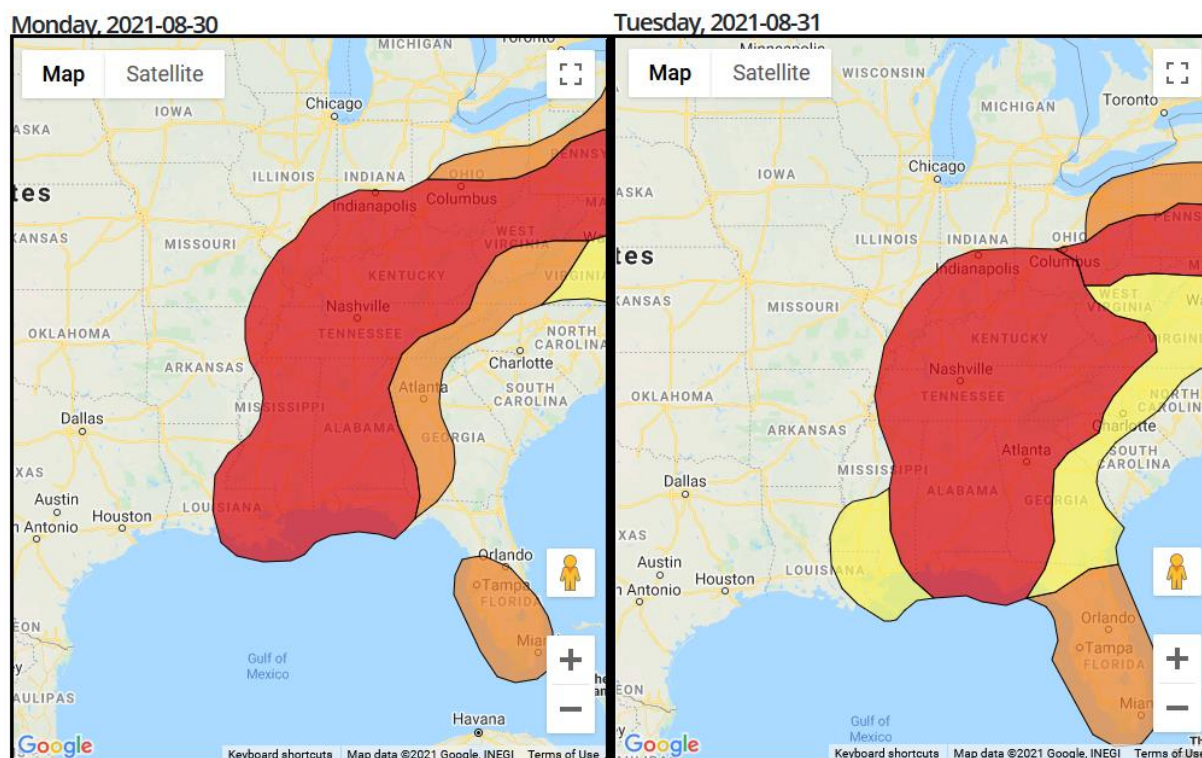


Downy Mildew Potential for Arkansas

With hurricane winds blowing through the eastern portion of the state, Arkansas growers need to be scouting often to lower the risk of excessive losses from cucurbit downy mildew.

Current cucurbit downy mildew forecasts for 8/30 and 8/31 (<https://cdm.ipmpipe.org/forecasting/>) include the eastern tip of Arkansas (Picture 1). Due to the aggressive nature of this disease and its propensity to move through weather systems, pumpkin growers need to scout now and consider making targeted fungicide applications. This is even more important considering the windy and humid conditions we have had recently. See below for more information about this disease and recommendations for forecasting, scouting, and management.



Picture 1. Cucurbit Downy Mildew forecast for 8/30 and 8/31 showing a high risk (red) for portions of eastern Arkansas.

Cucurbit Downy Mildew

Downy mildew is one of the most devastating diseases of cucurbits. In Arkansas downy mildew of cucurbits is only occasionally observed because the fungus that confers this disease, *Pseudoperonospora cubensis*, can only survive in living cucurbit plants. These plants do not survive the winter in Arkansas and therefore this disease does not overwinter in the state. However, this disease does overwinter in states further South and it can work its way across the Southeast in the summer as spores are moved in the wind. This makes scouting very important for disease management, especially considering the limited number of products that provide good suppression.

Identification and Monitoring

Cucurbit downy mildew presents as angular, faint yellow-light green spots early, which turn in to necrotic yellow-brown lesions on the tops of leaves (Picture 2). It can be further identified by gray/purplish spores on the underside of leaves (Picture 3). Growers should keep an eye out for these symptoms and check the forecasting tool that has been created to determine areas at the highest risk of infection. This tool works via reports from extension specialists of confirmed cases of downy mildew, which are then combined with weather data to determine the risk of surrounding areas. Please consult the CDM IPM Pipe Website for downy mildew forecasting to get out ahead of any potential issues. Provided above is the current forecast for downy mildew (Picture 2) from <https://cdm.ipmpipe.org/forecasting/>. Expect the forecast map to include larger portions of Arkansas if cases develop from the current weather systems.



Picture 2. Downy mildew symptomology observed in Clay county in 2020. Leaves toward the bottom of the picture show signs of early symptomology with yellow angular lesions. Many leaves of this picture show advanced symptomology with leaves rolling inward. Photo by Allison Howell, Clay County UAEX.



Picture 3. Angular lesions exhibiting grey/purple spore growth on the underside of the leaf. This is a key characteristic of potential cucurbit downy mildew. Photo by Allison Howell, Clay County UAEX.

Management

Growers should scout at least once a week for diseases in pumpkins. These scouting efforts should be intensified when forecasts indicate a risk for our area, or when we have confirmed cases in the state. Fungicide products that provide good control of downy mildew are **Ranman** (cyazofamid, FRAC 21), **Orondis Ultra** (oxathiapoprolin FRAC 49 + mandipropamid FRAC 40), and **Orondis Opti** (oxathiapoprolin FRAC 49 + chlorothalonil FRAC M05). See the 2021 Southeastern US Vegetable Crop Handbook <https://content.ces.ncsu.edu/southeastern-us-vegetable-crop-handbook> for further fungicide recommendations and products that provide fair control/prevention. None of these products will provide good control as a salvage application, making it necessary to scout often and watch the IPM Pipe forecasting.

Give me a call ASAP if you think you may be dealing with this disease, and please feel free to text pictures.

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