



An Evaluation of Nozzle Performance with OnTarget™

Nozzle Evaluation

WinField® United evaluated the spray angle of 25 of the 26 nozzles with OnTarget™ at nozzle pressures approved for use on the Xtendimax® herbicide and FeXapan™ herbicide supplemental labels, which also include the nozzles approved for use with Engenia™ herbicide. The spray angle was evaluated for pattern collapse from each nozzle at their respective pressures. Based on the observations made during the evaluation, WinField® United has put together a recommendation chart that can be found on the second page to help applicators, growers and owners make the proper nozzle selection when applying Xtendimax®, FeXapan™ or Engenia™ with the approved DRA, OnTarget®.

Implications of Improper Spray Angles

When the spray angle of the tank-mix solution coming out of a nozzle does not reach manufacturer specifications, pattern collapse occurs and spray pattern distribution can be inconsistent. This can result in poor weed control and decreased herbicide efficacy. The inconsistency can also lead to application misses, over-application and under-application. Over-application could cause a crop response, under-application could deliver low doses of an herbicide to the target weed and decrease overall weed control. Therefore, using approved nozzles at pressures that will deliver a proper spray pattern when using OnTarget™ is imperative to good weed control with the new dicamba tolerant technology.

Example of an unacceptable spray pattern



Example of an acceptable spray pattern



Nozzle Evaluation Test

Each nozzle was evaluated using a John Deere R4023 sprayer. Pressure was measured using a pressure gauge mounted onto an adjacent nozzle body. Spray angles and patterns were observed for every 10 psi within the supplemental labeled pressure ranges. Visual observations were made and captured using a Canon® EOS Rebel T5 camera.



Nozzle Recommendation Chart with OnTarget™

- = **Recommended** – Pattern was acceptable
- = **Nozzle may provide adequate coverage** – Evaluate spray pattern before application
- = **Not Recommended** – Due to pattern collapse or pattern reduction
- = **Not Labeled for Use**

Manufacturer	Nozzle Type	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI
Greenleaf Technologies	TADF-D11003						
	TADF-D11006						
	TDXL-D11003						
	TDXL-D11004						
	TDXL-D11005						
	TDXL-D11006						
Hypro	ULD12004						
	ULD12005						
John Deere	ULD12004						
	ULD12005						
Lechler	ID11003						
	ID11004						
	ID11005		Not Tested				
	ID8004						
TeeJet® Technologies	AI11003						
	AI8003						
	AI8005						
	TTI11003						
	TTI11004						
	TTI11005						
	TTI11006						
Wilger	DR11010						
	UR11005						
	UR11006						
	UR11008						
	UR11010						