

FIRST REPORT OF SCAB ON CULTIVATED WILD RICE IN MINNESOTA.

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Fusarium spp. were isolated from seed of cultivated wild rice (*Zizania palustris* L.) that was dried to 20-21% moisture content following the 1993 growing season. *Fusarium graminearum* Schwabe was isolated most frequently, but *F. culmorum* (Wm. G. Sm.) Sacc., *F. moniliforme* J. Sheld., *F. sporotrichoides* (Sherb.), and *F. subglutinans* (Wollenweb. & Reinking) P. E. Nelson, T. A. Toussoun, & Marasas also were isolated. *Fusarium* spp. were not isolated from seed stored in water immediately after harvest, the normal procedure to store seed for sowing the following year. Scab has not been reported on cultivated wild rice. Therefore, during the 1994 growing season, plants in the field were observed at four different locations approximately every 10 days, beginning at anthesis, for symptoms of infection by *Fusarium* spp. We observed spikelets that were bleached to a tan color and were either sterile or contained shriveled and discolored seed. Frequently a pink to orange discoloration caused by sporodochia containing conidia, conidiophores and mycelium was observed during high humidity conditions. *Fusarium graminearum* was isolated from 100% of spikelets and seed displaying these symptoms. Other *Fusarium* species were not isolated from symptomatic seed in 1994. Conditions for the cultivation of wild rice, especially high humidity, are optimum for scab development. To our knowledge this is the first report of scab on cultivated wild rice. Cultivated wild rice is now becoming widely used in rice mixtures and other food stuffs throughout the United States. Therefore, this represents another mode by which harmful toxins that may potentially be produced by *Fusarium* spp. are introduced into the human food chain.

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Fungal Brown Spot of Cultivated Wild Rice is Two Different Diseases.

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Since the first disease report in 1961, fungal brown spot of cultivated wild rice (Zizania palustris) has been considered as one disease. However, the disease is caused by two related fungi, Bipolaris oryzae and B. sorokiniana that produce different disease symptoms. Bipolaris oryzae produces the toxin ophiobolin but B. sorokiniana does not. Bipolaris sorokiniana survives in grasses and residue and causes disease earlier in the growing season while B. oryzae is thought to survive only in residue but is a better parasite and causes disease later in the season. Under optimum conditions for disease, B. oryzae predominates but B. sorokiniana is the dominant pathogen under less optimum conditions. We suggest the name fungal brown spot be retained for the disease caused by B. oryzae and spot blotch be used for the disease caused by B. sorokiniana.