

大豆孢囊线虫种群遗传 变异的分子分析

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MOLECULAR ANALYSIS OF GENETIC DIVERSITY AMONG SOYBEAN CYST NEMATODE POPULATIONS

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The Soybean Cyst Nematode, *Heterodera glycines* is a major factor reducing soybean yields. Reactions on soybean cultivars indicate there is considerable diversity within and among nematode populations. We are examining the genetic diversity among numerous worldwide SCN populations by endonuclease restriction analysis and DAN hybridization. Experiments with purified mitochondrial DNA demonstrate variability in the number of mitochondrial genotypes present in these populations. Some populations obtain a single genotype where as others possess multiple mitochondrial genotypes. In an effort to further analyze the populations containing multiple genotypes, we have developed a technique to isolate and characterize the DNA from individual cysts. A preliminary comparison of individual cysts between two provinces in China show we can generate enough fragments to calculate estimates of percent nucleotide sequence divergence. A second comparison between a race 3 and race 1 population demonstrates unique restriction fragment polymorphisms can be identified through hybridization with a mitochondrial probe.