



What happens to the DNA of *Rhizoctonia solani* and *Pratylenchus neglectus* in soil under different storage conditions over time?

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Rhizoctonia solani AG8 and root lesion nematode (*Pratylenchus neglectus*) are two of the most yield-depleting soilborne pathogens/pests on broadacre crops in Western Australia. PreDicta B, a qPCR based test, can be used to assess amounts of *R. solani* and *P. neglectus* in the soil to guide best management strategies. Soils samples are often stored refrigerated or at ambient temperature prior to sending for DNA testing. This study investigated effects of storage time and temperature on the integrity of *R. solani* and *P. neglectus* DNA in dried or paddock moisture soils. Soil was collected from a cereal paddock known to be naturally infested with *R. solani* and *P. neglectus*. Dried and moist soil samples were stored at either ambient (av. 20°C) or refrigerated (4°C) conditions for 0, 7, 14, 28 or 119 d prior to testing for DNA levels. For *R. solani*, there were no significant treatment differences between times 0, 7 and 14 d. At 28 and 119 days, however, there were significant reductions in the pathogen DNA levels at both storage temperatures and soil moistures. For *P. neglectus*, DNA levels declined for both dry and moist samples stored at ambient conditions, while for samples stored at 4°C, DNA levels did not decline with time. Soil samples, regardless of storage temperature, need to be sent within 14 days of sampling for the most accurate measurement of *R. solani* levels, while for *P. neglectus*, DNA integrity is maintained when soil is stored at 4°C for long periods (at least 119 d).

