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Conidial Production in the Genus *Cercospora*

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CONIDIAL PRODUCTION IN THE GENUS
CERCOSPORA

C. M. NAGEL

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.

BOTANY AND PLANT PATHOLOGY SECTION,
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THE CYTOLOGY OF HOMOTHALLISM

J. E. SASS

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