**Principles of Biological Nitrogen Fixation Products and Their Implications for Agriculture**

1. What statement best characterizes the nitrogen-fixing microbial products described in the talk?
   1. They involve different species of bacteria with differing traits and growth strategies
   2. The different products contain essentially the same kinds of organisms
   3. Because they contain transgenic organisms, these products are closely regulated by the FDA
   4. They induce nodule formation in non-legume plants
2. What statement best characterizes the capacity of nitrogen-fixing microbial products to supply nitrogen to a crop?
   1. Observed nitrogen fixation rates are likely to vary based on environmental characteristics
   2. Observed nitrogen fixation rates are likely to be highly predictable for a given product
   3. Nitrogen fixed by microbial products is vulnerable to environmental losses (e.g., nitrate leaching)
   4. Nitrogen-fixing microbial products have consistently been shown to supply nitrogen to field-grown crops
3. How did nitrate leaching respond to use of a microbial nitrogen product in the Iowa trial mentioned in the talk?
   1. Nitrate leaching increased
   2. Nitrate leaching was not affected
   3. Nitrate leaching tended to decrease
   4. Negligible nitrate leaching was observed
4. How would we expect nitrogen fixation rates of root-associated bacteria to respond to increased soil moisture?
   1. Increase, because soil oxygen decreases
   2. Increase, because soil oxygen increases
   3. Decrease, because soil oxygen decreases
   4. Decrease, because soil oxygen increases
5. Which of the following might increase nitrogen fixation by future microbial products?
   1. Select bacterial species based on soil characteristics
   2. Supply targeted food sources to bacteria
   3. Match plant traits with bacterial traits
   4. All of the above