

A close-up, high-resolution portrait of a woman's face. Her eyes are a striking green color, looking directly at the camera. Her hair is dark and styled in a complex braid that runs down the right side of the frame. The lighting is soft and natural, highlighting the texture of her skin and the individual strands of her hair. The overall mood is serene and focused.

# A Look At ...

FORCE OF NATURE — THE WHOLE TRUTH FROM AN INDEPENDENT PERSPECTIVE from  
National Organization Responding Against HUJE that seek to harm the Green Space Industry (NORAHG)

# Cedar Apple Rust

A Look At Ornamental  
Plant Disease Management

**Globs of Orange Goo,  
Jelly-Like Orange Masses,  
Ooey-Gooey Galls, and  
Brain-Like Galls**

March 23<sup>rd</sup>, 2012

Kansas State University

Selected and adapted excerpts

# Cedar Apple Rust

The birds are singing, the tulips are blooming, and junipers ( also called red cedars ) are « *blooming* » in another fashion.

CEDAR APPLE RUST is here.

The pathogen (a fungus) spends part of its life cycle on a juniper tree, and the other part of its life cycle on apples, crabapples, hawthorns, or quince.

To simplify, we'll just call them « *apple hosts* ».

In spring, orange « *horns* » poke out from brown, BRAIN-LIKE GALLS on junipers.



# Cedar Apple Rust

Spring rains triggered the galls to pop out in all their OOEY-GOOEY glory —



# Quince Rust

There is a similar disease called QUINCE RUST that forms GLOBS OF ORANGE GOO ( instead of long tendrils ) on twigs and branches of junipers.



# Quince Rust



# Hawthorn Rust

And, HAWTHORN RUST produces galls similar to CEDAR-APPLE RUST, but smaller and less dramatic —



# Rust Leaf Spot

Those JELLY-LIKE ORANGE MASSES on the junipers produce spores that infect the apple hosts. Once infection occurs, LEAF SPOTS ON APPLE LEAVES develop in 1 to 3 weeks ( see below ). Eventually, fungal spores are produced in these leaf spots on the apple tissues. The spores are spread by wind and rain back to junipers starting in about July. Without both hosts, the fungus cannot complete its life cycle.



# Cedar Apple Rust

The disease is looks dramatic on junipers, but it does not cause much harm.

The RUSTS can cause problems in the apple host, however.

If infection is severe, many leaves drop off early and the tree is weakened due to reduced photosynthesis.

If your tree only gets a small amount of rust each year, it probably will not be an issue for long term tree health.

Management Options ( For Apple Hosts ).

## 1 ) Resistance

For new plantings of fruiting or flowering apples, consider planting a rust-resistant variety.

Apple cultivars vary in their level of susceptibility to rust diseases.

### Apple cultivar susceptibility to CEDAR-APPLE RUST

	Cultivar ( s )
Fairly resistant	Empire, Liberty, Macfree, McIntosh, Northern Spy, Novamac, Paula Red, Red Delicious, Spartan
Highly susceptible	Golden Delicious, Idared, Mutsu, Russet

# Quince Rust

## Apple cultivar susceptibility to QUINCE RUST

	Cultivar ( s )
Fairly resistant	Idared, Jonafree, Liberty, McIntosh, Redfree, Spartan
Highly susceptible	Empire, Golden Delicious, Mutsu, Northern Spy, Red Delicious

### 2 ) Tree Care

For any apple tree, proper pruning will allow air movement through the canopy.

This practice reduces the leaf wetness that promotes disease.

Maintaining overall tree health will also help prevent the disease.

### 3 ) Fungicides

Where there is a bad history of this disease ( severe defoliation ), consider preventive fungicide sprays on the apple hosts when leaves are out and the orange galls are active.

For best control, applications should continue through May or as long as the ORANGE GALLS are active.





A Look At ...

