SOUTHWEST FLORIDA
VEGETABLE PEST AND DISEASE
HOTLINE

April 1, 1999

Drought conditions continue to affect southwest Florida. The FAWN weather station at Immokalee recorded no precipitation over the past two weeks. Forecasts are calling March, the driest March in over a quarter century. Much of the area has seen less than an inch of rain since January, while the rest of the region has seen little more. Abnormally dry weather has kept many foliar diseases at relatively low levels. The extremely dry conditions that have prevailed since January have resulted in a significant drop in water tables and some growers are reporting difficulty in maintaining adequate soil moisture with resulting plant stress, lowered yields and fruit quality. Daytime temperatures have started to moderate and have been reaching the low to mid 80’s most days. Night temperatures have remained unseasonably cool with the mercury dipping to the upper 40’s to mid 50’s at night.

Quadris 2.08 FL fungicide has received approval for use on cucurbits in Florida after having been approved by the EPA earlier. This is good news, as it will allow growers to rotate chemistries for resistance management. In addition, this is a good material to use after fruit set, permitting growers to avoid chlorothalonil-containing materials that can burn fruit. The range of rates on the label for Quadris on cucurbits is 11.0 to 15.4 fl oz/acre. Restrictions include: 1) no more than two applications of Quadris before alternating with a fungicide that has a different mode of action (Note: at this time, no other labeled fungicide on cucurbits has the same mode of action); 2) do not mix with crop oil concentrates, MSO, silicon adjuvants, malathion, Kelthane, Thiodan, Phaser, Lannate, Lorsban, M-Pede, or Botran (Note: Botran is not labeled on cucurbits, anyway); 3) no more than six applications of Quadris per crop per acre per year; 4) application is limited to not more than 2.88 quarts of product per crop per acre per season (limit is 1.5 lbs. Ai/A. The pre-harvest interval is up to one day before harvest. The reentry interval for workers is four hours.

The cucurbit diseases listed on the label are anthracnose, belly rot (Rhizoctonia solani), downy mildew, gummy stem blight, leaf spots (Alternaria spp. and Cercospora spp. and powdery mildew (both species listed on label). Data in Florida supports the efficacy of Quadris for gummy stem blight, downy mildew, and powdery mildew of cucurbits (Hopkins, Kucharek, and Roberts). Data from Pam Roberts indicates some control of Phytophthora. Note: Phytophthora is difficult to control with any fungicide and none is likely to provide much, if any control of infections by Phytophthora capsici that occur below the soil line.

An increase in powdery mildew has been noted in a number of crops including watermelons, squash and cucumber. Isolated cases of powdery mildew have also been reported on tomato.
**Gummy stem blight** is being seen widely on watermelon throughout the area. Incidence is mostly low to moderate. Some young plantings have been severely affected with 15 – 20% stand loss being observed. In such instances, infections may originate from the plant house.

**Downy mildew** is widely present at low levels on cucurbits with little increase in activity being noted. Some older squash fields are showing moderate incidence of infection. **Alternaria leaf spot** is also being seen widely on watermelon.

**Fusarium wilt** is being reported widely on watermelon. In most instances, only scattered plants are being affected in any particular field, although there have been some isolated cases where losses have been moderate to high. Characteristic symptoms include wilt of one or more runners that leads to plant collapse and vascular discoloration observed when stem or roots are cut in longitudinal or cross sections. The incidence of **fusarium crown rot** in tomato has also shown some increase over the past few weeks.

**Rhizoctonia** and **fusarium** have been diagnosed in snap beans, where stand establishment has been adversely affected with low to moderate loss of emerging plants being observed.

**Pinworms** are being seen in a number of locations and appear to be increasing in occurrence. For the most part, trap counts are low and populations are being controlled with pheromones. There have been a few isolated reports of **pinworms** getting on plants and causing some damage.

**Beet and southern army worms** appear to be on the increase and have caused some economic damage in a few fields. **Tomato fruit worms** are also starting to appear in some locations.

**TYLCV** remains widely present at low levels on tomato. Respondents are reporting some stabilization of the situation with little increase over the 2 - 5% infection rate reported in the last hotline. A few fields have reached higher infection levels. Of concern are low tomato prices, which has caused some growers to consider cutting back on pest control programs and/or abandonment of tomato fields.

**Pepper weevil** populations appear to moderating from most reports. Low trap counts are being reported and most respondents have reported finding few weevils in peppers.

**Melon worms/pickle worms** are also being reported from several locations on cucurbits. Counts are low and damage minimal in most instances, although a few growers report having to resort to harsh chemicals such as Lannate to get outbreaks under control.

**Spider mites** are reported to be increasing on cucurbits. In some areas, populations are reported to be building up on nightshade along ditch banks and field margins.

**Broad mites** are being seen on pepper in only a few locations and numbers are reportedly down.

High **whitefly** counts are being reported from a number of locations on cucurbits and tomatoes, while in other locations respondents are noting very low **whitefly** populations especially in tomato. The situation is rather mixed up but is of major concern due to the presence of **TYLCV** throughout the area.

Most respondents indicate that **leaf miner** counts are down and **leaf miners** are currently under control, although there have been some reports of problems on late spring plantings of tomato and melons.

Persistent but sporadic, low levels of **aphids** have been observed in many areas on brassicas, cucurbits, pepper, potato and tomato. Winged aphid numbers are low.
Flower thrips (*F. bispinosa*) are widely present in most fields and appear to be increasing somewhat in tomato, pepper and watermelon. Counts of 5 per bloom in tomato have been reported. Melon thrips (*Thrips palmi*) are causing low to moderately low damage in some fields. Melon thrips do not normally become a problem unless broad insecticides are being applied. AgriMek, Provado and Spintor have been used successfully. In severe cases, tank mixes of Lannate or Vydate and Guthion may be needed. This scenario should be avoided, as once such a program is initiated it must be kept up through the rest of the season.

Very little foliar disease is being reported on pepper and tomato. Some growers are reporting isolated low levels of target spot/gray mold on the inside of tomatoes where vines are thick and fungicide penetration is restricted. Scattered light occurrence of early blight has also been reported.

An Aquatic Weed Control, Aquatic Plant Culture and Revegetation Short Course will be held at the Fort Lauderdale Research and Education Center from May 17–20, 1999. Up to 24 CEU’s may be earned. Contact Dr. Vernon Vandiver at 954-475-8990 or vvv@ufl.edu for further information.

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