IR-4 Ornamental Horticulture Program
Orkestra (Fluxapyroxad + Pyraclostrobin) Crop Safety

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Lori Harrison
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Abstract

The IR-4 Project screens new active ingredients for potential deleterious impacts to aid growers in selection of appropriate disease management tools for their crops. During 2014 and 2015, IR-4 completed 42 trials on 22 ornamental plant species examining phytotoxicity related to foliar applications of Orkestra (fluxapyroxad + pyraclostrobin). In these trials, 4 species or genera exhibited minimal or no injury after foliar applications in a minimum of 3 trials for each crop; these can be added to a list of tolerant plants in the new label for this active ingredient. All trials for sixteen other species or genera exhibited minimal or no injury in the limited number of trials (one or two) for each crop; BASF can consider adding these to the label.
**Introduction**

The IR-4 Project screens new active ingredients for potential deleterious impacts to aid growers in selection of appropriate disease management tools for their crops. During 2014 and 2015, IR-4 completed 42 trials on 22 ornamental plant species examining phytotoxicity related to foliar applications of Orkestra (fluxapyroxad + pyraclostrobin).

**Materials and Methods**

Orkestra was tested applied as foliar treatment typically 3 times at approximately 14 days intervals. The application rates were 8, 16 and 32 fl oz per 100 gal, plus a water treated control. A minimum of six plants (replicate treatments) were required. Phytotoxicity was rated 7 days after each application using a scale of 0 to 10 (0 = No phytotoxicity; 10 = Complete kill). The following protocols were used: 14-003 and 15-003. For more detailed materials and methods, including application rates for various products, please visit [http://ir4.rutgers.edu/ornamental/OrnamentalDrafts.cfm](http://ir4.rutgers.edu/ornamental/OrnamentalDrafts.cfm) to view and download these protocols.

Orkestra was supplied to researchers (See list of researchers in Appendix 1) by BASF.

**Results and Summary**

Based on the type and nature of injury seen with pesticide applications, tested plant species were placed into four categories: 1) no significant phytotoxicity or growth differences from the untreated check or any injury was transitory, 2) no or minimal transitory injury seen at the 1X rate, but the 2X and/or 4X rates did cause significant phytotoxicity, 3) Significant injury sufficient to recommend growers not utilize fluxapyroxad + pyraclostrobin, and 4) more data is needed to make informed recommendations.

**Phytotoxicity**

Across all plant species tested, Orkestra caused no or minimal negative impact on 4 plant species or genera (Table 1). Only one plant species (*Cornus florida*) exhibited significant injury in one study (Table 2). No crops exhibited significant injury at 1x (Table 3). There are 18 species or genera where less than 3 trials were conducted so there is not enough information available at this time (Table 4). All trials for 16 of these crops showed no or minimal, transitory phytotoxicity.

Please see Table 5 for a list of research and a summary of the individual trial results with Orkestra.
Table 1. List of Orkestra treated crops with no or minimal transitory injury.

*Dianthus* sp.
*Pinus* sp.
*Verbena* sp.
*Zinnia* sp.

Table 2. List of Orkestra treated crops with no injury at 1X but significant injury at 2X or 4X.

*Cornus florida*¹

¹ Injury observed was in the form of discolored and distorted leaves.

Table 3. List of Orkestra treated crops with significant injury at 1X.

None

Table 4. List of Orkestra treated crops where more information is needed.

*Aquilegia* sp.¹  *Osteospermum* sp.¹
*Catharanthus* roseus¹  *Pelargonium* × *hortorum*¹
*Coreopsis* sp.¹  *Picea* sp.¹
*Coronius* anomomum¹  *Pseudotsuga* menziesii¹
*Hydrangea macrophylla*¹  *Rosa* sp.¹
*Impatiens* hawkeri¹  *Salvia* sp.¹
*Lantana* sp.¹  *Ulmus* sp.
*Lupinus* sp.¹  *Vinca* sp.¹
*Osteospermum* sp.¹  *Viola* × *wittrockiana*¹

¹ For these plants, the one or two trials presented here indicate no phytotoxicity or slight, transient injury, but these findings need to be confirmed.
Table 5  Detailed Summary of Crop Safety Testing with Orkestra (fluxapyroxad + pyraclostrobin)

Notes: Table entries are sorted by crop Latin name. Only those trials with research reports received by 3/16/2016 are listed below.

<table>
<thead>
<tr>
<th>PR#</th>
<th>Product (Active Ingredients)</th>
<th>Crop</th>
<th>Production Site</th>
<th>Researcher</th>
<th>State</th>
<th>Year</th>
<th>Application Type</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>31765</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Columbine (Aquilegia sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31765</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Columbine (Aquilegia sp.) A. canadensis 'Little Lanterns'</td>
<td>Field Container</td>
<td>Catlin</td>
<td>NY</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or significant growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times; unacceptable spray residue at 2X and 4X after 3rd application.</td>
</tr>
<tr>
<td>32214</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Rose Periwinkle (Catharanthus roseus) 'Cora Burgundy'</td>
<td>Greenhouse</td>
<td>Freiberger</td>
<td>NJ</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times; no delay in blooming.</td>
</tr>
<tr>
<td>32416</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Tickseed (Coreopsis sp.) 'Early Sunrise Yellow'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31772</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Dogwood (Cornus sp.) C. amomum</td>
<td>Field Container</td>
<td>Brazee</td>
<td>MA</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31772</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Dogwood (Cornus sp.) C. florida</td>
<td>Field Container</td>
<td>Reding</td>
<td>OH</td>
<td>2015</td>
<td>Foliar</td>
<td>Moderate to high injury increasing with rates (8, 16 and 32 fl oz per 100 gal) applied 3 times; no growth reduction but 4X treated plants not marketable.</td>
</tr>
<tr>
<td>31761</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pinks (Dianthus sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31761</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pinks (Dianthus sp.) D. chinensis 'First Love'</td>
<td>Field Container</td>
<td>DeFrancesco</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31761</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pinks (Dianthus sp.) D. gratianopolitanus 'Firewitch'</td>
<td>Field Container</td>
<td>Hausbeck</td>
<td>MI</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times; visible spray residue on treated plants.</td>
</tr>
<tr>
<td>31761</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pinks (Dianthus sp.) 'Neon Star'</td>
<td>Field Container</td>
<td>Hand</td>
<td>OH</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31766</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Daylily (Hemerocallis sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>PR#</td>
<td>Product (Active Ingredients)</td>
<td>Crop</td>
<td>Production Site</td>
<td>Researcher</td>
<td>State</td>
<td>Year</td>
<td>Application Type</td>
<td>Results</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>31766</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Daylily (Hemerocallis sp.)</td>
<td>Field Container</td>
<td>Reding</td>
<td>OH</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury with 8, slight and moderate with 16 and 32 fl oz per 100 gal applied 3 times; good recovery, with all plants marketable at end of trial.</td>
</tr>
<tr>
<td>31767</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Hydrangea (Hydrangea sp.) H. macrophylla 'Nikko Blue'</td>
<td>Field Container</td>
<td>Fraelich</td>
<td>GA</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31767</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Hydrangea (Hydrangea sp.) H. macrophylla 'Robert'</td>
<td>Field Container</td>
<td>DeFrancesco</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>32413</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>New Guinea Impatiens (Impatiens hawkeri) 'Harmony Deep Red'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31769</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Shrub Verbena (Lantana sp.) 'Chapel Hill Yellow'</td>
<td>Field Container</td>
<td>Fraelich</td>
<td>GA</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>32418</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Lupine (Lupinus sp.) 'Gallery Mix'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No significant injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>32215</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>African Daisy (Osteospermum sp.) 'Summertime Blueberry'</td>
<td>Greenhouse</td>
<td>Freiberger</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>32417</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Geranium, Zonal (Pelargonium x hortorum) 'Maverick Violet'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31778</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Spruce (Picea sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31778</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Spruce (Picea sp.) P. glauca</td>
<td>Field Container</td>
<td>Brazee</td>
<td>MA</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31777</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pine (Pinus sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31777</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pine (Pinus sp.) P. taeda</td>
<td>Field Container</td>
<td>Fraelich</td>
<td>GA</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31777</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Pine (Pinus sp.) P. taeda</td>
<td>Field Container</td>
<td>Henn</td>
<td>MS</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>PR#</td>
<td>Product (Active Ingredients)</td>
<td>Crop</td>
<td>Production Site</td>
<td>Researcher</td>
<td>State</td>
<td>Year</td>
<td>Application Type</td>
<td>Results</td>
</tr>
<tr>
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</tr>
<tr>
<td>31774</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Fir, Douglas (Pseudotsuga menziesii)</td>
<td>Field Container</td>
<td>Brazee</td>
<td>MA</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31774</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Fir, Douglas (Pseudotsuga menziesii)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31768</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Rose (Rosa sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>32415</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Sage (Salvia sp.) 'New Dimension Blue'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No significant injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31773</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Elm (Ulmus sp.) U. parvifolia</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31773</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Elm (Ulmus sp.) U. parvifolia</td>
<td>Field Container</td>
<td>Henn</td>
<td>MS</td>
<td>2014</td>
<td>Foliar</td>
<td>Slight injury (bleaching/interveinal chlorosis) with 8, 16 and 32 fl oz per 100 gal applied 3 times; no significant growth reduction.</td>
</tr>
<tr>
<td>31773</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Elm (Ulmus sp.) U. parvifolia</td>
<td>Field Container</td>
<td>Uber</td>
<td>CA</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31763</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Vervain (Verbena sp.)</td>
<td>Field Container</td>
<td>Harvey</td>
<td>WA</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, moderate and severe with 16 and 32 fl oz per 100 gal, applied 3 times.</td>
</tr>
<tr>
<td>31763</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Vervain (Verbena sp.) V. hastata</td>
<td>Field Container</td>
<td>Catlin</td>
<td>NY</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31763</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Vervain (Verbena sp.) 'Lanai Premium Twister Amethyst'</td>
<td>Field Container</td>
<td>Reding</td>
<td>OH</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.; all plants marketable.</td>
</tr>
<tr>
<td>31770</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Periwinkle (Vinca sp.)</td>
<td>Field Container</td>
<td>Harvey</td>
<td>WA</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31770</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Periwinkle (Vinca sp.) V. maculata</td>
<td>Field Container</td>
<td>Reding</td>
<td>OH</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.; all plants marketable.</td>
</tr>
<tr>
<td>32411</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>(Viola x wittrockiana) 'Delta Orange Blotch'</td>
<td>Greenhouse</td>
<td>Bodine</td>
<td>NJ</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>PR#</td>
<td>Product (Active Ingredients)</td>
<td>Crop</td>
<td>Production Site</td>
<td>Researcher</td>
<td>State</td>
<td>Year</td>
<td>Application Type</td>
<td>Results</td>
</tr>
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</tr>
<tr>
<td>31764</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Zinnia (Zinnia sp.)</td>
<td>Field Container</td>
<td>Grunwald</td>
<td>OR</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal; all plants saleable.</td>
</tr>
<tr>
<td>31764</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Zinnia (Zinnia sp.) 'Dreamland Red'</td>
<td>Field Container</td>
<td>Freiberger</td>
<td>NJ</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.</td>
</tr>
<tr>
<td>31764</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Zinnia (Zinnia sp.) 'Envy'</td>
<td>Field Container</td>
<td>Catlin</td>
<td>NY</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or significant growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times; unacceptable spray residue at 4X after 3rd application.</td>
</tr>
<tr>
<td>31764</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Zinnia (Zinnia sp.) 'Profusion Cherry'</td>
<td>Field Container</td>
<td>Reding</td>
<td>OH</td>
<td>2015</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times.; all plants marketable.</td>
</tr>
<tr>
<td>32217</td>
<td>Orkestra (Fluxapyroxad + pyraclostrobin)</td>
<td>Zinnia (Zinnia sp.) 'Profusion Cherry'</td>
<td>Greenhouse</td>
<td>Freiberger</td>
<td>NJ</td>
<td>2014</td>
<td>Foliar</td>
<td>No injury or growth reduction with 8, 16 and 32 fl oz per 100 gal applied 3 times; no delay in blooming.</td>
</tr>
</tbody>
</table>
Label Suggestions

In this report, 4 species or genera exhibited no or minimal injury after foliar treatments of Orkestra (fluxapyroxad + pyraclostrobin) at 8, 16 and 32 fl oz per 100 gal. These can be included in a future label: *Dianthus sp*, *Pinus sp.*, *Verbena sp.*, and *Zinnia sp*.

Given the lack of phytotoxicity across so many different plant species and genera, it is suggested that all the 16 plants in Table 4 (listed below) that showed no injury be placed on the Orkestra label if BASF have similar results on these crops. Or a general statement can be placed on the label such as ‘Orkestra has not been demonstrated to cause damage on various ornamental plant species according to labeled use instructions. Orkestra may be used on a wide number of crops, but must be tested on a limited portion of the crop prior to applying to the whole crop if the grower has no previous experience applying Orkestra to that crop’.

*Aquilegia sp.*
*Catharanthus roseus*
*Coreopsis sp.*
*Cornus amomum*
*Hydrangea macrophylla*
*Impatiens hawkeri*
*Lantana sp.*
*Lupinus sp.*
*Osteospermum sp.*
*Pelargonium x hortorum*
*Picea sp.*
*Pseudotsuga menziesii*
*Rosa sp.*
*Salvia sp.*
*Vinca sp.*
*Viola x wittrockiana*
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