Pest and Management Considerations for Peanut Production in West Texas.

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Peanut production in Texas is unique as all four peanut market-types can be grown throughout the states four major growing regions. Over the past 12 years, peanut acreage has decreased and the composition of market-types has shifted and increased proportion of acres being planted to Spanish and Virginia cultivars, rather than Runners. Currently, production is concentrated in the Southern High Plains, where peanut is often rotated with cotton to help alleviate pest issues such as root-knot nematodes (*Meloidogyne incognita*). While peanut is a good rotational crop for cotton, several diseases can limit production and must be considered prior to planting. Foliar diseases such as early and late leaf spot, as well as web blotch and pepper spot or leaf scorch have been reported in the region. Recent drought conditions have led to a decrease in the incidence of foliar diseases, whereas, soilborne diseases such as Pythium and Rhizoctonia pod rot, and Verticillium wilt have increased. Losses from pod rot are greatest when kernels become infected, resulting in severe reductions for the value of the crop. Pythium and Rhizoctonia pod rot are of great concern, as management options are limited and disease development within a field can be sporadic. Furthermore, information regarding Verticillium wilt in peanut is limited. As a result, research efforts have focused on characterizing the response of different market-types and cultivars to the aforementioned diseases. Overall, Virginia and Runner cultivars appear to be inherently more susceptible to pod rot than Spanish cultivars. Recent studies have found differences exist among cultivars in the reaction to pod rot; however, the mechanism of resistance is not understood. In contrast, Runner and Virginia cultivars appear to be less susceptible to Verticillium wilt. Other issues, such as irrigation capacity and water quality are impacting peanut production in the region. Additional research is needed investigating newly released cultivars and advanced breeding lines, in order to maintain profitable peanut production in west Texas.