

The Preliminary Study of Variation Mechanism of Pathogenic Type of *Verticillium dahliae* Kleb.

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Abstract: 31 strains of different aggressiveness and V991(a highly aggressive, defoliating strain) are cultured on PDA flat under four different temperature(15°C, 20°C, 25°C, 30°C). The result indicated that 31 strains showed different characteristics on PDA flat, 81.25% strains of high aggressiveness are filament type (which produce much filament and a few nuclei), all of the defoliating strains are filament type, 80.0% strains of medium aggressiveness are medium type (which produce some nuclei) and all of strain of weak aggressiveness are nuclei type (which produce quite a few nuclei). Strains produce more nuclei under 20~25°C than 30°C. Under four different temperatures strains produce fewer and

fewer nuclei along with the generation going ahead, especially under 30°C. The speed of filament grow is more rapid, the sporulation production and toxin production are higher under 25°C than 15°C and 30°C. Under 30°C, the growth speed of filament of highly aggressive strains is more rapid, and the sporulation production and toxin production are higher than medium and weak aggressive strains. Under 25°C, toxin production of defoliating strains is obviously higher than nondefoliating strains. Under 30°C, the growth speed of filament of defoliating strains is more rapid, sporulation production and toxin production are obviously higher than nondefoliating strains. Defoliating strains can stand higher temperature(30°C).

Key words: *Verticillium dahliae* Kleb.; aggressiveness; physiologic mechanism