



2007 PMTP Consultant Survey

Summary

A survey of tree fruit industry consultants was sent out in July 2008. The survey measured levels of insecticide use, IPM practice adoption, and consultant opinions on and perceptions of the transition to alternative pest management systems during the 2007 growing season. The survey response rate was 55% (40 out of 73 mailed out). Consultants identified other professional consultants, the WSU Decision Aid System, WSU researchers, and conferences, workshops or seminars as the most important sources of information in helping them make recommendations to their clientele.

Consultants surveyed made pest management recommendations on a mean of about 1950 acres of apples, about 10% of which was managed organically and 5% which was in transition to organic certification. Consultants also provided recommendations on a mean of 415 acres of cherries, 370 acres of pears, and smaller acreages of apricots, grapes, peaches, nectarines, prunes, and plums. 95% of respondents were male, and 75% were between 30 and 49 years of age. Two-thirds had had parents who farmed during their childhood, and two-thirds had a four-year college degree.

While codling moth was identified as the pest that caused the most damage or most resulted in consultants making control recommendations (97.5%), woolly apple aphid, rosy apple aphid, thrips, campylopus and spider mites were also ranked as important (>50%). Most consultants (67%) indicated that codling moth was a pest of concern every year and 94% indicated that it would cause 6% or more crop loss if not controlled for a year. Most consultants (92.5%) recommended Guthion as part of their codling moth control program and over half also recommended use of Imidan. Consultants were about equally split as to whether use of organophosphate insecticides (OPs) had increased, decreased or remained about the same compared to the previous three years. Most thought that codling moth damage had increased (40%) or remained about the same (47.5%) compared to the previous three years and fewer thought damage had decreased (12.5%). 95% of consultants indicated that the cost of codling moth control had increased relative to the previous three years. Consultants recommended a variety of insecticides regarded as alternatives to OPs. The most common alternatives were Assail, pheromones, oil, CM-virus, Entrust, Rimon and Intrepid. Consultants reported that field monitoring for damage, pheromone traps, degree-day models and resistance management strategies were the most often used IPM tactics.

Leafrollers were identified by only half of the consultants as being a pest that caused noticeable crop damage, resulted in high production costs, or made production more difficult, and only 30% of consultants indicated that leafrollers were of concern every year. The risk of crop loss by leafrollers was not as great as with codling moth, however, 82% thought crop loss would exceed 3% if controls were not applied for one year. The only OP used for leafroller was Lorsban and 80% of the consultants reported recommending this product. However, none of the consultants indicated an increase in their recommendations for Lorsban use relative to the previous three years, and 37.5% indicated they had reduced the frequency of Lorsban recommendations. Only 10% of consultants indicated that leafroller injury had increased over the past three years but most (57.5%) thought that costs had increased. Numerous OP alternatives were reported being recommended for leafroller control, including Success, Proclaim, Intrepid, Entrust, Bt, Rimon and Esteem. Consultants reported that field monitoring for damage, resistance management strategies, degree-day models, and economic or treatment thresholds were the most often used IPM tactics.

Not all consultants knew which was the last year that Guthion could be used, nor did they correctly identify how it would be restricted during the phase-out period. This indicates that there is room for more education around this issue. Overall, consultants expressed confidence in the use of OP alternatives for codling moth control. While consultants were concerned that both the costs and control of codling moth would become more difficult and riskier after the Guthion phase-out, they agreed that WSU research has



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developed good information on alternatives to Guthion. Consultants did not think that the costs of leafroller control would be higher after the phase-out of Guthion nor that this pest would be more difficult to control. Most consultants (75%) indicated that they would be interested in more training on the use of Guthion alternatives to manage pests. These results indicate that the PMTP is heading in the right direction – providing needed training and resources to help the apple industry adopt alternative technologies. Despite encouraging results, these results are nevertheless based on a small sample. Thus, a second and expanded consultant survey will be sent out this winter and results compared with the previous survey.



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Consultant Survey Data

Initial Questions

Are you currently a professional consultant who makes recommendations to orchard owners or managers on the use of insecticides on apples?

	Frequency	Percent
Yes	40	100.0
Non-responses = 0		

Over the past three years, which insects caused noticeable crop damage, resulted in higher production costs, or made production more difficult in the apple orchards for which you make recommendations?

Insect	Frequency	Percent
Codling moth	39	97.5
Woolly apple aphid	28	70.0
Rosy apple aphid	26	65.0
Thrips	24	60.0
Campylomma	22	55.0
Spider mite	22	55.0
Leafroller	20	50.0
Stink bug	15	37.5
Mealybug	9	22.5
San Jose scale	7	17.5
Green aphid	5	12.5
Rust mite	5	12.5
Lacanobia	2	5.0
Leafhopper	1	2.5
Other (black cherry aphid)	2	2.5
Other (pear psylla)	1	2.5
Leafminer	0	0
Non-responses = 0		

Over the past three years, which one of the insects selected in the previous question has been the biggest production problem in orchards for which you make recommendations? ^a

	Frequency	Percent
Codling moth	34	85.0
Woolly apple aphid	2	5.0
Leafroller	2	5.0
Stink bug	1	2.5
Other:	1	2.5
Total	40	100.0
Non-responses = 0		

^a 1 comment = "if biggest production problem is defined as making the most number of treatments or money spent to control pest or prevent damage"



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Questions about codling moth

How often does codling moth cause noticeable crop damage, result in higher production costs, or make production more difficult in the apple orchards for which you make recommendations?

	Frequency	Percent
Less than 1 out of every 5 years	0	0
About 1 out of every 5 years	3	7.7
About 2 out of every 5 years	1	2.6
About 3 out of every 5 years	6	15.4
About 4 out of every 5 years	3	7.7
Every year	26	66.7
Total	39	100.0
Non-responses = 1		

If no controls were applied for codling moth this year, what level of crop injury would you expect by harvest?

	Frequency	Percent
Less than 1%	1	2.6
1-2%	0	0
3-5%	1	2.6
6-10%	11	28.2
More than 10%	26	66.7
Total	39	100.0
Non-responses = 1		

During the 2007 growing season, did you recommend any of the following insecticides as a control for codling moth?

Insecticide	Frequency	Percent
Guthion (azinphos methyl)	37	92.5
Imidan (phosmet)	23	57.5
Diazinon	2	5.0
Non-responses = 0		

How did the frequency of your recommendation of these insecticides (Guthion, Diazinon, and Imidan) as a control for codling moth compare in 2007 growing season to 3 previous growing seasons?

	Frequency	Percent
The frequency of my recommendation of these insecticides was higher in 2007	12	30.0
The frequency of my recommendation of these insecticides was lower in 2007	14	35.0
The frequency of my recommendation of these insecticides remained about the same in 2007	13	32.5
I did not recommend these insecticides during the 2004-2007 growing seasons	1	2.5
Total	40	100.0
Non-responses = 0		



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During the 2007 growing season, did you recommend this insecticide as a control for codling moth?

Insecticide	Frequency	Percent	Non-responses
Assail (acetamiprid)	38	95.0	0
Pheromones (mating disruption)	38	95.0	0
Horticultural spray oil	35	87.5	0
CM granulosis virus	34	85.0	0
Entrust (spinosad)	33	82.5	0
Rimon (novaluron)	32	82.1	1
Intrepid (methoxyfenozide) ^a	27	67.5	0
Esteem (pyrifoxen)	15	38.5	1
Calypso (thiacloprid)	10	25.0	0
Other (Warrior – used up supply)	1	2.5	
Other (Pyganic)	1	2.5	
Other (Delegate)	1	2.5	
Other (Warrior/ProAxis)	1	2.5	
Other (Agrimels & oil)	1	2.5	

^a 1 comment = uses Intrepid as a “petal full application for OBCR; helps with CM eggs”

How often do you recommend or practice this IPM tactic as part of your consulting program for codling moth management?

IPM tactic	Never (%)	Rarely (%)	Occasionally (%)	Often (%)	Non-responses
Field monitoring for damage				100.0	0
Pheromone traps				100.0	0
Degree day models			5.0	95.0	0
Resistance management strategies			10.0	90.0	0
Economic or treatment thresholds	5.1	7.7	28.2	59.0	1
Border sprays		2.5	47.5	50.0	0
Delay distribution of bins in orchard ^a	10.0	15.0	27.5	47.5	0
Use of biological control agents	7.7	30.8	46.2	15.4	1
Reduced pesticide rates ^b	46.2	23.1	23.1	7.7	1
Alternate row middle spraying ^c	43.6	35.9	17.9	2.6	1
Other (Develop control measure/strategies for bin piles)				2.5	
Other (Mating disruption)				2.5	
Other (Preserve ENDEMIC biocontrols)				2.5	

^a 1 comment = delays distribution of bins in orchard “whenever possible”

^b 1 person circled both “never” and “rarely” for use of biological control agents – coded as non-response

^c 1 comment = uses alternate row middle spraying on “small trees”



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Over the past three years did codling moth injury in the apple orchards for which you make recommendations increase, decrease, or remain about the same?

	Frequency	Percent
Codling moth injury increased	16	40.0
Codling moth injury decreased	5	12.5
Codling moth injury remained about the same	19	47.5
Total	40	100.0
Non-responses = 0		

Over the past three years did the cost of codling moth control in the apple orchards for which you make recommendations increase, decrease, or remain about the same?

	Frequency	Percent
The cost of codling moth control increased	37	94.9
The cost of codling moth control decreased	0	0
The cost of codling moth control remained about the same	2	5.1
Total	39	100.0
Non-responses = 1		

What percentage of the conventionally managed apple acres for which you make recommendations would you estimate the preceding section on codling moth applies to?

% of acres	Frequency	Percent
1-10%	2	5.4
11-25%	2	5.4
26-50%	2	5.4
51-75%	10	27.0
76-99%	15	40.5
100%	6	16.2
Total	37	100.0
Non-responses = 3 ^{a b}		

^a 1 comment = one person felt that different percentages applied to different questions (for example, his answer for changing CM injury applied to 1-10% of his acres, while his answer for changing costs applied to 76-99% of his acres). Because there were multiple answers recorded, his answer(s) to this question had to be counted as a non-response.

^b 1 comment = "?", i.e. the person probably didn't understand question and so left it blank



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Questions about leafrollers

How often do leafrollers cause noticeable crop damage, result in higher production costs, or make production more difficult in the apple orchards for which you make recommendations?

	Frequency	Percent
Less than 1 out of every 5 years	11	28.2
About 1 out of every 5 years	1	2.6
About 2 out of every 5 years	8	20.5
About 3 out of every 5 years	5	12.8
About 4 out of every 5 years	2	5.1
Every year	12	30.8
Total	39	100.0
Non-responses = 1		

If no controls were applied for leafrollers this year, what level of crop injury would you expect by harvest? ^a

	Frequency	Percent
Less than 1%	2	5.1
1-2%	5	12.8
3-5%	10	25.6
6-10%	13	33.3
More than 10%	9	23.1
Total	39	100.0
Non-responses = 1		

^a 1 comment = "1 yr?" i.e. the person probably wanted to know if this meant level of crop injury over just 1 year

During the 2007 growing season, did you recommend any of the following insecticides as a control for leafroller?

Insecticide	Frequency	Percent
Lorsban (chlorpyrifos)	32	80
Guthion (azinphos methyl)	0	0
Imidan (phosmet)	0	0
Diazinon	0	0
Non-responses = 0		

How did the frequency of your recommendation of these insecticides (Guthion, Lorsban, Diazinon, and Imidan) as a control for leafrollers compare in 2007 growing season to 3 previous growing seasons?

	Frequency	Percent
The frequency of my recommendation of these insecticides was higher in 2007	0	0
The frequency of my recommendation of these insecticides was lower in 2007	15	37.5
The frequency of my recommendation of these insecticides remained about the same in 2007	20	50.0
I did not recommend these insecticides during the 2004-2007 growing seasons	5	12.5
Total	40	100.0
Non-responses = 0		



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During the 2007 growing season, did you recommend this insecticide as a control for leafroller?

Insecticide	Frequency	Percent	Non-responses
Success (spinosad)	37	92.5	0
Proclaim (emamectin benzoate)	33	82.5	0
Intrepid (methoxyfenozide)	32	80.0	0
Entrust (spinosad)	31	77.5	0
Bt (Bacillus thuringiensis)	29	72.5	0
Rimon (novaluron)	26	65.0	0
Esteem (pyrifoxen) ^a	23	59.0	1
Horticultural spray oil	17	42.5	0
Pheromones (mating disruption) ^b	5	12.5	0
Other (Entreed? (spelling problem))	1	2.5	

^a 1 comment = Wrote "But no more than 1 or 2 apps" for Esteem

^b 1 comment = Wrote "Some" for pheromones

How often do you recommend or practice this IPM tactic as part of your consulting program for leafroller management?

IPM tactic	Never (%)	Rarely (%)	Occasionally (%)	Often (%)	Non-responses
Field monitoring for damage ^a			5.0	95.0	0
Resistance management strategies		5.0	17.5	77.5	0
Degree day models	5.0	22.5	5.0	67.5	0
Economic or treatment thresholds	10.0	10.0	25.0	55.0	0
Pheromone traps	10.0	20.0	32.5	37.5	0
Border sprays	45.0	32.5	12.5	10.0	0
Use of biological control agents ^b	28.9	34.2	28.9	7.9	2
Reduced pesticide rates	56.4	30.8	10.3	2.6	1
Alternate row middle spraying	66.7	25.6	5.1	2.6	1

^a 1 comment = Wrote "Always" and drew a star next to field monitoring for damage

^b 1 comment = Wrote "BT" next to use of biological control agents

Over the past three years did leafroller injury in the apple orchards for which you make recommendations increase, decrease, or remain about the same?*

	Frequency	Percent
Leafroller injury increased	4	10
Leafroller injury decreased	15	37.5
Leafroller injury remained about the same	21	52.5
Total	40	100.0
Non-responses = 0		

^a 1 comment = "(Proclaim!!)"



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Over the past three years, did the cost of leafroller control in the apple orchards for which you make recommendations increase, decrease, or remain about the same?

	Frequency	Percent
The cost of leafroller control increased	23	57.5
The cost of leafroller control decreased	2	5.0
The cost of leafroller control remained about the same	15	37.5
Total	40	100.0
Non-responses = 0		

What percentage of the conventionally managed apple acres for which you make recommendations would you estimate the preceding section on codling moth applies to? ^a

% of acres	Frequency	Percent
1-10%	3	7.7
11-25%	1	2.6
26-50%	2	5.1
51-75%	9	23.1
76-99%	15	38.5
100%	9	23.1
Total	39	100.0
Non-responses = 1		

^a 1 comment = Wrote "less than" (and checked 1-10%, so meant less than 1-10%? Misunderstood question?)



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Sources of information for providing pest control recommendations

Over the past three years, how important were each of the following as sources of information in helping you provide pest control recommendations to your clientele?

Information Sources	Mean Scores on a Scale from 1 ("Not Important") to 5 ("Very Important")	Non-responses
Other professional consultants	4.28	0
WSU Decision Aid System (web-based IPM models and management) ^a	4.28	0
WSU researchers	4.21	1
Conferences, workshops, or seminars	4.05	0
WSU Extension educators	3.74	1
Internet-based resources ^b	3.73	0
WSU Crop Protection Guide (EB0419)	3.62	1
Other agricultural chemical distributor fieldmen	3.55	0
Formal education or continuing education classes	3.51	1
Non-WSU researchers	2.97	2
Growers	2.95	1
Newsletters or magazines	2.82	1
Field days or farm tours ^c	2.64	1
Packing warehouse fieldmen ^d	2.08	2
Commodity or grower association	2.08	2
Family members	1.74	1
Marketing organization	1.67	1

^a 1 comment = Wrote "Plus!" for WSU decision aid system (web-based IPM models & mgmt)

^b 1 comment = Wrote "DAC" (misspelling for DAS?) for internet-based resource

^c 1 comment = Wrote "usually held during the day (work week) when we are unable to attend" for field days or farm tours

^d 1 comment = Wrote "less," "less 1" for packing warehouse fieldmen & left question blank)



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Questions about Guthion (Azinphos-methyl) Phase-Out

Before reading the statement about Guthion, were you aware that Guthion is going to be phased out?

	Frequency	Percent
Yes	40	100.0
Non-responses = 0		

What will be the last year you can recommend the use of Guthion? ^a

	Frequency	Percent
2009	2	5.0
2010	12	30.0
2011	3	7.5
2012	22	55.0
Not sure	1	2.5
Total	40	100.0
Non-responses = 0		

^a 1 comment = "damn!"

How will the Guthion phase-out schedule affect your recommendations of Guthion over the next several growing seasons?

	Frequency	Percent
The phase-out schedule will limit when I can recommend Guthion (to a grower) during the growing season.	1	2.7
The phase-out schedule will limit the total amount of Guthion I can recommend (to a grower) each year.	12	32.4
The phase-out schedule will limit the total number of Guthion applications I can recommend (to a grower) each year.	1	2.7
All of the above.	23	62.2
Total	37	100.0
Non-responses = 3 ^a		

^a 1 person circled answers 2 & 3, and 2 people circled 2 & 4 – these were coded as non-responses



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How confident are you in your knowledge of how to use (recommend) alternatives for Guthion to achieve acceptable codling moth control? ^a

Alternatives for Guthion	Mean Scores on a Scale from 1 ("Not Confident") to 5 ("Very Confident")	Non-responses
Pheromones (mating disruption)	4.53	0
Assail (acetamiprid) ^b	4.50	0
CM granulosis virus	4.18	0
Entrust (spinosad) ^c	4.08	0
Horticultural spray oil	4.05	0
Rimon (novaluron)	3.83	0
Calypso (thiacloprid)	3.64	1
Intrepid (methoxyfenozide)	3.78	0
Esteem (pyriproxifen)	3.53	0

^a 1 comment – One person circled “acceptable codling moth control” and drew arrow to comment “stand alone”; Wrote “as a program” and drew arrow to “most 5s”

^b 2 comments on Assail = 1) “I’m still having a time of it educating growers about timing!” 2) “?? Confidant on how to use material, not confident in results”

^c 1 comment on Entrust = “I’m still having a time of it educating growers about timing”

Please indicate the extent to which you disagree or agree with each of the following statements.

Statement	Strongly Disagree (%)	Disagree (%)	Neither Disagree nor Agree (%)	Agree (%)	Strongly Agree (%)	Mean (scale: 1 = strongly disagree, 5 = strongly agree)	Non-responses
The cost of codling moth control will be higher after the Guthion phase-out		2.5		25.0	72.5	4.68	0
WSU research has developed good information on alternatives to Guthion			17.5	42.5	40.0	4.23	0
Control of codling moth will be more difficult after the Guthion phase-out		17.5	12.5	35.0	35.0	3.88	0
Phasing out Guthion will make tree fruit production riskier for growers	2.5	15.0	17.5	35.0	30.0	3.75	0
Phasing out Guthion will encourage growers to use safer pesticides	5.0	10.0	17.5	45.0	22.5	3.70	0
Growers’ opinions were not considered when the EPA decided to phase out Guthion		17.9	28.2	25.6	28.2	3.64	1
Growers have effective alternatives to Guthion at their disposal ^a	7.7	10.3	12.8	61.5	7.7	3.51	1
Non-WSU research has developed good information on alternatives to Guthion	7.5	12.5	35.0	35.0	10.0	3.28	0
Phasing out Guthion will require my clients (growers) to reorganize their orchard operations ^b	2.6	30.8	17.9	41.0	7.7	3.21	1

^a 1 comment = “Hmmp!” for Growers have effective alternatives to Guthion at their disposal

^b 1 comment = “What???” for Phasing out Guthion will require my clients (growers) to reorganize their orchard operations



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Please indicate the extent to which you disagree or agree with each of the following statements (continued).

Statement	Strongly Disagree (%)	Disagree (%)	Neither Disagree nor Agree (%)	Agree (%)	Strongly Agree (%)	Mean (scale: 1 = strongly disagree, 5 = strongly agree)	Non-responses
Growers will bear all the burden of the Guthion phase-out	15.0	25.0	17.5	22.5	20.0	3.08	0
Phasing out Guthion will provide my clients (growers) with new apple marketing opportunities ^a	5.1	23.1	56.4	15.4		2.82	1
Phasing out Guthion will protect the health of agricultural workers	17.5	27.5	22.5	25.0	7.5	2.78	0
Phasing out Guthion will have a positive environmental impact ^b	20.0	25.0	25.0	27.5	2.5	2.68	0
Phasing out Guthion will require significant retraining of agricultural workers ^c	12.8	41.0	28.2	10.3	7.7	2.59	1
Training workers to use alternatives to Guthion will be difficult for my clients (growers) to implement	15.0	50.0	22.5	7.5	5.0	2.38	0
The cost of leafroller control will be higher after the Guthion phase-out	25.0	35.0	32.5	5.0	2.5	2.25	0
It has been difficult for my clients (growers) to train workers to use Guthion	20.0	50.0	27.5	2.5		2.13	0
Phasing out Guthion as soon as possible will be beneficial to my clients (growers)	30.0	42.5	20.0	2.5	5.0	2.10	0
Control of leafrollers will be more difficult after the Guthion phase-out	35.0	50.0	5.0			1.80	0

^a 2 comments on Phasing out Guthion will provide my clients (growers) with new apple marketing opportunities:

1) "Tree Top"; 2) "What???"

^b 1 comment = "Hmmp!" for Phasing out Guthion will have a positive environmental impact

^c 1 comment = "What???" for Phasing out Guthion will require significant retraining of agricultural workers

Would you be interested in more training on how to use or recommend alternatives for Guthion to manage pests?

	Frequency	Percent
Yes	30	75.0
No	10	25.0
Non-responses = 0		



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Please share your thoughts about the Guthion phase-out in the space below.

- I think it's a big mistake. It's one of the more effective control methods out there, and it's about half the cost per acre compared to other effective insecticides.
- I think the Guthion phase out will make it difficult for growers to continue to produce the quality of fruit this state is known for.
- I will miss Guthion because I feel it is this most effective tool and economical tool for the control of codling moth at this time. I hope by 2010 - 2011 an effective codling moth control measure can be developed that is cost effective for the grower.
- I just became a crop consultant. I like Guthion but it has its pluses & minuses. It is still fairly effective & I wish I could use it at least once a year for a chemistry rotation partner.
- It seems somewhat artificial, not driven by real data. The phase-out seems driven more by fear than by fact.
- To Phase-Out Guthion Forced Growers To implement mating Disruption And begin To use Alternative materials That Have been developed. We As An industry Have 1) increased The Number of Sprays Needed each year 2) Which Has increased The expose of Pesticides to Growers, Shorter Lived materials That give us the Feeling of Safer material is a P.R. situation. Look At The Last 3 major Food Born illness Problems in the U.S. They Have Come From Farms using The cheapest Fertilizer on the market.
- It's ridiculous
- If alternatives aren't as effective, than frequency of alternative applications could be more. Causing more spray apps in our environment as a whole.
- A Guthion based CM Program was very stable. New Chems have changed the effects on predators. Should fight to keep AZ(Guthion) on limited Apple only usage.
- Guthion is very IPM friendly. Alternatives have proven to flare mites, disrupt predators & make my career a growers' livelihoods more difficult.
- There is no doubt that we as an industry, can successfully "phase out" Guthion. Unfortunately, no one seems to be communicating to growers the dramatic cost that they will assume. 1- Products replacing AZ are much more money per acre. 2-Products replacing AZ don't last as long. 3-Products replacing AZ are sometimes less efficacious resulting in more damage & increasing populations. 4-Products replacing AZ do not handle cooling & over heads as well, resulting in (even shorter) residences & poorer control. 5-Because of the above, we will have to increase support programs like; mating disruption virus, stickers/extenders, oils, etc. Resulting in increased cost.
- I believe that the phase out will increase the cost of production on tree fruit crops. I think that the level of control can be comparable, but at an increased cost.
- It will be expensive for growers who have not moved to soft programs and are not using mating disruption.
- The cost for newer & safer insecticides hurt the average grower, you can not compare \$15/acre to \$55/acre. In my experience that is what every grower looks at, what is the price? Why am I using something that cost \$55/acre when the \$15/acre product works better? I hear this every day! It is clear to me that we do have good (not great) alternatives to Guthion. What will be challenging is using these alternatives in a way that will have little impact on beneficial insects that help control secondary insects



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- It will be more costly for the growers. They will have to spray more often, with more costly products. NEW products won't last as long and need to be mixed for Dual modes of action.
- Early observations indicate that "soft" replacements for Guthion are much more disruptive to predatory insects than originally anticipated. This, coupled with the 2x cost of new materials will result in higher pest control costs for producers and more trips through their fields.
- We can farm without Guthion, but until they do, growers will continue to use A.Z. because of its cost & effectiveness.
- The biggest obstacle is retaining growers to timing of ovicide sprays
- My biggest problems with CM are from backyard trees and regrowth. Newer CM materials have trouble dealing with pressure from outside sources compared to Guthion. If the Environmentalists want to take away some of our tools they should also support making backyard trees and unmaintained lots with regrowth illegal.
- Guthion phase-out will not be a benefit to the environment if the alternative products used for pest control are pyrethroids

- Will not be that hard to phase-out Guthion have a lot of my growers who did it 10+ years ago.
- Guthion has been a cheap but effective tool for CM control. However, it is a nasty product to use and be around. The new products such as Delegate & Altacor look good on CM control and they seem to be easier on the workers. Guthion will be missed by some growers- but not by me.
- Overall it will be healthy for the industry to do this as quickly as possible. I think it is a rare orchard indeed that is so infested that it can ONLY be managed with the punch that Guthion provides. By the same token, the managers of those very infested orchards need to be aware that the time to clean up is NOW, because none of the alternatives is as effective (or as cheap!)



2007 PMTP Consultant Survey

Please tell us about your consulting activities

How many total apple orchard acres did you make recommendations for in 2007? ^a

Mean Acres	Non-responses
1951.63	0

^a 1 comment = "+ or -" for number of apple acres

Of the total apple orchard acres you made recommendations for in 2007, how many acres were in the following categories?

Categories	Mean Acres	Non-responses
Certified organic apples	217.59	1
Transition to certified organic apples	102.00	1
Organically managed apples, but not certified or in transition ^a	35.36	1

^a 1 comment = "?" for Organically managed apples but not certified or in transition

In what region are the apple orchards for which you make recommendations located?

Region	Frequency	Percent
Columbia Basin	20	50.0
Wenatchee	18	45.0
Okanogan	13	32.5
Lower Yakima Valley (Union Gap to Benton City)	11	27.5
Chelan/Manson	9	22.5
Upper Yakima Valley	8	22.5
Tri-Cities	7	17.5
Columbia Gorge	4	10.0
Ellensburg	1	2.5
Other (Douglas County)	1	2.5
Other (none)	1	2.5
Non-responses = 0		

How many acres of the following other tree fruit crops did you make recommendations for in 2007?

Crop	Mean conventional acres	Mean transitional acres	Mean certified organic acres	Total	Non-responses (respectively)
Pear ^a	335.68	4.68	29.84	370.20	3, 9, 8
Cherry	380.62	14.13	21.16	415.91	3, 10, 8
Other (apricots, plums, wine grapes) ^b	42.80	7.14	0.38	50.32	30, 33, 32
Peach	14.31	1.29	4.67	20.27	4, 12, 10
Nectarine	10.61	1.82	3.50	15.93	4, 12, 10
Prune	3.06	0.00	0.34	3.40	10, 5, 11

^a 1 comment – "A lot" on conventional acres of pear, but blank was left empty (so not reflected in mean)

^b Analysis can split up "Other" responses further if interested



2007 PMTP Consultant Survey

Respondent Demographics

Are you male or female?

	Frequency	Percent
Male	38	95.0
Female	2	5.0
Total	40	100.0

How old are you?

Age	Frequency	Percent
20-29 years	3	7.5
30-39 years	10	25.0
40-49 years	20	50.0
50-59 years	6	15.0
60-69 years	1	2.5
Total	40	100.0

Did your parents farm during any part of your childhood (age 0-18 years)?

	Frequency	Percent
Yes	27	67.5
No	13	32.5
Non-responses = 0		

Which of the following categories best describes your ethnic background?

Category	Frequency	Percent
Caucasian (not Spanish, Hispanic, or Latino)	38	95.0
American Indian or Alaska Native	1	2.5
Spanish, Hispanic, or Latino	0	0.0
Black or African American	0	0.0
Asian or Asian American	0	0.0
Other (citizen of the world)	1	2.5
Other	1	2.5
Non-responses = 0		

What is the highest level of formal education that you have completed?

	Frequency	Percent
Some college, but no degree	3	7.5
Two-year college degree	5	12.5
Four-year college degree	27	67.5
Some graduate school	3	7.5
Graduate degree	2	5.0
Total	40	100.0
Non-responses = 0		



2007 PMTP Consultant Survey

If you have any comments you would like to share with us, please write them in the space below.

- I think it would be a big mistake to ban Guthion. It's cheap effective and going to drive up input costs per acre with having to use alternative insecticides.
- Help us to educate growers about the real world without A.Z.! -The increased costs of the sprays themselves. -Potentially accepting more damage. -The increased commitment of their management time in spraying, removal of damage, altering the acceptance and placement of bins, etc. -Potentially altering their market strategies overseas. (Some may find it difficult to skip to Taiwan). I am amazed at how few people really understand what a challenge this will be to all of our resources. I'm thankful the industry is experiencing some profitability at the moment. What happens when we go back to \$100/Bin apples (or lower) and growers are spending 4x on codling moth control alone?
- Looking For An Adulticide For Lepidoptra Would be a good Start To Have in 1st Generation Codling Moth That does Not Have a 2 week Re entry Period. I Can See where Trapping And Growers Trying To do What the General Public Perceives As A Safer more environmental Friendly Program Toward Sager materials. Has placed a bigger burden on Tree Fruit Growers W/No Guarantee of a Greater Return on Their Time or investment. Very easy To Say mating Disruption And New materials "Safer" Products To Humans For CM Control but the Timing is so critical. As A Researcher do you get out of Bed At 4 Am And Work until dark most of my clients w/Family Farms do. Its easy To Say And Recommend it is another To be Guy or Gal That Has To get it done
- WSU does a very good job in training & research for WA St. Horticultural Crops. Good job PS forget AZM Phase out & bring back Penncap!
- IU Meetings have poor grower Attendances. Need to tie Private App Lic to IU participation. Same for All consultants -esp Ag Chem & Wandereres(sp?)! Tie Com Consultant Lic. to IU involvement. Revive Area Wides: -Grower Incentives -Cost share for CMMD. Grower & Fieldman Attendance for Lic's. Area coordinator with public Access to Area info. Stronger pest-boards in Chelan & Douglas Cty. (Signature and date)
- Need more education and exposure to the general public. Backyard trees and regrowth on undeveloped lots are a huge problem in Chelan County. Until these are dealt with, CM will continue to be a big problem.
- Thank you. We somehow need to convince more young people to become horticulturalists. It is becoming difficult to find people wanting to do our jobs.
- I am sorry this is late! In the future, for me, these type of questionnaires are better if sent out Nov. - Feb. Thank you!
- I just started work as a consultant.

Notes

- **One respondent noted on the form several times that he had just started work and therefore couldn't answer some of the questions that asked for historical data (B1, B8, B9, C1, C2, C9, etc.)**