XtendiMax® Herbicide with VaporGrip® Technology – Best Practices for Optimizing Pressure and Coverage when Utilizing Tank Mix Drift Reduction Agents

- Some products approved for tank mixing with XtendiMax with VaporGrip Technology require the use of an approved drift reduction agent (DRA).
- Use the higher operating spray pressures, within the approved range for the specific nozzle, and the lowest labelled DRA rate when using a DRA with a tank mixture.
- An application rate of 15 GPA is recommended to improve coverage, especially when higher weed populations are present.

XtendiMax with VaporGrip Technology has specific requirements for nozzles, adjuvants, drift reduction agents (DRA), and other herbicides. Some products approved for tank mixing with XtendiMax with VaporGrip Technology require the use of an approved DRA. **For a complete list of approved nozzles and tank-mix products, visit** www.xtendimaxapplicationrequirements.com.

To optimize the spray pattern and herbicide delivery within the recommended parameters, applicators need to follow the proper order of mixing herbicides and additives and use proper ground speed, approved nozzle types, adequate spray pressure, adequate gallons per acre (GPA) delivery, and correct boom height. Below are some guidelines to help optimize herbicide delivery when applying a DRA with XtendiMax with VaporGrip Technology:

DRA rate. When using an approved DRA for tank-mix products, as required by the XtendiMax with VaporGrip Technology label, the lowest rate allowed by the DRA label is recommended. Only use approved DRAs.

Mixing products. Using the proper order of mixing multiple products can help avoid incompatibility that may reduce product efficacy or increase drift. Start with 1/2 to 3/4 volume of water in the tank and constant agitation prior to adding a product directly to the tank or through an inductor. Add and mix each product individually. If an inductor is used, add one product to the inductor at a time and pump it into the spray tank. Rinse the inductor thoroughly after each component has been added.

Refer to the tank-mix product labels to confirm that the respective products are registered for the specific crop use. Refer to all individual product labels, supplemental labels, and fact sheets for all products in a tank mixture. Observe all precautions and limitations on each label. Use according to the most restrictive precautionary language statements for each product in the tank mixture.

Nozzle type and pressure. Nozzle pressure can not only influence droplet size but also spray pattern. Use the higher operating spray pressures, **within the approved range for the specific nozzle**, when using a DRA with a tank mixture to improve coverage (see Table 1 on page 2 and www.xtendimaxapplicationrequirements.com for the most up-to-date information). Figure 1 shows how the spray distribution pattern is improved with higher pressure (the maximum psi) versus lower pressure (the minimum psi). Nozzle selection is one of the most important parameters for drift control. Not all DRAs are compatible with every nozzle type and pesticide/adjuvant combination. Check with the additive manufacturer to ensure that the DRA will work properly with the spray nozzle, spray pressure, and specific spray solution.

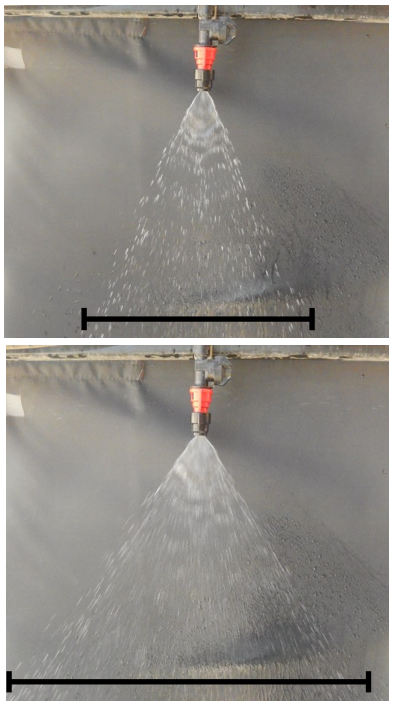

Figure 1. Spray distribution pattern of water plus a DRA at the minimum psi (top) versus the maximum psi (bottom).

The applicator needs to consider that operating pressure readings may be different "in the cab" (prior to screens and strainers) and at the boom where the pressure should be in the recommended range. During the initial application pass, with the sprayer operating at the desired speed and pressure, verify that the boom height is appropriate for the spray pattern overlap, not exceeding 24 inches above the target pest or crop canopy, and nozzles are providing coverage of the target pests for effective control.

Application rate. Systemic herbicides generally work well at 10 GPA or higher; however, the use of DRAs result in the formation of ultra coarse droplets and higher application volumes are needed for adequate coverage. An application rate of 15 GPA is recommended to improve coverage, especially when higher weed populations are present.

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Applicators are required to consult www.xtendimaxapplicationrequirements.com no more than 7 days before application for a complete list of nozzles, DRAs, and other herbicides, pesticides, and additives approved for use with XtendiMax with VaporGrip Technology.

Nozzle Specifics			Operating Pressure (psi)						
Manufacturer	**Nozzle Type**	**Part Number**	**10**	**20**	**30**	**40**	**50**	**60**	**70**
Greenleaf Technologies	TADF03-D	TADF03-D		Min 20		Max 40			
	TADF06-D	TADF06-D		Min 20			Max 50		
	TDXL 11003-D	TDXL 11003-D		Min 20		Max 40			
	TDXL 11004-D	TDXL 11004-D		Min 20			Max 50		
	TDXL 11005-D	TDXL 11005-D		Min 20				Max 60	
	TDXL 11006-D	TDXL 11006-D		Min 20				Max 60	
Hypro	ULD120-04	ULD120-04 / FC-ULD120-04		Min 20		Max 40			
	ULD120-05	ULD120-05 / FC-ULD120-05		Min 20		Max 40			
John Deere	ULD120-04	PSULD2004 / PSULDQ2004		Min 20		Max 40			
	ULD120-05	PSULD2005 / PSULDQ2005		Min 20		Max 40			
Lechler	ID 110-03	ID 110-03 / ID 110-03C			Min 30	Max 40			
	ID 110-04	ID 110-04 / ID 110-04C			Min 30	Max 40			
	ID 110-05	ID 110-05 / ID 110-05C			Min 30	Max 40			
	ID 80-04	ID 80-04 / ID 80-04C			Min 30	Max 40			
TeeJet® Technologies	AI11003	AI11003-VS / AIC1103-VS			Min 30	Max 40			
	AI8003	AI8003-VS / AIC8003-VS			Min 30	Max 40			
	AI8005	AI8005-VS / AIC8005-VS			Min 30	Max 40			
	TTI11003	TTI11003-VP		Min 20				Max 60	
	TTI11004	TTI11004-VP		Min 20				Max 63	
	TTI11005	TTI11005-VP		Min 20				Max 60	
	TTI11006	TTI11006-VP		Min 20			Max 50		
Wilger	DR110-10	40286-10			Min 30	Max 40			
	UR110-05	40292-05			Min 30		Max 50		
	UR110-06	40292-06			Min 30			Max 60	
	UR110-08	40292-08			Min 30				Max 70
	UR110-10	40292-10			Min 30				Max 70

Table 1. Recommended nozzle operating pressures for the specified nozzles when using a DRA in a tank mixture with XtendiMax with VaporGrip Technology. Blue areas represent the minimum and maximum pressures and the range of acceptable operating pressures for each nozzle type. Table last updated 04/27/2017. Source: www.xtendimaxapplicationrequirements.com.

Always read and follow directions for use on pesticide labeling. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. Not all formulations of dicamba or glyphosate are approved for in crop use. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. XTENDIMAX® HERBICIDE WITH VAPORGRIP® ECHNOLOGY AND IN CROP USES MAY NOT BE APPROVED IN ALL STATES. CONTACT THE US EPA AND YOUR STATE PESTICIDE REGULATORY AGENCY WITH ANY QUESTIONS ABOUT THE APPROVAL STATUS OF DICAMBA HERBICIDE PRODUCTS. **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Tank mixtures:** The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Monsanto has not tested all tank mix product formulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. VaporGrip® and XtendiMax® are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners. ©2017 Monsanto Company. 170615115223 062017CAM