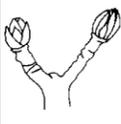
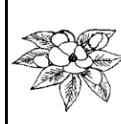
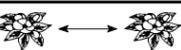


# PEST PHENOLOGY CALENDAR

## APPLES

MAJOR PESTS	STAGES OF DEVELOPMENT											
												
	Dormant	Green Tip	Half-inch Green	Tight Cluster	Pink	Full Bloom	Petal Fall (May)	June	July	August	Sept.	Post Harvest
Crown Gall (D)	Prevent at time of planting Infects only through injuries to roots, especially at transplanting											
Phytophthora Root & Collar Rot (D)	 Zoospores active during entire season when water is present 											
Iron Chlorosis (N)	+  Early spring soil treatments most effective					+  Difficult to control with foliar summer sprays						
Zinc Deficiency (N)	+  Dormant spray most effective						+  Summer foliar sprays only temporary					
Apple Scab (D)	Inactive	Primary spread from Ascospore 				Secondary spread by Conidia 				Inactive		
European Red Mite (M)	Eggs on limbs 			Immatures / Adults / Eggs on leaves 						Eggs on limbs		
San Jose Scale (I)	Immatures on Limbs 				Adults / Crawlers / Immatures on limbs, leaves & fruit 					Immatures on limbs		
Apple Aphid (I)	Eggs on limbs	Nymphs / Winged and Wingless Adults on new growth  *					Eggs on limbs  *			Eggs on limbs		
Powdery Mildew (D)	Fungus overwinters in buds			Active when buds first open 			Conidia spread during summer 					
Western Flower Thrips (I)	Adults on ground				+  Adults and eggs in blooms and on leaves		+  Larvae and Adults on fruit and leaves			Adults		
Campylomma (I)	Eggs in wood			Nymphs on blooms & fruit 			Nymphs/Adults (predators) /Eggs on			Eggs in wood		
Fire Blight (D)	Overwinters in cankers			 Ooze from cankers is primary source, secondary spread flower to flower								
White Apple Leafhopper (I)	Eggs in wood			Nymphs on leaves 			Nymphs/Adults/Eggs on leaves 			Eggs in wood		
Codling Moth (I)	Larvae under bark			Pupae		Adults / Eggs / Larvae in fruit 			Larvae under bark 			
Bitter Pit (N)							+  Fruit sprays					
Western Tentiform Leafminer (I)	Pupae in dropped leaves			Adults / Eggs on leaves		Larvae in leaf mines / Adults / Eggs on leaves 				Pupae 		
Spider Mites (M)	Miticides not recommended unless treatment thresholds exceeded; manage with biological and cultural controls											
	Adults at base of tree			Eggs / Immatures / Adults on ground cover and tree leaves						Adults		

D = Disease, I = Insect, M = Mite, N = Nutrient deficiency

\* Only if necessary, or if first spray missed.

+ Only if history of pest injury or problems in orchard.