References

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Effect of *Ascochyta rabiei* Inoculum Age on Disease Development

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For successful screening of chickpea for ascochyta blight [*Ascochyta rabiei* (Pass.) Lab.] resistance, the use of viable inoculum plays an important role in disease development under artificial conditions.

To study the effect of age of the inoculum on disease development, the 'Delhi' isolate of *Ascochyta rabiei* was used. The fungus was multiplied on autoclaved kabuli chickpea seeds in a 250 mL conical flask (20 g kabuli chickpea seeds soaked in water for 15 h and autoclaved) and incubated at 20°C for 10, 15, 20, 30, 40, 50 and 60 days. The susceptible chickpea line Pb 7 was sown in plastic trays (40 × 34 × 8 cm) in three replications (30 seeds per replication) for each treatment. Chickpea seedlings were raised in a greenhouse for 7 days and moved to a plant growth room on the day of inoculation.

Chickpea seeds with pycnidia were kept in water for about 30 min and stirred with a clean glass rod, and the spore suspension was then passed through a double-folded muslin cloth. The concentration of spores was adjusted to 200×10^4 mL^{-1} for all the treatments. Seven-day old seedlings were inoculated with the inoculum of different ages separately, using a hand sprayer.

The plastic trays with seedlings were placed on shelves fitted with four cool fluorescent lamps. Temperature around 20°C and relative humidity above 90% were maintained throughout the experiment.

The data on the disease intensity in the chickpea seedlings are given in Table 1. The disease incidence was rated on a 1–9 point scale (where 1 = healthy plants and 9 = completely dead plants) 10 days after inoculation. High disease intensity was observed on the seedlings inoculated with 10- and 15-day old inoculum. Disease severity decreased with an increase in the inoculum age. The disease intensity was only 3.3 when 60-day old inoculum was used.

Table 1. Effect of age of inoculum of *Ascochyta rabiei* on disease incidence under controlled conditions.

Inoculum age (days)	Disease rating on 1–9 scale[1]
10	8.0
15	8.0
20	7.6
30	6.6
40	5.0
50	4.0
60	3.3
SE	±0.26
CV (%)	7.5

1. Scored on a 1-9 scale, where 1 = healthy, and 9 = dead.

Host Range Studies with the Ascochyta Blight Pathogen of Chickpea

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The host range of *Ascochyta rabiei*, the causal agent of ascochyta blight of chickpea is considered to be confined to *Cicer* species. Zachos et al. (1963) were unable to infect lentil (*Lens culinaris*), pea (*Pisum sativum*), and vetch (*Vicia* sp) with *A. rabiei*. In inoculation studies with *A. rabiei*, Sprague (1930) failed to infect several plant species, including lentil, pea, and bean (*Phaseolus vulgaris*). Tripathi et al. (1987) inoculated over 40 species of crops and weeds with a Pantnagar isolate of *A. rabiei* but no infection resulted. In greenhouse inoculation studies at the International Center for Agricultural Research in the Dry Areas (ICARDA) in Syria, *A. rabiei* infected cowpea, bean, and peas (Nene and Reddy 1987).

Ascochyta blight was first detected on chickpea in the US Pacific Northwest in 1983 and reached epidemic proportions in 1987 (Kaiser and Muehlbauer 1988). In May