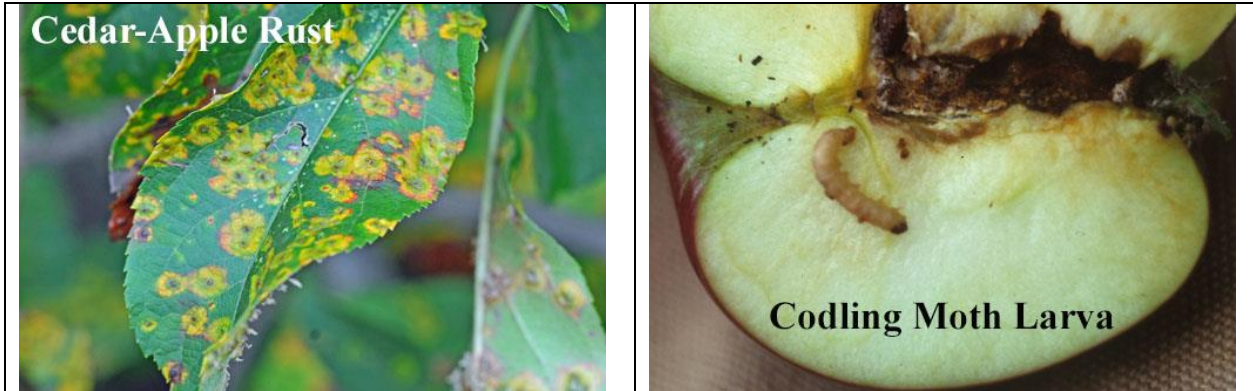


**Problem:** Pests on Fruiting Apples



**Host Plants:** Apple

**Description:** Apples are the fruit most likely to be damaged by diseases and insects of any fruit grown in Kansas. The most common disease on apple trees in Kansas is cedar apple rust. However, other diseases such as apple scab, powdery mildew and fireblight can also cause problems. Though some apple varieties are resistant to most or all of these diseases — including Liberty, Jonafree, Redfree, Freedom and Williams Pride — most varieties are susceptible. For a listing of the disease resistance of various cultivars, go to:

<https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/pdf/agguides/hort/g06022.pdf>

The most common insect attacking apples is the codling moth. This is the insect that is the “worm in the apple.”

**Recommendations:** Fungicide sprays during April and May are critical to preventing disease on susceptible varieties. The first spray should go down when leaves appear. A fungicide that is available to homeowners and very effective for control of apple scab, cedar apple rust and powdery mildew is myclobutanil (Immunox, Monterey Fungi-Max and F-Stop Lawn & Garden Fungicide). There are several formulations of Immunox but only one is labeled for fruit. Check the label. Sprays should be done on a 7- to 10-day schedule to keep the protective chemical cover on the rapidly developing leaves and fruit. Cedar-apple rust is only a problem during April and May. Apple scab and powdery mildew may be a problem later but that is weather dependent.

An insecticide will need to be added to this mixture after petal drop to prevent damage from codling moths that cause wormy apples. We have five products that can be used. They are listed below along with the maximum number of sprays that can be used per year.

Product	Maximum Number of Sprays/Year
Bonide Malathion	2
Bonide Fruit Tree Spray	2
Bonide Fruit Tree and Plant Guard	4
Cyd-X	No limit

In order to protect bees, DO NOT use any insecticide during bloom. Wait until petal fall.

Although gardeners may continue to use myclobutanil after May, certain other fungicides are more effective on summer diseases such as sooty blotch and fly speck. Consider using Bonide Fruit Tree and Plant Guard or Bonide Fruit Tree Spray after petal drop as both contain an insecticide(s) and fungicide(s). However, you are limited in the number of applications per year allowed.

An organic control with the trade name Cyd-X is also labeled but will control only codling moth.

A spreader-sticker can be added to the fungicide-insecticide chemical mixture to improve the distribution and retention of the pest control chemicals over the leaves and fruit. Sprays are applied every 10 to 14 days. A hard, driving rain of about 1 inch or more will likely wash chemicals from the leaves and fruit. In such cases, another application should be made.

Another organic control that is often overlooked is bagging. There are bags made specifically for this purpose and are called Japanese apple bags. However, 3 lb paper bags (lunch bags) can work as well. Cut the lunch bags down to six inches long and cut a slit to slip over the stem of the apple. Place the bag over a single fruit when it is the size of quarter (about 3 weeks after petal fall) and secure with a twist tie. The bag should be removed three weeks before harvest to allow the apples to color. The Japanese apple bags already have the slit cut and a twist tie built in. Once the bags are placed on the fruit, no additional sprays are needed. The bags prevent both fungus diseases and attacks by insects. For a video illustrating all the steps required for bagging apples, see <https://www.youtube.com/watch?v=sbbmgJ5F1wc>. Following are the steps that need to be taken if bags are not used and the trees will be sprayed.

### Simple Spray Schedule

*Leaves Appear:* Apply Immunox, Fungi-Max or F-Stop Lawn & Garden Fungicide

*Petal Drop:* Add insecticide to the Immunox, Fungi-Max or F-Stop. Therefore, the mixture is Immunox, Fungi-Max or F-Stop + one of the listed insecticides.

*June 1:* Drop the Immunox, Fungi-Max or F-Stop so you are applying only Bonide Fruit Tree and Plant Guard or Bonide Tree Fruit spray. Another option is to use one of the other listed insecticides plus Captan.

Spray every 10 to 14 days or until the fruit is bagged or mid-August.

### References:

1. [Spray Guide for Growing Apples at Home](#) – MF3429, K-State Research & Extension, Kansas State University
2. [Fruit Pesticides, Active Ingredients, and Labeled Fruits](#) – MF3431, K-State Research & Extension, Kansas State University
3. [Apple Bagging](#), University of Kentucky, YouTube Video

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Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

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