



## Arkansas Plant Health Clinic Newsletter

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### Rose

Downy Mildew of roses, caused by *Peronospora sparsa*, is a serious disease of cultivated roses. This pathogen is active during cool, humid conditions in the spring and the fall. Downy Mildew goes dormant when temperatures get above 80°F. Symptoms may include lesions on canes, leaves, stems, and flowers. Leaf lesions begin as small, block-like, purplish spots on the leaves. Eventually, the lesions may coalesce to blight large portions of the leaf. Severe defoliation may occur. When lesions girdle stems or canes, dieback occurs. A downy mass of sporangia forms on the undersides of infected leaves and on infected canes during periods of high humidity (85% relative humidity). Leaf wetness of 6 hours is enough to cause sporulation. Heavily infected plants are often killed. Control of Downy Mildew is challenging as the pathogen overwinters on rose leaves and canes. Therefore, good sanitation is critical. Plants should be spaced to promote fast leaf drying. Commercial growers may use Subdue Maxx, or Stature, or Aliette, or Segway. Homeowners may use Aliette. Products containing mancozeb may also prove useful. Some growers destroy infected plants to prevent spread of Downy to nearby plants.

### Rose Downy Mildew-*Peronospora sparsa*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### Rose Downy Mildew-*Peronospora sparsa*



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## Rose Downy Mildew sporangia- *Peronospora sparsa*

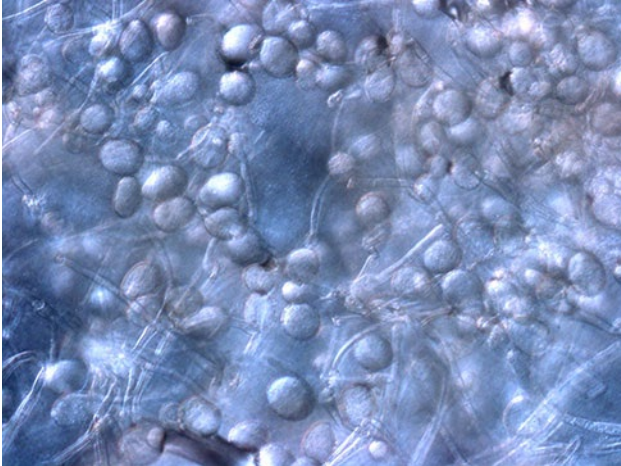


Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension

## Strawberry

Powdery Mildew of strawberries, caused by *Sphaerotheca macularis* f. sp. *fragariae*., is a serious problem when environmental conditions are right for infection. Blooms, fruit, leaves, and stems can all be infected. Leaves which are severely damaged by Powdery Mildew have a reduced ability to photosynthesize. This reduces the overall vigor of the plant. Infection of flowers and fruit can significantly reduce yield. An early symptom is white patches of mycelium on the undersides of leaves. As the amount of Powdery Mildew increases, the leaf edges roll upward. Purplish blotches also may occur on the affected leaves. Young fruit may be infected during bloom and become covered with Powdery Mildew mycelia. Severely infected new fruit may die and dry up. Older fruit develop dark, watery areas on the fruit with sunken

lesions. The Powdery Mildew mycelia eventually become apparent on the injured fruit. Strawberries grown in high tunnels and greenhouses are especially vulnerable. Cultivar susceptibility, low light intensity or short days, high humidity, and low temperatures are factors in disease development. There are many cultivars with decent resistance to Powdery Mildew. Commercial growers may use Abound, or Quadris Top, or Pristine, or Switch 62.5 WG, or Inspire Super, or Fontelis, or Cabrio EG, or Flint. Homeowners must rely on resistant cultivars and good sanitation.

## Strawberry Powdery Mildew (note the pitted fruit)-*Sphaerotheca macularis* f. sp. *fragariae*

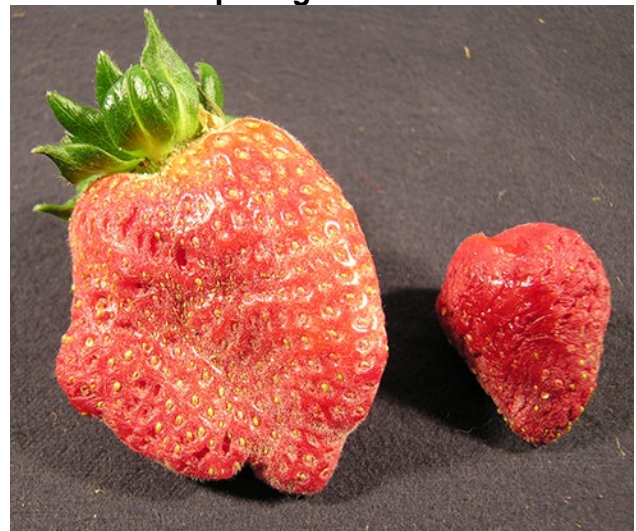


Photo by Sherrie Smith, University of Arkansas  
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**Strawberry Powdery Mildew-**  
*Sphaerotheca macularis* f. sp. *fragariae*



Photo by Elizabeth Bush, Virginia Polytechnic Institute and State University, Bugwood.org

**Strawberry Powdery Mildew-**  
*Sphaerotheca macularis* f. sp. *fragariae*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

**Strawberry Powdery Mildew**  
**conidia-***Sphaerotheca macularis* f. sp. *fragariae*

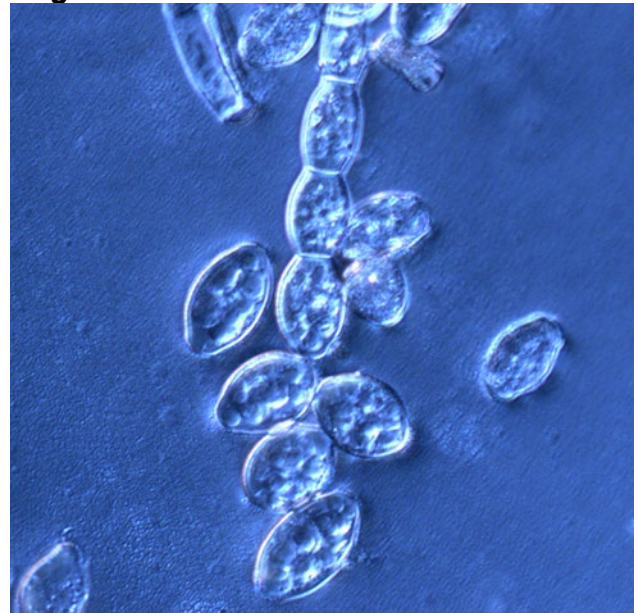


Photo by Sherrie Smith, University of Arkansas Cooperative Extension



## Peony

Peonies that receive glyphosate injury (Roundup) have chlorotic, distorted foliage. Peonies that got a lighter dose of the herbicide may have unusual purplish coloring and witch's broom. Since this herbicide is systemic, symptoms may be evident for more than one or two seasons if the plant is not killed outright.

### Peony Glyphosate (Roundup) Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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