
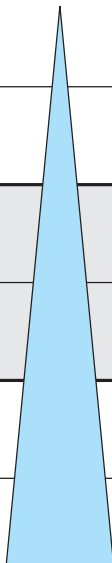
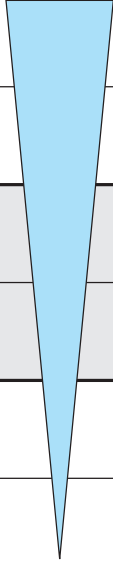
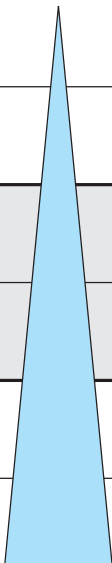







Optimal application criteria by droplet size for various nozzle types on field sprayers

Droplet sizes			Venturi nozzles	Standard nozzles	Coverage potential	Penetration	Drift potential
extremely coarse	approx. +550 µm		Systemic chemicals 300 l/ha+	Not optimal			
very coarse	approx. 400–550 µm		Systemic chemicals	Not optimal			
coarse	approx. 350–400 µm		Systemic chemicals Contact pesticides (200 l/ha+)	Systemic chemicals (400 l/ha+)			
medium	approx. 250–350 µm		Systemic chemicals Contact pesticides	Systemic chemicals			
fine	approx. 150–250 µm		Drift potential	Systemic chemicals Contact pesticides – spray risk potential			
very fine	approx. –150 µm		Not recommended	Not recommended			

Droplet size classification to ASAE/BCPC.

Measurements carried out with Malvern Particle Sizer. These criteria are based on long-term and general experiences.

Follow the recommendations of the chemical manufacturers if required by individual conditions.



extremely coarse



very coarse



coarse



medium



fine



very fine

General application rates for field sprayers and 50cm nozzle spacings

Water volume l/ha	Flow rate (l/min) per nozzle at a specific forward speed (km/h)												
	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0	12.0
50	0.17	0.19	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.35	0.38	0.42	0.50
80	0.27	0.30	0.33	0.37	0.40	0.43	0.47	0.50	0.53	0.57	0.60	0.67	0.80
100	0.33	0.38	0.42	0.46	0.50	0.54	0.58	0.63	0.67	0.71	0.75	0.83	1.00
120	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	1.00	1.20
150	0.50	0.56	0.63	0.69	0.75	0.81	0.88	0.94	1.00	1.06	1.13	1.25	1.50
200	0.67	0.75	0.83	0.92	1.00	1.08	1.17	1.25	1.33	1.42	1.50	1.67	2.00
250	0.83	0.94	1.04	1.15	1.25	1.35	1.46	1.56	1.67	1.77	1.88	2.08	2.50
300	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13	2.25	2.50	3.00
350	1.17	1.31	1.46	1.60	1.75	1.90	2.04	2.19	2.33	2.48	2.63	2.92	3.50
400	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50	2.67	2.83	3.00	3.33	4.00
450	1.50	1.69	1.88	2.06	2.25	2.44	2.63	2.81	3.00	3.19	3.38	3.75	4.50
500	1.67	1.88	2.08	2.29	2.50	2.71	2.92	3.13	3.33	3.54	3.75	4.17	5.00
600	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	5.00	6.00
700	2.33	2.63	2.92	3.21	3.50	3.79	4.08	4.38	4.67	4.96	5.25	5.83	7.00
800	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00	5.33	5.67	6.00	6.67	8.00
900	3.00	3.38	3.75	4.13	4.50	4.88	5.25	5.63	6.00	6.38	6.75	7.50	9.00
1000	3.33	3.75	4.17	4.58	5.00	5.42	5.83	6.25	6.67	7.08	7.50	8.33	10.00

The above rates refer to water at a temperature of 20 °C; the pressure was measured on the nozzle tip.

Ensure to verify these rates with a measuring jug before starting the application.

Example:

1. Select the water volume, e.g. 250 l/ha
2. Select the forward speed, e.g. 7.0 km/h
3. Read the required flow rate: 1.46 l/min
4. Select the suitable nozzle and pressure from the table on page 66. For example, select AirMix® ISO size -04 at 2.5 bar or TurboDrop® ISO-size -025 at 6.0 bar