Leaf Spot of Zinnia Caused by *Alternaria zinniae*

M.B. Ellis in Korea

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**Alternaria zinniae**에 의한 백일홍 검은무늬병 (黑斑病)

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**要約**


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In the summer of 1987, a severe leaf spot and blight disease of zinnia(*Zinnia elegans*) was observed in a garden in Taejon. All the above ground plant parts, *i.e.*, leaves, stems and flowers were affected. In advanced stage of the disease, plants showed heavy defoliation.

The disease was found to be caused by a species of *Alternaria*. The fungus can be isolated easily through selection of single conidium from infected host material held overnight in a damp chamber. It grows readily on potato dextrose agar (PDA) and V-8 juice agar (V-8) under a 12/12 hr near-ultraviolet light/dark cycle at 25°C. Colony mycelia on PDA and V-8 are moderate to abundant in quantity, cottony or wooly, grayish brown to dark blackish brown, with varying amounts of pale gray nonsporulating aerial hyphae.

Conidiophores are septate, unbranching, erect, single or in fascicles, with one, two or infrequently, more scars and measured up to 200μ long and 4-10μ thick (Fig. 1). Normally the conidia are formed singly.

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on the conidiophores, a secondary conidium appearing but seldom, on natural media as well as in cultures. They are large, obclavate to oval, pale brown to dark brown, constricted by septa. The spore body with numerous transverse and longitudinal septa turns rather abruptly into a long, very narrow, straight, filiformed beak (Fig. 1). The beak is almost colorless, has a few septa, and often is slightly swollen at its tip. Dimensions of the spore body were 32-123 x 8-27μ, and of the beak 13-230 x 1.5-2.5μ. The total length of the conidia is 41-295μ. The fungus was identified as Alternaria zinniae M.B. Ellis, according to the descriptions of the species by various authors (2,3,6,7,9).

For determining the pathogenicity of the fungus ten-day old monosporic culture maintained on V-8 was used. Five-weeks old zinnia plants were sprayed with conidial suspension in water. First symptoms were observed 2 to 3 days after inoculation on the leaves in the form of light brown to dark brown and circular spots. The spots rapidly became irregular, measuring 2 to 10mm in diameter. Such spots gradually increased in size and coalesced to form bigger irregular spots (Fig. 2). Severely infected leaves became brown and dry. On flowers and stems, infection