

Thinking about Fungicide Choices

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Biweekly fungicide applications have been the standard practice for peanut leaf spot control since chlorothalonil was introduced in the 1960's. Many new chemistries and products have been launched since then, but with few exceptions biweekly sprays have remained the standard. Now, growers understandably are interested in Miravis and any other product that could safely afford longer intervals between fungicide applications. Along with this interest, they have questions about how these products and intervals might fit in their overall disease management programs.

Like many of the recently labeled products, Miravis is a group 7 (SDHI) fungicide. Group 7 fungicides are highly effective against spore germination, but are not very effective at stopping active infections. For this reason, they are best used to protect the plant before infection. When used preventively, Miravis is active against leaf spot fungi for 21 to 28 days.

Miravis must be mixed or alternated with another product to provide a complete disease management program because it is not effective against stem rot. Ideally, growers would like to tank mix Miravis with a fungicide that also provides 21 to 28 days of protection against stem rot. Many fungicides that control stem rot are typically applied at biweekly intervals, which complicates the selection of a mixing or rotation partner. For example, tebuconazole ("Folicur") has been an inexpensive mainstay for stem rot control in our area, but only 14 days of protection is assumed. Convoy (flutalonil) can be applied at 28-day intervals when used against stem rot at high rates (up to 32 oz/A). It is possible that a low rate of Omega (16 oz/A) or a high rate of Elatus (8 – 9.5 oz/A) could be effective for 21 to 28 days. Depending on the rate applied, there may be other labeled fungicides that could provide more than 14 days of stem rot control, but additional investigation of all these possibilities is needed.

In 2018, Miravis applied in 28-day programs generally provided disease control and yields that equaled biweekly programs with other products (Table 1). Miravis applied in a tank mix with either Elatus (treatment 3) or tebuconazole (treatments 4) at approximately 60 and 90 days after planting (DAP; July 18 and August 15) controlled leaf spot and stem rot and resulted in high yields. Results with Miravis + tebuconazole tank mixes applied at 75 and 105 DAP (treatments 5 and 6) were a bit more erratic. Similar results were seen in 2017. In that trial, Miravis was applied at 21 day intervals and was more effective when the first application was made at 60 DAP compared to 85 DAP (data not shown).

Results reinforce the idea that Miravis, like other group 7 fungicides, is best applied preventively. However, if it is used too early in the season, rapid plant growth could

produce many new leaves that would not be protected. Growers should stick with traditional products such as Bravo + Alto for the first spray, which usually is applied around 45 DAP. Growers interested in using Miravis should consider making an application at about 60 DAP as opposed to earlier or later in the season.

Since Miravis is a group 7 fungicide with a single a.i., alternating with a product from another fungicide group is strongly recommended for resistance management. Good rotations include group 3 fungicides (Provost, tebuconazole), chlorothalonil, or tank mixes from these groups. Consecutive applications of Miravis or Miravis followed by another group 7 fungicide should be avoided.

The idea of using Miravis late in the season so that a spray can be skipped during the busiest time of the year is attractive, but risky. Miravis will not clean up any established infections, potentially leading to disappointing results. More important, late-season applications of any selective fungicide puts a lot of selection pressure on leaf spot populations, which could lead to resistance down the road. Given the threats peanut fungicides face from resistance issues and trade uncertainties, it is very important to protect the efficacy of the products that remain.

With some recent troubling exceptions, North Carolina's peanut growers have attained excellent disease control with many different fungicide programs. Weigh cost, field history, past results, cultivars grown, and convenience to choose the products and programs that make sense for disease control in your situation.