CCW visit, Nov-23

Horticultural Spraying Specialists
helping growers make better decisions

A spray application day was held at CCW Co-op, organised by Ashley and sponsored by Nick from Corteva, with the purpose of discussing with the grower group some fundamentals and passing on a few basic tips to help with their spray application. Discussions included spray application rate, concentration factor, how to measure spray deposition quickly and easily, and some strategies for ensuring that the products we use have every opportunity to maximise results.
We tested two sprayers using water sensitive papers and ran a third one as part of our application observation. All 3 units appeared ideal for the job.

Right: A “tape test” is an easy way to ensure the air from the sprayer is heading to the right canopy zones and not to the atmosphere or the ground.
Ron’s Hardi was set up with higher output in the critical bunch zone, as can be seen in the spray plume where it is needed most.

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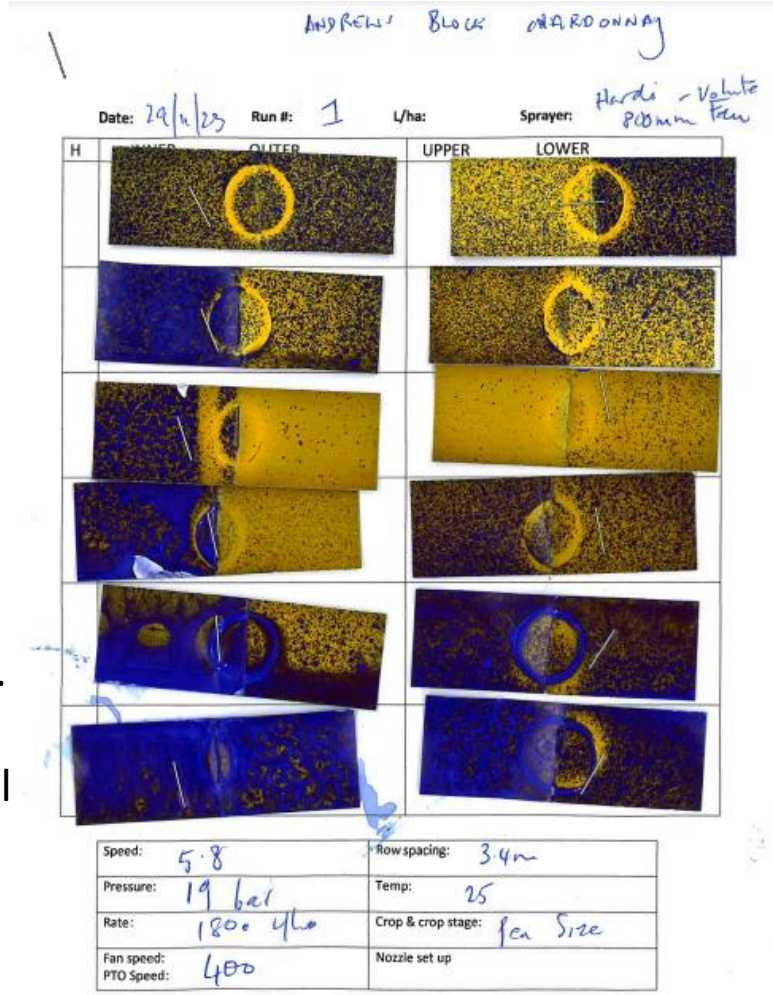
Rons Hardi single row sprayer:

- Travel speed = 5.8 km/hr
- Spraying pressure = 19 bar
- Application rate = 1,800 L/ha
- Nozzles = Albuz ATR's configured correctly for the canopy
- PTO speed = 400 rpm
- Bunches set, approx. pea size

Results:

As you can see from the attached water sensitive spray card results, Ron's sprayer did a great job, particularly in the critical bunch zone. The way Ron has his nozzles set up, he is applying 50% of the spray volume in that critical zone.

This maximises the chance of good coverage. The air output and volume is well matched to the canopy, as is the application rate and travel speed.



Above: excellent droplet deposition. I believe this was a Shiraz canopy (not chardonnay)

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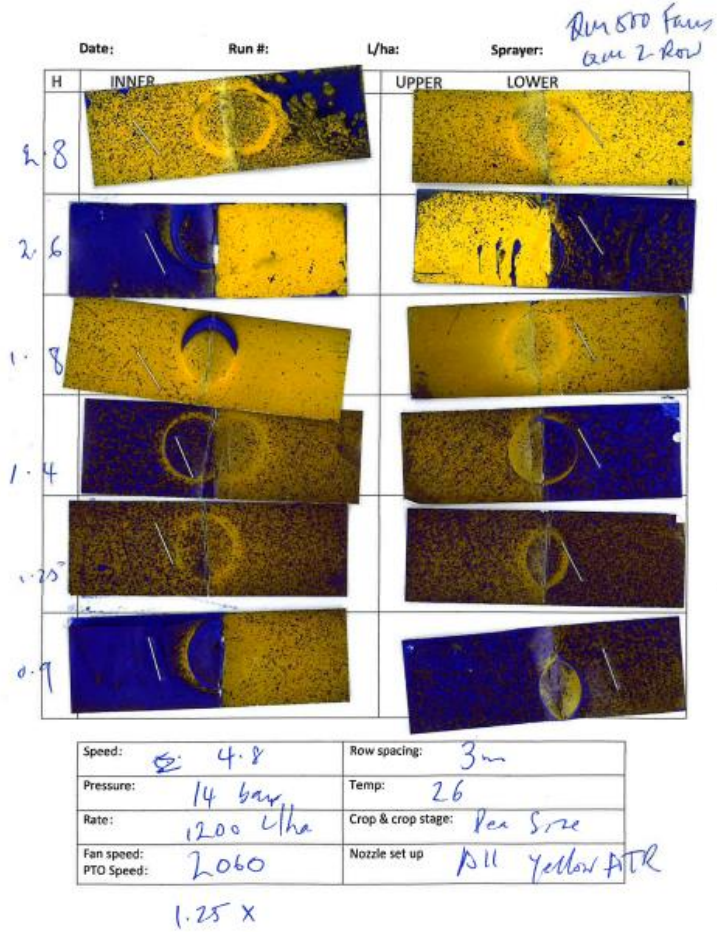
Garys Quantum Mist 2-row sprayer:

- Speed = 4.8 km/hr
- Spraying pressure = 14 bar
- Application rate = 1,200 L/ha
- Nozzles = ATR yellow 80-deg in all fans
- Fan speed = average 2,060 rpm
- Bunches approx. pea size – larger chardonnay canopy

Results:

Gary's sprayer is set up for 3.3 metre rows – the rows we trialled the sprayer in are 3 metre centres. This may have had a slight effect around the 1.8m height (see results, right) where the fans intersect. Like Ron, Gary has had a lot of experience and knows his sprayer well. It is well set up at the right speed for the canopy size, air is correctly set, and coverage is excellent as a result.

New nozzles are probably needed soon, apart from that, Gary's unit is very capable, as is Gary.



In this canopy, the inside fans could be adjusted to avoid the "stripping" effect that sometimes occurs when the fans are close to the canopy. The outer fans were set perfectly.

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Grading chart:

1 = 0.5% Coverage. Ineffective

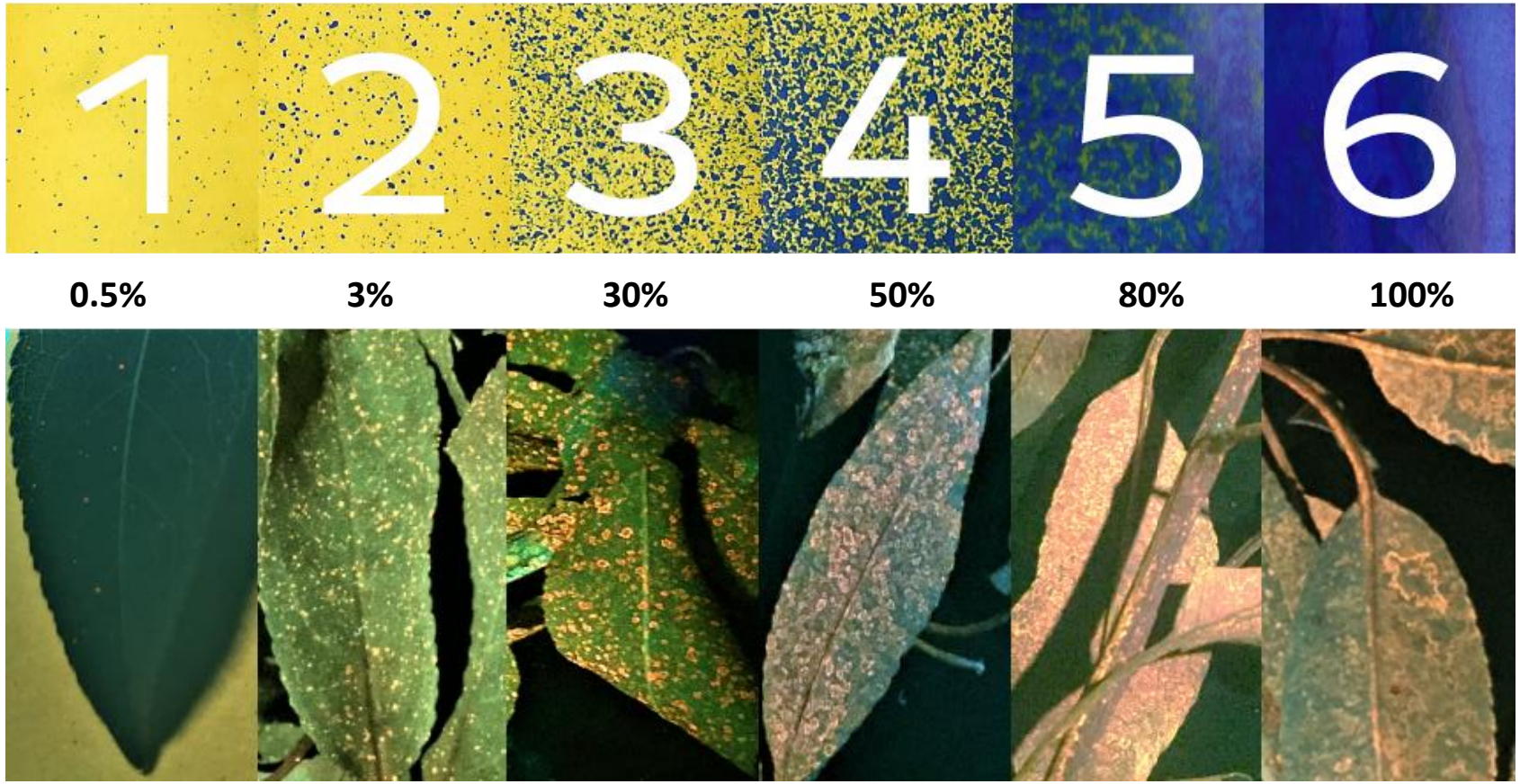
2 = 3% Coverage. Ineffective results

3 = 30% Coverage. Numerous droplets - provides reliable results with most broad-spectrum products, but does will produce marginal results with target-specific or contact-only products

4 = 50% Coverage. Quality coverage - maximises the opportunity for success and produces reliable results with nearly all crop protection products

5 = 80% Coverage. Maximum coverage - some droplet runs from broken water tension between droplets and is required be select products that require outstanding coverage

6 = 100% Coverage. Point of run-off - causes products to drip to ground as off-target deposition, though is necessary for certain pests and diseases



Above: This grading chart is an easy, visual tool to help growers to get a quick snapshot of how their coverage is looking as the season progresses. Coverage is never perfect, but small adjustments can make a big difference to the outcome of the application.

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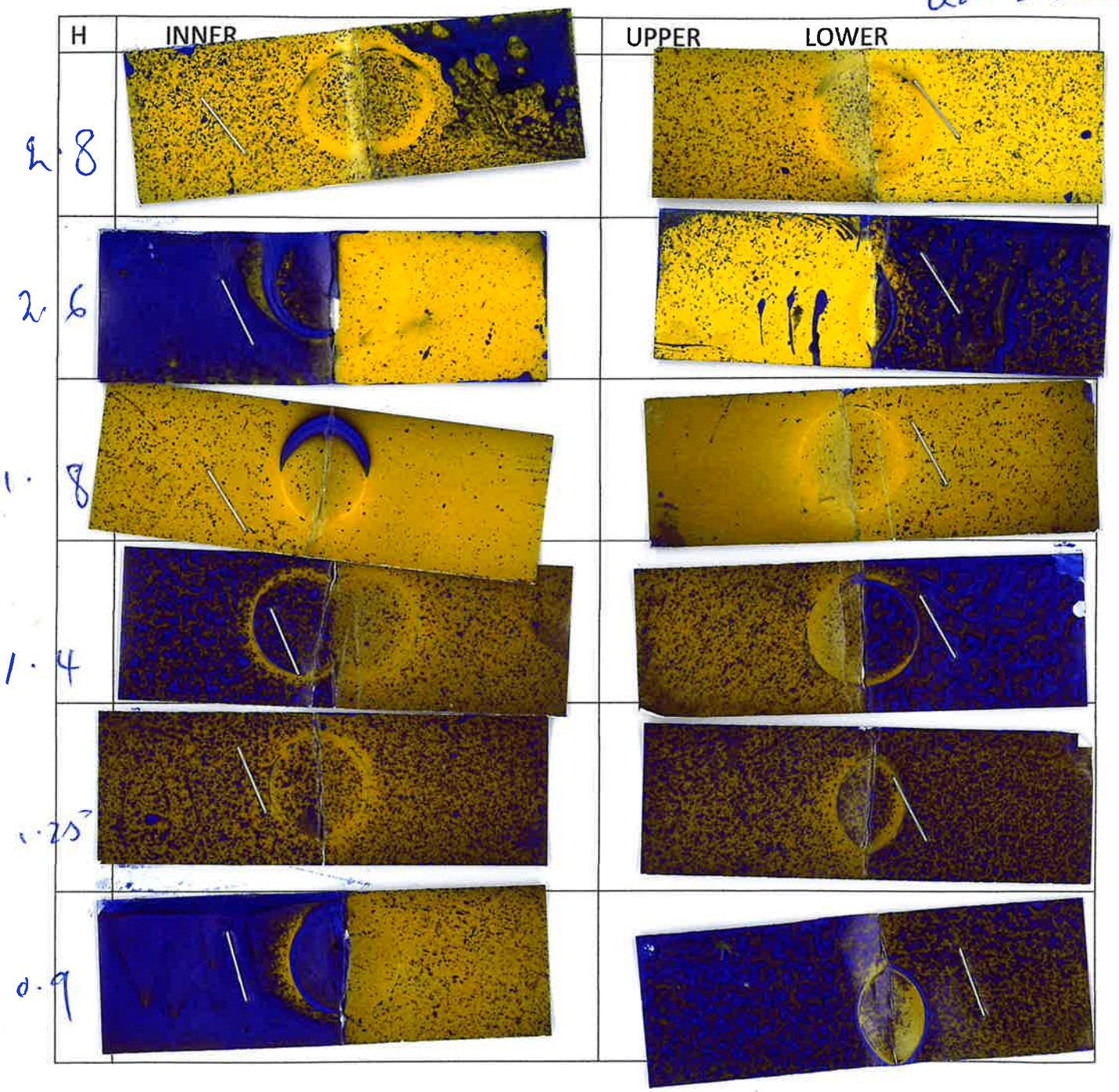
Summary:
It was a pleasure to run the workshop for the grower group. They were very attentive and provided excellent feedback during all parts of the session.
Ashley did a fantastic job organising the event, and clearly had a great relationship with the growers in the co-op (and probably many others).
My impression that the growers who attended are very attuned to the requirements of good application. I hope they all took something home from the day. Our thanks to Corteva (Nick and Brownie) for sponsoring the event. Industry events like this are a great way to remain connected when things are a bit tougher than usual.

Andrew's Interlink, which we ran out of time to do a W/S test with, looked very effective in its run

Date: Run #: L/ha: Sprayer: Dun 800 Fans QM 2-Row

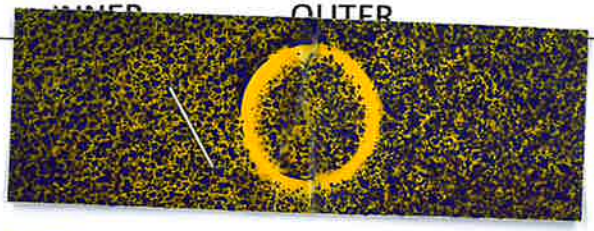
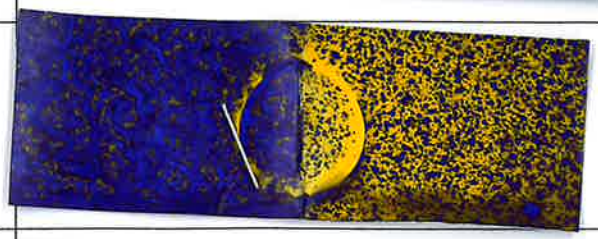
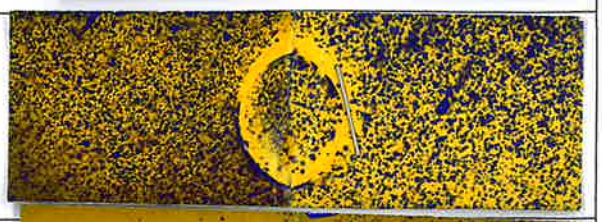
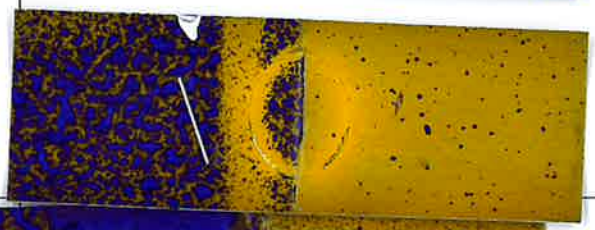
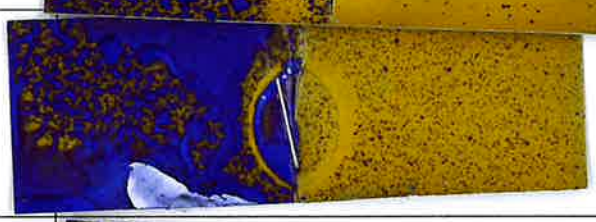
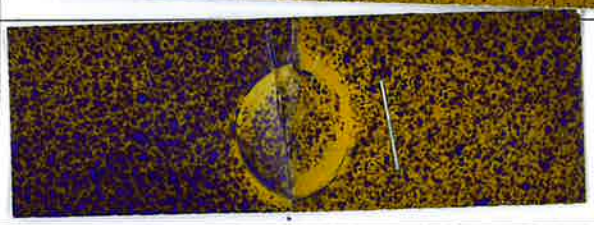
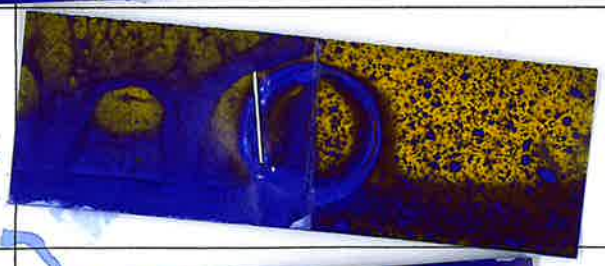
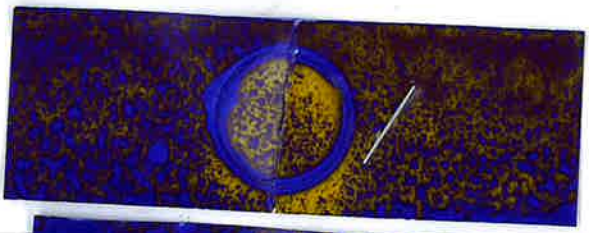
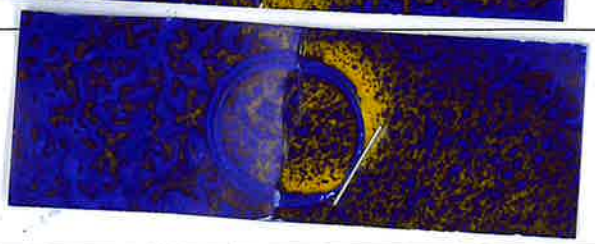


Speed:	~~5~~ 4.8	Row spacing:	3m
Pressure:	14 bar,	Temp:	26
Rate:	1200 L/ha	Crop & crop stage:	Pea Size
Fan speed: PTO Speed:	2060	Nozzle set up	DII Yellow ATR

1.25 X

ANDREWS' BLOCK CHARDONNAY

Date: 29/11/23 Run #: 1 L/ha: Sprayer: Hardi - Volute 800mm Fan

H	OUTER	UPPER	LOWER
			
			
			
			
			
			

Speed:	5.8	Row spacing:	3.4m
Pressure:	19 bar	Temp:	25
Rate:	180 L/ha	Crop & crop stage:	Pea Size
Fan speed: PTO Speed:	400	Nozzle set up	