**Instantaneous Low-Cost Sensors for Crop Nitrate and In-Season Management**

1. Plant sap nitrate concentration can be used to make nitrogen management decisions in several crops
   1. True
   2. False
2. A wide dynamic range of measurement (e.g., 100-,1000 ppm nitrate-N) is important to prevent the need for sample dilution.
   1. True
   2. False
3. Nitrogen fertilizer rate to corn is positively associated with nitrate concentration in the stalk.
   1. True
   2. False
4. Soil nitrate concentrations in corn fields are highest in:
   1. June
   2. July
   3. August
5. New opportunities for instantaneous, low-cost nitrate sensing could benefit agriculture by characterizing nitrate levels in the following media:
   1. Plants
   2. Soils
   3. Water
   4. All of the above