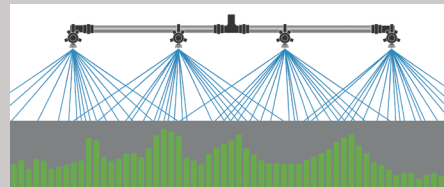


ARE WORN NOZZLES COSTING YOU?

Spray nozzles are some of the smallest and most overlooked pieces of equipment on a sprayer, but they have the greatest effect on accuracy, efficiency, and drift potential. Worn spray nozzles can increase application rates and/or change distribution patterns, causing under- and over-application and impacting your bottom line.

WORN NOZZLE SPRAY PATTERN



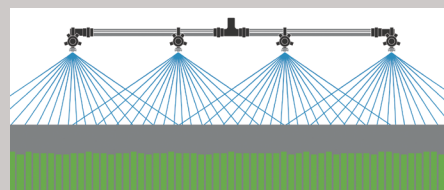
UNDER-APPLICATION

- Reduced yield
- Inadequate weed, pest, or disease control
- Repeated trips over the field

OVER-APPLICATION

- Increased input costs
- Crop damage

NEW NOZZLE SPRAY PATTERN



How do I Know When a Nozzle Needs to be Replaced?

To check for nozzle wear, set your spraying pressure at 40 psi and collect the flow of a full spray pattern. This is easiest achieved by using a SpotOn calibrator, that will time and measure your nozzle flow rate automatically for you.

Replace Nozzles...

If the flow from a nozzle varies more than **10%** above or below the average of all the nozzles or the factory stated flow at 40 psi.

What are the impacts of using worn spray nozzles?

As nozzles wear their orifice increases in size, allowing for greater flow of spray solution at a given pressure. A modern sprayer utilizing a rate controller will detect this increase in application volume. In order to maintain the desired application volume, the rate controller will compensate for the higher than expected flow by reducing pressure. While the desired application volume in this scenario is maintained, desired spray quality may be affected. This reduction in pressure can alter droplet size, pattern formation, pattern overlap and ultimately spray coverage.

Original Pressure and Droplet Size	Pressure (PSI)	Droplet Size	Published Flow Rate (USGPM)	Actual Flow Rate (USGPM)	Nozzle Wear (%)	Actual Pressure (PSI)	New Droplet Size	Worn Nozzle Pressure and Droplet Size
	40	UC	0.40	0.44	10	31.6	UC	
50	XC	0.45	0.50	10	38.7	UC		
60	XC	0.49	0.54	10	47.4	UC		
70	XC	0.53	0.58	10	55.0	XC		
80	VC	0.57	0.63	10	61.7	XC		

Droplet size: UC = Ultra Coarse, XC = Extremely Coarse, VC = Very Coarse. See John Deere sprayer parts guide for more details.