**PLP 2001C – Signs, Symptoms, & Plant Processes**

Sign vs. Symptom

Recall, **symptoms** are the **expression of disease by a plant** as a response to a pathogen. Examples of symptoms are: leaf spot, blight, canker, dieback, root rot, stem rot, scab, wilt, galls, leaf curls, etc. **Signs**, on the other hand, are **structures or products of a pathogen** on or in a diseased plant. These include but are not limited to: mycelium, sclerotia, fruiting bodies, and spores.

**\*\*\*One of the keys to being a plant pathologist or diagnostician is being able to tell the difference between these two!**

Plant Processes Affected by Pathogens

Plant Pathogens affect their hosts in a wide variety of ways. Listed below, are the main processes occurring within the plant that can be and are affected by these virulent organisms.

* Photosynthesis
* Water/Nutrient Translocation
* Host plant respiration
* Permeability of cell membranes
* Transcription & translation
* Plant growth
* Plant reproduction

Examples of diseases that affect each of these processes have been provided in Lecture 2. At the conclusion of today’s lab, you should be able to distinguish the different types of plant diseases and how they affect these processes.

**Directions**

* Go out to the landscape and scout for any and all potential plant disease issues.
* Bring back to the lab leaf samples, twigs, branches, roots, or whole plants if you can.
* Look at the samples using the dissecting scope and write down the symptoms and/or signs you are able to observe.
* With assistance by the professor, if necessary, make a slide of the potential pathogen to observe under the compound microscope.
* Write down below the plant process being affected by this potential plant pathogen.

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| **Sample Number** | **Type of Plant** | **Symptom and/or Sign** | **Plant Process Affected** |
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