Cultivar resistance and application of Prosaro or Caramba fungicides are the principal means of managing Fusarium head blight (FHB) and reducing yield losses and deoxynivalenol content of wheat grain. However, wheat growers have been slow to adopt these management practices, and there is no consensus on the optimal time to apply a fungicide for managing FHB. A field experiment will be conducted in Arkansas in conjunction with similar experiments in other states to determine the effects of cultivar resistance and timing of a Prosaro fungicide application on incidence and severity of Fusarium head blight, yield, test weight, and deoxynivalenol content of harvested grain. These data will be further analyzed to determine the economic return of using moderately resistant cultivars and/or applying Prosaro compared to planting a susceptible cultivar and not applying a fungicide. These data will also be analyzed to refine the application window when Prosaro can be applied to achieve maximal efficacy.