Field peas are one of the fastest growing crops in North Dakota. The Glacial Lake Oahe acreage has grown from 69,000 acres in 2000 to 808,000 acres in 2005 easily surpassing Montana at 135,000 acres as the number one producer of field peas in the United States. The current high energy and fertilizer costs make it likely that planted acres will increase again in 2006. Field peas, canola, sunflowers, and soybeans fit well into rotations that include small grains due to different pathogen susceptibilities of the grass type species. Field pea, canola, sunflower, and soybean and several hundred other broadleaf crops and many weed species are susceptible to white mold disease caused by the pathogen Sclerotinia sclerotiorum (Lib.) de Bary. The most common mode of infection of the disease is the emergence of apothecia from sclerotia deposited in the soil from previous infections. These sclerotia can live in the soil for more than five years and expel spores airborne. The spores are very small and can travel great distances with the prevailing winds. Field pea has a very dense canopy that creates an environment conducive to spore germination and infection when precipitation is abundant. Research studies conducted in 2003 indicated that some fungicides and timings may provide control of the disease. These studies initiated in 2004 will qualify some of the 2003 findings to determine differences in susceptibility between two cultivars with determinate and indeterminate type of flowering.

The results of this study concur with a prior study indicating field peas can be severely affected by sclerotinia disease. Results of some fungicides applications reduced incidence of disease, improved some quality factors and increased yield. There was a definite advantage to the determinant type cultivar in improving quality and yield under Agreement Nos. 58-5442-2-264. This is a cooperative project with the USDA-ARS Sclerotinia Initiative. "Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture."