

My research focuses on learning more about the genetic and environmental influence on traits associated with natto quality. Natto is a fermented, whole bean food product popular in many Asian countries. Soybeans sold for natto production occupy a niche soybean market. This market represents a small fraction of the soybeans sold on the world market, but it is important for American growers to find as many novel areas to market their crops.

Understanding the genetic control of traits associated with natto quality is important for the soybean breeding program. The breeding program at Virginia Tech is interested in releasing cultivars that can be grown in the region and sold to natto producers. Understanding the number of genes and their interaction with each other is an important step in improving a trait. A breeder must know what the genetics are behind a trait before he or she can efficiently improve them. It is also important to understand what role the environment will play on a soybeans development. The environmental conditions can affect the genetics of the soybean. This can lead to an unstable or unreliable soybean crop and is undesirable. For this reason, it is also important to understand the environmental influence on natto traits.

Through my research I hope to help the program gain a better understanding of the parameters controlling traits associated with natto quality. This will help the program breed better cultivars and make an impact on the soybean market for the region.