

10 Nozzle Sprayer - 500 l/ha

ZESPRI 2011 sprayer nozzling guides:

For a sprayer fitted with TEN 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.

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

Pergola 3 m row - 10 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	900	kPa	131 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 Yellow	1.0	16%	Wide	
	2 Off				
Albuz ATR	3 Yellow	1.0	16%	Wide	
Albuz ATR	4 Orange	1.3	21%	Wide	
Albuz ATR	5 Orange	1.3	21%	Wide	
TeeJet Disk+Core	6 D3-45	1.6	25%	Medium	
	7 Off				
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	6.3	100%			
Total predicted output (l/min)	12.5				

Pergola 4 m row - 10 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	1000	kPa	145 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 Yellow	1.1	13%	Wide	
	2 Off				
Albuz ATR	3 Yellow	1.1	13%	Wide	
Albuz ATR	4 Orange	1.4	17%	Wide	
Albuz ATR	5 Orange	1.4	17%	Wide	
TeeJet Disk+Core	6 D3-45	1.6	20%	Medium	
	7 D3-45	1.6	20%	Medium	
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	8.2	100%			
Total predicted output (l/min)	16.5				

Pergola 5 m row - 10 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	1500	kPa	218 PSI		
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
Albuz ATR	1 Yellow	1.3	13%	Wide	
	2 Off				
Albuz ATR	3 Yellow	1.3	13%	Wide	
	4 Off				
Albuz ATR	5 Orange	1.7	17%	Wide	
TeeJet Disk+Core	6 D3-45	2.0	19%	Medium	
	7 D3-45	2.0	19%	Medium	
TeeJet Disk+Core	8 D2-35	2.0	19%	Narrow	
	9 Off				
	10 Off				
Output from one side (l/min)	10.3	100%			
Total predicted output (l/min)	20.6				



10 Nozzle Sprayer - 1000 l/ha

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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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Bill May (SprayTec Ltd) and
David Manktelow (freshLearn Ltd)
September 2011

Pergola 3 m row - 10 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	1550	kPa	225	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.0	16%	Medium	
	2 Off				
TeeJet Disk +Core	3 D3-45	2.0	16%	Medium	
TeeJet Disk +Core	4 D3-45	2.0	16%	Medium	
TeeJet Disk +Core	5 D4-45	3.2	25%	Wide	
TeeJet Disk +Core	6 D4-33	3.3	26%	Medium	
	7 Off				
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	12.5	100%			
Total predicted output (l/min)	25.0				

Pergola 4 m row - 10 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	1550	kPa	225	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.0	12%	Medium	
	2 Off				
TeeJet Disk +Core	3 D3-45	2.0	12%	Medium	
TeeJet Disk +Core	4 D3-45	2.0	12%	Medium	
TeeJet Disk +Core	5 D4-45	3.2	19%	Wide	
TeeJet Disk +Core	6 D4-33	3.3	20%	Medium	
TeeJet Disk +Core	7 D4-35	4.2	25%	Medium	
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	16.7	100%			
Total predicted output (l/min)	33.4				

Pergola 5 m row - 10 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	1550	kPa	225	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.0	10%	Medium	
	2 Off				
TeeJet Disk +Core	3 D3-45	2.0	10%	Medium	
TeeJet Disk +Core	4 D3-45	2.0	10%	Medium	
TeeJet Disk +Core	5 D4-45	3.2	15%	Wide	
TeeJet Disk +Core	6 D4-33	3.3	16%	Medium	
TeeJet Disk +Core	7 D4-35	4.2	20%	Medium	
TeeJet Disk +Core	8 D4-46	4.2	20%	Narrow	
	9 Off				
	10 Off				
Output from one side (l/min)	20.9	100%			
Total predicted output (l/min)	41.8				



10 Nozzle Sprayer - 1500 l/ha

ZESPRI 2011 sprayer nozzling guides:

For a sprayer fitted with TEN 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 - 10 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	1550	kPa	225	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.0	11%	Medium	
TeeJet Disk +Core	2 D3-45	2.0	11%	Medium	
TeeJet Disk +Core	3 D4-45	3.2	17%	Wide	
TeeJet Disk +Core	4 D4-45	3.2	17%	Wide	
TeeJet Disk +Core	5 D4-35	4.2	22%	Medium	
TeeJet Disk +Core	6 D4-35	4.2	22%	Medium	
	7 Off				
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	18.7	100%			
Total predicted output (l/min)	37.5				

Pergola 4 m row - 10 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	1650	kPa	239	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.1	8%	Medium	
TeeJet Disk +Core	2 D3-45	2.1	8%	Medium	
TeeJet Disk +Core	3 D4-45	3.3	13%	Wide	
TeeJet Disk +Core	4 D4-45	3.3	13%	Wide	
TeeJet Disk +Core	5 D4-35	4.3	17%	Medium	
TeeJet Disk +Core	6 D4-35	4.3	17%	Medium	
TeeJet Disk +Core	7 D5-35	5.7	23%	Medium	
	8 Off				
	9 Off				
	10 Off				
Output from one side (l/min)	25.1	100%			
Total predicted output (l/min)	50.1				

Pergola 5 m row - 10 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	1900	kPa	276	PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle	
TeeJet Disk +Core	1 D3-45	2.2	7%	Medium	
TeeJet Disk +Core	2 D3-45	2.2	7%	Medium	
TeeJet Disk +Core	3 D4-45	3.5	11%	Wide	
TeeJet Disk +Core	4 D4-45	3.5	11%	Wide	
TeeJet Disk +Core	5 D4-35	4.6	15%	Medium	
TeeJet Disk +Core	6 D4-35	4.6	15%	Medium	
TeeJet Disk +Core	7 D5-35	6.1	20%	Medium	
TeeJet Disk +Core	8 D4-46	4.6	15%	Narrow	
	9 Off				
	10 Off				
Output from one side (l/min)	31.4	100%			
Total predicted output (l/min)	62.9				



10 Nozzle Sprayer - 2000 l/ha

ZESPRI 2011 sprayer nozzling guides:

For a sprayer fitted with TEN 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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David Manktelow (freshLearn Ltd)
September 2011

Pergola 3 m row - 10 Nozzle sprayer 2000 l/ha 5 km/hr				
Target Volume	2000	l/ha	45.0 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	1300	kPa	189 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-45	2.9	12%	Wide
TeeJet Disk +Core	2 D4-45	2.9	12%	Wide
TeeJet Disk +Core	3 D4-35	3.9	15%	Medium
TeeJet Disk +Core	4 D4-35	3.9	15%	Medium
TeeJet Disk +Core	5 D5-35	5.1	21%	Medium
TeeJet Disk +Core	6 D5-46	6.4	25%	Narrow
	7 Off			
	8 Off			
	9 Off			
	10 Off			
Output from one side (l/min)	25.0	100%		
Total predicted output (l/min)	50.0			

Pergola 4 m row - 10 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	4.0	metres		
Output required	66.7	l/min total		
NOZZLING DETAILS				
Nozzle pressure	1500	kPa	218 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-45	3.1	9%	Wide
TeeJet Disk +Core	2 D4-45	3.1	9%	Wide
TeeJet Disk +Core	3 D4-35	4.1	12%	Medium
TeeJet Disk +Core	4 D4-35	4.1	12%	Medium
TeeJet Disk +Core	5 D5-35	5.5	16%	Medium
TeeJet Disk +Core	6 D5-46	6.9	20%	Narrow
TeeJet Disk +Core	7 D5-56	6.8	20%	Narrow
	8 Off			
	9 Off			
	10 Off			
Output from one side (l/min)	33.6	100%		
Total predicted output (l/min)	67.1			

Pergola 5 m row - 10 Nozzle sprayer 2000 l/ha 5 km/hr				
Target Volume	2000	l/ha	75.0 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	1600	kPa	232 PSI	
Nozzle type	Nozzle	Predicted output	%	Nozzle angle
TeeJet Disk +Core	1 D4-45	3.2	8%	Wide
TeeJet Disk +Core	2 D4-45	3.2	8%	Wide
TeeJet Disk +Core	3 D4-35	4.2	10%	Medium
TeeJet Disk +Core	4 D4-35	4.2	10%	Medium
TeeJet Disk +Core	5 D5-35	5.7	14%	Medium
TeeJet Disk +Core	6 D5-46	7.1	17%	Narrow
TeeJet Disk +Core	7 D5-56	7.0	17%	Narrow
TeeJet Disk +Core	8 D5-46	7.1	17%	Narrow
	9 Off			
	10 Off			
Output from one side (l/min)	41.7	100%		
Total predicted output (l/min)	83.5			

