

Field Broadcast Nozzle

Field Broadcast Nozzle for Tractors – 4mm Orifice

Manufactured in brass, the large broadcast nozzle is an efficient and inexpensive device that will enable application of liquid fertiliser to pasture. To operate, it requires a PTO powered diaphragm pump capable of 30-40 PSI (207-276 kPa) and with sufficient throughput to feed the nozzle with 12 litres per minute plus retain strong circulation within the spray tank. The Field Broadcast Nozzle will achieve a swath width of 6-7 metres at a pressure of 30-40 PSI (207-276 kPa) and a throughput of around 12 litres per minute (see table overleaf).

The Field Broadcast Nozzle should be mounted at the back of the tractor so that it is situated 900 mm above ground level in the operational position. It should be positioned facing rearwards with the threaded part pointing towards the ground.

Dilution

For application, the dilution is unimportant. The key consideration is to apply the desired amount of product to the required area and the amount of water should be as much as is needed to ensure the correct coverage. The more water the better the result will be, but if application is followed by rain, irrigation or heavy dew, then this means that less water may be applied during application of product.

Dilution can be varied to suit the vehicle speed, swath width and spray rate of the application equipment. Groundspray equipment may use a dilution anywhere between 1:10 and 1:50. To ensure adequate mixing, have the recirculating system running vigorously while adding water then product last.

Field Broadcast Nozzle for Quad Bikes – 2mm Orifice

This brass nozzle is designed for use on a quad bike or similar vehicle that uses a 12 volt pump connected to the vehicle battery as a power source. It can be supplied with a screw on hose tail and metal bracket that can be fitted at the back of the vehicle. It should be fitted so that it is 900 mm above the ground in the operating position and facing rearwards with the hose tail pointing at the ground.

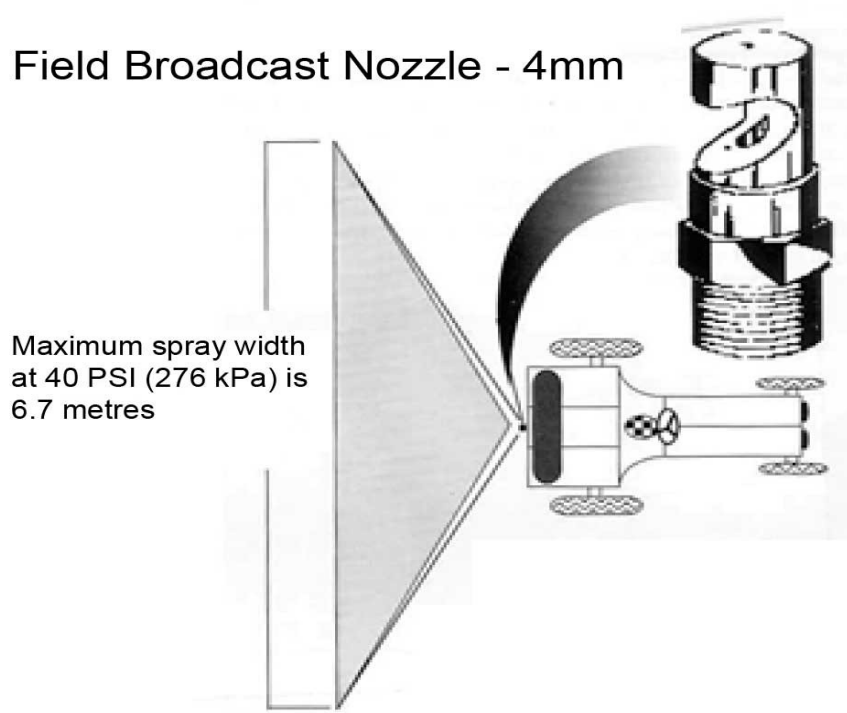
The small broadcast nozzle will give a swath width of 4-5 metres provided the pump will produce 10-20 PSI (69-138 kPa) and a throughput of 2-3 litres per minute (see table overleaf). This nozzle is eminently suitable for application of liquid fertilisers however will not handle liquid lime. The 12 volt pumps are not sufficiently powerful to handle liquid lime either.

How to Calculate Coverage and Dilution

Fill or even half-fill the spray tank with water. Go to a paddock of known size, select a gear and speed that will be comfortable, spray the tank of water and assess the area covered. Alternatively one hectare equals 10,000 square metres, so pace out the area covered by the amount of water sprayed and relate the area covered to the desired application rate of product. For example, if one tankful covers two hectares and you desire to apply 60 litres of product per hectare, simply add 120 litres of product to the tank while filling it with water.

Application Table

					Approx Litres applied per hectare at these speeds				
Orifice	PSI	kPa	Lts/min	Width	3 km	5 km	8 km	12 km	16 km
4 mm	30	207	11.7	6.4 m	350	230	134	91	69
	40	276	13.6	6.7 m	387	255	153	102	77
2 mm	10	69	1.9	4.2 m	83	56	33	22.7	17
	20	138	2.6	5.1 m	98	65	39	26.5	20



Attach the nozzle at the rear of the tractor with the orifice and cutout facing rearwards. Mount the nozzle so that the threaded part is pointing at the ground, about 900 mm high when it is in the operating position.

What are the advantages of Field Broadcast Nozzles?

- Spray is directed downwards to minimise drift;
- An inexpensive spray 'boom' with a good spray drift;
- With a 4 mm orifice it will not block;
- Easy to fit onto a tractor spray unit;
- No extensions to catch on gateways, trees, undulating ground or fences;
- It won't dig in to rough ground or catch on drinking troughs;
- It can spray right through a fence line especially if it is being used to control weeds on a neighbouring property!