

Hein, Gary L.¹, Greg D. Binford¹, Eric D. Kerr¹, John A. Smith¹, Robert G. Wilson¹, and M. D. Culy², University of Nebraska Panhandle Research and Extension Center, 4502 Ave. I, Scottsbluff, NE 69361 and Dow-Elanco, 9330 Zionsville Rd., Indianapolis, IN 46268-1054. - Damage potential of rhizomania and the use of soil fumigation, varietal resistance, and planting date in the management of rhizomania.

Three studies were done to determine the effects of various cultural and chemical practices on rhizomania. Several resistant varieties were tested in both rhizomania infested and uninfested soils, and many performed well especially in the rhizomania field. However, they tended to have lower percent sugar and higher sugar loss to molasses. In the second study, planting date, starter fertilizer, Telone II, and varieties (susceptible= Monohikari; resistant=Rhizoguard) were combined to determine their effects on the severity of rhizomania. The most important findings indicated that Telone II reduced the impact of rhizomania especially on Monohikari (susceptible). Also, the effects of the fumigant were reduced for the earlier planting dates indicating the benefits of early planting in the management of this disease. The third study looked at the influence of variety (Monohikari vs. Rhizoguard) and several Telone II rates in managing rhizomania. The results from this study indicated that Telone II can have a significant impact on rhizomania with the highest rate (20 gallons/acre) giving a 65% (1993) and 19% (1994) yield increase over the non-fumigated treatments. Only at the higher rhizomania pressure did the Rhizoguard have comparable yields to the Monohikari.