

# Why Bad Things Happen to Good Plants

by Carol Ann Harlos

The American Horticultural Institute has some intriguing information regarding plants. The health of all plants depends on disease resistance or tolerance, pest resistance or tolerance and tolerance to abiotic stresses such as drought, excess water, cold or heat exposure. The terms “resistance” and “tolerance” have different meanings and we need to realize the difference.

Resistance means that a plant can overcome the effect of a certain pathogen or insect. Pathogens include fungi, bacteria, viruses, phytoplasmas. Immunity means the plant can restrict the pathogen from getting into the plant in the first place.

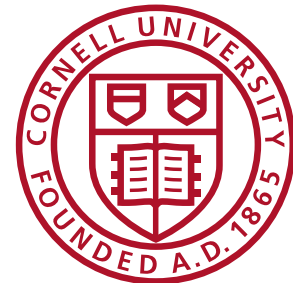
You may have witnessed this in your gardens. An example of immunity was present when the KnockOut Pink rose was released. It did great! No problems! Time passed. The pathogens changed over time and in some cases made this rose unwell. This is really frightening to gardeners! They are thrilled with a certain plant for years and then something changes. They ask “What went wrong? What did I do?” The answer may be “Nothing.”

Another example includes some of the newer cultivars of impatiens that have downy mildew immunity. Immunity to pathogens is usually due to one or two genes. Over time both the impatiens genes change as does the downy mildew pathogen. They may change the resistance to tolerance and eventually to death.

That is why bad things happen to good plants.



*Photo of KnockOut Roses Pixabay.org*



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