

Appendix I. AgDISP Model

AGDISP Input Data Summary

--General--

Title: Linuron

Notes:

Calculations Done: Yes

Run ID: AGDISP Linuron.ag 8.15 06-05-2008 14:10:01

--Ground Sprayer--

Name	-----	
	Air Tractor AT-401	
Boom Pressure (psig)		60
Boom Height (ft)		4
Spray Lines		20
Optimize Spray Lines		No
Spray Line Reps	#	Reps
1		1
2		1
3		1
4		1
5		1
6		1
7		1
8		1
9		1
10		1
11		1
12		1
13		1
14		1
15		1
16		1
17		1
18		1
19		1
20		1

--Ground Application Type--

Ground Application Type	-----
	Liquid

--Drop Size Distribution--

Name	-----
	ASAE Very Fine to Fine

Type	Reference	
Drop Categories	#	Diam (um)
		Frac
1	10.77	0.0017
2	16.73	0.0013
3	19.39	0.0017
4	22.49	0.0027
5	26.05	0.0043
6	30.21	0.0060
7	35.01	0.0070
8	40.57	0.0077
9	47.03	0.0130
10	54.50	0.0227
11	63.16	0.0353
12	73.23	0.0487
13	84.85	0.0590
14	98.12	0.0717
15	113.71	0.0863
16	131.73	0.1020
17	152.79	0.1247
18	177.84	0.1420
19	205.84	0.1077
20	238.45	0.0573
21	276.48	0.0450
22	320.60	0.0273
23	372.18	0.0120
24	430.74	0.0053
25	498.91	0.0037
26	578.54	0.0020
27	670.72	0.0020

--Nozzle Distribution--

Boom Length (%)		65.06	
Nozzle Locations	#	Hor(ft)	Ver(ft)
		Fwd(ft)	
1	-15.94	0	0
2	-15.16	0	0
3	-14.38	0	0
4	-13.61	0	0
5	-12.83	0	0
6	-12.05	0	0
7	-11.27	0	0
8	-10.5	0	0
9	-9.72	0	0
10	-8.94	0	0
11	-8.16	0	0
12	-7.39	0	0
13	-6.61	0	0

14	-5.83	0	0
15	-5.05	0	0
16	-4.28	0	0
17	-3.5	0	0
18	-2.72	0	0
19	-1.94	0	0
20	-1.17	0	0
21	-0.3888	0	0
22	0.3888	0	0
23	1.17	0	0
24	1.94	0	0
25	2.72	0	0
26	3.5	0	0
27	4.28	0	0
28	5.05	0	0
29	5.83	0	0
30	6.61	0	0
31	7.39	0	0
32	8.16	0	0
33	8.94	0	0
34	9.72	0	0
35	10.5	0	0
36	11.27	0	0
37	12.05	0	0
38	12.83	0	0
39	13.61	0	0
40	14.38	0	0
41	15.16	0	0
42	15.94	0	0

--Swath--

Swath Width	60 ft
Swath Displacement	0 ft

--Spray Material--

Name	Water
Type	Reference
Nonvolatile Fraction	0.03
Active Fraction	0.016
Spray Volume Rate (gal/ac)	15

--Meteorology--

Wind Speed (mph)	15
Wind Direction (deg)	-90
Temperature (deg F)	65
Relative Humidity (%)	50

--Atmospheric Stability--	-----
Atmospheric Stability	Overcast
--Transport--	-----
Flux Plane Distance (ft)	0
--Canopy--	-----
Type	None
--Terrain--	-----
Surface Roughness (ft)	0.0246
Upslope Angle (deg)	0
Sideslope Angle (deg)	0
--Advanced--	-----
Wind Speed Height (ft)	6.56
Max Compute Time (sec)	600
Max Downwind Dist (ft)	2608.24
Vortex Decay Rate (IGE) (mph)	1.25
Vortex Decay Rate (OGE) (mph)	0.3355
Aircraft Drag Coeff	0.1
Propeller Efficiency	0.8
Ambient Pressure (in hg)	29.91
Save Trajectory Files	No
Half Boom	No
Default Swath Offset	1/2 Swath
Specific Gravity (Carrier)	0.95
Specific Gravity (Nonvolatile)	1
Evaporation Rate ($\mu\text{m}^2/\text{deg C}/\text{sec}$)	84.76

Terrestrial Output

AGDISP *Linuron.ag

File Edit View Run Toolbox Help

Title
Linuron

Application Method
Method: Ground
Nozzle Type: Flat Fan
Boom Pressure: 60 psig
Release Height: 4 ft
Spray Lines: 20 Reps

Meteorology
Wind Speed: 15 mph
Wind Direction: -90 deg
Temperature: 65 deg F
Rel. Humidity: 50 %

Surface
Upslope Angle: 0 deg
Sideslope Angle: 0 deg
Canopy None
Surface Details

Application Technique
☒ Liquid
Nozzles 42 nozzles
DSD ASAE Very Fine to Fine (Reference)
☐ Dry
Details Venturi Spreader

Spray Material
Material Water

Atmospheric Stability
Stability Overcast

Swath
Swath Width: 60 ft Swath Displacement: 0 ft

Transport
Distance: 0 ft
Height: ft

Advanced Settings
Advanced

 **AGDISP**

Gaussian Far-Field Extension

Handoff Options
☒ Automatic
☐ Specified at 2483.99 ft

Surface Layer Mixing Height Options
☒ Automatic
☐ Specified at ft

Deposition Assessment Plot Export Calc Close

 **Deposition Assessment** 

Deposition Area Definition

☐ Aquatic Area

Downwind Water Body Width: ft

Average Depth: ft

☒ Terrestrial Point

☐ Terrestrial Area

Downwind Area Average Width: ft

Calculations

Distance To Water Body, Point, or Area Average From Edge of Application Area: ft

Initial Average Deposition: lbm/ac

Initial Average Concentration: ng/L (ppt)

Aquatic Output

AGDISP *

File Edit View Run Toolbox Help

Title
Linuron (aquatic)

Application Method
Method: Ground
Nozzle Type: Flat Fan
Boom Pressure: 60 psig
Release Height: 4 ft
Spray Lines: 20 Reps

Meteorology
Wind Speed: 15 mph
Wind Direction: -90 deg
Temperature: 65 deg F
Rel. Humidity: 50 %

Surface
Upslope Angle: 0 deg
Sideslope Angle: 0 deg
Canopy None
Surface Details

Application Technique
☒ Liquid
Nozzles 42 nozzles
DSD BCPC Very Fine to Fine (Reference)
☐ Dry
Details Venturi Spreader

Spray Material
Material Water

Atmospheric Stability
Stability Overcast

Swath
Swath Width: 60 ft Swath Displacement: 0 ft

Transport
Distance: 0 ft
Height: ft

Advanced Settings
Advanced

AGDISP

Gaussian Far-Field Extension

Handoff Options
☒ Automatic
☐ Specified at 2483.99 ft

Surface Layer Mixing Height Options
☒ Automatic
☐ Specified at ft

Deposition Assessment Plot Export Calc Close

 **Deposition Assessment** 

Deposition Area Definition

☒ Aquatic Area

Downwind Water Body Width: ft

Average Depth: ft

☐ Terrestrial Point

☐ Terrestrial Area

Downwind Area Average Width: ft

Calculations

Distance To Water Body, Point, or Area Average From Edge of Application Area: ft

Initial Average Deposition: lbm/ac

Initial Average Concentration: ng/L (ppt)