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Rust on Aster

Rust appears on Aster as orange or brown pustules on the underside of leaves and as chlorotic spots on the topside of the leaves.



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Aster (*Aster* species) is a common fall crop for growers and is used by consumers as an outdoor garden ornamental and herbaceous perennial (Figure 1). Aster can also be grown for use as a potted flowering ornamental or for cut flower production. The cultural requirements of Aster are similar to those of mums.

One major foliar disease of Aster is rust, which is a generic name for a group of fungal pathogens (including *Coleosporium campanulae* and several *Puccinia* species). Rust appears as orange or brown bumps (or pustules) on the underside of leaves and potentially as chlorotic spots on the topside of the leaves (Figure 2). When the infection is sufficiently severe the leaves themselves may turn



Figure 1. A perennial Aster at the Michigan State University horticulture gardens.

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Figure 2. An Aster with rust disease exhibiting orange pustules on the underside of leaves and chlorotic spots on the topside of leaves. Photo courtesy of Jackie Smith, Michigan State University.

chlorotic and then necrotic. Since rust requires live plant material to complete its own lifecycle, it may not kill the plant, but can reduce plant growth to the point of losing all ornamental value.

One reason rusts show up during production is that imported propagation mate-

rial may be infected, but not exhibiting symptoms of the pathogen. To prevent that as a source of infection in your production area, scout all incoming plants for rust and keep newly purchased plant material separate from the rest of the crop for several weeks to see if rust develops. In addition, only purchase

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high quality, disease-free propagative material from a reputable company that practices good sanitation to ensure the best results.

Remember to scout regularly for this disease by looking at the underside of leaves frequently. If rust-infected leaves are found, remove the leaves, or if the plant is severely infected, destroy the entire plant. For covered production, keeping the humidity low, having adequate air movement (fans), and proper plant spacing (for good air circulation) should help prevent the development of rust. Of course as with all fungal pathogens, try to avoid splashing water onto foliage, especially late in the day when plants may not dry

as quickly.

Fungicide application may also sometimes be necessary for rust control. For a full list of products that are labeled for such use, visit www.flor.hrt.msu.edu/DWC/ on your computer or smart-phone and click the 'Filter' button and then click the plus sign next to 'Treats' and scroll down to select 'Rust'. Then scroll down further and select 'Done'. The displayed filtered list includes all products that are labeled for rust control. Some products that have been particularly successful during Michigan State University's trials are products that contain trifluzole, propiconazole, or tebuconazole.

*For further reading*Aster Production

Guide to Successful Outdoor Garden Aster Production produced by the North Carolina Cooperative Extension Service (<http://www.ces.ncsu.edu/depts/hort/floriculture/hils/HIL505.pdf>)

Aster Rust

Gleason et al. 2009. Diseases of Herbaceous Perennials. Aster, pp 54-56.

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