Keller, Alvin L., and Del Traveller, The Amalgamated Sugar Company, P.O. 700 Paul, Idaho 83347. The effect of soil temperature and planting date on Rhizomania. Rhizomania identified in Idaho fields in 1992 resulted in less yield and sugar losses than expected. the average yield was 18.92 tons with an average sugar content of 16.88%. Cropping history and the number of infested fields lead us to believe the problem had been around for a number of years but was minimized by conditions in our area. We believe that soil moisture and temp. combined with planting date play a major role in disease severity. *Polymyxa betae*, a soil born fungus, is the vector on which rhizomania depends to infect sugar beets. The resting spores of this vector require temps. of about 60 degrees F. to begin germination which remains slow until temps. of 68 to 70 degrees F. are reached. Temp. data obtained from the USDA Research Center in Kimberly Idaho showed our normal 2" soil temps. in April,when beets are emerging, to be below those required for good *Polymyxa betae* germination. By May when beets are feeding at the 4" to 6" depth, our average normal high soil temp. at this level is still below 60 degree F. In April 1992 we had average 2" soil temps. near the 70 degree mark when beets were planted. Fields were dry requiring several irrigations. These factors provided an ideal environment for the fungus when beets were small making the symptoms more apparent.