Table 1. Effects of Moderate Drought (1 week) on Corn Plants and 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
	Silks 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, reduced test weight	Medium to minor