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Rochester Sentinel Article
Clean Up Your Act

With a lot of our attention focused on the COVID virus, we are seeing an increased emphasis on sanitation and hygiene to the point that shortages are occurring. It is hard to find some liquid hand soaps, hand sanitizers, and disinfectant wipes.

In the plant world, sanitation is important and even very critical for eradicating or decreasing some diseases. One of the main reasons for crop rotation is to reduce disease pressure. The corn-soybean rotation practiced by farmers will reduce the number of fungal spores present year to year and improve production. Corn or soybeans grown continuously normally have a yield reduction around 10%. Not all of the yield decrease is due to diseases, but having the fungal spores close by in the left-over residue just makes life easier for the fungus to infect.

In the garden, Purdue recommends rotation of vegetables to prevent disease. A tomato plant is a magnet for several diseases that cause the plant to slowly die from the bottom up during the season. Having last year's tomato plant residue nearby allows the fungus to take a quick trip to this year's plant.

Apple trees have a problem with a fungus disease called apple scab. The apple scab fungus overwinters on fallen, diseased leaves and in spring, these fungi shoot spores into the air that land on newly developing leaves. Removing the fallen, diseased leaves lengthens the time before infection will take place the following spring, allowing the tree to get a jump on the disease for that year. It will still get apple scab, but it will be later in the year and possibly less severe.

We stress the importance of rotation and residue control. However, there are some diseases where it does not matter because the infecting spores will not live through the winter in our area. The disease that caused that famous Irish potato blight needs to spend the winter on live tissue. So, potatoes stored inside may still harbor the fungus. Once they deteriorate and are thrown outside they may infect the next season's live plants.

Sanitation also applies to insect problems. I read an article from an 1873 newspaper that stated, "The best fruit—the cleanest, best grown, and least deformed fruit—I have seen, is that grown in orchards in which pigs or sheep have been permitted to range." The fallen fruit may have a variety of insects in them like plumb curculio and codling moth. That article went on to extoll the virtues of poultry such as geese, turkey and guinea. In 2005, Michigan State University revisited hogs in the orchard as part of an organic growing experiment. They saw decreased levels of insects but the U.S. Department of Agriculture and the Food and Drug Administration came out with a new Good Agricultural Practices Law that stated "domesticated animals are not to be in the presence of plant agriculture." That was the end of hog heaven for those little piggies.

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