**The Quest for Everlasting Agriculture Student Handout – Answer Key**

What are the threats to the way that we currently farm? *Loss of soil nutrients, erosion, climate change, urban sprawl, water availability, and increase in need for food to meet the needs of a growing World population.*

How are plants currently grown by farmers? *Farmers grow annual plants, which requires the fields to be plowed and planted in the spring and harvested in the fall.*

Why are agricultural experts interested in growing perennial plants? *Perennial plants can start growing earlier in the season and famers can harvest multiple times during the growing season. Perennials require less “energy-intensive machines and materials” and they need less fertilizer and can survive for many seasons. The root systems are healthier.*

What is the challenge of growing perennials? *It is difficult and takes a lot of time to selectively breed a variety of plant that can survive year-round and produce food that tastes good.*

What types of scientists are investigating better perennial plants for food? *Crop researchers, geneticists and agroecologist are mentioned in the article. Botanists, farmers, and biologist are acceptable answers.*

What are some of the characteristics researchers are selecting for in perennial plants? *Large seeds that hang onto the plant long enough for harvest*. *Also, plants that can live through cold winters, can be grown in a multi-crop system, and some oilseeds can be used for biofuels, forage for animals, and raw materials for industry.*