Multiple Ears on the Same Shank

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Last year there was a rash of reports from cornfields throughout Illinois and Indiana of an odd multiple-eared phenomenon that I termed the “bouquet” effect (Nielsen, 2006). The nature of the “bouquet” effect was multiple ear shoots that developed from a single ear shank and, in the worst cases, none of the ears successfully pollinated or set kernels. As I indicated last year, multiple ears on a single plant are not unusual, but the multiple ears usually develop separately from individual stalk nodes.

I suspected then that certain genetic backgrounds were probably more prone to developing multiple ears from the same ear shank. In recent weeks, I’ve noticed a benign form of the multiple-ear characteristic appearing in a hybrid with nearly identical genetics to one that developed dramatic “bouquets” of multiple ears last season.

The fact that multiple ears sometimes develop from a single ear shank in and of itself is not unusual. Ear shank development essentially replicates the developmental sequence of the main stalk of the plant. The ear shank is comprised of nodes and internodes. Each node develops a leaf like the main stalk, albeit referred to as husk leaves. The ear shank terminates
with a reproductive organ (the female ear) somewhat akin to the main stalk terminating with a reproductive organ (the male tassel).

Additional ear shoots can develop from individual nodes of the ear shank like additional ear shoots that develop from individual nodes of the main stalk (Nielsen, 2007a). Normally the ear shank does not initiate these secondary ears or ears initiate but quickly cease development due to apical dominance from the apical ear.

It remains to be seen whether the more dramatic “bouquet” version of multiple ears on a single ear shank will develop this year. One of my observations last year was that the “bouquet” symptom appeared more frequently where kernel set on the main ear was severely restricted (e.g., severe corn rootworm beetle silk clipping).

**Related References**


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