P-114

Efficacy of fungicides for target spot control in soybean in Argentina

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Target spot of soybean, caused by *Corynespora cassiicola*, is an endemic disease in northwestern Argentina, but only in recent years it has become a concern for growers. At present, it is considered one of the main components of the 'late-season disease complex'. Genetic resistance is recommended to manage target spot. Since most commercial cultivars available in the region at present are susceptible to target spot, application of foliar fungicides is considered the most effective way for its management. The objective of this work was to assess the efficacy of active ingredients and the timing and number of fungicide applications for target spot control. Field trials were conducted during the 2014-2015 and 2015-2016 seasons at two locations in Tucuman province. A total of eight treatments were evaluated in each season, which included an untreated control and various active ingredients from different chemical groups (strobilurins, triazoles, and carboxamides), alone or in combinations, applied at different growth stages (R3, R5, or R3+R5). Target spot severity (percentage affected leaf area) at R6 and yield (kg/ha) were evaluated. In both seasons, the fungicide which included pyraclostrobin + epoxiconazole + fluxapyroxad applied at R3, R5, or R3 + R5 showed significantly lower severity values (7.5 to 13.8%) than the control (20.0% in 2014-2015 and 25.0% in 2015-2016). In 2014-2015, only pyraclostrobin + epoxiconazole + fluxapyroxad and azoxystrobin + benzovindiflupyr, applied at R5, had significantly higher yields than the control (3,564.2 kg/ha), with values of 4,069.4 and 4,077.8 kg/ha, respectively. In the 2015-2016 season, all treatments differed statistically from the control (3,310.4 kg/ha); but the treatments pyraclostrobin + epoxiconazole + fluxapyroxad applied at R3 + R5 (3,741.7 kg/ha) and at R5 (3,735.4 kg/ha) exhibited the highest yield values.