

Use of Your Spray Pole

Height	
Top of Canopy	<p>- If you are just using one pole, it is probably best to place it in a difficult to spray canopy (either big dense trees or in a windy part of the orchard), with the pole in the foliage with the vertical papers facing along the row. The poles can be tied to training wires, but will stand up well in a spade cut.</p> <p>- When several poles are placed in similar locations in the same canopy the spray deposits on papers tend to be very consistent. Therefore if you are using two poles they are probably best placed in different canopies or with one on the outside of the foliage and the other in the centre of the trees.</p>
Mid Canopy	<p>- Water sensitive papers can be attached to the target location by folding the 25 x 75 mm paper in half and clipping into the targets with the fold outwards. The papers are best handled with gloves to avoid marking the yellow surface with fingers.</p> <p>- If the weather is humid it is important to bring the papers in as soon as possible after spraying or they will turn totally blue. If they are stored in a dry place they will keep indefinitely without turning blue. Papers can be fixed permanently by spraying with an artist's water colour fixative (e.g. "Crystal Clear", available from art supply shops).</p>
Top of Bunchline	<p>- It should take less than 2 minutes to set up a pole and only about twice that to take the papers off and staple them to the record sheet. It is important to place the papers on the record sheet so that their position on the spray pole remains obvious.</p>
Mid Bunchline	<p>- Top and bottom surfaces are easily recognised on the horizontal papers. The different sides of the vertical papers can usually be described as either up-wind or down-wind and/or as the side facing the sprayer or the side distant from the sprayer.</p> <p>- Keeping permanent spray deposit records from spray poles allows many important comparisons to be made, for example; as the canopy develops through the season, in different wind conditions, between sprayers, with different travel speeds, with different water volumes, with different nozzle arrangements.</p>
Bottom of bunchline	<p>- If testing coverage under alternate row spray applications it is usually best to use two poles. Place the poles about half a metre in from the outside of the canopy on the unsprayed side of the trees in the rows either side of the sprayer. These will provide a good indication of sprayer performance in <i>whatever wind and growth stage conditions exist at the time</i>.</p>

What to look for

The papers represent a repeatable, fixed-position target. Given that leaves are free to move in the sprayer air stream it is quite likely that leaf deposits will be better than those seen on the papers. However, the papers are not unlike fruit or branches which do not move as readily and the deposits on the papers can be regarded as a worst case look at deposits from your sprayer.

There are four important things to look out for;

- 1) **Major gaps in spray coverage** = yellow papers where the spray is failing to penetrate or reach.
- 2) **Uneven coverage** = some papers heavily or totally blued, while others are still mostly yellow. Even if there is an even spread of droplets on the poorly covered areas this area is underdosed relative to the areas with greater coverage.
- 3) **Droplet sizes and distribution** - there is a useful guide available with the water sensitive papers that provides information on this area.
- 4) **Runoff** (totally blue papers with streak marks), especially if this occurs with concentrate spray applications.

Water Sensitive Paper location record

LOCATION.....DATE.....RUN #

Block
Sprayer
Water Rate (l/ha)
Travel Speed (km/h)

Mark Pole Position

X marks trees **X**

Indicate
 wind direction
 with an arrow

X



X

X

X

**Direction
of sprayer**

X

Weather **Wind speed**
 Temperature

X

X

Write in height of target

Orientation

Facing/Upwind

Distant/Downwind

Top Surface

Bottom Surface

...

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Ground alleyway

Ground drip line

Ground trunk line