Tillers in Corn

- Tillers are vegetative or reproductive shoots that grow from the base of grass plants. Corn is a highly specialized grass plant.
- While tillers are an essential part of wheat, barley, and oat production, they are perceived to be far less desirable in corn. They are commonly referred to as “suckers,” because of the old wives tale that they “suck” the nutrients from the main stem.
- Research from the University of Illinois has shown that this is not the case.¹ The overall effect of tillers is usually neutral.
- There may be some benefit to tillers if corn is produced for silage because more dry matter is produced per unit area.

What Are Tillers?
Tillers are branches that develop from buds on the lower five to seven nodes of a corn plant². Tillers are morphologically identical to the main stem, and they are capable of developing their own roots, nodes, leaves, tassels, and ears if there is sufficient time in the season.²

Why Do They Develop?
The number of tillers that develop is a function of plant population, spacing, soil fertility, early season growing conditions, and the genetic background of the hybrid.³ Tillers are more likely to be found on plants that are located in thin areas of the stand or near field edges. Ample supplies of soil fertility and moisture favor tiller development. Some hybrids are more genetically prone to tiller.

University studies have found that there is very little movement of photosynthate between the main stem and tillers before tasseling.³ However, after silking and during grain fill, plant sugars may move from earless tillers to ears on the main stem. When there are ears on both the tiller and the main stem, very little movement of plant sugars occurs; the main stem and tillers act independently and each receives sugars from its own leaves.

What Can Be Done?
If a particular corn product shows excellent yield potential and also produces some tillers under normal growing conditions, it is not a cause for concern. However, excessive tillering (more than two or three tillers per plant) may indicate problems with stand density and distribution³. Less than optimal plant populations or row gaps are conditions that should be corrected for next year to help obtain optimal yield potential.

Sources: