Air-Blast Sprayer Calibration Worksheet

Retain the following information for your records:

Date ____________________.

Farm______________________ Operator ____________________ Phone ________________.

Address___________________ Town ____________________ State _____ Zipcode ________.

Tractor____________________ Sprayer____________________

Tractor Gear _______________ Tank_______________________gallons

Tractor RPM_______________ Pump Pressure_______ PSI

Measured Distance_______ feet

Time in seconds (down) _______ Time in seconds (back) _______

Average Time in seconds _______

Miles per Hour = \[ \frac{\text{Distance in Feet} \times 60}{\text{Time in Seconds} \times 88} \]

= ( ______ Feet) x 60 = _______ = _______ MPH

= ( ______ Seconds) x 88

For Orchards:

Block (#___________) Tree Height _____ ft. Tree Width ______ ft. Row Width _________ ft.

For Vegetable or Other Crops Sprayed:

Block (#___________) Spray Swath Width _________ ft

Linear Feet of Row per Acre = \[ \frac{43,560}{\text{Row Width}} \]

= 43,560 = (_____ Feet per Acre

Or Spray Swath Width

Speed in Feet per Minute = MPH \times 88 = (_____ MPH \times 88 = (_____ Feet per Minute

For Orchards:

DG/A = Tree Height \times Tree Width \times \text{Linear Feet of Row} \times 0.7 = (_____ GPA \times 1000

= (_____ GPA

Block (#___________) DG/A = (_____) \times (_____) \times (_____) \times \frac{0.7}{1000} = (_____ GPA
## Nozzle Output for Air-Blast Sprayer

To determine the left versus right side, look at the sprayer from behind.

<table>
<thead>
<tr>
<th>Nozzle Output - Left</th>
<th>Nozzle Output - Right</th>
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<tbody>
<tr>
<td>Nozzle</td>
<td>Tip Size</td>
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<td>L-10</td>
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</tbody>
</table>

**Total Left Side Manifold Output in GPM**

**Total Right Side Manifold Output in GPM**

**Total Output for Sprayer in GPM**

All Nozzles Output = (_______) gpm

Alternative Output: Nozzles (#________) = (_______) gpm

Alternative Output: Nozzles (#________) = (_______) gpm

Block (#_______) Minutes/Acre = Linear Feet Row per Acre / Feet per Minute = (_______) / (_______) Minutes/Acre

Arrangement Nozzles (#_______) GPA = GPM X MPA = (_______) GPM X (_______) MPA = (_______)GPA

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*Developed by: George Hamilton, Extension Educator, Agricultural Resources, Hillsborough County  
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**Penn State Pesticide Education Program is proud to partner with George Hamilton CE - Hillsborough County to bring this program to Pennsylvania growers**
Pre Air-Blast Sprayer Calibration Instructions

Prior to calibrating an air-blast sprayer, please complete the following tasks:

1. Triple rinse tank and piping. Take special care to flush manifolds and nozzles.
2. Pressure wash sprayers. Pay special attention to cleaning both sides of nozzles and around pump and filters.
3. Clean nozzles and record orifice and whirl disc sizes.
4. Flush out line to pressure gauge.
5. Clean filters, including: tank filters, suction filters, final filters and every screen behind nozzles.
6. Make sure all valves, diaphragms, and O-rings are in good condition and working properly.
7. Check tire pressures on both sprayer and tractor.
8. Make sure tachometer is working on tractor.
9. Measure and mark off a 200 foot straight “course” that can be used to time tractor speed to determine actual MPH.
10. Fill sprayer ½ full with clean water.
11. Please have any operators or mechanics that work with the sprayer/tractor combination on hand for the sprayer calibration.
12. Have sprayer operators manual on hand.