



IPM Update
Pests in 2015 & Suggestions for 2016
North Jersey Fruit Meeting
February 24, 2016

Dean Polk
Statewide Fruit IPM Agent

Pyrethroids

Ambush/Pounce/Perm-up:

Asana:

Baythroid:

Danitol:

Decis/DeltaGold:

Gladiator/Mustang-Maxx:

Proaxis:

Renounce/Tombstone:

Hero:

Bifenture/Brigade

Group 3

permethrin

esfenvalerate

beta cyfluthrin

fenpropathrin

deltamethrin

zeta cypermethrin

gamma cyhalothrin

cyfluthrin

zeta cypermethrin +

bifenthrin

bifenthrin

Pyrethroid Premixes (Grp 3 +)

Endigo: thiamethoxam (Actara) +
lambda cyhalothrin (Warrior)

Leverage: imidacloprid (Admire) +
beta cyfluthrin (Baythroid)

Voliam Xpress: chloranthriniliprole (Altacor) +
lambda cyhalothrin (Warrior)



Miticide Group 25
13.7 oz/A, Pome Fruits
REI - 12 hr, PHI - 7D



Insecticide Group 4D
(Apple, Pear)
Aphid, LH 7-10.5 oz
psylla, scale 10.5 - 14 oz
REI - 4 hr, PHI - 10D



Bioinsecticide
leafhoppers, scale
(fair)

Calypso (Bayer) - Discontinued

Materials and Ratings Effective for BMSB

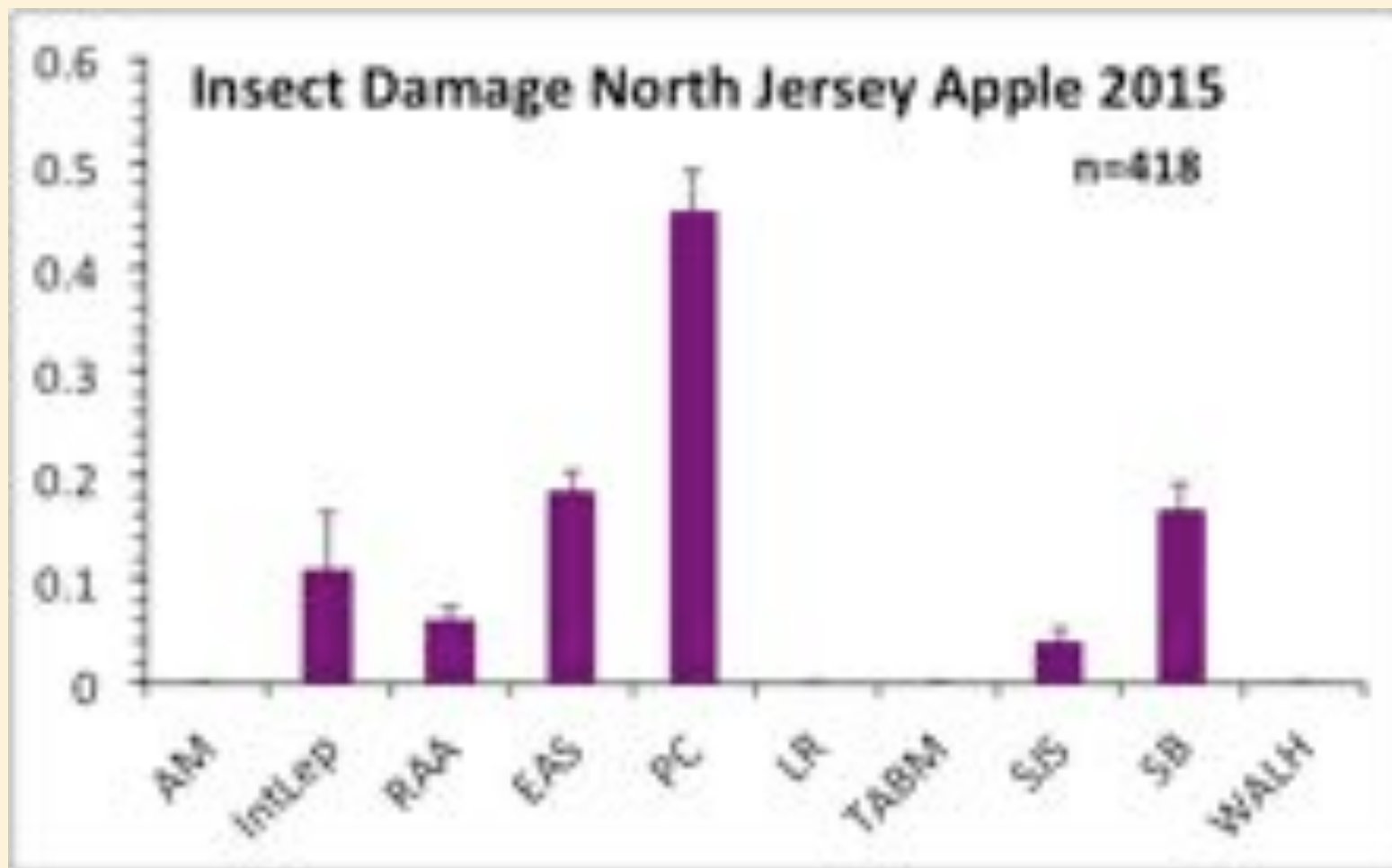
Product Name	BMSB Rating	Peach				Pome fruit				IRAC	Class
		Rate	Seasonal No. apps or material	PHI	Interval (days)	Rate	Seasonal No. apps or material	PHI	Interval (days)		
Actara*	+++	5.5 oz	11 oz	14	7	5.5 oz	16.5 oz	35	10	4A	Neonicotinoid
Perm-up**	+++	10 oz	3	14	10	N/A	N/A	N/A	N/A	3A	Pyrethroid
Asana	++	14.5 oz	5	14	N/A	14.5 oz	7	21	N/A	3A	Pyrethroid
Assail	+++	0.15 lbs	4	7	10	0.15 lbs	4	7	12	4A	Neonicotinoid
Azera	++	16-56 oz	10	0	3	16-56 oz	10	0	3		Pyrethrin + neem extract
Baythroid	+++	2.4 oz	5.6 fl oz	7	14	2.4 oz	2.8 oz	7	14	3A	Pyrethroid
Beley	++++	6 fl oz	2	21	10	6-12 oz	12 oz	7	14	4A	Neonicotinoid
Bifenture Brigade Capture (SECTION 18 required for Apples and Peaches)	++++	12.8 oz	28.8 oz after PF, season total 32 oz.	14	30	12.8 oz	28.8 oz after PF, season total 32 oz.	14	30	3A	Pyrethroid
Danitol	+++	21.3 oz	2	3	10	21.3 oz	2	14	10	3A	Pyrethroid
Dimate (Pear)	+++	1 lb	1	28	N/A	1 lb	1	28	N/A	1B	Organophosphate
Endigo ZC	++++	5.5 oz	19 oz	14	7	6 oz	28 oz	35	10	3A	Pyrethroid + Neonicotinoid

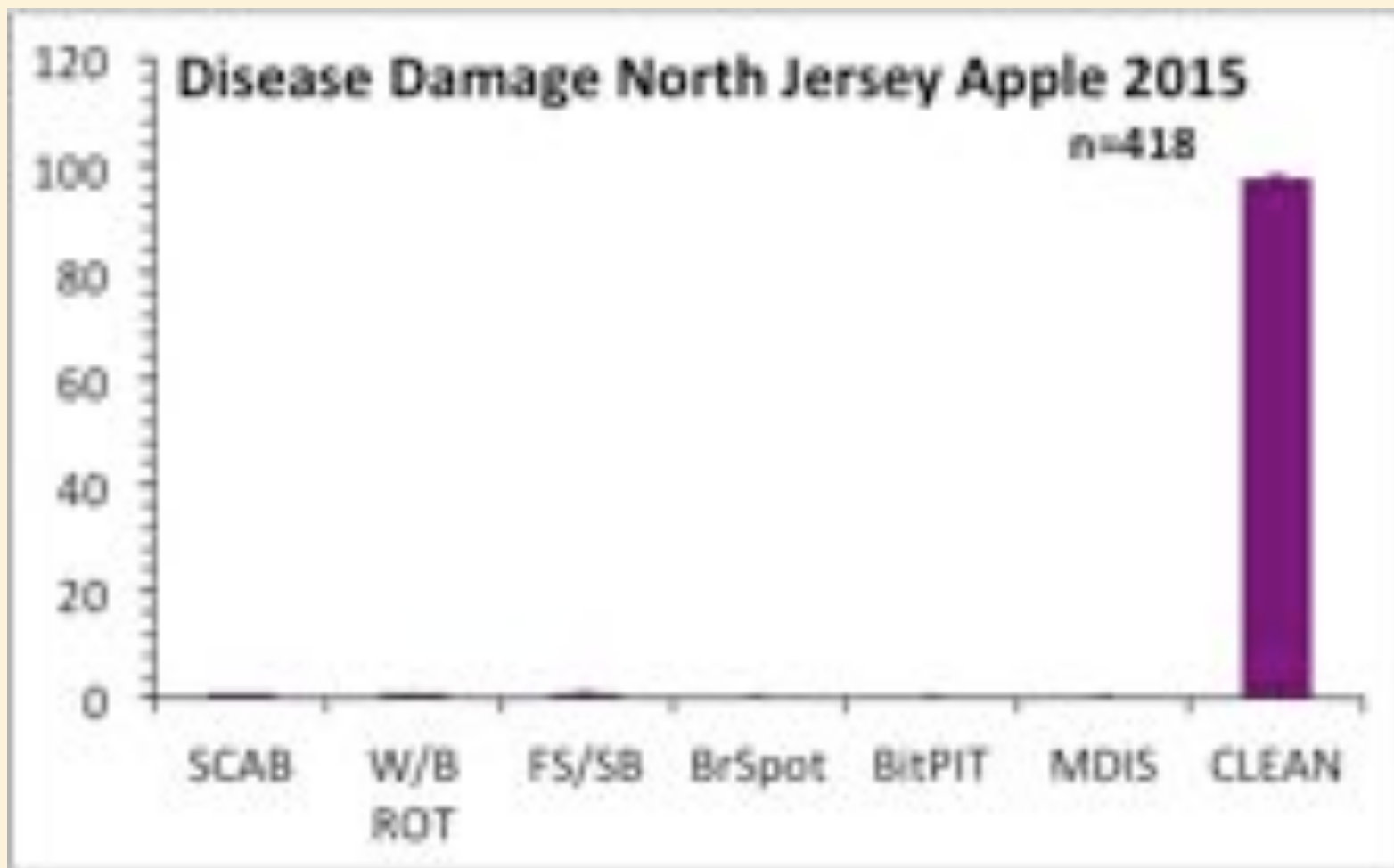
Materials and Ratings Effective for BMSB

Product Name	BMSB Rating	Peach				Pome fruit				IRAC	Class
		Rate	Seasonal No. apps or material	PHI	Interval (days)	Rate	Seasonal No. apps or material	PHI	Interval (days)		
Lambda-Cy	++	5.12 oz	25.6 oz 20.48 oz post bloom	14	5	5.12 oz	25.6 oz 20.48 oz post bloom	21	5	3A	Pyrethroid
Lannate SP	++	1 lb	6	4***	7	1 lb	5	14	7	1A	Carbamate
Leverage 2.7	+++	4.4	10.2 oz	7	14	4.4 oz	5.1 oz	7	14	4A + 3A	Neonicotinoid + Pyrethroid
M-Pede	++	2% v/v	3 sequential apps		7	2% v/v	3 sequential apps		7		Potassium salt
Mustang Max	+++	4 oz	24 oz	14	7	4 oz	24 oz	14	7	3A	Pyrethroid
Pyganic 1.4 EC	++	16 oz	N/A	0.5	N/A	16 oz	N/A	0.5	N/A		Pyrethrin
Scorpion	+++	7 oz	10.5 oz	3	7	N/A	N/A	N/A	N/A	4A	Neonicotinoid
Surround	++	25-50 lb	N/A	1	7	25-50 lb	N/A	1	7		Particle film
Venom	+++	4 oz	8 oz	3	7	N/A	N/A	N/A	N/A	4A	Neonicotinoid
Vollam FlexI	+++	7 oz	14 oz	14	10	7 oz	18 oz	35	10	4A + 2B	Neonicotinoid + Diamide
Vollam Xpress	+++	12 oz.	31 oz	14	7	12 oz	31 oz.	21	10	3A + 2B	Pyrethroid + Diamide
Warrior II	+++	2.56 oz	12.8 oz, 10.24 oz post bloom	14	5	2.56 oz	12.8 oz, 10.24 oz post bloom	21	5	3A	Pyrethroid

Apples







HG-P

Apple/Spirea Aphid complex

Rosy Apple Aphid

Red Mites

European Apple Sawfly

Scale

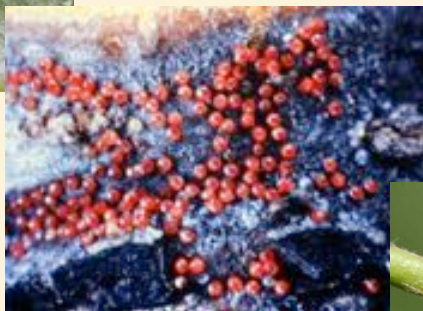
Oil +

Assail

Sivanto

Actara

(Avoid the pyrethroids this early)



PF

Plum Curculio

European Apple Sawfly

Oriental Fruit Moth

Redbanded Leafroller

Green Fruitworm

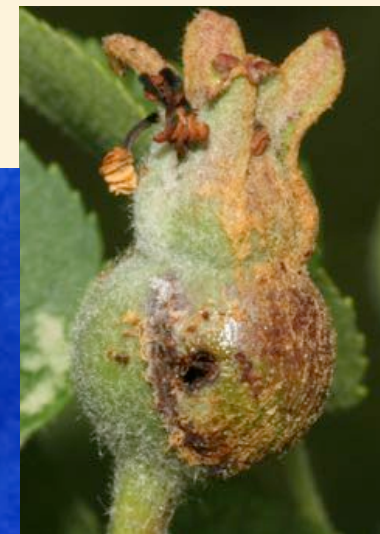
Tarnished Plant Bug
(BMSB)?

Imidan

Avaunt

Assail +

Imidan or Avaunt if BMSB

*Include a neonic if aphids
not yet controlled**Weeds Gone!**

1st C

Plum Curculio
Codling Moth
STLM?
Aphids?
(BMSB?)

Voliam Flexi (Altacor+Actara)
Avaunt+ Actara or Belay
Imidan+ Actara or Belay



2nd C

Codling Moth

Tufted Apple Budmoth?

Plum Curculio?

(BMSB)?

Voliam Flexi

Endigo (Lcy+Actara)

Leverage (Baythroid+Actara)

Delegate + Actara or Belay

Belt or Turismo+

Actara or Belay



3rd C (about mid June

Not much going on
Apple Maggot?
Tufted Apple Budmoth?
Oriental Fruit Moth?
San Jose Scale?
(BMSB)?

Any pyrethroid

Baythroid

Danitol

Warrior

Premixes -

Leverage

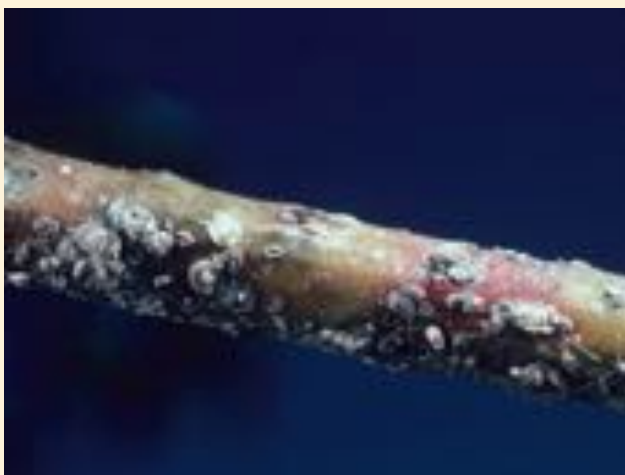
Endigo

Scale-

Esteem

Centaur

Movento



WSU E. Beers



4th C

Codling Moth
Apple Maggot?
STLM?
(BMSB)



Delegate +
A pyrethroid -
Baythroid
Danitol
Mustang Max
Warrior



Pyrethroids alone

Consider border sprays of BMSB materials -
Pyrethroids incl. Brigade/Bifenture (sec 18),
Lannate, Venom/Scorpion

5th C

Codling Moth

Tufted Apple Budmoth?

Obliquebanded LR

STLM?

Apple Maggot?

(BMSB)

Delegate +

A pyrethroid -

Baythroid

Danitol

Mustang Max

Warrior

Pyrethroids alone

Consider border sprays of BMSB materials -
Pyrethroids incl. Brigade/Bifenture (sec 18),
Lannate, Venom/Scorpion

6th C

Tufted Apple Budmoth?

Codling Moth?

Apple Maggot?

(BMSB)



A pyrethroid -

Baythroid

Danitol

Mustang Max

Warrior or

Lannate

Frequent
applications
especially to border

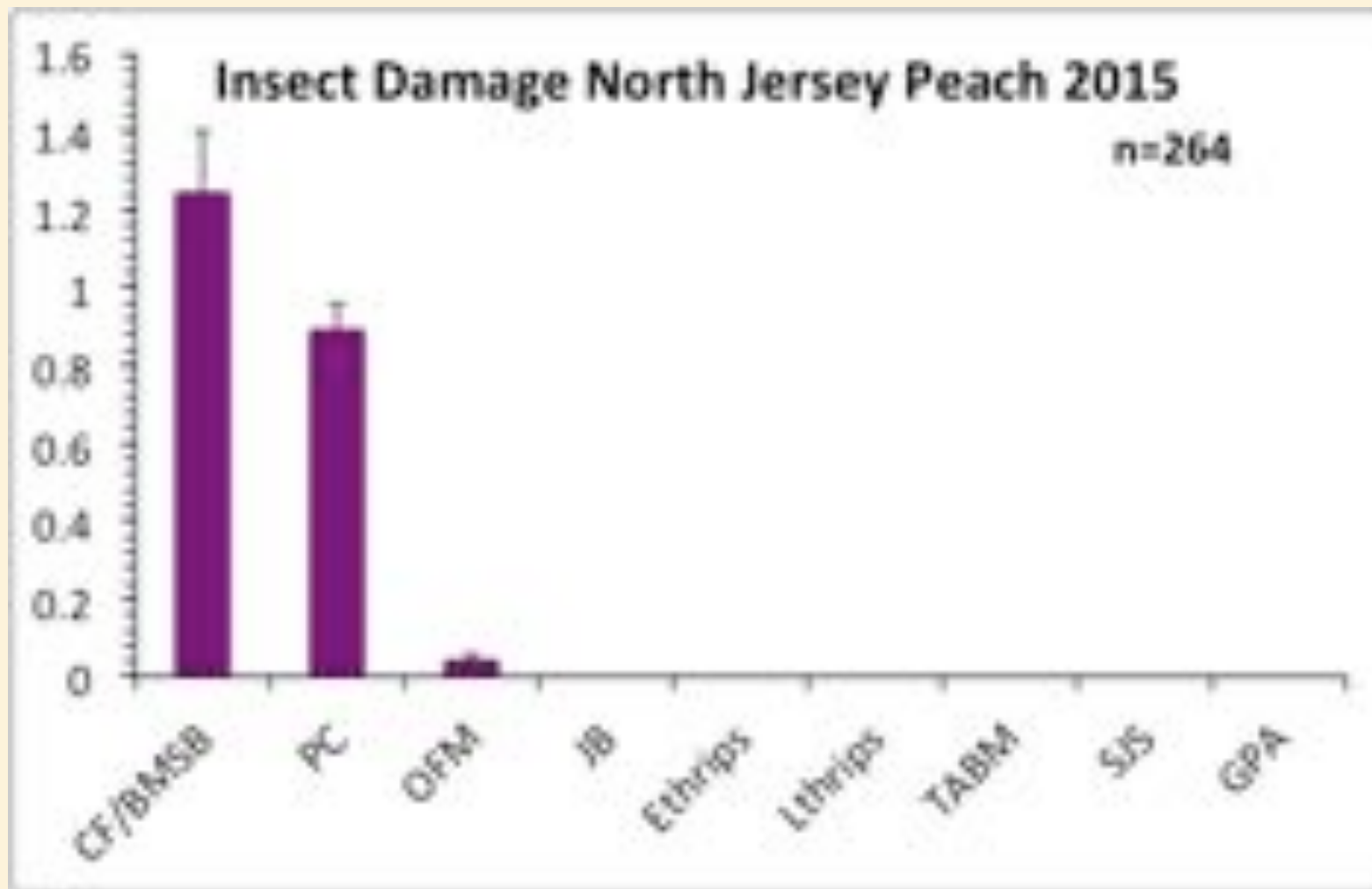
Peaches

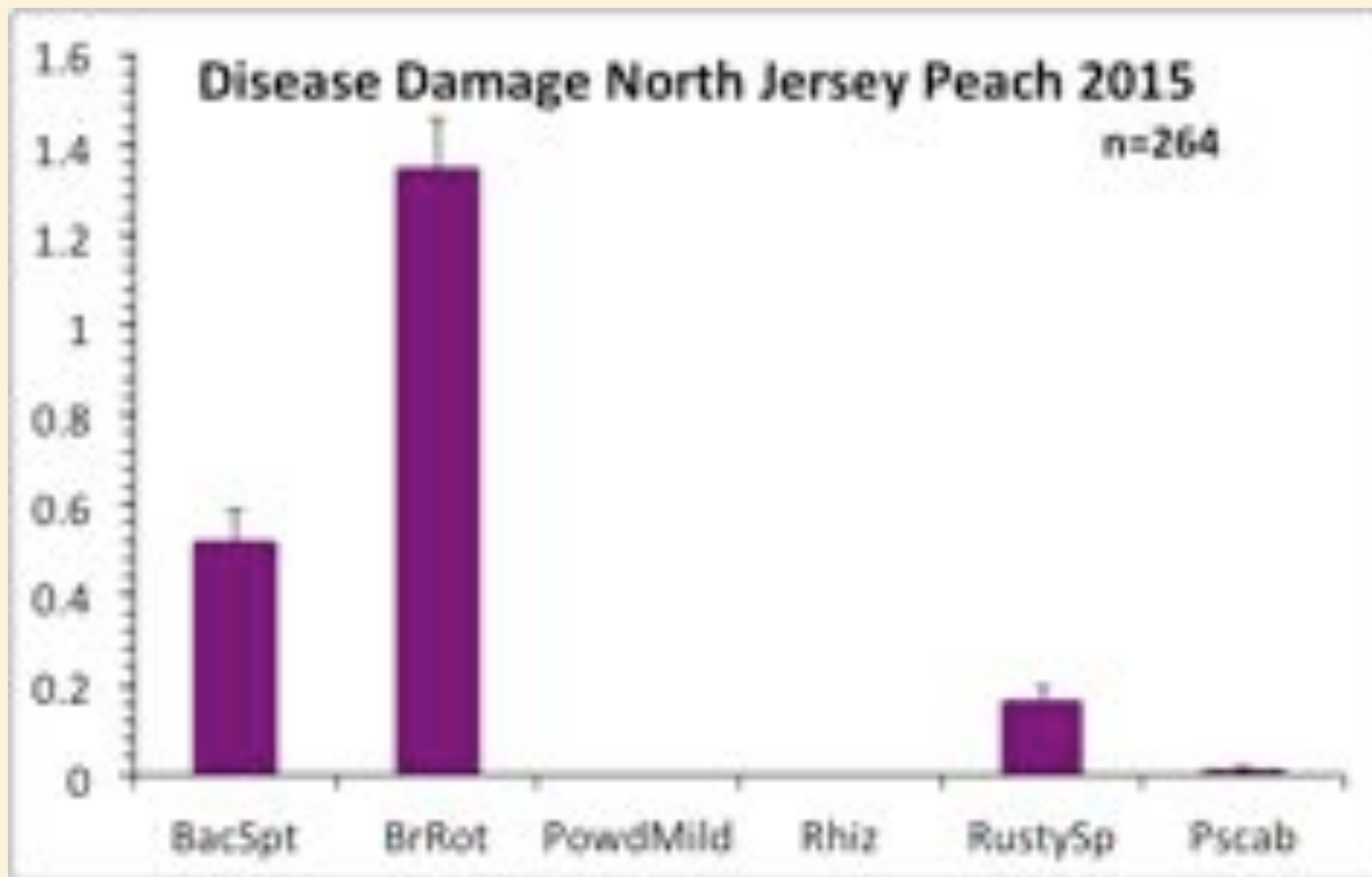


- If you have at least 3-5 solid acres then use mating disruption for OFM.
- Use 2,4-D and Stinger in the aisles to get rid of flowering weeds.



No weeds =
*No bugs &
*No bees to get killed
by insecticides.





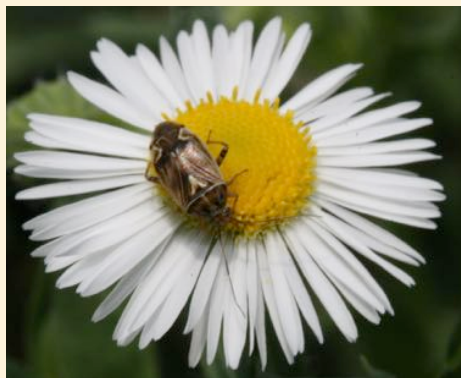
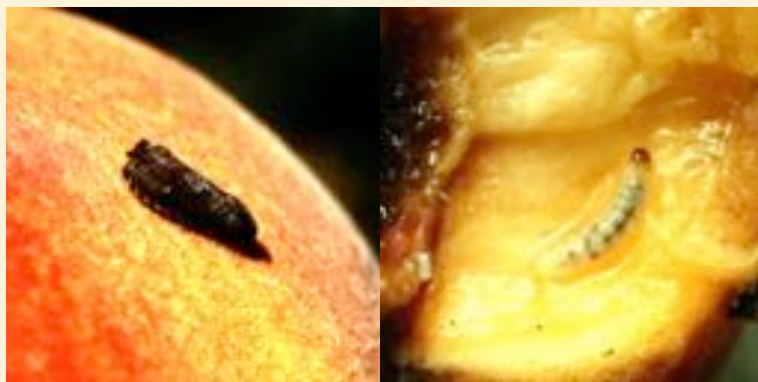
And what if we don't use mating disruption?

(You Should)

And get rid of the flowering weeds in groundcover?

(You Should)

Monitoring and choosing insecticides for everything.



Most Likely Pests, Days After Full Bloom

Pest	7-15
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	

Actara - PC, TPB, GPA

Voliam Flexi - PC, OFM, TPB, GPA

Avaunt - PC, OFM

Belay - PC, TPB, GPA

Imidan - PC, TPB, OFM

Gray = Maybe it's present

Green = Effective on BMSB

Save the Pyrethroids and other "hot" BMSB materials

Most Likely Pests, Days After Full Bloom

Pest	15-30
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	

Actara - PC, TPB, GPA

Voliam Flexi - PC, OFM, TPB, GPA

Avaunt - PC, OFM

Belay - PC, TPB, GPA

Imidan - PC, TPB, OFM

Gray = Maybe it's present

Green = Effective on BMSB

Alternate w/ a material used previously

Save the Pyrethroids and other "hot" BMSB materials

Most Likely Pests, Days After Full Bloom

Pest	30-45
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	
Scales	
Flower Thrips	
Tufted Apple Budmoth	
European Red Mite	
Two Spotted Spider Mite	
Japanese Beetle	
Lesser Peachtree Borer	

Actara -TPB, SB, BMSB

Voliam Flexi -TPB, SB, BMSB

Belay -TPB, SB, BMSB

Imidan -TPB,SB

Perm-up -TPB, SB, BMSB

Endigo -TPB, SB, BMSB

Mustang Max -TPB, SB, BMSB

Warrior -TPB, SB, BMSB

No pest is a sure thing here.
Needs to be scouted.

Most Likely Pests, Days After Full Bloom

Pest	45-60
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	
Scales	
Flower Thrips	
Tufted Apple Budmoth	
European Red Mite	Action Threshold
Two Spotted Spider Mite	
Japanese Beetle	
Lesser Peachtree Borer	
Peachtree Borer	

Actara -TPB, SB, BMSB

Voliam Flexi - OFM,TPB, SB, BMSB, TBM

Belay -TPB, SB, BMSB (watch PHI)

Imidan -OFM, TPB, SB

Perm-up -OFM,TPB, SB, BMSB, TBM

Endigo -OFM,TPB, SB, BMSB, TBM

Mustang Max -OFMTPB, SB, BMSB, TBM

Warrior -OFM,TPB, SB, BMSB, TBM

Brigade/Bifenture - OFM, SB, BMSB, TBM

TPB will be present with flowering weeds.

Most Likely Pests, Days After Full Bloom

Pest	60-75
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	
Scales	
Flower Thrips	
Tufted Apple Budmoth	
European Red Mite	Action Threshold
Two Spotted Spider Mite	
Japanese Beetle	
Lesser Peachtree Borer	
Peachtree Borer	

Voliam Flexi - OFM, SB, BMSB, TBM
 Voliam Xpress - OFM, SB, BMSB, TBM
 Imidan -OFM, SB
 Perm-up -OFM,SB, BMSB, TBM
 Endigo -OFM,SB, BMSB, TBM
 Mustang Max -OFM,TPB, SB, BMSB, TBM
 Warrior -OFM,TPB, SB, BMSB, TBM
 Brigade/Bifenture - OFM, SB, BMSB, TBM

TPB will be present with flowering weeds.

Most Likely Pests, Days After Full Bloom

Pest	75-90
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	
Scales	
Flower Thrips	
Tufted Apple Budmoth	
European Red Mite	Action Threshold
Two Spotted Spider Mite	
Japanese Beetle	
Lesser Peachtree Borer	
Peachtree Borer	

Voliam Flexi -SB, BMSB, TBM
 Voliam Xpress -SB, BMSB, TBM, JB
 Imidan -SB, JB
 Perm-up -SB, BMSB, TBM, JB
 Endigo -SB, BMSB, TBM, JB
 Mustang Max -TPB, SB, BMSB, TBM, JB
 Warrior -TPB, SB, BMSB, TBM, JB
 Brigade/Bifenture -SB, BMSB, TBM, JB
 Danitol -SB, BMSB, TBM, JB
 Baythroid - SB, BMSB, TBM, JB
 Lannate - SB, BMSB, TBM, JB
 Venom/Scorpion - SB, BMSB

TPB will be present with flowering weeds.
 Venom & Scorpion - preharvest for BMSB
 Scales- target crawlers
 Favor Danitol, Baythroid, Leverage, Lannate,
 Scorpion and Venom for PHI's
 Delegate for thrips & Leps

Most Likely Pests, Days After Full Bloom

Pest	90-105
Tarnished Plant Bug	
Plum Curculio	
Oriental Fruit Moth	
Green Peach Aphid	
Stink Bugs native	
BMSB	
Scales	
Flower Thrips	
Tufted Apple Budmoth	
European Red Mite	Action Threshold
Two Spotted Spider Mite	
Japanese Beetle	
Lesser Peachtree Borer	
Peachtree Borer	

Voliam Flexi -OFM,SB, BMSB, TBM

Voliam Xpress -OFM, SB, BMSB, TBM, JB

Imidan -OFM, SB, JB

Perm-up -OFM, SB, BMSB, TBM, JB

Endigo -OFM, SB, BMSB, TBM,JB

Mustang Max -OFM, TPB, SB, BMSB, TBM, JB

Warrior -OFM, TPB, SB, BMSB, TBM, JB

Brigade/Bifenture -OFM, SB, BMSB, TBM, JB

Danitol -OFM, SB, BMSB, TBM, JB

Baythroid - OFM, SB, BMSB, TBM, JB

Lannate - OFM, SB, BMSB, TBM, JB

Venom/Scorpion - SB, BMSB

TPB will be present with flowering weeds.

Venom & Scorpion - preharvest for BMSB

Scales- target crawlers

Favor Danitol, Baythroid, Leverage, Lannate,

Scorpion and Venom for PHI's

Delegate for thrips and Leps



Thank You