

## **Suppression of Sclerotinia Blight with Co-Application of Pydiflumetofen, Azoxystrobin, and Benzovindiflupyr in North Carolina**

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Sclerotinia blight of peanut, caused by the soil-borne fungal pathogen *Sclerotinia minor*, is a significant disease of peanut in North Carolina. The pathogen, *S. minor* can persist for long periods of time in the soil and spread rapidly upon infection. Consequently, the sporadic occurrence of Sclerotinia blight can make this disease difficult to manage and cause substantial yield loss. In 2023, high levels of Sclerotinia blight occurred within research trials at the Peanut Belt Research Station (Lewiston-Woodville, NC) and were reported in other peanut production areas across North Carolina. Severity of the disease in 2023 could have been due to several factors including favorable environmental conditions as well as traditional leaf spot spray programs using the broad-spectrum fungicide product, chlorothalonil. Objectives of field experiments at the Peanut Belt Research Station consisted of evaluating the efficacy of the fungicide tank mixture, pydiflumetofen (Miravis®), azoxystrobin, and benzovindiflupyr (Elatus®), at different timings within peanut fungicide programs. All three fungicide program experiments were conducted in a randomized complete block design containing four replications on one Virginia-type peanut variety, Bailey II. Data collected consisted of Sclerotinia blight hits (hits per 60 feet), leaf spot (*Nothopassalora personata*) incidence (0-100%), leaf spot defoliation (0-100%), and peanut yield (kg/ha).

Leaf spot control was similar for all timings of Miravis® plus Elatus® while Sclerotinia blight control was slightly higher when applications were made closer to harvest when the pathogen was most active under cooler and moist soil conditions. In these experiments, a single application of Miravis® plus Elatus® decreased Sclerotinia Blight by 20% compared with non-treated peanut while two sequential applications spaced 3 weeks apart decreased Sclerotinia blight by 75%. In this experiment, two treatments without Miravis® plus Elatus® included 3 to 5 sprays of chlorothalonil alone or with tebuconazole. Applying three or more sprays of chlorothalonil increased Sclerotinia Blight by 22% compared with non-treated peanut. Peanut yield often reflected differences observed for Sclerotinia blight control. Results from these experiments indicate that Miravis® plus Elatus® is effective in controlling leaf spot and Sclerotinia blight in North Carolina. Although well known, these results remind researchers and practitioners that multiple applications of chlorothalonil can increase incidence of Sclerotinia blight.