Preliminary Comparative Summary

Data were gathered on knowledge of insecticide use and orchard IPM among 788 participants in Spanish language pesticide license recertification classes in 2009-10. These data are presented in the left hand column of each page of this report, and are compared with similar data gathered in 2008-09 from 982 respondents, as presented in the right column. All data were self-reported using the Turning Point audience response system.

Because each recertification class presentation was allotted a different time slot and was part of a different larger context, some questions were asked in certain sessions but not in others, or in one year but not the next. These differences are noted above each question. Note too that the last two pages of this report focus on the Decision Aid System and on knowledge of beneficial insects, questions asked only in 2009-10 and in particular sessions.

Comparing 2009-10 with 2008-09, responses were similar in many ways. Respondents worked primarily with tree fruit (79% and 73%, respectively), as pesticide applicators (38%, 36%) or supervisors (22%, 33%). Most applied pesticides as part of their jobs (73%, 71%) and many supervised people applying pesticides (43%, 47%). Most had worked with the pesticide Guthion (72%, 70%), and knew that it was being phased out (82%, 79%). Many knew how to manage crop production without Guthion (46%, 40%), a number that rose when including those who knew how to manage it “somewhat” (55%, 52%). When the analysis was restricted to only those who indicated that managing crop production was actually part of their job, the percentage who felt able to do so without Guthion rose (57%, 52%; or 69%, 68% when the “somewhat” respondents were included). Most had worked with the pesticide Gethion (72%, 70%), and knew that it was being phased out (82%, 79%). Many knew how to manage crop production without Guthion (46%, 40%), a number that rose when including those who knew how to manage it “somewhat” (55%, 52%). When the analysis was restricted to only those who indicated that managing crop production was actually part of their job, the percentage who felt able to do so without Guthion rose (57%, 52%; or 69%, 68% when the “somewhat” respondents were included). Most had worked with the pesticide Delegate (58% in 2009-10 compared to 47% in 2008-09), Altacor (42% compared to 25%), and Calypso (33% compared to 24%). The percentage of people who had worked with other new insecticides stayed constant (Assail 49-51%, Intrepid 41%, Rimon 28-29%, and Esteem 19-23%).

Pesticide safety data were fairly consistent from year to year (note that these questions were asked of relatively fewer respondents in 2009-10 than in 2008-09), with a few exceptions. In 2009-10, fewer respondents received pesticide information from their supervisors (31% compared with 49% in 2008-09) or took part in cholinesterase monitoring programs (43% compared with 57% in 2008-09). This may be in part because respondents in 2009-10 held slightly higher-level positions (19% were managers or growers in 2009-10 compared to 8% in 2008-09) in the orchard. Participants from both years’ sessions reported finding recertification classes useful and also enjoying using the Turning Point system.

In general, then, there is still room for participants to learn more about how to use IPM strategies to manage crops without Guthion, but this learning process has certainly already begun. Although some respondents didn’t know what IPM was, for example, they nevertheless had experience using IPM systems that included pheromones and alternative insecticides.

Note that because of the anonymous methods of data collection used, it is almost certain that some respondents participated in this survey exercise more than once, both from one year to the next and within the same year. As an indication, in 2009-10, 57% of respondents indicated that they had used Turning Point before, compared with 27% in the tail end of 2008-09 session). Nevertheless, data do provide a good sense of what participants in pesticide recertification classes know about the pest management transition and about pesticide safety, and indicate that information on these topics (the uses for which Turning Point has been employed thus far) has at least been reaching pesticide applicators and supervisors over the last two years.
Background and Demographic Questions

Each survey session began with general questions about the participants’ role regarding pesticides and basic demographics. The results of those questions follow. All graphs represent the percent response data for each question.

Number of respondents per meeting session

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>GS Long Yakima</td>
<td>275</td>
<td>28</td>
<td>441</td>
<td>53.3</td>
</tr>
<tr>
<td>Horticultural Association</td>
<td>272</td>
<td>27.7</td>
<td>258</td>
<td>32.7</td>
</tr>
<tr>
<td>Wenatchee (WSHA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilbur Ellis Yakima</td>
<td>196</td>
<td>20.0</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Wenatchee Recertification</td>
<td>68</td>
<td>6.9</td>
<td>33</td>
<td>4.2</td>
</tr>
<tr>
<td>Pasco Recertification</td>
<td>57</td>
<td>5.8</td>
<td>58</td>
<td>7.4</td>
</tr>
<tr>
<td>Pasco Ag Trade English</td>
<td>54</td>
<td>5.5</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Pasco Ag Trade Spanish</td>
<td>22</td>
<td>2.2</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Sunnyside Recertification</td>
<td>38</td>
<td>3.9</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Tilth Producers Yakima</td>
<td>*</td>
<td>*</td>
<td>28</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>982</td>
<td>100.0</td>
<td>788</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Not all meetings were surveyed both years.
## Background and Demographic Questions cont.

**What is your primary role at work?**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticide applicator ¹</td>
<td>335</td>
<td>36.2</td>
<td>202</td>
<td>38.1</td>
</tr>
<tr>
<td>Supervisor</td>
<td>319</td>
<td>7.6</td>
<td>118</td>
<td>22.3</td>
</tr>
<tr>
<td>Owner/manager ²</td>
<td>75</td>
<td>32.5</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Manager</td>
<td>*</td>
<td>*</td>
<td>78</td>
<td>14.7</td>
</tr>
<tr>
<td>Grower (owner)</td>
<td>*</td>
<td>*</td>
<td>21</td>
<td>4.0</td>
</tr>
<tr>
<td>Consultant</td>
<td>7</td>
<td>0.7</td>
<td>5</td>
<td>0.9</td>
</tr>
<tr>
<td>Other</td>
<td>89</td>
<td>9.1</td>
<td>39</td>
<td>7.4</td>
</tr>
<tr>
<td>I don't work in orchards ³</td>
<td>24</td>
<td>2.4</td>
<td>17</td>
<td>3.2</td>
</tr>
<tr>
<td>Missing (did not answer)</td>
<td>113</td>
<td>11.5</td>
<td>50</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>982</strong></td>
<td><strong>100.0</strong></td>
<td><strong>530</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ At the 2008 WSHA and Wenatchee Recertification meetings, the option “pesticide applicator” was broken out into licensed and unlicensed pesticide applicators. Data here are combined.

² At the 2008 GS Long and Wenatchee Recertification meetings, the option “owner/manager” was broken down into owners and managers. Data here are combined.

³ The option “I don't work in orchards” was not available to the 54 respondents in the 2008 Pasco Ag Trade English session.

![Primary role at work (%)](image-url)
**Background and Demographic Questions cont.**

*What crops do you work with? (multiple answers allowed)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree fruit</td>
<td>478</td>
<td>73.2</td>
<td>419</td>
<td>79.1</td>
</tr>
<tr>
<td>Grapes</td>
<td>99</td>
<td>15.2</td>
<td>80</td>
<td>15.1</td>
</tr>
<tr>
<td>Wheat</td>
<td>22</td>
<td>3.4</td>
<td>12</td>
<td>2.3</td>
</tr>
<tr>
<td>Potatoes</td>
<td>14</td>
<td>2.1</td>
<td>10</td>
<td>1.9</td>
</tr>
<tr>
<td>Other</td>
<td>65</td>
<td>10.0</td>
<td>39</td>
<td>7.4</td>
</tr>
<tr>
<td>Missing (did not answer)</td>
<td>74</td>
<td>11.3</td>
<td>36</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>752</strong> ¹</td>
<td><strong>100.0</strong></td>
<td><strong>596</strong> ²</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ This question was not asked at the 2008 WSHA or Pasco recertification classes; total respondents = 653.

² This question was not asked at the 2009 WSHA meeting; total respondents = 530.
Background and Demographic Questions cont.

How many years of experience do you have in agriculture? (only asked at the 2009 WSHA meeting)

<table>
<thead>
<tr>
<th>Years Experience</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>2.5</td>
<td>25</td>
<td>9.7</td>
</tr>
<tr>
<td>6.1</td>
<td>58</td>
<td>22.5</td>
</tr>
<tr>
<td>20-Nov</td>
<td>89</td>
<td>34.5</td>
</tr>
<tr>
<td>Over 20 years</td>
<td>68</td>
<td>26.4</td>
</tr>
<tr>
<td>Missing</td>
<td>14</td>
<td>5.4</td>
</tr>
<tr>
<td>Total</td>
<td>258</td>
<td>100</td>
</tr>
</tbody>
</table>

AZM and Alternatives Questions

The following survey results correspond to the questions related to the participants’ experience and understanding of Guthion (AZM) and their knowledge regarding alternatives. All graphs represent the percent response data for each question.

Have you worked with the pesticide Guthion (AZM)?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>686</td>
<td>69.9</td>
<td>360</td>
<td>71.7</td>
</tr>
<tr>
<td>No</td>
<td>188</td>
<td>19.1</td>
<td>97</td>
<td>19.3</td>
</tr>
<tr>
<td>I don't know</td>
<td>29</td>
<td>3</td>
<td>17</td>
<td>3.4</td>
</tr>
<tr>
<td>Missing</td>
<td>79</td>
<td>8</td>
<td>28</td>
<td>5.6</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100</td>
<td>502</td>
<td>100</td>
</tr>
</tbody>
</table>

1 Was not asked at the 2009 WSHA or 2010 Tilth meetings.
AZM and Alternatives Questions cont.

Did you already know that Guthion (AZM) is being phased out?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>777</td>
<td>79.1</td>
<td>409</td>
<td>81.5</td>
</tr>
<tr>
<td>No</td>
<td>144</td>
<td>14.7</td>
<td>55</td>
<td>10.9</td>
</tr>
<tr>
<td>Missing</td>
<td>61</td>
<td>6.2</td>
<td>38</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>502</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was not asked at 2009 WSHA or 2010 Tilth meetings.

Until what year can you continue to use Guthion (AZM)?

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>98</td>
<td>10.6</td>
<td>26</td>
<td>3.4</td>
</tr>
<tr>
<td>2012</td>
<td>483</td>
<td>52.2</td>
<td>522</td>
<td>68.7</td>
</tr>
<tr>
<td>2015</td>
<td>17</td>
<td>1.8</td>
<td>15</td>
<td>2.0</td>
</tr>
<tr>
<td>2020</td>
<td>6</td>
<td>0.7</td>
<td>8</td>
<td>1.0</td>
</tr>
<tr>
<td>I don't know</td>
<td>251</td>
<td>27.1</td>
<td>135</td>
<td>17.8</td>
</tr>
<tr>
<td>Missing</td>
<td>70</td>
<td>7.6</td>
<td>54</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>925</td>
<td>100.0</td>
<td>760</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Correct answer

¹ Correct answer

² Was not asked at the 2008 Pasco recertification meeting.

³ Was not asked at the 2009 WSHA or 2010 Tilth meetings.

Do you know how to manage crop production without Guthion (AZM)?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>370</td>
<td>52.3</td>
<td>233</td>
<td>57.4</td>
</tr>
<tr>
<td>No</td>
<td>148</td>
<td>20.9</td>
<td>85</td>
<td>20.9</td>
</tr>
<tr>
<td>Somewhat</td>
<td>114</td>
<td>16.1</td>
<td>45</td>
<td>11.1</td>
</tr>
<tr>
<td>Missing</td>
<td>76</td>
<td>10.7</td>
<td>43</td>
<td>10.6</td>
</tr>
<tr>
<td>Total</td>
<td>708</td>
<td>100.0</td>
<td>502</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Response of N/A were eliminated for better comparison.

² Was not asked at the 2008 Pasco recertification meeting.

³ Was not asked at the 2009 WSHA or 2010 Tilth meetings.
Turning Point Data from Pesticide Recertification Classes

Have you worked with any of these pesticides? (multiple answers allowed)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Delegate</td>
<td>458</td>
<td>46.6</td>
<td>439</td>
<td>57.8</td>
</tr>
<tr>
<td>Assail</td>
<td>201</td>
<td>51.0</td>
<td>375</td>
<td>49.3</td>
</tr>
<tr>
<td>Altacor</td>
<td>249</td>
<td>25.4</td>
<td>322</td>
<td>42.4</td>
</tr>
<tr>
<td>Intrepid</td>
<td>405</td>
<td>41.2</td>
<td>311</td>
<td>40.9</td>
</tr>
<tr>
<td>Calypso</td>
<td>237</td>
<td>24.1</td>
<td>253</td>
<td>33.3</td>
</tr>
<tr>
<td>Rimon</td>
<td>276</td>
<td>28.1</td>
<td>220</td>
<td>28.9</td>
</tr>
<tr>
<td>Esteem</td>
<td>222</td>
<td>22.6</td>
<td>146</td>
<td>19.2</td>
</tr>
<tr>
<td>I don't know</td>
<td>72</td>
<td>7.3</td>
<td>44</td>
<td>5.8</td>
</tr>
<tr>
<td>I don't work with pesticides</td>
<td>67</td>
<td>8.9</td>
<td>75</td>
<td>9.9</td>
</tr>
<tr>
<td>Missing</td>
<td>123</td>
<td>12.5</td>
<td>57</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>982</strong></td>
<td></td>
<td><strong>760</strong></td>
<td></td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2010 Tilth meeting.

Have you used pheromones?

<table>
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<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>684</td>
<td>73.9</td>
<td>582</td>
<td>76.6</td>
</tr>
<tr>
<td>No</td>
<td>140</td>
<td>15.1</td>
<td>100</td>
<td>13.2</td>
</tr>
<tr>
<td>I don't know</td>
<td>32</td>
<td>3.5</td>
<td>24</td>
<td>3.1</td>
</tr>
<tr>
<td>Missing</td>
<td>69</td>
<td>7.5</td>
<td>54</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>925</strong></td>
<td>100.0</td>
<td><strong>760</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was not asked at 2008 Pasco recertification meeting.
² Was not asked at the 2009 WSHA or 2010 Tilth meetings.

Do you know what Integrated Pest Management (IPM) is?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>496</td>
<td>53.6</td>
<td>262</td>
<td>52.2</td>
</tr>
<tr>
<td>No</td>
<td>227</td>
<td>24.5</td>
<td>116</td>
<td>23.1</td>
</tr>
<tr>
<td>Somewhat</td>
<td>133</td>
<td>14.4</td>
<td>81</td>
<td>16.1</td>
</tr>
<tr>
<td>Missing</td>
<td>69</td>
<td>7.5</td>
<td>43</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>925</strong></td>
<td>100.0</td>
<td><strong>502</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2008 Pasco recertification meeting.
² Was not asked at the 2009 WSHA or 2010 Tilth meetings.
Pesticide Safety Questions

The following survey results correspond to the questions related to participants’ experience and understanding of pesticide safety including handling and labeling. All graphs represent the percent data for each question.

Do you apply pesticides as part of your job?

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>693</td>
<td>70.6</td>
<td>365</td>
<td>72.7</td>
</tr>
<tr>
<td>No</td>
<td>199</td>
<td>20.3</td>
<td>97</td>
<td>19.3</td>
</tr>
<tr>
<td>Missing</td>
<td>90</td>
<td>9.1</td>
<td>40</td>
<td>8.0</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>502</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2010 Tilth meeting during this survey period.

Have you been part of cholinesterase testing/monitoring program?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tr>
<td>Yes</td>
<td>562</td>
<td>57.2</td>
<td>25</td>
<td>43.1</td>
</tr>
<tr>
<td>No</td>
<td>329</td>
<td>33.5</td>
<td>30</td>
<td>51.7</td>
</tr>
<tr>
<td>I don't know</td>
<td>11</td>
<td>1.1</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Missing</td>
<td>80</td>
<td>8.2</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>58</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was only asked at the Pasco recertification meeting during this survey period.

Do you have a pesticide applicators license?

<table>
<thead>
<tr>
<th>Response</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>302</td>
<td>68.0</td>
</tr>
<tr>
<td>No</td>
<td>113</td>
<td>25.5</td>
</tr>
<tr>
<td>Missing</td>
<td>29</td>
<td>6.5</td>
</tr>
<tr>
<td>Total ¹</td>
<td>444</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was only asked at the 2010 GS Long and Wenatchee recertification meetings.
Do you supervise people who apply pesticides?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>447</td>
<td>45.5</td>
<td>214</td>
<td>42.6</td>
</tr>
<tr>
<td>No</td>
<td>435</td>
<td>44.3</td>
<td>241</td>
<td>48.0</td>
</tr>
<tr>
<td>Missing</td>
<td>100</td>
<td>10.2</td>
<td>47</td>
<td>9.4</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>502</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2009 WSHA or 2010 Tilth meetings during this survey period.

Do you know how to check what kinds of personal protective equipment (PPE) you need to use with a pesticide?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>895</td>
<td>91.1</td>
<td>54</td>
<td>93.1</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>3.1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Missing</td>
<td>57</td>
<td>5.8</td>
<td>4</td>
<td>6.9</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>58</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was only asked at the Pasco recertification meeting during this survey period.

When you work with pesticides, do you know the re-entry interval (REI) for the product?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>849</td>
<td>86.5</td>
<td>54</td>
<td>93.1</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>2.75</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>I don't know what REI means</td>
<td>27</td>
<td>2.75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I don't work with pesticides</td>
<td>22</td>
<td>2.2</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Missing</td>
<td>57</td>
<td>5.8</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>982</td>
<td>100.0</td>
<td>58</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Was only asked at the Pasco recertification meeting during this survey period.
Turning Point Data from Pesticide Recertification Classes

Pesticide Safety Questions cont.

When you work with pesticides, how well do you understand the labels?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfectly</td>
<td>60</td>
<td>17.5</td>
<td>126</td>
<td>25.1</td>
</tr>
<tr>
<td>Well</td>
<td>73</td>
<td>21.3</td>
<td>104</td>
<td>20.7</td>
</tr>
<tr>
<td>Somewhat</td>
<td>134</td>
<td>39</td>
<td>187</td>
<td>37.2</td>
</tr>
<tr>
<td>Not much</td>
<td>39</td>
<td>11.4</td>
<td>27</td>
<td>5.4</td>
</tr>
<tr>
<td>N/A (don't work with pesticides)</td>
<td>10</td>
<td>2.9</td>
<td>19</td>
<td>3.8</td>
</tr>
<tr>
<td>Missing</td>
<td>27</td>
<td>7.9</td>
<td>39</td>
<td>7.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>343</strong></td>
<td><strong>100.0</strong></td>
<td><strong>502</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ Was only asked at the 2008 WSHA and 2009 GSL meetings during this survey period.
² Was not asked at the 2009 WSHA or 2010 Tilth meetings during this survey period.

Do you get asked questions at work about the pesticides that are being used?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>772</td>
<td>73.5</td>
<td>38</td>
<td>65.5</td>
</tr>
<tr>
<td>No</td>
<td>178</td>
<td>18.1</td>
<td>15</td>
<td>25.9</td>
</tr>
<tr>
<td>I don't work with pesticides</td>
<td>25</td>
<td>2.6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Missing</td>
<td>57</td>
<td>5.8</td>
<td>5</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>982</strong></td>
<td><strong>100</strong></td>
<td><strong>58</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

¹ Was only asked at the 2010 Pasco recertification meeting during this survey period.
## Pesticide Safety Questions cont.

If you get asked questions at work, do you have enough information to answer them?

<table>
<thead>
<tr>
<th>Response</th>
<th>2008-2009</th>
<th></th>
<th>2009-2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>705</td>
<td>71.5</td>
<td>40</td>
<td>69.0</td>
</tr>
<tr>
<td>No</td>
<td>130</td>
<td>13.2</td>
<td>10</td>
<td>17.2</td>
</tr>
<tr>
<td>I don't answer such questions</td>
<td>62</td>
<td>6.3</td>
<td>4</td>
<td>6.9</td>
</tr>
<tr>
<td>Missing</td>
<td>85</td>
<td>8.7</td>
<td>4</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Total 982 100.0 58 ¹ 100.0

¹ Was only asked at the 2010 Pasco recertification meeting during this survey period.

Information Source: Label/MSDS, My supervisor, Certification classes, Gov. entity, Medical provider, Other, I don't receive the info I need, I don't work with pesticides, Missing

<table>
<thead>
<tr>
<th>Information Source</th>
<th>2008-2009</th>
<th></th>
<th>2009-2010</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Label/MSDS</td>
<td>548</td>
<td>55.8</td>
<td>35</td>
<td>60.3</td>
</tr>
<tr>
<td>My supervisor</td>
<td>479</td>
<td>48.8</td>
<td>18</td>
<td>31.0</td>
</tr>
<tr>
<td>Certification classes</td>
<td>339</td>
<td>34.5</td>
<td>20</td>
<td>34.5</td>
</tr>
<tr>
<td>Gov. entity ¹</td>
<td>169</td>
<td>17.2</td>
<td>8</td>
<td>13.8</td>
</tr>
<tr>
<td>Medical provider</td>
<td>49</td>
<td>5.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>38</td>
<td>3.9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I don't receive the info I need</td>
<td>22</td>
<td>2.2</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>I don't work with pesticides ²</td>
<td>38</td>
<td>3.9</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Missing</td>
<td>70</td>
<td>7.1</td>
<td>4</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Total 982 58 ³

¹ Gov entity = DOH, WSDA, L&I, WSU, UW, etc.
² The option “I don’t work with pesticides” was not offered at the 2009 Sunny Side and 2010 Pasco recertification meetings.
³ Was only asked at the Pasco recertification meeting during this survey period.
### Pesticide Safety Questions cont.

**How do you interact with pesticides at work?** (multiple answers allowed)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I mix and load</td>
<td>172</td>
<td>50.1</td>
<td>19</td>
<td>32.8</td>
</tr>
<tr>
<td>I apply pesticides</td>
<td>155</td>
<td>45.2</td>
<td>22</td>
<td>37.9</td>
</tr>
<tr>
<td>I mix, load and apply</td>
<td>142</td>
<td>41.4</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>I'm responsible for spray crews &amp; applications</td>
<td>113</td>
<td>23.9</td>
<td>22</td>
<td>37.9</td>
</tr>
<tr>
<td>I order pesticides</td>
<td>39</td>
<td>11.4</td>
<td>11</td>
<td>19.0</td>
</tr>
<tr>
<td>None of the above</td>
<td>25</td>
<td>7.3</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>I don't work with pesticides</td>
<td>17</td>
<td>5.0</td>
<td>8</td>
<td>13.8</td>
</tr>
<tr>
<td>Missing</td>
<td>32</td>
<td>9.3</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>343</strong></td>
<td></td>
<td><strong>58</strong></td>
<td></td>
</tr>
</tbody>
</table>

* The answer choice "I mix, load and apply" was not available during this survey period.

¹ Was only asked at the 2010 Pasco recertification meeting during this survey period.
Decision Aid System (DAS) Usage Questions

The following survey results correspond to the questions related to participants’ experience and understanding of the WSU Decision Aid System (DAS). This question set was not asked during the 2008-2009 Audience Survey period nor at the 2009 WSHA meeting. All graphs represent the percent data for each question.

**Had you heard about the WSU Decision Aid System (DAS) before today?**

<table>
<thead>
<tr>
<th>Response</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>169</td>
<td>31.9</td>
</tr>
<tr>
<td>No</td>
<td>302</td>
<td>57.0</td>
</tr>
<tr>
<td>Missing</td>
<td>59</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>530</strong>¹</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2009 WSHA meeting nor during the 2008-2009 survey period.

**Do you use DAS?**

<table>
<thead>
<tr>
<th>Response</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>61</td>
<td>11.5</td>
</tr>
<tr>
<td>No</td>
<td>410</td>
<td>77.4</td>
</tr>
<tr>
<td>Missing</td>
<td>59</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>530</strong>¹</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2009 WSHA meeting nor during the 2008-2009 survey period.

**Would you prefer to use DAS in English or Spanish?**

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>In English</td>
<td>48</td>
<td>9.1</td>
</tr>
<tr>
<td>In Spanish</td>
<td>366</td>
<td>69.0</td>
</tr>
<tr>
<td>No preference</td>
<td>42</td>
<td>7.9</td>
</tr>
<tr>
<td>I don’t think I will use DAS</td>
<td>20</td>
<td>3.8</td>
</tr>
<tr>
<td>Missing</td>
<td>54</td>
<td>10.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>530</strong>¹</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

¹ Was not asked at the 2009 WSHA meeting nor during the 2008-2009 survey period.
Decision Aid System (DAS) Usage Questions cont.

Would you like to learn DAS in a workshop?

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, in Spanish</td>
<td>407</td>
<td>76.8</td>
</tr>
<tr>
<td>Yes, in English</td>
<td>59</td>
<td>11.1</td>
</tr>
<tr>
<td>No</td>
<td>17</td>
<td>3.2</td>
</tr>
<tr>
<td>Missing</td>
<td>47</td>
<td>8.9</td>
</tr>
<tr>
<td>Total</td>
<td>530 (^1)</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^1\) Was not asked at the 2009 WSHA meeting nor during the 2008-2009 survey period.

Beneficial Insects and Biological Control Practices Questions

The following survey results correspond to the questions related to participants’ knowledge of the beneficial insects and biological control practices. This question set was only asked at the 2010 Tilth meeting. All graphs represent the percent data for each question.

Do you work in an orchard in which beneficial insects or mites are released to improve pest control?

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>9</td>
<td>32.1</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>42.9</td>
</tr>
<tr>
<td>I don’t know</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Which of these beneficial insects or mites are released in your orchard? (multiple answers allowed)

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacewings</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lady beetles</td>
<td>7</td>
<td>25.0</td>
</tr>
<tr>
<td>Predatory mites</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beneficials are released, but I don’t know which.</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>No or I don’t know if beneficials are released.</td>
<td>16</td>
<td>57.1</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>
Beneficial Insects ad Biological Control Practices Questions cont.

If beneficiaries are released in your orchard, do you think it is important or not so important to research how to improve the release process?

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think its important</td>
<td>18</td>
<td>64.3</td>
</tr>
<tr>
<td>I don't think its so important</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beneficials aren’t released where I work (N/A)</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

If beneficiaries are released in your orchard, do you think it is important or not so important to research their efficacy?

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think its important</td>
<td>16</td>
<td>57.1</td>
</tr>
<tr>
<td>I don't think its so important</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beneficials aren’t released where I work (N/A)</td>
<td>8</td>
<td>28.6</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>14.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>

If beneficiaries are not released in your orchard, would you consider releasing them if there was good evidence of their efficacy?

<table>
<thead>
<tr>
<th>Preference</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>23</td>
<td>82.1</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Beneficials are released where I work</td>
<td>2</td>
<td>7.2</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Meeting Feedback Questions

The following survey results correspond to the questions only asked at specific meetings regarding the respondents’ past history with participating in a Turning Point audience response system survey and their purpose for attending the meeting. This question set was not asked during the 2008-2009 Audience Survey period nor at the 2009 WSHA meeting. All graphs represent the percent data for each question.

**Why did you come to this meeting today?** (multiple answers allowed)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To learn</td>
<td>233</td>
<td>67.9</td>
<td>61</td>
<td>70.9</td>
</tr>
<tr>
<td>For the credits</td>
<td>181</td>
<td>52.8</td>
<td>36</td>
<td>41.9</td>
</tr>
<tr>
<td>My boss sent me</td>
<td>94</td>
<td>27.4</td>
<td>10</td>
<td>11.6</td>
</tr>
<tr>
<td>I had a day off of work</td>
<td>23</td>
<td>6.7</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>To meet and/or see colleagues</td>
<td>4 ^3</td>
<td>5.9</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td>Other reasons</td>
<td>13</td>
<td>3.8</td>
<td>5</td>
<td>5.8</td>
</tr>
<tr>
<td>Missing</td>
<td>12</td>
<td>3.5</td>
<td>10</td>
<td>11.6</td>
</tr>
<tr>
<td><strong>Total respondents</strong></td>
<td>343 ^1</td>
<td></td>
<td>86 ^2</td>
<td></td>
</tr>
</tbody>
</table>

1 Responses from the GS Long and Wenatchee recertification meetings.
2 Responses from the Pasco recertification and Tilth meetings.
3 The answer “to meet and/or see colleagues” was not available at the 2009 GS Long meeting participants.
Meeting Feedback Questions cont.

**Why did you come to this meeting today?** (multiple answers allowed)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>182</td>
<td>53.1</td>
<td>44</td>
<td>51.2</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>102</td>
<td>29.7</td>
<td>25</td>
<td>29.1</td>
</tr>
<tr>
<td>Some</td>
<td>22</td>
<td>6.4</td>
<td>8</td>
<td>9.3</td>
</tr>
<tr>
<td>No or not much</td>
<td>5</td>
<td>1.5</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td>I don’t know</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>Missing</td>
<td>25</td>
<td>7.3</td>
<td>4</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>343</td>
<td>100</td>
<td>86</td>
<td>100</td>
</tr>
</tbody>
</table>

1 Responses from the GS Long and Wenatchee recertification meetings.

2 Responses from the Pasco recertification and Tilth meetings.

**Have you used the Turning Point System before?**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>94</td>
<td>27.4</td>
<td>287</td>
<td>57.2</td>
</tr>
<tr>
<td>No</td>
<td>191</td>
<td>55.7</td>
<td>159</td>
<td>31.7</td>
</tr>
<tr>
<td>Missing</td>
<td>58</td>
<td>16.9</td>
<td>56</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>343</td>
<td>100</td>
<td>502</td>
<td>100</td>
</tr>
</tbody>
</table>

1 Responses from the 2009 GS Long and Wenatchee recertification meetings.

2 Was not asked at the 2010 Pasco recertification and 2009 WSHA meetings.

**Did you like using the Turning Point System?**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Liked it</td>
<td>845</td>
<td>91.4</td>
<td>718</td>
<td>91.1</td>
</tr>
<tr>
<td>Didn’t like it</td>
<td>41</td>
<td>4.4</td>
<td>28</td>
<td>3.6</td>
</tr>
<tr>
<td>Missing</td>
<td>39</td>
<td>4.2</td>
<td>42</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>925</td>
<td>100</td>
<td>788</td>
<td>100</td>
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</table>
Meeting Feedback Questions cont.

*Did you use the Turning Point system at this same meeting last year?*

<table>
<thead>
<tr>
<th>Response</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>271</td>
<td>54.0</td>
</tr>
<tr>
<td>No</td>
<td>191</td>
<td>38.0</td>
</tr>
<tr>
<td>Missing</td>
<td>40</td>
<td>8.0</td>
</tr>
<tr>
<td>Total</td>
<td>502 ¹</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹This question was only asked during the 2009-2010 survey period and excluded the 2009 WSHA and 2010 Tilth meetings.

*What types of information do you like learning in this meeting?* (multiple answers allowed)

<table>
<thead>
<tr>
<th>Information Type</th>
<th>2009-2010 Frequency</th>
<th>2009-2010 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker safety (PPE, respirators, cholinesterase, etc.)</td>
<td>270</td>
<td>65.7</td>
</tr>
<tr>
<td>Product/pesticide news</td>
<td>202</td>
<td>49.1</td>
</tr>
<tr>
<td>Understanding pesticide labels and MSDS</td>
<td>190</td>
<td>46.2</td>
</tr>
<tr>
<td>Pests and Disease</td>
<td>184</td>
<td>44.8</td>
</tr>
<tr>
<td>Airblast sprayer calibration</td>
<td>169</td>
<td>41.1</td>
</tr>
<tr>
<td>Missing</td>
<td>37</td>
<td>9.0</td>
</tr>
<tr>
<td>Total respondents</td>
<td>411 ¹</td>
<td></td>
</tr>
</tbody>
</table>

¹This question was only asked at the 2010 GS Long meeting.