## Effects of Moderate Drought (5 days) on Corn Yield

| Stage | Plant process | Drought effect on plant | Yield effect |
|---|---|---|---|
| V1-V6 | Full expansion of first 6 leaves and partial expansion of 2 to 4 additional leaves | Slightly smaller early leaf area; first 6 leaves are a minor part of the total leaf area | Usually minor |
| | Elongation of primary root system | Reduced uptake of some mineral nutrient, e.g. potassium | |
| | Initiation of secondary root system | Rootless corn syndrome; roots will not grow into dry soil; aggravated by soil compaction | |
| | Ear buds initiated in leaf axils | No effect | |
| | All leaves and nodes initiated | Little or no effect | |
| | Rows of potential kernels per ear established | Fewer rows of kernels result in smaller ear diameter; minor effect, mostly under genetic control | |
| | Growing point becomes embryonic tassel | No effect | |
| V7-V14 | Rapid elongation of cells in stem internodes | Shorter stem internodes result in shorter plants | Minor to medium |
| | Full expansion of leaves 7 through 14 and partial expansion of next 4 to 6 leaves | Smaller leaf area; less sunlight capture results in less photosynthesis during grain fill | |
| | Potential kernels (female flowers) added to ear rows | Fewer kernels per ear row results in shorter, smaller ears | |
| V14-VT | Internode elongation in upper stem including tassel peduncle | Shorter stem internodes result in shorter plants; tassel may not fully emerge | Medium to major |
| | A few additional potential kernels (female flowers) added to ear rows | May not occur during drought | |
| | Silk growth initiated and continues | Slower silk growth; may affect timing of silk emergence | |
| R1 | Pollen shed from tassels | Little effect; pollen shed from tassel for 3 to 7 days; all tassels in a field may require 14 days to complete pollen shed | Major |
| | Silk emerge from husks | Poor nick, silks may emerge after some to all of pollen grains shed | |
| | Pollen tube growth | Failed fertilization; requires 24 hours | |
| R2-R3 | Kernel filling | Aborted kernels, smaller ear size | Medium to major |
| R4-R6 | Kernel filling | Smaller kernels; smaller ear weight, reduced test weight | Medium to minor |