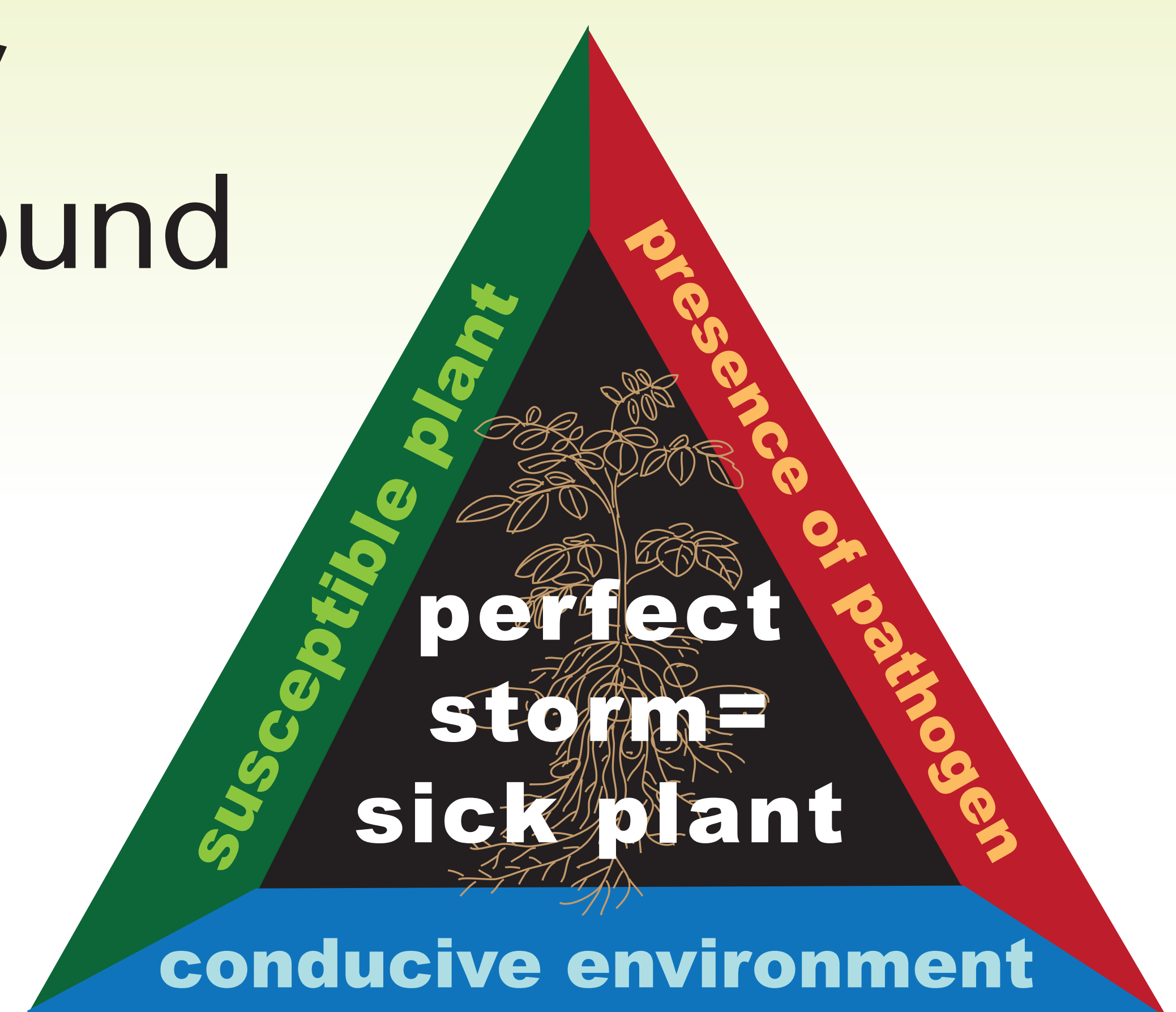


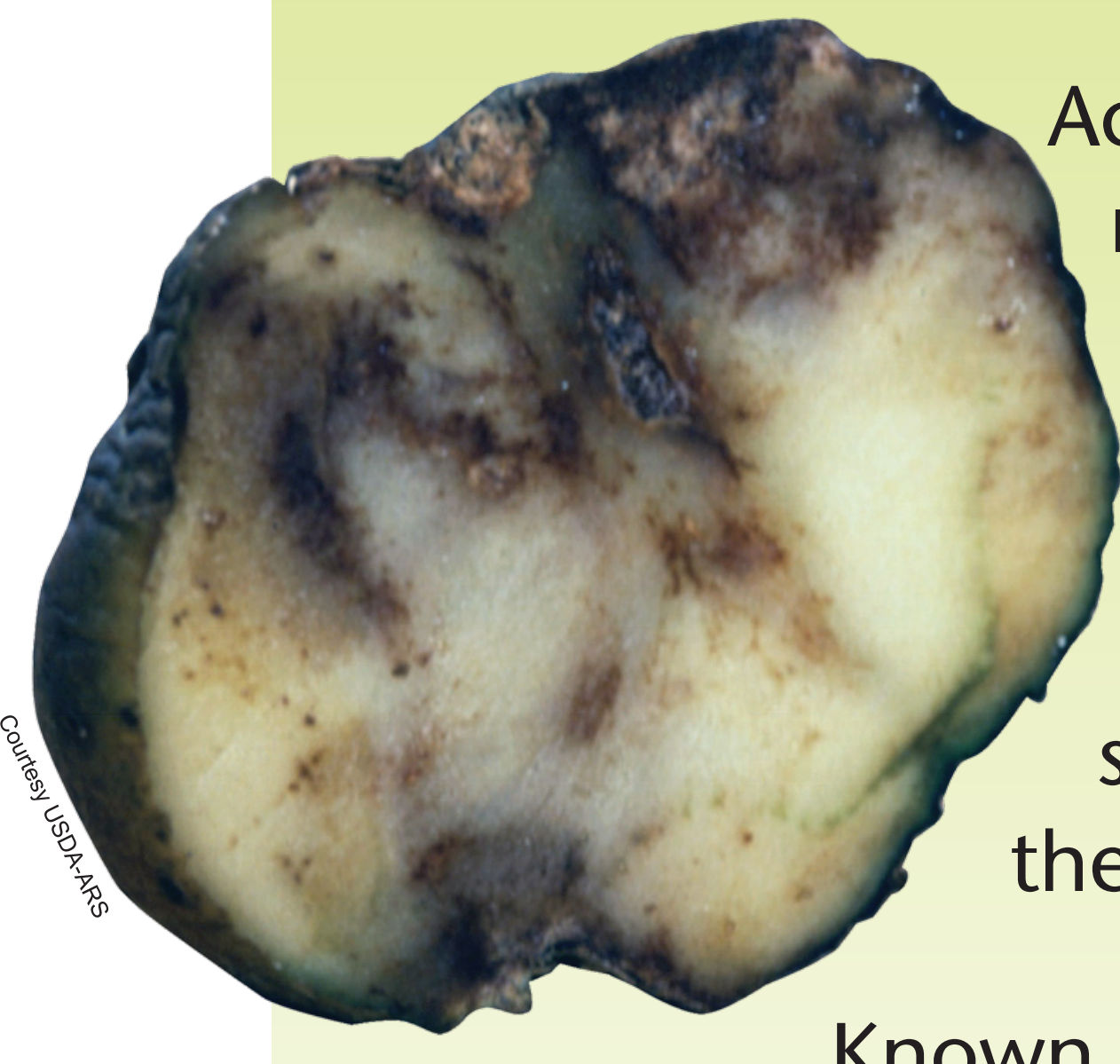
# Crops Get Sick Too

## Preventing the perfect storm preserves plant health

All plant diseases require three conditions to occur. By controlling these variables scientists aim to manage deadly diseases, such as late blight. Around the world, late blight continues to destroy potato fields and, as a result, fuels world hunger.



### The perfect storm struck in 1845



Across Europe, conditions were ripe for disaster: a potato-killing disease called late blight lurked; the weather was cool and rainy, ideal for spreading the pathogen; and all of the potatoes were the same kind, so when one got sick, they all got sick.

Known as the Irish Potato Famine, the late blight epidemic swept through fields, rotting the food staple and starving millions. In Ireland alone, over 1.5 million people died and just as many fled, mostly to the United States.

### Swimming water mold kills whole potato plant

The pathogen that causes late blight is aptly named *Phytophthora* (Fie-top-thor-a) which means "plant destroyer." It looks like a fungus up close; however, it is actually a water mold, or oomycete (o-o-my-seat), which develops spores that swim in water on leaves. Late blight kills the entire potato plant, causing leaves and stems to collapse and the potato tuber to rot.

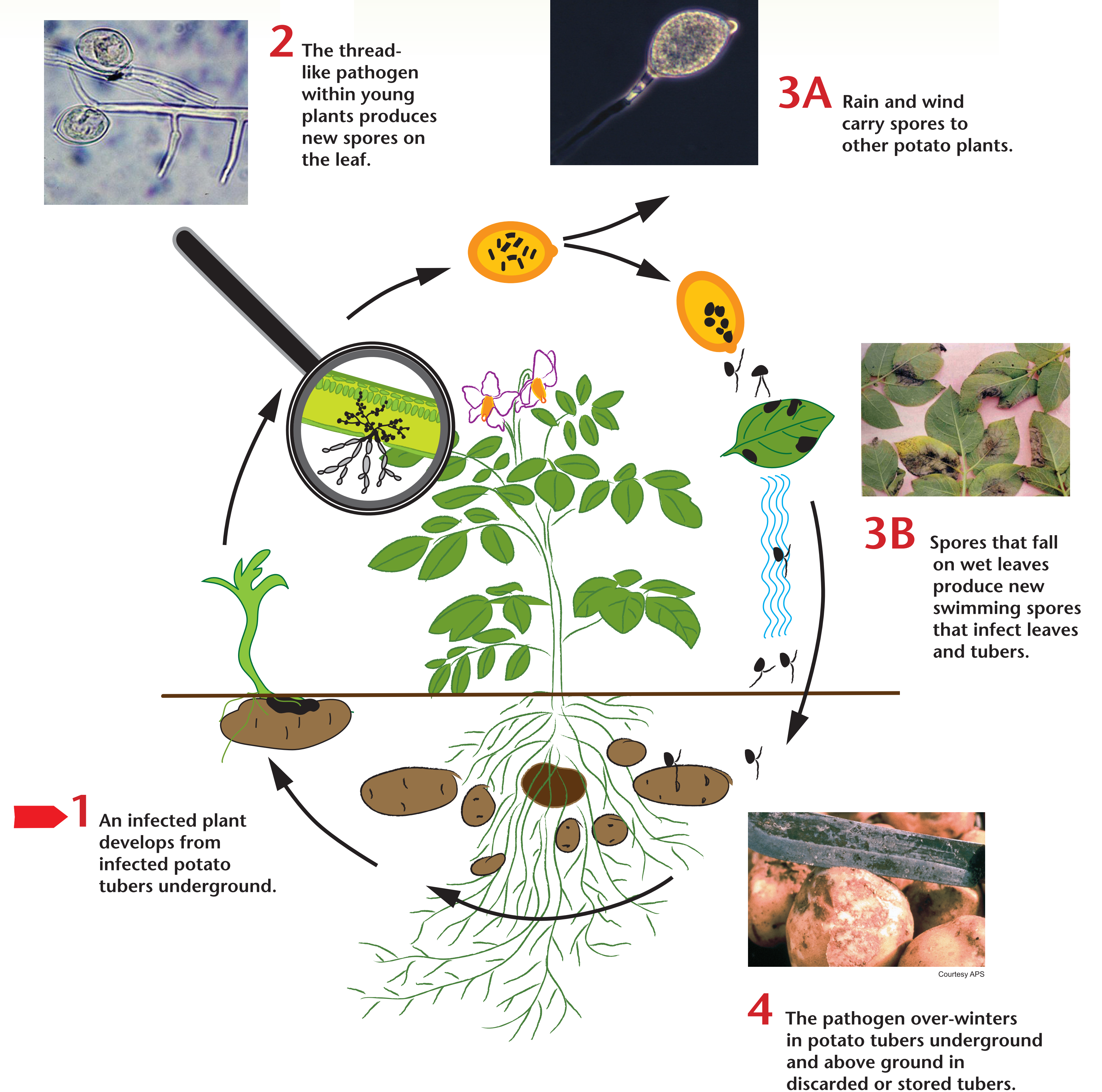
### Scientist on the Spot



#### Late blight strikes again

“Late blight still causes devastating epidemics on both tomato and potato more than 165 years after the great famine. The epidemics of 2009 were the worst in modern history due to conducive weather and widespread inoculum introduced on tomato transplants in the Northeast US. My research involves studies of historic and modern strains of *Phytophthora infestans*, their origins and migrations.”

Jean Beagle Ristaino  
Plant Pathology  
North Carolina State University



The American Phytopathological Society

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