**HarvestCide®**

Post Harvest Solutions Ltd
Specialises in sales and marketing of the industry leading postharvest fruit and vegetable sanitiser, *HarvestCide®*.

Design and installation requirements for *HarvestCide®*. application equipment are provided to customers along with an ongoing service package to ensure customer satisfaction.

Post Harvest Solutions Ltd has business focussed on Pack House issues.

Storage and transit rot control as well as application technology are uniquely encompassed under the one company umbrella, an approach not previously offered to the horticulture industry.

*HarvestCide®* is a highly sophisticated, broad spectrum, halogen-based Biocide. When added to water, *HarvestCide®* forms two outstandingly effective biocides HOCl (Hypochlorous acid) and HOBr (Hypobromus acid). *HarvestCide®* controls yeasts, mould, fungi, algae and bacteria in post-harvest treatments of vegetables, fruit and cut flowers. *HarvestCide®* is a proven performer in an Environment conscious age.

**TECHNICAL – FOOD SAFETY**

Even at low levels *HarvestCide®* kills a wide range of post-harvest rot causing Pathogens.

Extensive tests against fungal and bacterial organisms as well as human pathogens which pose food safety risks, confirm *HarvestCide®* as the product of choice.

*HarvestCide®* has been tested and proven to show excellent activity against the following Human Pathogens:

- Staphylococcus Aureus
- Salmonella Kahla
- Pseudomonas Aeruginosa
- Legionella pneumophilia
- Listeria monocytogenes
- Escherichia Coli
- Candida Albicans

**TECHNICAL – DISEASE CONTROL**

Extensive testing by laboratories both in New Zealand and Australia have demonstrated outstanding activity against major post harvest rot causing organisms – both bacterial and fungal. To date, over 20 post-harvest pathogens have been screened. The follow graph clearly demonstrates efficacy against two fungal pathogens – Penicillium expansum & Mucor piriformis.  *HarvestCide®* clearly outperforms its competition®.

**FORMULATIONS:**

*HarvestCide®* is available to two formulations, Granules and Gel. The granule is 96% active ideal for fully automated system, very cost effective.

The gel is 35% active, devolves readerly in water, ideal for smaller operators, can be manually dosed.

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*Note*: Chlorine Dioxide was generated on site (to maximise its efficacy) for these trials, at the above levels it would not be a safe working environment for staff without appropriate safety equipment.
VEGETABLES AND FRUITS

<table>
<thead>
<tr>
<th>Potatoes</th>
<th>Yams</th>
<th>Cut salads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrus</td>
<td>Stonefruit</td>
<td>Asparagus</td>
</tr>
<tr>
<td>Carrots</td>
<td>Tomatoes</td>
<td>Cut flowers</td>
</tr>
<tr>
<td>Apples</td>
<td>Cherries</td>
<td>Avocados</td>
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<tr>
<td>Parsnips</td>
<td>Squash</td>
<td>Kiwifruit PSAv</td>
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<tr>
<td>Pears</td>
<td>Melons</td>
<td>Processed vegetables</td>
</tr>
</tbody>
</table>

WASH WATER TREATMENT IN THE PACKHOUSE

Dump tanks, fluming and Hydrocoolers are ideally suited to treatment by a combination of filtration and automated HarvestCide® injection systems. It should be understood that mains supply water in dump tanks/hydrocoolers becomes contaminated quickly by spores carries on the product. Left untreated, this same water may well transmit considerably more disease into the produce than it was intended to wash off.

RESISTANCE MANAGEMENT

By complete contrast with conventional fungicides, HarvestCide® has a totally unique method of terminating post-harvest pathogens and will rapidly and precisely wipe out any “resistant” species. A significant benefit in Post-harvest treatment has been a marked increase in the effectiveness and performance of post-harvest fungicide applied to any washed produce treated with HarvestCide®.

“I have found the HarvestCide and PH controller systems provided by post harvest solutions to be an easy and effective way to manage water quality, and Paul has provided an excellent service in regards to maintenance and training of these units.”

Simon Taylor
ENZA Packhouse
Packhouse Manager Lat 41
Nelson, New Zealand

Longview New Zealand Ltd has used HarvestCide post harvest sanitation exclusively in the Longview apple packhouse. “We were the first in Hawkes bay to use HarvestCide for protection against post harvest rots and have been delighted with it's continued performance”.

Michael Caccioppoli
Site Manager
Longview Packhouse,
Hastings, New Zealand
| 1. EFFECTIVE | Controls a wide range of disease causing pathogens |
| 2. PHYTOTOXICITY | Will not burn foliage or flowers at label rate |
| 3. TOXICITY | Low toxicity to humans and domestic animals |
| 4. TESTING | Simple, economical kits to check active levels |
| 5. RESIDUES | MRL at label rates, well below background bromide level |
| 6. ORP CONTROL | Usage rates within range of control systems |
| 7. pH SENSITIVITY | Operates effectively at 1.0 pH unit above chlorine products |
| 8. CORROSION | Lower usage levels reduce corrosion effects |
| 9. WATER QUALITY | Effective in creek water, bore water, dam water - even salty water |
| 10. COST | Streets ahead of its competitors |

**HarvestCide®** EFFECTIVELY controls a wide range of disease causing pathogens on fruit and vegetables; At label rates will not burn foliage or roots no PHYTOTOXICITY; Low TOXICITY to humans and animals; HarvestCide® tests strips makes TESTING simple and cost effective to monitor active levels; ORP & pH automation to ensure the system operates within the required parameters and maintains cost effectiveness; HarvestCide® is effective in all water supplies i.e. Bore water, river or stream water, pond or lake water, dams and sea water.