The risk of developing powdery mildew is increasing. Florida growers are seeing powdery mildew now. Below are some suggestions for identifying and dealing with powdery mildew on watermelons.

Powdery mildew has become more of a problem on Georgia watermelons lately as it has shown up late in the season both in 1999 and 2000. Usually this disease attacks watermelon foliage on plants that have a heavy fruit load. Powdery mildew on watermelon is generally much more difficult to recognize than that observed on other crops as the white, powdery sporulation is not as pronounced on watermelon leaves. Look for the oldest leaves to become conspicuously chlorotic then later becoming necrotic. These chlorotic/necrotic areas will sometimes show up as small patches or spots in the field. Close inspection of the undersides of leaves may reveal the powdery growth of the fungus visible to the unaided eye. If the growth is not visible,
Figures 2 and 3 showing chlorosis and powdery growth, respectively.

Control of powdery mildew in watermelons relies on the timely application of fungicides such as Quadris, Flint and Nova. Of these, Nova has been shown to be the most effective on powdery mildew in Georgia. However, Nova should be tank-mixed with either chlorothalonil or mancozeb products to broaden the control spectrum as Nova will suppress powdery mildew only.

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**Salt Injury Becoming Common**

Terry Kelley

Extension Vegetable Specialist - UGA

Salt injury has been showing up in several fields this spring. So far the problem has appeared mainly on cantaloupe and squash. Cucurbits are the most susceptible and the condition has been identified on pumpkins in the last year as well. To date, no major problems have been reported for cucumbers and watermelon. Isolated appearances of the injury in Georgia were identified in 2000 on cantaloupes and pumpkins. However, several cases have been reported this season.

Salt injury is usually characterized by an initial “rim firing” appearing as a yellow band around the outer edge of the leaf. This can then spread to yellow splotches on the leaf as it worsens (Figures 4 - 7). The condition normally appears on older leaves only. New growth will not show the symptoms until it becomes mature. The affected areas of the leaf will be yellow and have a sandpapery feel to them. The condition does not always cause economic damage. However, if it begins early enough in the life of the plant, it can cause severe yield losses.

To date, all cases identified in Georgia have been on cucurbits grown on plastic. Except for pumpkins, the injury has not appeared in any bareground culture. The cause of the problem is still somewhat of a mystery. Numerous soil and tissue analyses done on affected areas have not revealed any apparent abnormalities. Tissue analysis on affected tissue will result in normal readings for most values with the exception of nitrogen which will be low in affected leaves. Soil analysis in every case has returned normal results.

It is thought that the condition is the result of an accumulation of something in the soil that normally leaches out. As of yet, there has been nothing identified that has accumulated in excessive amounts. Due to the extended drought, the use of plastic mulch to cover fields and use of low volume irrigation, there is much less leaching in some fields than would normally occur.

Efforts are currently underway to identify the culprit that is causing this condition. So far there has been no common ground identified except for plastic mulch. Symptoms have occurred under various fertilizer regimes and across varieties. Further details will be made known as information is collected.

Figures 4 - 7 demonstrating yellowing associated with salt injury.
In last month’s newsletter, I hypothesized that “with the plants being in the field, a wider range of diseases might be seen.” The host and pathogens were in place, but the third component of the disease triangle - the environment - was not ideal for plant disease. Many of the samples received were diagnosed as being a result of chemical, environmental, or nutritional disorders. Most of the diseases seen in the clinic were soil-borne; the one area that would have moisture delivered through irrigation. The lack of foliar diseases was likely related to the lack of long periods of leaf wetness. With a recent rain event, and possibly more on the way, stressed plants might be predisposed to disease.

The following is a summary of the commercial vegetable samples received during the past month.

**Cabbage:** Oedema

**Cantaloupe:** Gummy Stem Blight
Cold Injury
Inadequate Sample
Chemical Phytotoxicity

**Collard:** Downy Mildew
Oedema

**Onion:** Purple Blotch (2)
Stemphylium Leaf Blight
Chemical Phytotoxicity

**Peas:** Fusarium Root Rot

**Pepper:** Pythium Root Rot
TSWV
No Disease
Insect or Physical Injury
Nutrient Deficiency
Blossom-End Rot
Chemical phytotoxicity

**Pole Bean:** Fusarium Yellows

**Snap Bean:** Alternaria Leaf Spot
Rhizoctonia Root Rot
Nutrient Deficiency
Thrips Injury
Unknown

**Squash:** Phytophthora capsici (2)
Pythium Root Rot
Alternaria Leaf Blight
Excessive Nitrogen

**Sweet Corn:** Common Rust

**Tomato:** No Disease

**Watermelon:** Gummy Stem Blight
Pythium Root Rot (3)
Fusarium Wilt (4)
Rhizoctonia Root and Stem Rot
Alternaria Leaf Blight
Physical Injury
No Disease (4)
Unknown
Fertilizer Burn (3)
Chemical Phytotoxicity (2)
Poor Pollination
Ozone Injury

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**Everything But Onions Field Day**

**Spring/Summer Fruits & Vegetables**

George Boyhan
Extension Vegetable Specialist - UGA

**Location**
Vidalia Onion and Vegetable Research Center
8163 Hwy 178
Lyons, GA 30436

**Date**
June 14, 2001

**Time**
6:00 pm – 8:00 pm

**Contacts**
George Boyhan (912) 681-5639
(912) 682-3481 Mobile
**Agenda**

Welcome and Convocation  
Sponsored Supper  
Visit Field Plots

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**Directions to VOVRC**

From Reidsville, GA take Hwy 147 south past the Georgia State Prison (on the right) and Rogers State Prison (on the left) and just after you cross the Toombs County line look for the brown and black sign for the Vidalia Onion and Vegetable Research Center on the right. Pull in that driveway and through the gate to the office.

From Lyons, GA take Hwy 178 southeast past Stanleys Store and look for the Vidalia Onion and Vegetable Research Center sign on your left. If you cross into Tattnall County you have gone too far. Pull in that driveway and through the gate to the office.