

**Table 1. Codling Moth GDD Model and insecticide timings**

DD° Base 50 (Post Biofix)	Event	Action
Pink bud	Development of overwintering larvae	Set traps
0 DD° = Biofix (~200 DD° after Jan 1)	1 <sup>st</sup> sustained moth captures	Set DD° = 0
100 DD°	Start of 1 <sup>st</sup> generation egg laying	Timing for 1 <sup>st</sup> treatment for egg targeted materials
250 DD°	Start of 1 <sup>st</sup> generation egg hatch	Timing for 1 <sup>st</sup> treatment if over threshold (for larva targeted materials)
350 DD°	1 <sup>st</sup> generation egg laying & hatch	Delayed timing for 1 <sup>st</sup> treatment if pest pressure is low, or for 2 <sup>nd</sup> treatment if an ovicide was applied at 100 DD°)
500-650 DD°	Peak of 1 <sup>st</sup> generation egg hatch	Timing for additional larvacide if monitoring of CODLING MOTH activity indicates a treatment is needed
1000 DD°	Expected end of 1 <sup>st</sup> generation activity	
1200-1250 DD°	Start of 2 <sup>nd</sup> generation egg hatch	Timing for treatment if over threshold (for larva targeted materials)
2100 DD°	Expected end of 2 <sup>nd</sup> generation activity	

**Table 2. Chemical class, activity and timing of insecticides used for CODLING MOTH control.**

Compound Trade Name	Chemical Class	Life-stage Activity	Optimal Spray Timing for CODLING MOTH	Mite Flaring Potential
Guthion, Imidan	Organophosphates	Eggs, Larvae, Adults	<b>Biofix + 250 DD</b>	<b>L - M</b>
Asana, Warrior, Danitol, Decis, Baythroid XL	Pyrethroids	Eggs, Larvae, Adults	<b>Biofix + 250 DD</b>	<b>H</b>
Rimon	IGR (chitin inhibitor)	Eggs, Larvae	<b>Biofix + 100 DD Residue under eggs</b>	<b>M*</b>
Delegate	Spinosyn	Larvae	<b>Biofix + 250 DD</b>	
Altacor	Anthranilic Diamide	Eggs, Larvae	<b>Biofix + 250 DD</b>	
Assail, Calypso, Clutch	Neonicotinoid	Eggs, Larvae, Adults (limited)	<b>Biofix + 200-250DD Residue over eggs</b>	<b>M*</b>
Intrepid	IGR (MAC)	Eggs, Larvae, Adults(sublethal)	<b>Biofix + 150-200DD Residue over eggs</b>	<b>L</b>
Avaunt	Oxidiazine	Larvae	<b>Biofix + 250 DD</b>	<b>L</b>
Esteem	IGR (juvenoid)	Eggs, Larvae	<b>Biofix + 100 DD Residue under eggs</b>	<b>L</b>
Proclaim	Avermectin	Larvae	<b>Biofix + 250 DD</b>	<b>L</b>
Granulovirus	Biopesticide	Eggs, Larvae	<b>Biofix + 250 DD Residue over eggs</b>	<b>L</b>

\*May cause mite flaring in combination with carbaryl or pyrethroids that kill predacious mites.

**Table 3. Relative activity spectrum of compounds against spring and early summer apple pests**

Insecticide	Primary pests				Secondary pests			
	CODLING MOTH		OFM	OBLR	PC	AM	STLM	GAA
	RAA	WALH	SJS					
Avaunt	**	**	*	***	*		*	*
Intrepid	***	***	***			**		
Spintor	**	**	***		**	**		*
Delegate	***	***	***	*	**			*
Esteem	**	*	*		**		**	
	***							
Rimon	***	***	***		**			
Altacor	***	***	***		*	**		
Proclaim	**	**	***		***			
Actara	*	*		***	***	***	***	***
	**							
Calypso	***	***		***	***	***	***	***
	**							
Assail								
Clutch	**	**		***	**	***	***	***
Guthion	***	***		***	***	*		
Imidan								
Pyrethroids	**	**	**	**	**	**	*	*
	**							

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