

**USDA, ARS, BELTSVILLE AGRICULTURAL RESEARCH CENTER, GENETIC
IMPROVEMENT OF FRUITS & VEGETABLES LABORATORY**

DR. KENNETH DEAHL

“DNA FINGERPRINTING TO DETECT POTATO PATHOGEN DIVERSITY”

Dr. Deahl led an international team in the use of DNA fingerprinting technology to measure the genetic diversity of the potato late blight fungal pathogen. Dr. Deahl took the initiative to suggest this technology would help in the UK and Western Europe where potato late blight was increasing. Dr. Deahl demonstrated the potential and application of DNA fingerprinting to answer unresolved questions about the genetic diversity in the late blight pathogen and discovered the emergence of a “new” pathogen group within the late blight population. The presence of this new group could increase aggressiveness of the population, as well as its fungicide resistance. Dr. Deahl demonstrated that DNA fingerprinting technology should be performed at the onset of late blight and throughout the entire season in order to develop integrated management recommendations and strategies for late blight control. The significant positive impact and adoption of the transferred DNA fingerprinting technology resulting from Dr. Deahl's efforts, is demonstrated by its positive impact in the current European Late Blight epidemic. As a result of his guidance, a grant "An Integrated Biosciences Platform for the future control of Potato Late Blight in Ireland" was funded in 2007 for 4 years (\$1,200,000.00). An official 3-member international scientific steering committee will oversee the grant. Dr. Deahl is an official member of that committee and an active member of the research team.