

We've all heard the saying, "At ease disease; there's a fungus among us."

Such rhyming words I find quite amusing, but their meaning remains to me yet confusing. Perplexed here I sit as I ponder such wit. They've caused quite a yearning for additional learning. Therefore, I now share with you some facts that are true about that nasty old fungus that lives among us. Okay, so my internal rhyme is a bit overdone, but humor me.

Fungi, the plural for fungus, exist in many forms. Scientifically, they belong to a large division of plant organisms called thallophyta. As previously mentioned, they are plantlike but lack the green pigment called chlorophyll. Fungi are void of true leaves, stems and roots, and they reproduce by spores. They include mushrooms, mildews, molds, yeast, rusts and smuts. Because they lack chlorophyll, fungi are incapable of manufacturing their own food; thus, they are parasitic. They survive by feeding on and digesting the nutrient value from other living and non-living organisms.

Surely, such a description hints that fungi are dangerous, but not all are. While some fungi can and do pose a serious threat to humans and other living organisms, many have beneficial value. For example, a number of mushrooms are highly sought after as delectable delights; yet others are extremely poisonous if eaten. Furthermore, most gardeners realize that mushrooms,



mold and mildew play an important role in the decomposition process. They are the major contributors to rotting. If it were not for these fungi, organic matter would not decay, certainly a necessary process to rid the landscape of dead organisms. Decomposition breaks down dead organic matter into its basic elements, recycling valued nutrients back to the soil.

Other beneficial forms of fungi involve certain molds. Every schoolchild eventually learns that in 1928 a research scientist by the name of Sir Alexander Fleming discovered the anti-bacterial action of *Penicillium notatum* mold. His discovery later led to the development of medicines such as penicillin and other wonder drugs used to treat diseases inside the human body.

Did you know a bluish-colored mold called *Penicillium roqueforti* is what makes blue cheese blue and provides that distinctive flavor in blue cheese and Roquefort dressing? There is also a species of white mold called *Penicillium candidum*. This mold colors, ripens and favors Brie and a variety of other white cheeses.

Yeast, another fungus, makes it possible for the rising of bread and assists in the fermentation process that gives us beer and wine.

In spite of all the beneficial values, many fungi still pose serious dangers to plants as well as humans and animals. Those who have gardened for any length of time are acutely aware of the many maladies caused by fungi. Whether we refer to these fungal problems as molds, mildews, or blights, they are diseases. Such deadly fungi attack and destroy many of those valued plants we attempt to grow in our landscape. Turfgrass, trees, flowers and vegetables are all at risk. Every growing season I am bombarded with a multitude of questions involving fungal diseases. What is destroying my tomatoes? Why is my lawn turning brown and dying? What is causing the leaves on my lilacs to appear white and dusty? The culprit is usually a fungus. A few of these deadly fungal diseases include leaf spot, Pythium blight, rust, slime mold, summer patch, powdery mildew, Necrotic ring spot, snow mold, black knot, anthracnose, and the list goes on.

Over the years, I have learned the identity of many, but I mostly rely on the expert diagnoses from plant pathologists at the University of Nebraska. Fortunately, they not only know the exact identity of the fungal pathogens but offer proven methods of control.

With that, I'm hoping that my yearning for additional learning about that nasty old fungus that lives among us has enlightened and not frightened. Yet with all this reflecting, I still find perplexing the true implication of that strange connotation, "At ease disease; there's a fungus among us."