PEST PHENOLOGY CALENDAR

APPLES

MAJOR PESTS	STAGES OF DEVELOPMENT											
	Dormant	Green Tip	Half-inch Green	Tight Cluster	Pink	Full Bloom	Petal Fall (May)	Post Bloom / Summer: 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	
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.