

20 Inch Spacing **Nozzle Ninja PWM Application Chart**
Nozzle Family and Droplet Size

Boom Flow Spray Pressure (PSI) Rate (GPM) Tip

MPH 20 inch nozzle spacing
Gallons per Acre

25%	2.5				5				7.5				10				12.5				15				17.5				20																						
	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%																			
0.20	20	0.14	UC	UC	F	F	NR	XC	XC	VC	M	M	M	M	M	M	C	XC	4.2	8.4	12.6	16.8	2.1	4.2	6.3	8.4	1.4	2.8	4.2	5.6	1.1	2.1	3.2	4.2	0.8	1.7	2.5	3.4	0.7	1.4	2.1	2.8	0.6	1.2	1.8	2.4	0.5	1.1	1.6	2.1	
	30	0.17	UC	UC	F	F	VC	VC	XC	VC	C	M	M	M	M	M	C	VC	5.1	10.3	15.4	20.6	2.6	5.1	7.7	10.3	1.7	3.4	5.1	6.9	1.3	2.6	3.9	5.1	1.0	2.1	3.1	4.1	0.9	1.7	2.6	3.4	0.7	1.5	2.2	2.9	0.6	1.3	1.9	2.6	
	40	0.20	UC	UC	F	F	VC	C	VC	C	F	M	F	F	F	M	M	C	5.9	11.9	17.8	23.8	3.0	5.9	8.9	11.9	2.0	4.0	5.9	7.9	1.5	3.0	4.5	5.9	1.2	2.4	3.6	4.8	1.0	2.0	3.0	4.0	0.8	1.7	2.5	3.4	0.7	1.5	2.2	3.0	
	50	0.22	UC	UC	F	F	C	C	VC	M	F	M	F	F	F	M	M	C	6.6	13.3	19.9	26.6	3.3	6.6	10.0	13.3	2.2	4.4	6.6	8.9	1.7	3.3	5.0	6.6	1.3	2.7	4.0	5.3	1.1	2.2	3.3	4.4	0.9	1.9	2.8	3.8	0.8	1.7	2.5	3.3	
	60	0.24	UC	UC	F	F	C	C	C	M	F	M	F	F	F	M	M	C	7.3	14.5	21.8	29.1	3.6	7.3	10.9	14.5	2.4	4.8	7.3	9.7	1.8	3.6	5.5	7.3	1.5	2.9	4.4	5.8	1.2	2.4	3.6	4.8	1.0	2.1	3.1	4.2	0.9	1.8	2.7	3.6	
	70	0.26	UC	UC	F	F	C	C	C	M	F	M	F	F	F	M	M	C	7.9	15.7	23.6	31.4	3.9	7.9	11.8	15.7	2.6	5.2	7.9	10.5	2.0	3.9	5.9	7.9	1.6	3.1	4.7	6.3	1.3	2.6	3.9	5.2	1.1	2.2	3.4	4.5	1.0	2.0	2.9	3.9	
80	0.28	XC	UC	F	F	C	C	C	M	F	NR	F	F	F	M	M	C	8.4	16.8	25.2	33.6	4.2	8.4	12.6	16.8	2.8	5.6	8.4	11.2	2.1	4.2	6.3	8.4	1.7	3.4	5.0	6.7	1.4	2.8	4.2	5.6	1.2	2.4	3.6	4.8	1.1	2.1	3.2	4.2		
90	0.30	XC	UC	F	F	C	C	C	M	F	NR	F	F	F	VF	M	C	8.9	17.8	26.7	35.6	4.5	8.9	13.4	17.8	3.0	5.9	8.9	11.9	2.2	4.5	6.7	8.9	1.8	3.6	5.3	7.1	1.5	3.0	4.5	5.9	1.3	2.5	3.8	5.1	1.1	2.2	3.3	4.5		
0.25	20	0.18	UC	UC	M	F	NR	XC	XC	VC	M	M	M	M	M	M	C	XC	5.3	10.5	15.8	21.0	2.6	5.3	7.9	10.5	1.8	3.5	5.3	7.0	1.3	2.6	3.9	5.3	1.1	2.1	3.2	4.2	0.9	1.8	2.6	3.5	0.8	1.5	2.3	3.0	0.7	1.3	2.0	2.6	
	30	0.22	UC	UC	F	F	VC	VC	XC	C	M	M	M	M	M	M	C	VC	6.4	12.9	19.3	25.7	3.2	6.4	9.6	12.9	2.1	4.3	6.4	8.6	1.6	3.2	4.8	6.4	1.3	2.6	3.9	5.1	1.1	2.1	3.2	4.3	0.9	1.8	2.8	3.7	0.8	1.6	2.4	3.2	
	40	0.25	UC	UC	F	F	VC	C	VC	C	M	M	F	F	F	M	M	C	7.4	14.9	22.3	29.7	3.7	7.4	11.1	14.9	2.5	5.0	7.4	9.9	1.9	3.7	5.6	7.4	1.5	3.0	4.5	5.9	1.2	2.5	3.7	5.0	1.1	2.1	3.2	4.2	0.9	1.9	2.8	3.7	
	50	0.28	UC	UC	F	F	C	C	C	VC	M	F	M	F	F	M	M	C	8.3	16.6	24.9	33.2	4.2	8.3	12.5	16.6	2.8	5.5	8.3	11.1	2.1	4.2	6.2	8.3	1.7	3.3	5.0	6.6	1.4	2.8	4.2	5.5	1.2	2.4	3.6	4.7	1.0	2.1	3.1	4.2	
	60	0.31	UC	UC	F	F	C	C	C	M	F	M	F	F	F	M	M	C	9.1	18.2	27.3	36.4	4.5	9.1	13.6	18.2	3.0	6.1	9.1	12.1	2.3	4.5	6.8	9.1	1.8	3.6	5.5	7.3	1.5	3.0	4.5	6.1	1.3	2.6	3.9	5.2	1.1	2.3	3.4	4.5	
	70	0.33	UC	UC	F	F	C	C	C	M	F	M	F	F	F	M	M	C	9.8	19.6	29.5	39.3	4.9	9.8	14.7	19.6	3.3	6.5	9.8	13.1	2.5	4.9	7.4	9.8	2.0	3.9	5.9	7.9	1.6	3.3	4.9	6.5	1.4	2.8	4.2	5.6	1.2	2.5	3.7	4.9	
80	0.35	UC	UC	F	F	C	C	C	M	F	NR	F	F	F	M	M	C	10.5	21.0	31.5	42.0	5.3	10.5	15.8	21.0	3.5	7.0	10.5	14.0	2.6	5.3	7.9	10.5	2.1	4.2	6.3	8.4	1.8	3.5	5.3	7.0	1.5	3.0	4.5	6.0	1.3	2.6	3.9	5.3		
90	0.38	UC	UC	F	F	C	C	C	M	F	NR	NR	F	F	VF	M	C	11.1	22.3	33.4	44.6	5.6	11.1	16.7	22.3	3.7	7.4	11.1	14.9	2.8	5.6	8.4	11.1	2.2	4.5	6.7	8.9	1.9	3.7	5.6	7.4	1.6	3.2	4.8	6.4	1.4	2.8	4.2	5.6		
0.30	20	0.21	UC	UC	M	F	NR	VC	VC	XC	VC	M	C	C	C	C	VC	VC	6.3	12.6	18.9	25.2	3.2	6.3	9.5	12.6	2.1	4.2	6.3	8.4	1.6	3.2	4.7	6.3	1.3	2.5	3.8	5.0	1.1	2.1	3.2	4.2	0.9	1.8	2.7	3.6	0.8	1.6	2.4	3.2	
	30	0.26	UC	UC	F	F	XC	VC	VC	XC	C	M	C	M	C	M	C	VC	VC	7.7	15.4	23.1	30.9	3.9	7.7	11.6	15.4	2.6	5.1	7.7	10.3	1.9	3.9	5.8	7.7	1.5	3.1	4.6	6.2	1.3	2.6	3.9	5.1	1.1	2.2	3.3	4.4	1.0	1.9	2.9	3.9
	40	0.30	UC	UC	F	F	VC	C	VC	C	M	M	M	M	M	M	C	C	8.9	17.8	26.7	35.6	4.5	8.9	13.4	17.8	3.0	5.9	8.9	11.9	2.2	4.5	6.7	8.9	1.8	3.6	5.3	7.1	1.5	3.0	4.5	5.9	1.3	2.5	3.8	5.1	1.1	2.2	3.3	4.5	
	50	0.34	UC	UC	F	F	VC	C	VC	M	M	M	M	M	M	M	C	C	10.0	19.9	29.9	39.8	5.0	10.0	14.9	19.9	3.3	6.6	10.0	13.3	2.5	5.0	7.5	10.0	2.0	4.0	6.0	8.0	1.7	3.3	5.0	6.6	1.4	2.8	4.3	5.7	1.2	2.5	3.7	5.0	
	60	0.37	UC	UC	F	F	C	C	C	VC	M	F	M	F	F	M	M	C	10.9	21.8	32.7	43.6	5.5	10.9	16.4	21.8	3.6	7.3	10.9	14.5	2.7	5.5	8.2	10.9	2.2	4.4	6.5	8.7	1.8	3.6	5.5	7.3	1.6	3.1	4.7	6.2	1.4	2.7	4.1	5.5	
	70	0.40	UC	UC	F	F	C	C	C	VC	M	F	M	M	M	M	M	C	11.8	23.6	35.4	47.1	5.9	11.8	17.7	23.6	3.9	7.9	11.8	15.7	2.9	5.9	8.8	11.8	2.4	4.7	7.1	9.4	2.0	3.9	5.9	7.9	1.7	3.4	5.1	6.7	1.5	2.9	4.4	5.9	
80	0.42	XC	UC	F	F	C	C	C	VC	M	F	NR	F	F	M	M	C	12.6	25.2	37.8	50.4	6.3	12.6	18.9	25.2	4.2	8.4	12.6	16.8	3.2	6.3	9.5	12.6	2.5	5.0	7.6	10.1	2.1	4.2	6.3	8.4	1.8	3.6	5.4	7.2	1.6	3.2	4.7	6.3		
90	0.45	XC	UC	F	F	C	C	C	VC	M	F	NR	NR	F	M	M	C	13.4	26.7	40.1	53.5	6.7	13.4	20.0	26.7	4.5	8.9	13.4	17.8	3.3	6.7	10.0	13.4	2.7	5.3	8.0	10.7	2.2	4.5	6.7	8.9	1.9	3.8	5.7	7.6	1.7	3.3	5.0	6.7		
0.35	20	0.25	UC	UC							M								7.4	14.7	22.1	29.4	3.7	7.4	11.0	14.7	2.5	4.9	7.4	9.8	1.8	3.7	5.5	7.4	1.5	2.9	4.4	5.9	1.2	2.5	3.7	4.9	1.1	2.1	3.2	4.2	0.9	1.8	2.8	3.7	
	30	0.30	UC	UC							M								9.0	18.0	27.0	36.0	4.5	9.0	13.5	18.0	3.0	6.0	9.0	12.0	2.3	4.5	6.8	9.0	1.8	3.6	5.4	7.2	1.5	3.0	4.5	6.0	1.3	2.6	3.9	5.1	1.1	2.3	3.4	4.5	
	40	0.35	UC	UC							M								10.4	20.8	31.2	41.6	5.2	10.4	15.6	20.8	3.5	6.9	10.4	13.9	2.6	5.2	7.8	10.4	2.1	4.2	6.2	8.3	1.7	3.5	5.2	6.9	1.5	3.0	4.5	5.9	1.3	2.6	3.9	5.2	
	50	0.39	UC	UC							M								11.6	23.2	34.9	46.5	5.8	11.6	17.4	23.2	3.9	7.7	11.6	15.5	2.9	5.8	8.7	11.6	2.3	4.6	7.0	9.3	1.9	3.9	5.8	7.7	1.7	3.3	5.						

15 Inch Spacing		Nozzle Ninja PWM Application Chart																MPH 15 inch nozzle spacing																																		
		Nozzle Family and Droplet Size																Gallons per Acre																																		
Boom Spray Tip	Flow Pressure (PSI)	Rate (GPM)	ULDM	UR110	VP	ER110	DR110	CFLD-XC	TFLD	TTJ	3D	LD	HLDC	SR110	GRD	LDC	MR110	CFLD-C																																		
																		2.5				5				7.5				10				12.5				15				17.5				20						
																		25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%							
0.20	20	0.14	UC	UC		F	F	VC	VC	XC	VC	M	M	M	M	M	M	C	XC	5.6	11.2	16.8	22.4	2.8	5.6	8.4	11.2	1.9	3.7	5.6	7.5	1.4	2.8	4.2	5.6	1.1	2.2	3.4	4.5	0.9	1.9	2.8	3.7	0.8	1.6	2.4	3.2	0.7	1.4	2.1	2.8	
	30	0.17	UC	UC	F	F	VC	VC	XC	C	F	M	M	M	M	M	M	C	VC	6.9	13.7	20.6	27.4	3.4	6.9	10.3	13.7	2.3	4.6	6.9	9.1	1.7	3.4	5.1	6.9	1.4	2.7	4.1	5.5	1.1	2.3	3.4	4.6	1.0	2.0	2.9	3.9	0.9	1.7	2.6	3.4	
	40	0.20	UC	UC	F	F	VC	C	VC	C	F	M	F	F	M	M	M	C	C	7.9	15.8	23.8	31.7	4.0	7.9	11.9	15.8	2.6	5.3	7.9	10.6	2.0	4.0	5.9	7.9	1.6	3.2	4.8	6.3	1.3	2.6	4.0	5.3	1.1	2.3	3.4	4.5	1.0	2.0	3.0	4.0	
	50	0.22	UC	UC	F	F	C	C	C	VC	M	F	M	F	M	M	M	C	C	8.9	17.7	26.6	35.4	4.4	8.9	13.3	17.7	3.0	5.9	8.9	11.8	2.2	4.4	6.6	8.9	1.8	3.5	5.3	7.1	1.5	3.0	4.4	5.9	1.3	2.5	3.8	5.1	1.1	2.2	3.3	4.4	
	60	0.24	UC	UC	F	F	C	C	C	C	M	F	M	F	F	M	M	M	C	C	9.7	19.4	29.1	38.8	4.8	9.7	14.5	19.4	3.2	6.5	9.7	12.9	2.4	4.8	7.3	9.7	1.9	3.9	5.8	7.8	1.6	3.2	4.8	6.5	1.4	2.8	4.2	5.5	1.2	2.4	3.6	4.8
	70	0.26	UC	UC	F	F	C	C	C	C	M	F	M	F	F	F	M	M	C	C	10.5	21.0	31.4	41.9	5.2	10.5	15.7	21.0	3.5	7.0	10.5	14.0	2.6	5.2	7.9	10.5	2.1	4.2	6.3	8.4	1.7	3.5	5.2	7.0	1.5	3.0	4.5	6.0	1.3	2.6	3.9	5.2
80	0.28	UC	UC	XC		F	C	C	C	M	F	NR	F	F	F	F	M	C	C	11.2	22.4	33.6	44.8	5.6	11.2	16.8	22.4	3.7	7.5	11.2	14.9	2.8	5.6	8.4	11.2	2.2	4.5	6.7	9.0	1.9	3.7	5.6	7.5	1.6	3.2	4.8	6.4	1.4	2.8	4.2	5.6	
90	0.30	UC	UC	XC		F	C	C	C	M	F	NR	F	F	F	VF	F	C	C	11.9	23.8	35.6	47.5	5.9	11.9	17.8	23.8	4.0	7.9	11.9	15.8	3.0	5.9	8.9	11.9	2.4	4.8	7.1	9.5	2.0	4.0	5.9	7.9	1.7	3.4	5.1	6.8	1.5	3.0	4.5	5.9	
0.25	20	0.18	UC	UC	M	F	NR	XC	XC	VC	M	M	M	M	M	M	M	C	XC	7.0	14.0	21.0	28.0	3.5	7.0	10.5	14.0	2.3	4.7	7.0	9.3	1.8	3.5	5.3	7.0	1.4	2.8	4.2	5.6	1.2	2.3	3.5	4.7	1.0	2.0	3.0	4.0	0.9	1.8	2.6	3.5	
	30	0.22	UC	UC	F	F	VC	VC	XC	C	M	M	M	M	M	M	M	C	VC	8.6	17.1	25.7	34.3	4.3	8.6	12.9	17.1	2.9	5.7	8.6	11.4	2.1	4.3	6.4	8.6	1.7	3.4	5.1	6.9	1.4	2.9	4.3	5.7	1.2	2.4	3.7	4.9	1.1	2.1	3.2	4.3	
	40	0.25	UC	UC	F	F	VC	C	VC	C	M	M	F	F	M	M	M	C	C	9.9	19.8	29.7	39.6	5.0	9.9	14.9	19.8	3.3	6.6	9.9	13.2	2.5	5.0	7.4	9.9	2.0	4.0	5.9	7.9	1.7	3.3	5.0	6.6	1.4	2.8	4.2	5.7	1.2	2.5	3.7	5.0	
	50	0.28	UC	UC	F	F	C	C	VC	M	F	M	F	F	M	M	M	C	C	11.1	22.1	33.2	44.3	5.5	11.1	16.6	22.1	3.7	7.4	11.1	14.8	2.8	5.5	8.3	11.1	2.2	4.4	6.6	8.9	1.8	3.7	5.5	7.4	1.6	3.2	4.7	6.3	1.4	2.8	4.2	5.5	
	60	0.31	UC	UC	F	F	C	C	C	M	F	M	F	F	M	M	M	C	C	12.1	24.2	36.4	48.5	6.1	12.1	18.2	24.2	4.0	8.1	12.1	16.2	3.0	6.1	9.1	12.1	2.4	4.8	7.3	9.7	2.0	4.0	6.1	8.1	1.7	3.5	5.2	6.9	1.5	3.0	4.5	6.1	
	70	0.33	UC	UC	F	F	C	C	C	M	F	M	F	F	F	M	M	C	C	13.1	26.2	39.3	52.4	6.5	13.1	19.6	26.2	4.4	8.7	13.1	17.5	3.3	6.5	9.8	13.1	2.6	5.2	7.9	10.5	2.2	4.4	6.5	8.7	1.9	3.7	5.6	7.5	1.6	3.3	4.9	6.5	
80	0.35	UC	UC	F	F	C	C	C	M	F	NR	F	F	F	M	M	C	C	14.0	28.0	42.0	56.0	7.0	14.0	21.0	28.0	4.7	9.3	14.0	18.7	3.5	7.0	10.5	14.0	2.8	5.6	8.4	11.2	2.3	4.7	7.0	9.3	2.0	4.0	6.0	8.0	1.8	3.5	5.3	7.0		
90	0.38	UC	UC	F	F	C	C	C	M	F	NR	NR	F	F	VF	M	C	C	14.9	29.7	44.6	59.4	7.4	14.9	22.3	29.7	5.0	9.9	14.9	19.8	3.7	7.4	11.1	14.9	3.0	5.9	8.9	11.9	2.5	5.0	7.4	9.9	2.1	4.2	6.4	8.5	1.9	3.7	5.6	7.4		
0.30	20	0.21	UC	UC	M	F	NR	VC	UC	VC	M	C	C	C	C	C	VC	VC	8.4	16.8	25.2	33.6	4.2	8.4	12.6	16.8	2.8	5.6	8.4	11.2	2.1	4.2	6.3	8.4	1.7	3.4	5.0	6.7	1.4	2.8	4.2	5.6	1.2	2.4	3.6	4.8	1.1	2.1	3.2	4.2		
	30	0.26	UC	UC	F	F	VC	VC	XC	C	M	C	M	C	M	C	VC	VC	10.3	20.6	30.9	41.2	5.1	10.3	15.4	20.6	3.4	6.9	10.3	13.7	2.6	5.1	7.7	10.3	2.1	4.1	6.2	8.2	1.7	3.4	5.1	6.9	1.4	2.9	4.4	5.9	1.3	2.6	3.9	5.1		
	40	0.30	UC	UC	F	F	VC	C	XC	C	M	M	M	M	M	M	C	C	11.9	23.8	35.6	47.5	5.9	11.9	17.8	23.8	4.0	7.9	11.9	15.8	3.0	5.9	8.9	11.9	2.4	4.8	7.1	9.5	2.0	4.0	5.9	7.9	1.7	3.4	5.1	6.8	1.5	3.0	4.5	5.9		
	50	0.34	UC	UC	F	F	VC	C	VC	M	M	M	M	M	M	M	C	C	13.3	26.6	39.8	53.1	6.6	13.3	19.9	26.6	4.4	8.9	13.3	17.7	3.3	6.6	10.0	13.3	2.7	5.3	8.0	10.6	2.2	4.4	6.6	8.9	1.9	3.8	5.7	7.6	1.7	3.3	5.0	6.6		
	60	0.37	UC	UC	F	F	C	C	C	VC	M	F	M	M	M	M	M	C	C	14.5	29.1	43.6	58.2	7.3	14.5	21.8	29.1	4.8	9.7	14.5	19.4	3.6	7.3	10.9	14.5	2.9	5.8	8.7	11.6	2.4	4.8	7.3	9.7	2.1	4.2	6.2	8.3	1.8	3.6	5.5	7.3	
	70	0.40	UC	UC	F	F	C	C	C	VC	M	F	M	M	M	M	M	C	C	15.7	31.4	47.1	62.9	7.9	15.7	23.6	31.4	5.2	10.5	15.7	21.0	3.9	7.9	11.8	15.7	3.1	6.3	9.4	12.6	2.6	5.2	7.9	10.5	2.2	4.5	6.7	9.0	2.0	3.9	5.9	7.9	
80	0.42	UC	UC	XC		F	C	C	VC	M	F	NR	F	F	M	M	C	C	16.8	33.6	50.4	67.2	8.4	16.8	25.2	33.6	5.6	11.2	16.8	22.4	4.2	8.4	12.6	16.8	3.4	6.7	10.1	13.4	2.8	5.6	8.4	11.2	2.4	4.8	7.2	9.6	2.1	4.2	6.3	8.4		
90	0.45	UC	UC	XC		F	C	C	VC	M	F	NR	NR	F	M	M	C	C	17.8	35.6	53.5	71.3	8.9	17.8	26.7	35.6	5.9	11.9	17.8	23.8	4.5	8.9	13.4	17.8	3.6	7.1	10.7	14.3	3.0	5.9	8.9	11.9	2.5	5.1	7.6	10.2	2.2	4.5	6.7	8.9		
0.35	20	0.25	UC	UC							M								9.8	19.6	29.4	39.2	4.9	9.8	14.7	19.6	3.3	6.5	9.8	13.1	2.5	4.9	7.4	9.8	2.0	3.9	5.9	7.8	1.6	3.3	4.9	6.5	1.4	2.8	4.2	5.6	1.2	2.5	3.7	4.9		
	30	0.30	UC	UC							M								12.0	24.0	36.0	48.0	6.0	12.0	18.0	24.0	4.0	8.0	12.0	16.0	3.0	6.0	9.0	12.0	2.4	4.8	7.2	9.6	2.0	4.0	6.0	8.0	1.7	3.4	5.1	6.9	1.5	3.0	4.5	6.0		
	40	0.35	UC	UC							M								13.9	27.7	41.6	55.4	6.9	13.9	20.8	27.7	4.6	9.2	13.9	18.5	3.5	6.9	10.4	13.9	2.8	5.5	8.3	11.1	2.3	4.6	6.9	9.2	2.0	4.0	5.9	7.9	1.7	3.5	5.2	6.9		
	50	0.39	UC	UC							M								15.5	31.0	46.5	62.0	7.7	15.5	23.2	31.0	5.2	10.3	15.5	20.7	3.9	7.7	11.6	15.5	3.1	6.2	9.3	12.4	2.6	5.2	7.7	10.3	2.2	4.4	6.6	8.9	1.9	3.9	5.8	7.7		
	60	0.43	UC	UC							M								17.0	33.9	50.9	67.9	8.5	17.0	25.5	33.9	5.7	11.3	17.0	22.6	4.2	8.5	12.7	17.0	3.4	6.8	10.2	13.6	2.8	5.7	8.5	11.3	2.4	4.8	7.3	9.7	2.1	4.2	6.4	8.5		
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