Rhizoctonia root rot (caused by the fungus *Rhizoctonia solani* Kühn, AG2-2) continues to be a problem in most sugar beet-growing areas in the United States, and is a growing problem worldwide. The USDA-ARS at Fort Collins has screened germplasm in artificially induced epiphytotic events to provide uniform, heavy disease pressure for over 50 years. One of the major concerns with artificially created epiphytotic events is that the disease pressure is uniform and consistent. Also of concern, is the potential for “cryptic variation” or “interplot interference” – i.e., the influence of including many susceptible lines in the same trial. If inoculum load is a limiting factor, and resistance is partial (as is the case with sugar beet and Rhizoctonia root rot), a large number of susceptible lines might cause a trial to be more severe than a trial with many resistant lines. The same check lines have been used in the Fort Collins nursery since 1985. In each year, there are from 6 to 10 experiments within the disease nursery, each of which contains the check lines. This allows us to monitor variation in results from within each year as well as from one year to another. Consistency of disease pressure seen within a single year is not necessarily seen over all years. For example in 1992 the mean value of the Disease Index (DI) of the susceptible check was 1.3 and in 1997 it was 6.5, rated on a scale of 0 (no damage) to 7 (dead plant with root completely rotted). For 1992 and 1997, the highly resistant check had a DI of 0.7 and 3.8, respectively. This environmental variation underscores the necessity of using consistent checks across years to compare results across years.