NEW STRAIGHT STREAM NOZZLE MODELS

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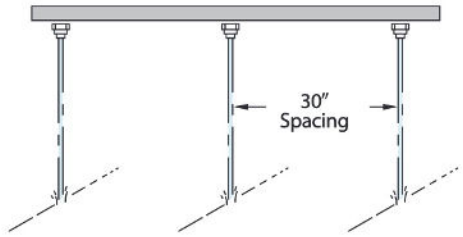
STRAIGHT STREAM NOZZLES

StreamJet Solid Stream Spray Nozzles

Stainless Steel for Banding Fertilizers

- Permits banding fluids at high rig speeds.
- Large orifices with no internal obstructions permit non-clogging suspension applications.
- Lower drift potential.
- See page 141 for liquid density conversion factors.
- For TP tips use Quick TeeJet cap and gasket 25608-1-NYR.



	PSI	CAPACITY ONE NOZZLE IN GPM	GPA 30" 4 MPH	6 MPH	8 MPH	10 MPH	12 MPH	14 MPH	16 MPH	18 MPH	20 MPH
TP0001-SS	10	0.050	2.5	1.7	1.2	0.99	0.83	0.71	0.62	0.55	0.50
	20	0.071	3.5	2.3	1.8	1.4	1.2	1.0	0.88	0.78	0.70
	30	0.087	4.3	2.9	2.2	1.7	1.4	1.2	1.1	0.96	0.86
	40	0.10	5.0	3.3	2.5	2.0	1.7	1.4	1.2	1.1	0.99
TP00015-SS	10	0.075	3.7	2.5	1.9	1.5	1.2	1.1	0.93	0.83	0.74
	20	0.11	5.4	3.6	2.7	2.2	1.8	1.6	1.4	1.2	1.1
	30	0.13	6.4	4.3	3.2	2.6	2.1	1.8	1.6	1.4	1.3
	40	0.15	7.4	5.0	3.7	3.0	2.5	2.1	1.9	1.7	1.5
H1/4U-SS0002 TP0002-SS	10	0.10	5.0	3.3	2.5	2.0	1.7	1.4	1.2	1.1	0.99
	20	0.14	6.9	4.6	3.5	2.8	2.3	2.0	1.7	1.5	1.4
	30	0.17	8.4	5.6	4.2	3.4	2.8	2.4	2.1	1.9	1.7
	40	0.20	9.9	6.6	5.0	4.0	3.3	2.8	2.5	2.2	2.0
H1/4U-SS0003 TP0003-SS	10	0.15	7.4	5.0	3.7	3.0	2.5	2.1	1.9	1.7	1.5
	20	0.21	10.4	6.9	5.2	4.2	3.5	3.0	2.6	2.3	2.1
	30	0.26	12.9	8.6	6.4	5.1	4.3	3.7	3.2	2.9	2.6
	40	0.30	14.9	9.9	7.4	5.9	5.0	4.2	3.7	3.3	3.0
H1/4U-SS0004 TP0004-SS	10	0.20	9.9	6.6	5.0	4.0	3.3	2.8	2.5	2.2	2.0
	20	0.28	13.9	9.2	6.9	5.5	4.6	4.0	3.5	3.1	2.8
	30	0.35	17.3	11.6	8.7	6.9	5.8	5.0	4.3	3.9	3.5
	40	0.40	19.8	13.2	9.9	7.9	6.6	5.7	5.0	4.4	4.0
H1/4U-SS0006 TP0006-SS	10	0.30	14.9	9.9	7.4	5.9	5.0	4.2	3.7	3.3	3.0
	20	0.42	21	13.9	10.4	8.3	6.9	5.9	5.2	4.6	4.2
	30	0.52	26	17.2	12.9	10.3	8.6	7.4	6.4	5.7	5.1
	40	0.60	30	19.8	14.9	11.9	9.9	8.5	7.4	6.6	5.9
H1/4U-SS0008 TP0008-SS	10	0.40	19.8	13.2	9.9	7.9	6.6	5.7	5.0	4.4	4.0
	20	0.57	28	18.8	14.1	11.3	9.4	8.1	7.1	6.3	5.6
	30	0.69	34	23	17.1	13.7	11.4	9.8	8.5	7.6	6.8
	40	0.80	40	26	19.8	15.8	13.2	11.3	9.9	8.8	7.9
H1/4U-SS0010 TP0010-SS	10	0.50	25	16.5	12.4	9.9	8.3	7.1	6.2	5.5	5.0
	20	0.71	35	23	17.6	14.1	11.7	10.0	8.8	7.8	7.0
	30	0.87	43	29	22	17.2	14.4	12.3	10.8	9.6	8.6
	40	1.00	50	33	25	19.8	16.5	14.1	12.4	11.0	9.9
H1/4U-SS0015 TP0015-SS	10	0.75	37	25	19	14.9	12.4	10.6	9.3	8.3	7.4
	20	1.06	52	35	26	21	17.5	15.0	13.1	11.7	10.5
	30	1.30	64	43	32	26	21	18.4	16.1	14.3	12.9
	40	1.50	74	50	37	30	25	21	18.6	16.5	14.9
H1/4U-SS0020 TP0020-SS	10	1.00	50	33	25	19.8	16.5	14.1	12.4	11.0	9.9
	20	1.41	70	47	35	28	23	19.9	17.4	15.5	14.0
	30	1.73	86	57	43	34	29	24	21	19.0	17.1
	40	2.00	99	66	50	40	33	28	25	22	19.8
H1/4U-SS0030	10	1.50	74	50	37	30	25	21	18.6	16.5	14.9
	20	2.12	105	70	52	42	35	30	26	23	21

OPERATIONAL RANGE

- TeeJet TP SS and H1 4U straight streams

- Orifice Sizes 2, 3, 4, 6, 8, 10, 12, 15, 20

- Pressures 30 to 90 psi

- Airspeeds 120 to180 mph

AIRSPEED

TJ SS @ 40 psi

120 mph

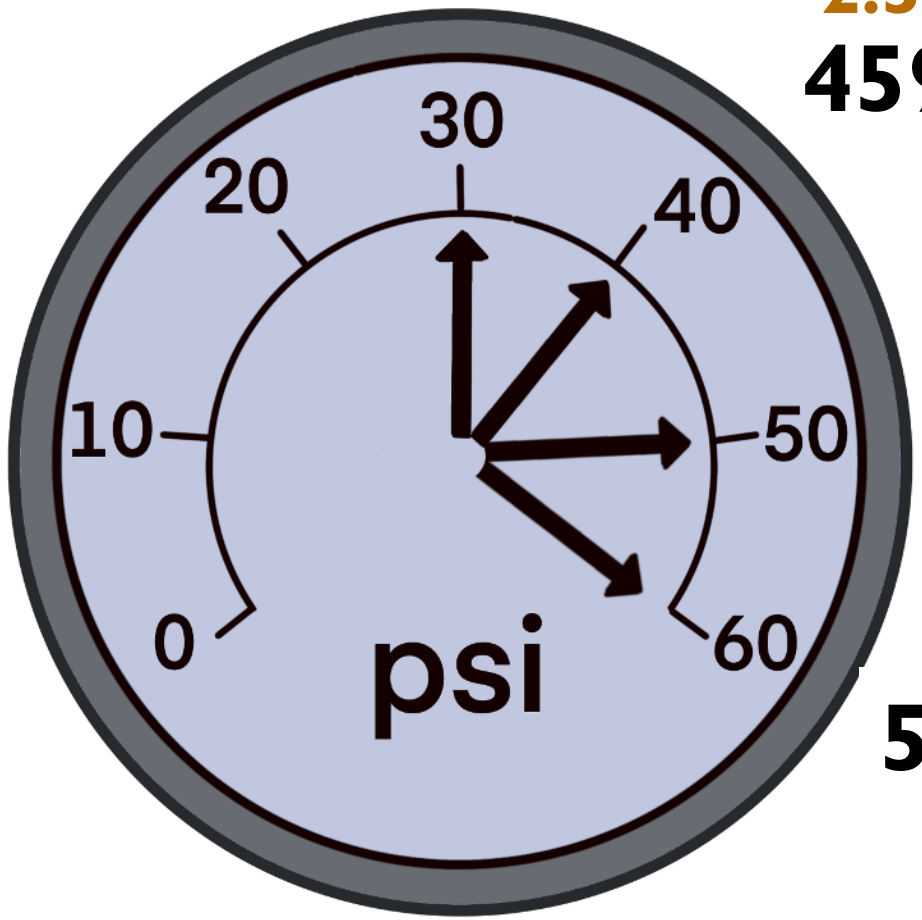
732 1.1% UC

271 8.7% M

180 mph

PRESSURE

TJ SS 0006
140 mph



C 2.9%
411

2.3%
459 C

1.9%
505 VC

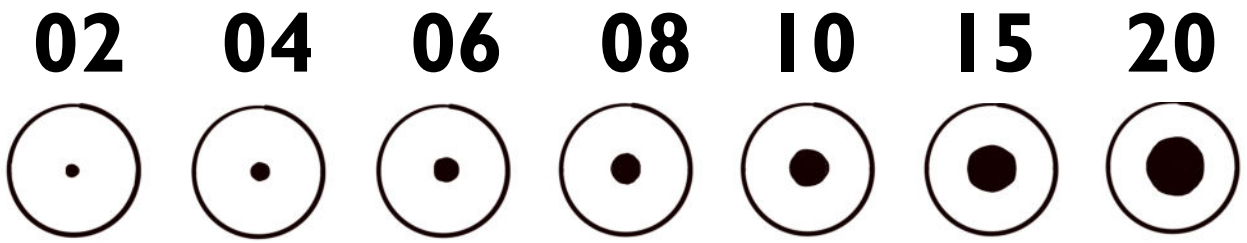
1.5%
550 VC

673 @ 90 psi

0.9% XC

ORIFICE SIZE

TJ SS
140 mph
40 psi



	02	04	06	08	10	15	20
$D_{V0.1}$	208			197			186
$D_{V0.5}$	458			459			456
$D_{V0.9}$	708			765			800
%Vol<100	2.3			2.3			2.9
	VC			C			C

USDA ARS Aerial Application Technology Research Unit High Speed Spray Nozzle Models

STEP 1: SELECT NOZZLE MODEL USING PULL DOWN MENU

TeeJet SS

VALID FOR AIRSPEEDS FROM 120 to 180 MPH

Aerial Application Technology Research Unit, Agricultural Research Service, U. S. Department of Agriculture, 3103 F&B Road, College Station, TX 77845, USA.

STEP 2: SELECT NOZZLE OPERATING PARAMETERS FROM PULLDOWN MENUS BELOW.

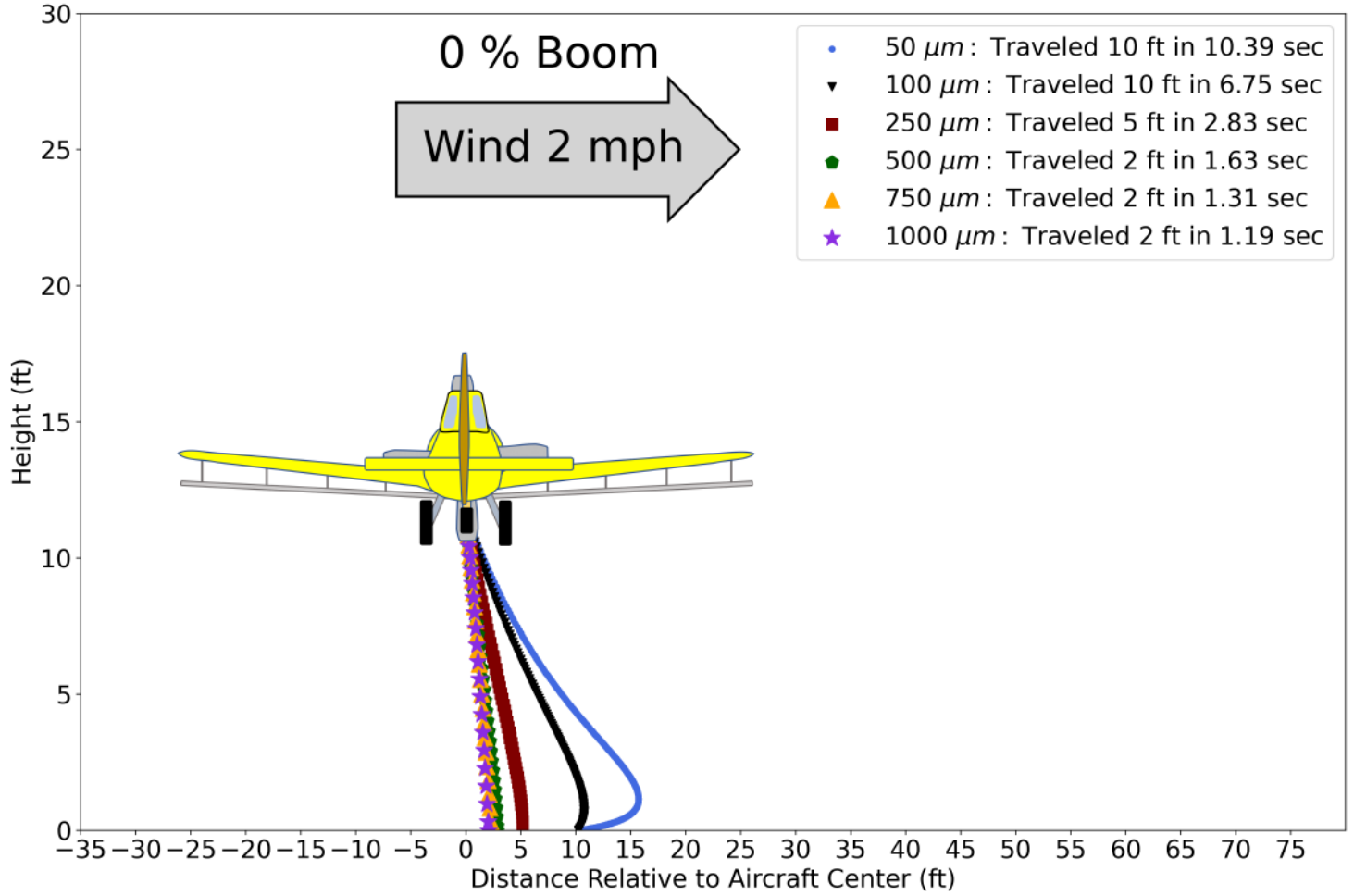
Acceptable Ranges:	Orifice Size	Nozzle Body Angle	Pressure	Airspeed
	2 to 20	0	25 to 45 psi	120 to 180 MPH
	2	0	45	150

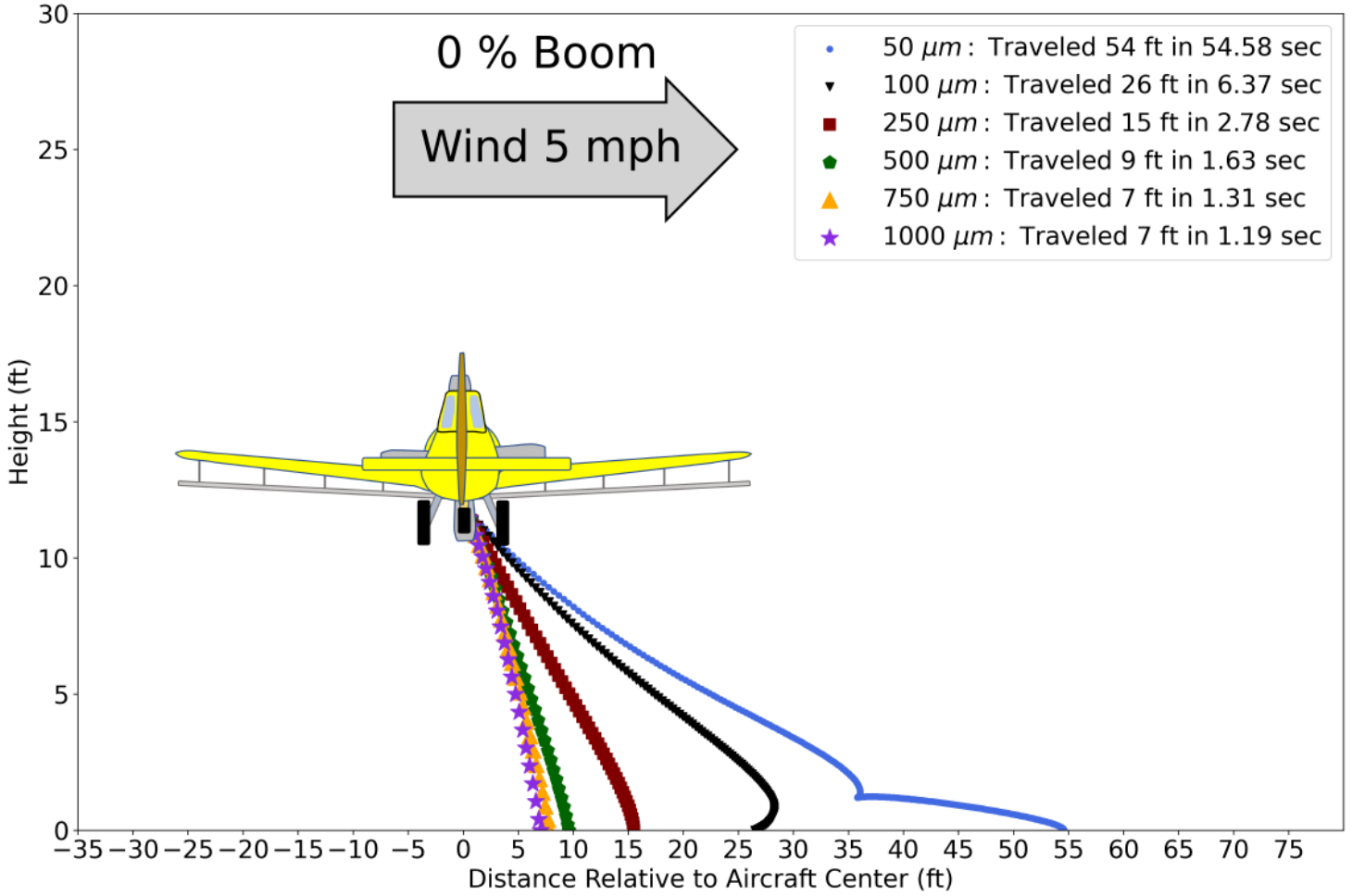
CAUTION: Do not enter or clear data in the cells in this box!

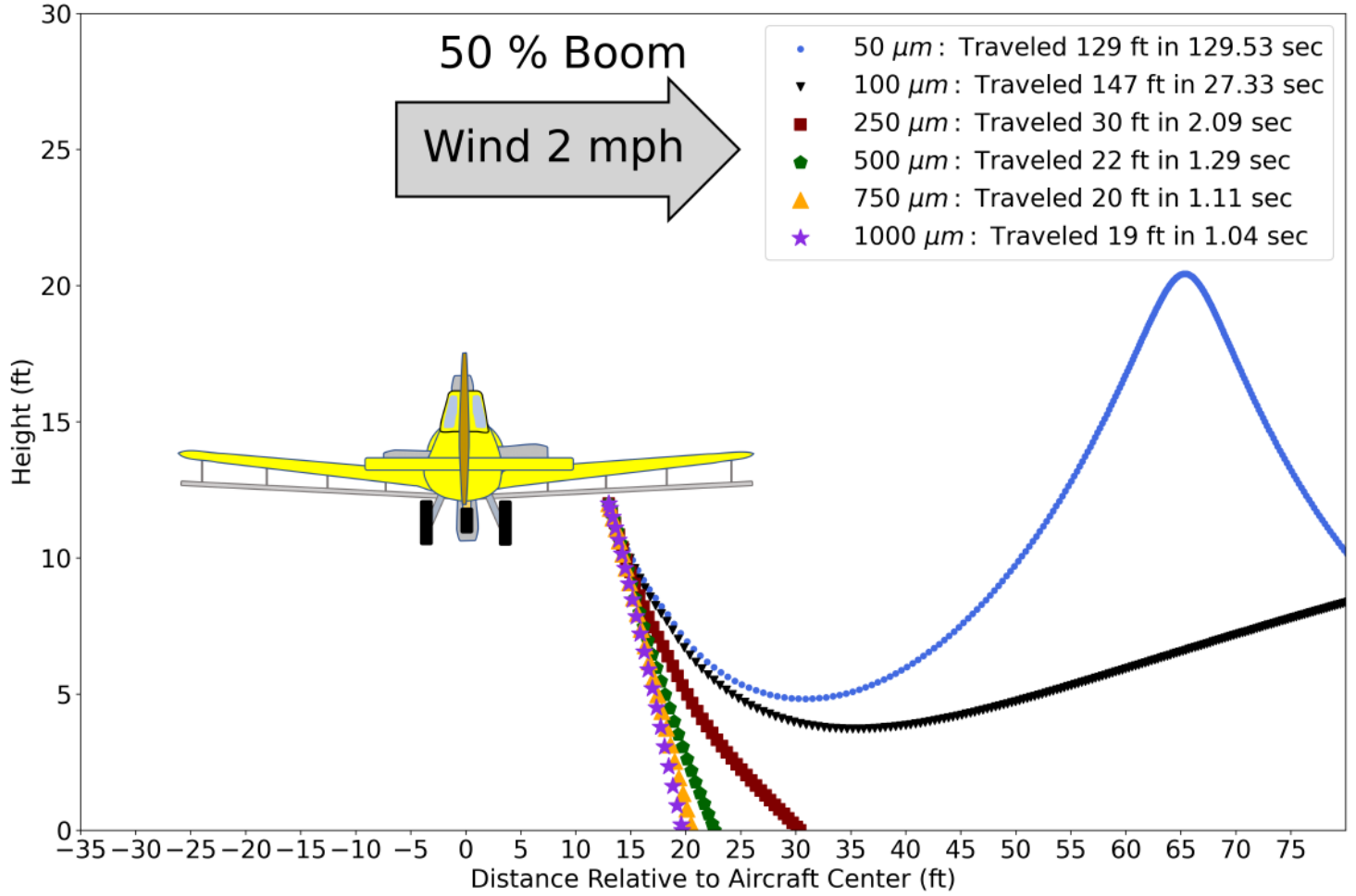
$D_{V0.1}$ =	172	µm	= Droplet size such that 10% of the spray volume is in droplets smaller than $D_{V0.1}$.
$D_{V0.5}$ =	384	µm	= Volume median diameter. Droplet size such that 50% of the spray volume is in droplets smaller than DV0.5.
$D_{V0.9}$ =	597	µm	= Droplet size such that 90% of the spray volume is in droplets smaller than $D_{V0.9}$.
RS =	1.10		= Relative Span
%V<100µm =	3.14	%	= Percentage of spray volume in droplets smaller than 100 µm diameter.
%V<200µm =	13.53	%	= Percentage of spray volume in droplets smaller than 200 µm diameter.
$DSC_{V0.1}$ =	COARSE		= Droplet Spectra Classification based on $D_{V0.1}$.
$DSC_{V0.5}$ =	COARSE		= Droplet Spectra Classification based on $D_{V0.5}$.
$DSC_{V0.9}$ =	COARSE		THE $D_{V0.9}$ CLASSIFICATION SHOWN IS FOR REFERENCE ONLY, DOES NOT IMPACT DSC RATING.
DSC =	COARSE		= ASABE S572.2 Droplet Spectra Classification

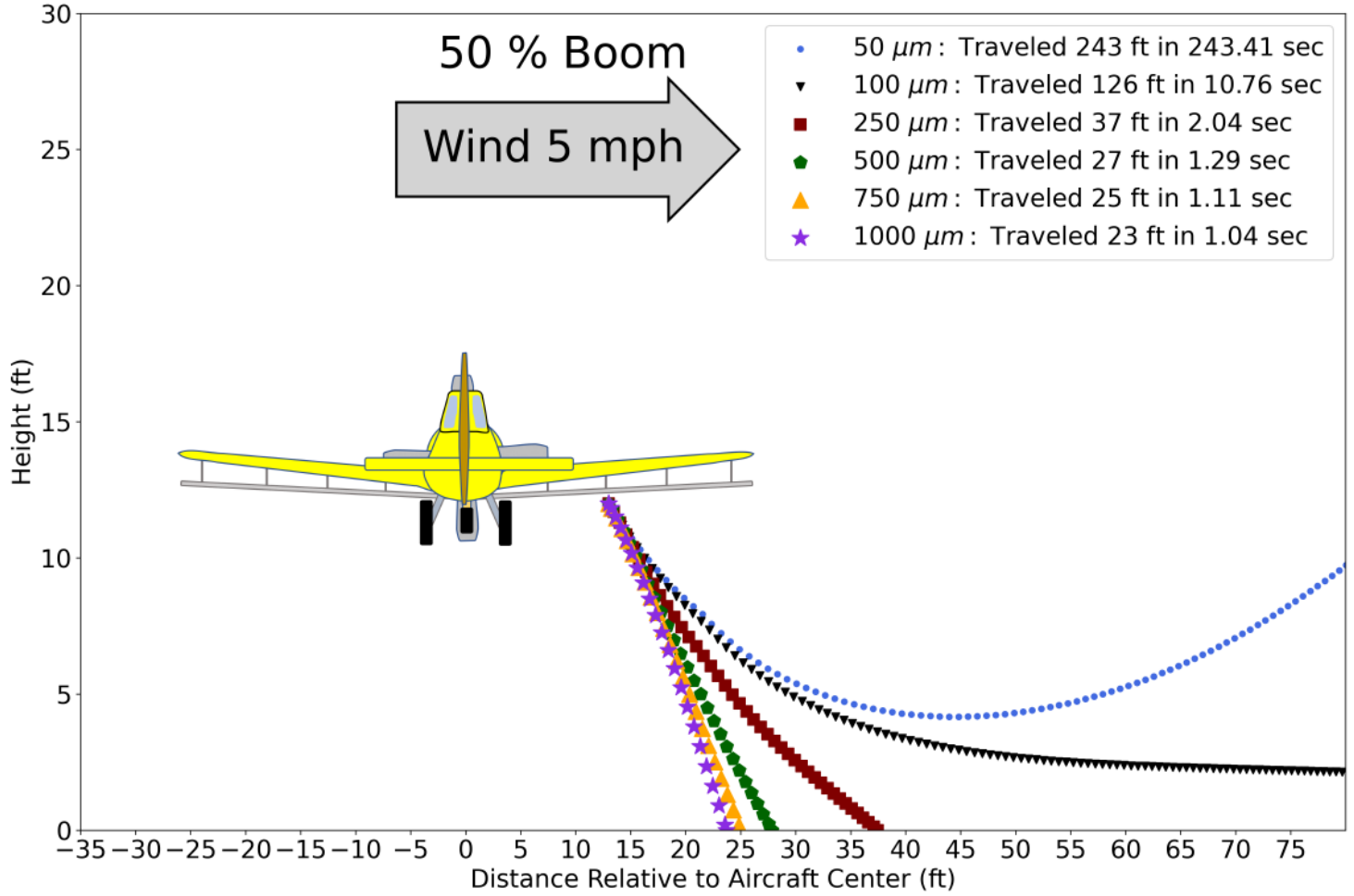
MOTIVATION FOR USE

- Larger droplet size
- Precision application
- Reduced off-target movement


0 % Boom
Wind 2 mph
50 μm : Traveled 10 ft in 10.39 sec
100 μm : Traveled 10 ft in 6.75 sec
250 μm : Traveled 5 ft in 2.83 sec
500 μm : Traveled 2 ft in 1.63 sec
750 μm : Traveled 2 ft in 1.31 sec
1000 μm : Traveled 2 ft in 1.19 sec
Height (ft)
Distance Relative to Aircraft Center (ft)


0 % Boom
Wind 5 mph
50 μm : Traveled 54 ft in 54.58 sec
100 μm : Traveled 26 ft in 6.37 sec
250 μm : Traveled 15 ft in 2.78 sec
500 μm : Traveled 9 ft in 1.63 sec
750 μm : Traveled 7 ft in 1.31 sec
1000 μm : Traveled 7 ft in 1.19 sec
Height (ft)
Distance Relative to Aircraft Center (ft)


50 % Boom
Wind 2 mph
50 μm : Traveled 129 ft in 129.53 sec
100 μm : Traveled 147 ft in 27.33 sec
250 μm : Traveled 30 ft in 2.09 sec
500 μm : Traveled 22 ft in 1.29 sec
750 μm : Traveled 20 ft in 1.11 sec
1000 μm : Traveled 19 ft in 1.04 sec
Height (ft)
Distance Relative to Aircraft Center (ft)
0
5
10
15
20
25
30
−35 −30 −25 −20 −15 −10 −5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75


50 % Boom
Wind 5 mph
50 μm : Traveled 243 ft in 243.41 sec
100 μm : Traveled 126 ft in 10.76 sec
250 μm : Traveled 37 ft in 2.04 sec
500 μm : Traveled 27 ft in 1.29 sec
750 μm : Traveled 25 ft in 1.11 sec
1000 μm : Traveled 23 ft in 1.04 sec
Height (ft)
Distance Relative to Aircraft Center (ft)

QUESTIONS?

Email

Nozzle Model Download