

Determining the Most Effective Time Interval for Fungicide Sprays Following Miravis plus Elatus or Convoy

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Protection of peanut from leaf spot disease by Miravis (pydiflumetafen) is longer than the traditional 2-week interval recommended for most fungicides with control lasting up to 4 weeks. However, peanut growers and their advisors are concerned about the risk associated with relying on 4 weeks of control from Miravis. Research was conducted from 2019-2021 in North Carolina (10 site-years) with the varieties Bailey or Baily II when Miravis plus either Elatus or Convoy were applied as the second spray in a comprehensive program following chlorothalonil. These fungicide program (sprays 1 and 2) were followed by no additional fungicide for the remainder of the season or with a spray of chlorothalonil plus either Abound or generic tebuconazole at 3, 4, or 5 weeks after Miravis plus Elatus or Convoy. Additional fungicide sprays were included on a bi-weekly schedule until the end of the season. A non-treated control was included. In 2021, the same treatments were applied to the cultivars Bailey II, Emery, and Sullivan at 3 locations. Leaf spot incidence (percent of leaves with lesions), canopy defoliation caused by leaf spot disease, and peanut pod yield were recorded near harvest.

When pooled over 10 site-years, applying Miravis plus either Elatus or Convoy resulted in less canopy defoliation and similar peanut yields when follow up sprays were initiated three, 4, and 5 weeks after Miravis plus Elatus or Convoy was applied. Canopy defoliation lower and pod peanut yield greater when follow up sprayers were included compared with non-treated peanut and when follow up sprays were not included. Applying Miravis plus Elatus or Convoy without follow up sprays had less disease and greater yields than non-treated peanut. In 2021, leaf spot incidence, canopy defoliation caused by leaf spot disease, and pod yield were similar for non-treated peanut and Miravis plus Elatus without follow up treatments. While leaf spot incidence and canopy defoliation were similar when follow up sprays were initiated 3, 4, or 5 weeks after Miravis plus Elatus, peanut yield for Baily II and Emery decreased when follow sprays were initiated 4 weeks after Miravis plus Elatus compared with initiation of sprays at 3 weeks. A further decrease in yield was noted when sprays were delayed until 5 weeks. No difference in yield for the variety Sullivan was noted when follow up sprays were initiated 3 or 4 weeks after Miravis plus Elatus: yield was lower when sprays were initiated 5 weeks later. These data suggest that the interval between a Miravis plus Elatus spray may need to be 3 weeks rather than 4 weeks, especially given the significant yield loss observed in 2022 when delayed until 5 weeks after Miravis plus Elatus compared with 3 weeks.