We will phenotype, for a second season in 2009, a RI population of 250 lines from the cross: Truman/Mo 940317 (A coordinated project with MO, KY, and OH). We will grow two replications of the population and parent lines, with the two parents repeated in each replication. Plots are 1 meter long, 30 cm apart and consist of 80 seeds. We will try to achieve natural infection (seeded in disced corn residue in the misted area). At 21 – 25 days after flowering we will determine the percentage of spikes infected with *F. graminearum*, and we will determine the percentage of spikelets diseased in a random sample of 10 infected spikes per plot.