

## News/What to Watch For:

Continue to prune out fire blight strikes, no need to sterilize tools between cuts

Prune out dead limbs, and limbs with obvious cankers on stone fruit trees

**More information on late season pest management coming in the next advisory**

## Insect and Disease Activity/Info

### POME FRUITS

#### Codling Moth

The end of egg hatch is upon us, as the cool nights and shorter daylength are either preventing egg hatch, or preventing hatching larvae from surviving. The usual recommendation is that growers only need to keep fruit protected until September 15.

### STONE FRUITS

#### Peach Twig Borer

Peach twig borer eggs have slowed hatching, and new larvae will not survive (or cause damage) after mid-September due to cooler nights and shorter daylength. Any larvae that hatch successfully will move to the tree cambium where they will burrow in and create a "hibernaculum" in which they'll spend the winter. Keep fruit protected until Sept. 15.

#### Greater Peachtree Borer

Keep lower bark protected through September.

#### Spider Mites

Spider mites spend the winter as adult females, and their activity has been slowing down for about a month now. Females that overwinter start turning from their typical yellow color to a brighter orange. They then migrate in mass numbers down the tree trunks to debris and groundcover. If spider mite densities are still high, a late season treatment may be helpful, using a miticide to protect trees from early senescence. Horticultural oil is a good option for late season control.

#### Cankers (gumming, oozing) on peaches, nectarines, apricots



Many people noticed lots of oozing on peaches and apricots this past spring, caused by a variety of factors. Plant pathogens are one cause, as they kill bark and cambial tissue, which in turn causes oozing. A bacterium called *Pseudomonas syringae*, and a fungus called *Cytospora* are the primary stone fruit canker pathogens in Utah.

Now is the time to make a concerted effort to locate areas in the crown of stone fruit trees with dark colored amber and prune out affected limbs. If you are not sure that a pathogen is causing the gummosis, scrape the outer bark away. If the inner bark is still cream-colored (healthy), the oozing is caused by a non-living factor. If the wood is tan to brown, it is dead, and was most likely killed by a pathogen. Pruning out diseased limbs will help to prevent spread.

# Degree Day Accumulations and Insect Development

## Upcoming Monitoring/Insect Activity

Pest	Host(s)	DD/Monitoring Action
Spider mite	all	Adult females are turning orange and beginning to migrate to ground cover
Western cherry fruit fly	cherry	Adults are still emerging, and will lay eggs on unharvested fruit
Fire blight	apple, pear	Prune out strikes
Codling moth	apple, pear	Partial third generation only in the warmest Utah locations

## Degree Day Accumulations

March 1 - Friday, September 11

County	Location	GDD (50)	Codling Moth, 3rd Gen.			Peach Twig Borer, 3rd Gen.		
			DD (post biofix)	% Moth Flight	% Egg Hatch	DD (post biofix)	% Moth Flight	% Egg Hatch
Box Elder	Perry	2608	2380	unknown	unknown	2154	34	4
	Tremonton	2479	2189	15	1	1928	5	100 (2nd)
Cache	North Logan	2021	1830	97 (2nd)	81 (2nd)	1533	96 (2nd)	62 (2nd)
	Providence	2255	2049	7	97 (2nd)	1697	0	91 (2nd)
	Smithfield	2074	1898	99 (2nd)	87 (2nd)	1617	98 (2nd)	78 (2nd)
Carbon	Price	2493	2233	21	3	2015	13	1
	Spring Glen	2238	2014	3	95 (2nd)	1789	1	97 (2nd)
Davis	Kaysville	2529	2292	25	5	2131	27	3
Grand	Castle Valley	3538	3244	unknown	unknown	3083	25 (4th)	3 (4th)
Salt Lake	Holladay	2703	2433	unknown	unknown	2248	50	11
	West Valley City	2826	2558	unknown	unknown	2369	72	27
Tooele	Erda	2838	2506	unknown	unknown	2284	65	20
	Grantsville	3154	2741	unknown	unknown	2393	81	38
	Tooele	2918	2585	unknown	unknown	2355	75	30
Uintah	Vernal	2391	2113	11	99 (2nd)	1902	5	100 (2nd)
Utah	Alpine	2273	2029	4	95 (2nd)	1737	0	93 (2nd)
	Genola	2540	2290	26	5	2032	14	1
	Lincoln Point	2390	2136	5	96 (2nd)	1957	7	0
	Orem	2651	2397	unknown	unknown	2140	37	5
	Payson	2499	2275	24	4	2033	14	1
	Provo	2694	2276	28	6	2063	24	2
	Santaquin	2476	2263	23	3	2023	13	0
Weber	Pleasant View	2560	2346	32	8	2062	18	1

“Base 41,” “base 50,” and “base 51” refer to the lower temperature threshold at which certain insects develop. For example, codling moth does not start developing in spring until temperatures reach 50 degrees or more.

## Spray Material Options - Commercial Applicators

Target Pest	Host	Chemical	Example Brands	Amount per acre	REI	PHI	Comments
Spider mites	all	bifenazate	Acramite	0.75- 1 lb	12 h	3-7 d	
		fenbutatin-oxide	Vendex	1-2 lb	48 h	14 d	
		spirodiclofen	Envidor	16-18 oz	12 h	7 d	
Codling moth	apple, pear	acetamiprid	Assail	3.4 oz	12 h	7 d	• for all products, ensure good coverage for effective control
		methoxyfenozide	Intrepid	16 oz	4 h	14 d	
		phosmet	Imidan	5.33 lbs	5 d	7 d	• <b>codling moth virus</b> must be applied every 7 days
		spinetoram	Delegate	6-7 oz	4 h	7 d	
		rynaxypyr	Altacor	3.5-4.5	4 h	14 d	
		codling moth virus	Virossoft, etc	---	---	---	
Earwigs	peach, nectarine	carbaryl	Sevin	2.5-3.75 lb	12 h	3 d	no more than three applications/season; residual only lasts 1-2 days
Peach twig borer	peach, nectarine	Bt	Dipel	see label	4 h	---	begin sprays according to spray timing table on previous page and keep fruit protected
		spinetoram	Delegate	4.5-7 oz	4 h	14 d	
		spinosad	Success, Entrust	see label	4 h	14 d	
		methoxyfenozide	Intrepid	8-16 oz	4 h	14 d	
		phosmet	Imidan	4 lb	4 d	14 d	
Greater peachtree borer	peach, nectarine, apricot	chlorpyrifos	Lorsban	see label	4 d	14 d	<b>Lorsban:</b> max once/season; do not allow spray to touch foliage/fruit
		endosulfan	Thionex	see label	4 d	21 d	
		esfenvalerate	Asana	see label	12 h	14 d	<b>Thionex:</b> max twice/season
		pemethrin	Pounce	4-8 oz	12 h	14 d	

## Spray Material Options - Residential Applicators

Note that these treatments are only recommended if you know you have the particular pest in your trees. We recommend learning about specific pests, and scouting your trees at least once/week.

Target Pest	Host	Chemical	Example Brands	Comments
Spider mites	all	horticultural oil insecticidal soap	variety variety	use no higher than 1% oil, and do not apply over 85 F
Codling moth	apple, pear	<i>Conventional</i> carbaryl malathion gamma-cyhalothrin acetamiprid  <i>Soft/orgainc</i> hort. oil spinosad	Sevin, Bonide Fruit Tree Spray, etc. Malathion Spectracide Triazide Ortho Max Flower, Fruit, and Vegetable  many options Green Light Lawn and Garden Spinosad, Gardens Alive Bull's Eye, Ferti-Lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray, Monterey Garden Insect Spray, Natural Guard	<b>Carbaryl:</b> every 7 days <b>Malathion:</b> every 7 days <b>Acetamiprid:</b> every 14 days  <b>hort. oil:</b> lasts 7 days; use at beginning of each generation; apply at 1% rate ONLY when temperatures are below 80 <b>spinosad:</b> every 7 days
Earwigs	peach, nectarine	<i>Conventional</i> carbaryl	Sevin	apply only if needed; cover bark and adjacent soil 1-2 times
Peach twig borer	peach, nectarine	<i>Conventional</i> carbaryl malathion permethrin  <i>Soft/orgainc</i> spinosad kaolin clay	Sevin, Bonide Fruit Tree Spray, etc. Malathion Adams Yard Spray, Ortho Basic Solutions Yard and Garden, Bonide Eight RTU, Hi Yield Permethrin Concentrate  see 'codling moth' above Surround	see comments under Codling Moth  <b>Surround:</b> every 3-5 days; works to repel, not kill insects; only moderate control; must purchase online
Greater peachtree borer	peach, nectarine, apricot	permethrin, bifenthrin  carbaryl	Bonide Eight, Ortho Bug-b-Gone, Green Light Borer Killer, Bonide Borer-Miner Killer Enforcer Outdoor Insect Killer, Hi-Yield Indoor/Outdoor Broad Use Including Gardens; Hi-Yield Pemethrin, Lilly Miller Multi-Purpose Insect Spray, Spectracide Bug Stop Garden  Sevin, Bonide Fruit Tree Spray	<b>permethrin:</b> apply every 14-21 days until mid-September in highly infested areas; apply twice (now and one month later) in low infestations  <b>carbaryl:</b> must be applied every 7 days

**Precautionary Statement:** Utah State University Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned in this document. All pesticides are labeled with ingredients, instructions, and risks. The pesticide applicator is legally responsible for proper use. USU makes no endorsement of the products listed herein.

### Tree Fruit IPM Advisory

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