This page contains a project abstract aimed at developing FHB-resistant wheat cultivars for the Midsouth. The project, led by Milus, Eugene, involves selecting lines from crosses between various adapted wheats and sources of FHB resistance for both agronomic traits and FHB resistance. Four of these lines are being tested in the Southern Winter Wheat Nursery, and 39 are being tested in Arkansas breeding nurseries. To provide breeders with sources of resistance to FHB and other important diseases in the Midsouth, lines from the germplasm enhancement program are selected for agronomic traits and resistance to FHB and contemporary races of leaf rust, stripe rust, and Septoria tritici blotch. Eighty-four of these F7, BCF6, and TCF6 lines from 16 sources of resistance are being evaluated in several screening nurseries to identify the best lines for release to breeders after the 2002 harvest. A genetic study to investigate the number and heritability of FHB resistance in seven of the most resistant lines and a recurrent selection program to develop lines with higher levels of FHB resistance are included in this proposal. As a service to breeders, this project evaluates breeding lines in the Northern and Southern Winter Wheat Scab Nurseries and from the Arkansas and Louisiana wheat breeding programs for FHB resistance in the greenhouse and in the inoculated, irrigated screening nurseries at two field locations.