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Effect of foliate synthetic fungicides in the crop protection and in the sanitary and industrial quality of the soybean seed with delayed harvest

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The loss of germination power (PG) and energy in the seed is mainly attributed to the presence of pathogens such as *Phomopsis* and *Fusarium*. The incidence of fungi in seed is increased when greater is the time that plants keep mature (R8) on the field without being harvested. The target of the investigation consisted of analyzing the effect of the different chemical handling strategies on the crop protection, the yield and the sanitary and industrial quality of the soybean seed upon a delay in the harvest. For this it was placed a trial on the field, in which three fungicides were applied (triazole, bencimidazole and mixture of strobilurin and triazole) in two moments (R3 and R5) and they were compared to another without application. All the plots were harvested in two moments: physiological maturity (R8) and physiological maturity above 20 days. During the crop cycle it was evaluated the incidence of “brown spot” (*Septoria glycines*) and the days that it took for the crop to get to physiological maturity; and in each harvest, yield, weight of a thousand grain, percentage of fungi colonization in seed, germination power and content of oil and protein. All the fungicides treatments reduced incidence of “brown spot”, but the mixture was different from the other treatments increasing the days to R8. In the crop harvested in due time, all the applications of foliate fungicides caused reduction in the levels of fungi infection of the seeds with reference to the one that was not applied. However, in the delayed harvest the mixture applied at any time kept the lower levels. In yield, weight of a thousand grains and germination power it was also the only fungicide that applied at any time caused significant increments more than the one that was not applied in both harvests.