

Under the Scope: Gymnosporangium Rust Management

We often receive calls from homeowners requesting specific fungicide recommendations and timing for managing the Cedar-Apple Rust fungus or other closely related *Gymnosporangium* spp. that infect junipers and rosaceous hosts.

You may find that there are many internet fact sheets on [Cedar-apple rust](#), (including our own) or other common *Gymnosporangium* rusts such as quince or hawthorn rust, and you may note that any given fact sheet may provide a specific fungicide recommendation for treatment of one of these rusts and may even provide a general treatment time. **Please** keep in mind however that those recommendations were likely made for the best time to manage that pest in that state! If your site is elsewhere, and you follow that recommendation, you may get little or no control and may waste an entire season treating at the wrong time.



Galls of various species and stages of development on juniper. First provided by S. Jensen; remaining photos provided by D. Dailey O'Brien

Managing *Gymnosporangium* rusts can be much more complicated than managing other disease issues for a couple of reasons. Each *Gymnosporangium* sp. has two unrelated hosts that the fungus requires to complete its life cycle. Spores produced on one host do not re-infect that host, they infect the alternate host. So, when you want to treat your Juniper (or Eastern red cedar) to protect it, you need to treat when the alternate host (quince, pear, crabapple, etc.) is producing infectious spores, and vice versa.

Timing of treatment also depends on the location of the trees! Treatment of a crabapple in Georgia on the same calendar date as treatment of a crabapple in New York is not likely to provide good results for both as sporulation on the Juniper in those locations is unlikely to occur on the same calendar date. Galls on Juniper in Georgia may begin to produce spores much earlier in the growing season than galls in New York.



Leaf spots and fruiting bodies on rosaceous hosts. Last photo provided by S. Jensen; remaining photos provided by D. Dailey O'Brien

The best timing for treating a specific host in your location is dependent on when the rust is sporulating on the alternate host. If your juniper and crabapple are growing side by side (not recommended!), and fruiting bodies develop on both every year, then determining your treatment time may be simple. When the galls on the juniper begin to look like orange jelly-like masses or tendrils, it's time to treat your crabapple. For any other situation, determining the best time to treat is more difficult. If you cannot determine when the alternate host when it is sporulating, you may have to make more applications than you actually need, and timing may be off so significant infection may still occur.

Consider hiring a professional pesticide applicator who has access to professional products and may be able to time applications based on other plants they have observed in your general area. Or, if you really want to know what pesticides are available that you might (legally!) use on your trees, please look for those recommendations within your own state first. Products that are registered for use in New York and Pennsylvania may differ greatly from those registered for use in Vermont or North Carolina. There may also be additional products that are effective and legal for use in your state that we cannot recommend in New York.