Survival of *Rhizoctonia bataticola* in groundnut seed under different storage conditions

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*Rhizoctonia bataticola* (sclerotal stage of *Macrophomina phaseolina*), which causes charcoal rot disease of groundnut, is an important pathogen of this crop. Under warm and wet conditions in the field, the pathogen enters the seed and remains inside without any visible symptoms. Groundnut germplasm stored for various durations in the medium term storage (4 C) commonly shows 10-29% infection of this pathogen. To determine the longevity and survival of this pathogen in groundnut seed, a study began on 15 May 1995 with healthy and *R. bataticola* infected groundnut seed stored at 20, 4 and -18 C. Initial levels of infection and moisture were determined in both the seed lots. Independent samples from the two bulks were drawn every year for determining seed germination and the level of pathogen infection. Agar plate method was used for pathogen detection and paper towel method for seed germination. After five years of storage, the germination of healthy seed was not affected at any of the temperatures. However, a drastic reduction in the germination of infected seed occurred at all temperatures even within three years of storage. This reduction in germination was associated with a significant increase in the incidence of *R. bataticola* in infected seed stored at all temperatures after 5 years of storage. In the case of healthy seed, there was a little increase in the incidence of infection at 20 and 4 C, but no increase occurred at -18 C. The results show that *R. bataticola* can survive and its incidence can substantially increase in infected groundnut seed even at -18 C, a temperature recommended for long term storage. The implication of these results is that for maintaining a high level of germination in groundnut seed, only disease-free, or seed with very low infection should be used for long term storage.