

CROPCARE[®]

Calibrating boom sprayers

1/128th Sprayer Calibration Method

128 oz of liquid in a gallon

1/128th of an acre to be sprayed

Ounces collected = gallons per acre

Step 1.

Select a nozzle that provides desired application rate and desired droplet size at a given speed and pressure.

Step 2.

Adjust the sprayer pressure to amount determined (in step 1) and check for uniformity.

Operate sprayer for one minute and then measure spray from each nozzle.

Clean or replace any nozzle that delivers 5-10% more or less than the output from a new/unused nozzle.

Step 3.

Measure spray width or nozzle spacing in inches on the boom to determine course length in feet. (see chart below)

The area to be sprayed must be equal to 1/128th of an acre

Distance to travel can be determined: $\frac{4084}{(\text{Nozzle Spacing Inches})} = (\text{Distance in feet})$

Step 4.

Measure the amount of time required to travel the predetermined distance (from step 3) with sprayer at your desired speed.

Take note of engine RPM and gearing.

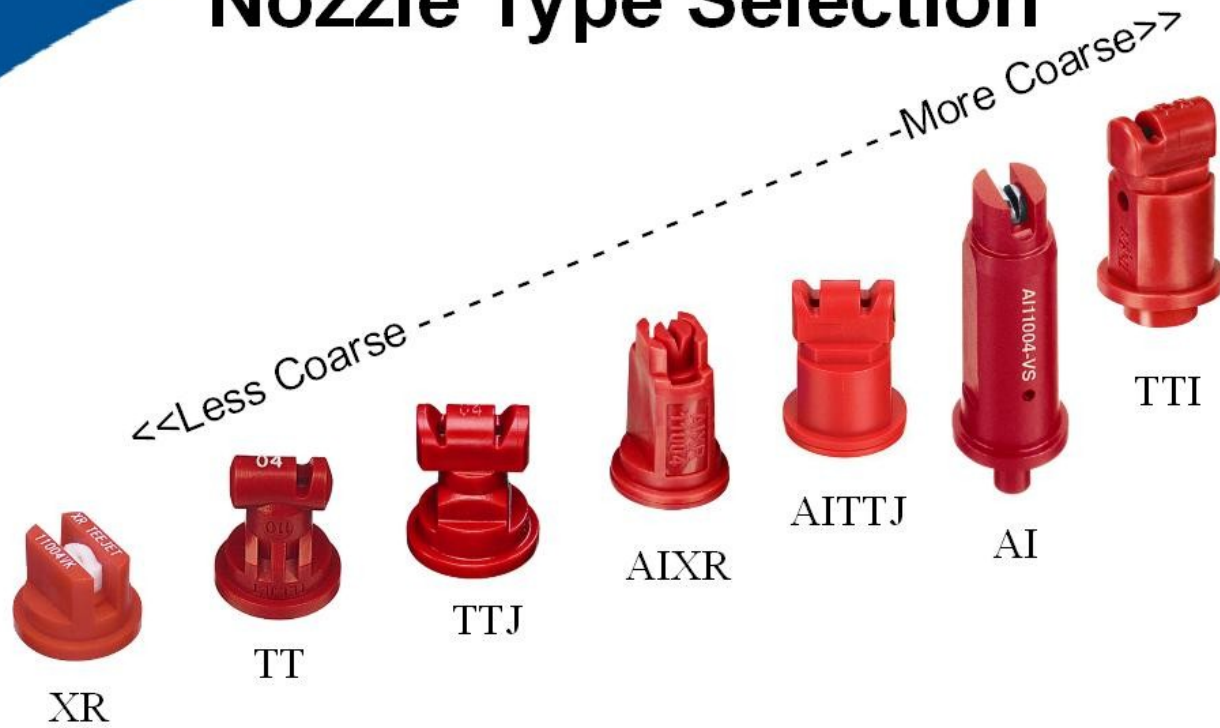
Step 5.





Measure the spray collected in ounces for the amount of time determined (from step 4). The number of ounces collected is the same as the number of gallons per acre applied.

W (in)	D (ft)	Seconds to travel (D) feet at a speed of:				
		3 mph	4 mph	5 mph	6 mph	7 mph
12	340	77	58	46	39	33
14	292	66	50	40	33	28
15	272	62	47	38	31	27
16	255	58	43	35	29	25
18	227	52	39	31	26	22
20	204	46	35	28	23	20
22	186	42	32	25	21	18
24	170	39	29	23	19	17
26	157	36	27	21	18	15
28	146	33	25	20	17	14
30	136	31	23	19	15	13

Table. Distance (D) to travel and seconds required for selected speeds when nozzle coverage is (W) inches

Nozzle Type Selection



 	 PSI	DROP SIZE	CAPACITY ONE NOZZLE IN GPM	CAPACITY ONE NOZZLE OZ./MIN.	 20"							
					GPA							
					4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	12 MPH	15 MPH	20 MPH
AIXR110025 (50)	15	XC	0.15	19	11.1	8.9	7.4	5.6	4.5	3.7	3.0	2.2
	20	XC	0.18	23	13.4	10.7	8.9	6.7	5.3	4.5	3.6	2.7
	30	XC	0.22	28	16.3	13.1	10.9	8.2	6.5	5.4	4.4	3.3
	40	VC	0.25	32	18.6	14.9	12.4	9.3	7.4	6.2	5.0	3.7
	50	C	0.28	36	21	16.6	13.9	10.4	8.3	6.9	5.5	4.2
	60	C	0.31	40	23	18.4	15.3	11.5	9.2	7.7	6.1	4.6
	75	C	0.34	44	25	20	16.8	12.6	10.1	8.4	6.7	5.0
	90	C	0.38	49	28	23	18.8	14.1	11.3	9.4	7.5	5.6
AIXR11003 (50)	15	XC	0.18	23	13.4	10.7	8.9	6.7	5.3	4.5	3.6	2.7
	20	XC	0.21	27	15.6	12.5	10.4	7.8	6.2	5.2	4.2	3.1
	30	XC	0.26	33	19.3	15.4	12.9	9.7	7.7	6.4	5.1	3.9
	40	VC	0.30	38	22	17.8	14.9	11.1	8.9	7.4	5.9	4.5
	50	C	0.34	44	25	20	16.8	12.6	10.1	8.4	6.7	5.0
	60	C	0.37	47	27	22	18.3	13.7	11.0	9.2	7.3	5.5
	75	C	0.41	52	30	24	20	15.2	12.2	10.1	8.1	6.1
	90	C	0.45	58	33	27	22	16.7	13.4	11.1	8.9	6.7
AIXR11004 (50)	15	XC	0.24	31	17.8	14.3	11.9	8.9	7.1	5.9	4.8	3.6
	20	XC	0.28	36	21	16.6	13.9	10.4	8.3	6.9	5.5	4.2
	30	XC	0.35	45	26	21	17.3	13.0	10.4	8.7	6.9	5.2
	40	XC	0.40	51	30	24	19.8	14.9	11.9	9.9	7.9	5.9
	50	VC	0.45	58	33	27	22	16.7	13.4	11.1	8.9	6.7
	60	VC	0.49	63	36	29	24	18.2	14.6	12.1	9.7	7.3
	75	C	0.55	70	41	33	27	20	16.3	13.6	10.9	8.2
	90	C	0.60	77	45	36	30	22	17.8	14.9	11.9	8.9