

Determinants of Awn Length in Wheat and Triticale

Awn development in wheat and triticale is controlled by both genetic and environmental factors. At least 13 genetic loci or "genes" are involved in the genetic control of awn development. The interaction of these multiple genes determine potential awn development of a variety. The expression of that potential, however, is affected by environmental conditions at the time awn length is determined during plant development. In fact, two spikes on the same plant, which have the same genetic makeup, can differ significantly in awn length because of differences in weather conditions, moisture status, and other environmental factors at the time awn length of the spike is determined.

The genetic endowment of TRICAL® 102 (PVP) triticale give it the potential to produce heads that are "awnleted" or have very short awns. As with other varieties, however, awn length on TRICAL® 102 can be affected by growing conditions. Typically awn lengths on TRICAL® 102 are longer where growing conditions are cooler and spring daylengths are longer.