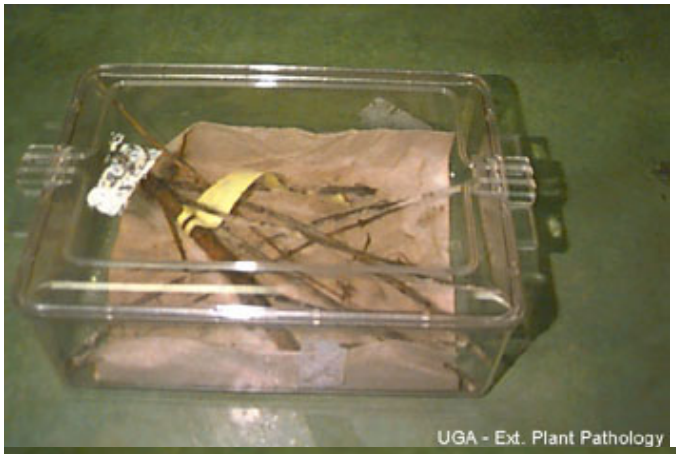
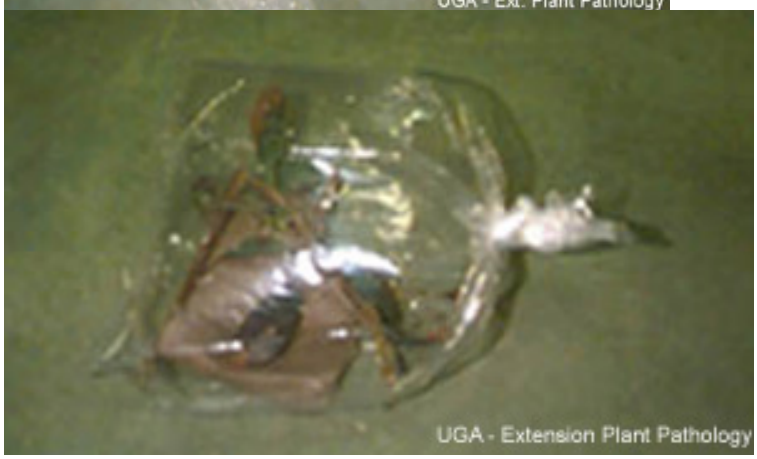
How To Methods

Making a Moist Chamber

Often disease samples will exhibit typical fungal disease symptoms, but no evidence of fungal sporulation, fruiting structures, etc. or the structures are too immature to produce spores for identification. It is then necessary to induce sporulation to accurately identify the fungal pathogen. Most fungi require moisture and high humidity to sporulate. These conditions can be achieved by placing the sample in a moist chamber.

Moist chambers can be simple such as a plastic bag or tupperware-like container.





Place the sample in the bag or container with a moist paper towel. Mist the inside of the chamber using a spray bottle and seal the container. If using a plastic bag, you may want to blow air into it to create a "bubble." Humidity within a moist chamber can reach 80-100%. Do not make the moist chamber too wet because excess water can often reduce fungal sporulation.

Under ideal moist chamber conditions, some fungi will sporulate within 24 hours. Some fungi that readily sporulate include Botrytis (gray mold), Fusarium, Rhizoctonia, Alternaria, and Colletotrichum. Many of the mostly saprophytic fungi including Cladosporium, Penicillium, Rhizopus, and Trichoderma sporulate rapidly in a moist chamber and can often interfere with fungal identification. It is not uncommon to have to

keep a sample in a moist chamber for up to several weeks to induce pathogen sporulation. Some fungi that may sometimes sporulate slowly include Phomopsis, Mycosphaerella, and Cercospora.