Conidial Production in the Genus Cercospora

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CONIDIAL PRODUCTION IN THE GENUS CERCOSPORA

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One of the limiting factors in the study of the biology of several species of the genus Cercospora has been the failure of investigators to obtain conidia abundantly and at will in pure culture. During a period of nine months transfers from stock cultures of *Cercospora beticola*, *C. dubia*, *C. davisii*, *C. zebrina* have been grown on 30 different media. No conidia were found upon the 40 successive transfers examined as soon as they showed vigorous growth. During the summer of 1931, Cercospora was isolated at Kanawha, Iowa, from the following hosts: *Beta vulgaris*, *Chenopodium album*, *Melilotus officinalis*, *Physalis sp.*, *Setaria viridis*, and *Vigna sinensis*. Cultures of all six of these species on potato-glucose agar sporulated within 48 hours after the original isolation. Then successive conidial transfers were made from each of these cultures at five-day intervals. These cultures were held at 24-27°C. In all of the cultures abundant conidial production occurred over the entire surface. Isolations made from *B. vulgaris* sporulated more abundantly on sugar-beet-leaf agar than on potato-glucose agar. During the summer of 1932, additional Cercospora species were isolated, namely, *C. althaeina*, *C. avicularis*, *C. muhlenbergiae*, *C. moricola*, *C. mirabilis* and *C. medicaginis*. Abundant conidial production occurred as described above. In the preliminary tests using stock cultures of *C. beticola*, *C. dubia*, *C. davisii*, and *C. zebrina*, no conidia were produced when exposed for different time intervals to ultra violet irradiation.

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THE CYTOLOGY OF HOMOTHALLISM

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Coprinus sterquilinus, a homothallic Hymenomycete, has a typical diploid nuclear cycle i.e., nuclear fusion occurs in the basidium, followed by the formation of a nuclear tetrad and four spores. Each spore receives one nucleus which divides at least once. The chromosomes are too small and poorly defined to use the