

8 Nozzle Sprayer - 500 l/ha

ZESPRI 2011 sprayer nozzling guides:

For a sprayer fitted with EIGHT nozzle positions per side
To apply at 5km/hr To PERGOLA canopies
at 3m, 4m or 5m row spacings

Note: The nozzling and pressure options shown in these charts are intended to provide an indication of a likely suitable sprayer configuration to deliver the predicted spray output range to a given canopy row spacing. There are other nozzle selections and configurations that could also be suitable. Different sprayers will vary in the exact location of nozzles on the spray ring, so may require different nozzle selections. The nozzle outputs shown are theoretical, actual nozzle outputs can vary and should be measured during calibration.

Nozzling recommendations developed for
Zespri and KVH by
Bill May (SprayTec Ltd) and
David Manktelow (freshLearn Ltd)
September 2011

Pergola 3 m row - 8 nozzle sprayer 500 l/ha 5 km/hr					
Target Volume	500	l/ha	15.0	l/100m row	
Target speed	5.0	km/hr			
Row spacing	3.0	metres			
Output required	12.5	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1500	kPa	218	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 brown	0.8	13%	Wide	
Albuz ATR	2 Yellow	1.3	21%	Wide	
Albuz ATR	3 Orange	1.7	27%	Wide	
Albuz ATR	4 red	2.4	39%	Wide	
	5 Off				
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)	6.3	100%			
Total predicted output (l/min)	12.6				

Pergola 4 m row - 8 nozzle sprayer 500 l/ha 5 km/hr					
Target Volume	500	l/ha	20.0	l/100m row	
Target speed	5.0	km/hr			
Row spacing	4.0	metres			
Output required	16.7	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1400	kPa	203	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 brown	0.8	10%	Wide	
Albuz ATR	2 Yellow	1.3	15%	Wide	
Albuz ATR	3 Orange	1.7	20%	Wide	
Albuz ATR	4 red	2.4	28%	Wide	
TeeJet Disk +Core	5 D3-35	2.4	28%	Narrow	
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)	8.5	100%			
Total predicted output (l/min)	16.9				

Pergola 5 m row - 8 nozzle sprayer 500 l/ha 5 km/hr					
Target Volume	500	l/ha	25.0	l/100m row	
Target speed	5.0	km/hr			
Row spacing	5.0	metres			
Output required	20.8	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1400	kPa	203	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 brown	0.8	8%	Wide	
Albuz ATR	2 Yellow	1.3	12%	Wide	
Albuz ATR	3 Orange	1.7	16%	Wide	
Albuz ATR	4 red	2.4	23%	Wide	
TeeJet Disk +Core	5 D3-35	2.4	23%	Narrow	
TeeJet Disk +Core	6 D2-35	1.9	19%	Narrow	
	7 Off				
	8 Off				
Output from one side (l/min)	10.4	100%			
Total predicted output (l/min)	20.8				



8 Nozzle Sprayer - 1000 l/ha

ZESPRI 2011 sprayer nozzling guides:

For a sprayer fitted with EIGHT nozzle positions per side
To apply 500, 1000, 1500 or 2000 l/ha at 5km/hr
To PERGOLA canopies at 3m, 4m or 5m row spacings

Note: The nozzling and pressure options shown in these charts are intended to provide an indication of a likely suitable sprayer configuration to deliver the predicted spray output range to a given canopy row spacing. There are other nozzle selections and configurations that could also be suitable. Different sprayers will vary in the exact location of nozzles on the spray ring, so may require different nozzle selections. The nozzle outputs shown are theoretical, actual nozzle outputs can vary and should be measured during calibration.

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September 2011

Pergola 3 m row - 8 nozzle sprayer 1000 l/ha 5 km/hr					
Target Volume	1000	l/ha	30.0 l/100m row		
Target speed	5.0	km/hr			
Row spacing	3.0	metres			
Output required	25.0	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1850	kPa	268 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 orange	1.9	15%	Wide	
Albuz ATR	2 red	2.7	21%	Wide	
Albuz ATR	3 green	3.4	27%	Wide	
TeeJet Disk +Core	4 D4-35	4.5	36%	Medium	
	5 Off				
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)	12.6	100%			
Total predicted output (l/min)	25.2				

Pergola 4 m row - 8 nozzle sprayer 1000 l/ha 5 km/hr					
Target Volume	1000	l/ha	40.0 l/100m row		
Target speed	5.0	km/hr			
Row spacing	4.0	metres			
Output required	33.3	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1750	kPa	254 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 orange	1.9	11%	Wide	
Albuz ATR	2 red	2.6	16%	Wide	
Albuz ATR	3 green	3.3	20%	Wide	
TeeJet Disk +Core	4 D4-35	4.4	27%	Medium	
TeeJet Disk +Core	5 D4-35	4.4	27%	Wide	
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)	16.7	100%			
Total predicted output (l/min)	33.4				

Pergola 5 m row - 8 nozzle sprayer 1000 l/ha 5 km/hr					
Target Volume	1000	l/ha	50.0 l/100m row		
Target speed	5.0	km/hr			
Row spacing	5.0	metres			
Output required	41.7	l/min total			
NOZZLING DETAILS					
Nozzle pressure	1700	kPa	247 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 orange	1.8	9%	Wide	
Albuz ATR	2 red	2.6	12%	Wide	
Albuz ATR	3 green	3.3	16%	Wide	
TeeJet Disk +Core	4 D4-35	4.4	21%	Medium	
TeeJet Disk +Core	5 D4-35	4.4	21%	Wide	
TeeJet Disk +Core	6 D4-46	4.4	21%	Narrow	
	7 Off				
	8 Off				
Output from one side (l/min)	20.8	100%			
Total predicted output (l/min)	41.7				



8 Nozzle Sprayer - 1500 l/ha

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To apply at 5km/hr To PERGOLA canopies
at 3m, 4m or 5m row spacings

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Pergola 3 m row - 8 nozzle sprayer 1500 l/ha 5 km/hr

Target Volume	1500	l/ha	45.0	l/100m row
Target speed	5.0	km/hr		
Row spacing	3.0	metres		
Output required	37.5	l/min total		

NOZZLING DETAILS

Nozzle pressure		1700	kPa	247	PSI
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D5-45	4.2	22%	Wide	
TeeJet Disk +Core	2 D4-35	4.4	23%	Medium	
TeeJet Disk +Core	3 D4-35	4.4	23%	Medium	
TeeJet Disk +Core	4 D5-35	5.8	31%	Medium	
	5 Off				
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)		18.7	100%		
Total predicted output (l/min)		37.4			

Pergola 4 m row - 8 nozzle sprayer 1500 l/ha 5 km/hr

Target Volume	1500	l/ha	60.0	l/100m row
Target speed	5.0	km/hr		
Row spacing	4.0	metres		
Output required	50.0	l/min total		

NOZZLING DETAILS

Nozzle pressure		1550	kPa	225	PSI
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D5-45	4.0	16%	Wide	
TeeJet Disk +Core	2 D4-35	4.2	17%	Medium	
TeeJet Disk +Core	3 D4-35	4.2	17%	Medium	
TeeJet Disk +Core	4 D5-35	5.6	22%	Medium	
TeeJet Disk +Core	5 D5-46	7.0	28%	Narrow	
	6 Off				
	7 Off				
	8 Off				
Output from one side (l/min)		24.9	100%		
Total predicted output (l/min)		49.8			

Pergola 5 m row - 8 nozzle sprayer 1500 l/ha 5 km/hr

Target Volume	1500	l/ha	75.0	l/100m row
Target speed	5.0	km/hr		
Row spacing	5.0	metres		
Output required	62.5	l/min total		

NOZZLING DETAILS

Nozzle pressure		1800	kPa	261	PSI
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D5-45	4.3	14%	Wide	
TeeJet Disk +Core	2 D4-35	4.5	14%	Medium	
TeeJet Disk +Core	3 D4-35	4.5	14%	Medium	
TeeJet Disk +Core	4 D5-35	6.0	19%	Medium	
TeeJet Disk +Core	5 D5-46	7.5	24%	Narrow	
TeeJet Disk +Core	6 D4-46	4.5	14%	Narrow	
	7 Off				
	8 Off				
Output from one side (l/min)		31.3	100%		
Total predicted output (l/min)		62.6			



8 Nozzle Sprayer - 2000 l/ha

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For a sprayer fitted with EIGHT nozzle positions per side
To apply 500, 1000, 1500 or 2000 l/ha at 5km/hr
To PERGOLA canopies at 3m, 4m or 5m row spacings

Note: The nozzling and pressure options shown in these charts are intended to provide an indication of a likely suitable sprayer configuration to deliver the predicted spray output range to a given canopy row spacing. There are other nozzle selections and configurations that could also be suitable. Different sprayers will vary in the exact location of nozzles on the spray ring, so may require different nozzle selections. The nozzle outputs shown are theoretical, actual nozzle outputs can vary and should be measured during calibration.

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September 2011

Pergola 3 m row - 8 nozzle sprayer 2000 l/ha 5 km/hr				
Target Volume	2000	l/ha	60.0 l/100m row	
Target speed	5.0	km/hr		
Row spacing	3.0	metres		
Output required	50.0	l/min total		
NOZZLING DETAILS				
Nozzle pressure	1950	kPa	283 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-35	4.6	19%	Medium
TeeJet Disk +Core	2 D5-35	6.2	25%	Medium
TeeJet Disk +Core	3 D5-35	6.2	25%	Medium
TeeJet Disk +Core	4 D5-46	7.9	32%	Narrow
	5 Off	0.0	0%	0
	6 Off	0.0	0%	0
	7 Off	0.0	0%	0
	8 Off	0.0	0%	0
Output from one side (l/min)	24.9	100%		
Total predicted output (l/min)	49.8			

Pergola 4 m row - 8 nozzle sprayer 2000 l/ha 5 km/hr				
Target Volume	2000	l/ha	80.0 l/100m row	
Target speed	5.0	km/hr		
Row spacing	4.0	metres		
Output required	66.7	l/min total		
NOZZLING DETAILS				
Nozzle pressure	2050	kPa	297 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-35	4.8	14%	Medium
TeeJet Disk +Core	2 D5-35	6.4	19%	Medium
TeeJet Disk +Core	3 D5-35	6.4	19%	Medium
TeeJet Disk +Core	4 D5-46	8.1	24%	Narrow
TeeJet Disk +Core	5 D5-56	7.9	24%	Narrow
	6 Off	0.0	0%	0
	7 Off	0.0	0%	0
	8 Off	0.0	0%	0
Output from one side (l/min)	33.4	100%		
Total predicted output (l/min)	66.9			

Pergola 5 m row - 8 nozzle sprayer 2000 l/ha 5 km/hr				
Target Volume	2000	l/ha	100.0 l/100m row	
Target speed	5.0	km/hr		
Row spacing	5.0	metres		
Output required	83.3	l/min total		
NOZZLING DETAILS				
Nozzle pressure	2050	kPa	297 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-35	4.8	11%	Medium
TeeJet Disk +Core	2 D5-35	6.4	15%	Medium
TeeJet Disk +Core	3 D5-35	6.4	15%	Medium
TeeJet Disk +Core	4 D5-46	8.1	19%	Narrow
TeeJet Disk +Core	5 D5-56	7.9	19%	Narrow
TeeJet Disk +Core	6 D5-46	8.1	19%	Narrow
	7 Off	0.0	0%	0
	8 Off	0.0	0%	0
Output from one side (l/min)	41.5	100%		
Total predicted output (l/min)	83.0			

