



SEED & SUPPLIES FOR NORTHERN CALIFORNIA

**TURFGRASS SEED GROWTH:
TEMPERATURE OPTIMUMS AND LETHAL THRESHOLDS**

Periods of most ACTIVE GROWTH of cool and warm season turf species in Bay Area.			
<u>Cool Season Turfgrass:</u>		<u>Most Active:</u>	
Perennial Rye (winter active varieties available)		Year -round	
Tall Fescue	Mar-Jun	and	Oct-Dec
Kentucky Bluegrass	End Feb – End of May	and	Oct-Dec
Fine Fescues	Mar-Jun	and	Oct-Dec
<u>Warm Season Turfgrass:</u>			
Bermudagrass	Apr- End of Sept		

Days to EMERGE by Soil Temperature				
<u>Cool Season Turf:</u>	50°F	60°F	70°F	
Perennial Rye (winter active varieties available)	14	10	7	
Tall Fescue	21	14	10	
Kentucky Bluegrass	28	21	14	
Fine Fescues	18	12	8	
<u>Warm Season Turf:</u>				
Bermudagrass	NA	28	21	

Summary of Temperatures affecting cool-and-warm season turfgrasses				
Parameter	Cool-Season Turfgrasses		Warm-Season Turfgrasses	
Optimum* Shoot Growth	60 to 75°F	16 to 24°C	80 to 95°F	27 to 35°C
Optimum** Root Growth	50 to 65°F	10 to 18°C	75 to 85°F	16 to 26°C
Root Heat** Stress	>80°F	27°C	>100°F	38°C
High Temp Kill***	104 to 112°F	40 to 44°C	110 to 120°F	43 to 49°C
Cold* Hardening	40 to 34°F	4 to 1°C	58 to 66°F	15 to 19°C
Chill* Stress	None		54 to 60°F	12 to 16°C
Low Temp Kill***	26 to -20°F	-3 to -29°C	31 to 20° F	-1 to -7°C
*Canopy temperature				
**Soil Temperature				
***Tissue Temperature				