



**FARMERS
FIRST™**

ADJ

ADJUVANTS

PRODUCT GUIDE



Available from 



Adjuvants: Vital tools for improving crop protection performance.

They may have many different functions, but all adjuvants serve one purpose: to enhance the effectiveness and safety of your crop protection.

Whether aiding in spray application, supporting better mixing and handling, or minimizing the potential for drift, the **Farmers First™** portfolio of quality adjuvants can help deliver a boost to your crop protection program at a great value.



Broad Selection

Supports a range of functions including improved spray mixing, product application and crop protection performance.



Reliable Quality

Made in the USA from high-grade ingredients and tested through a rigorous quality assurance process.



Great Value

Available from Farmers Business Network® with seasonal promotions, 0% financing and free direct-to-farm delivery.*

*0% financing subject to credit approval; terms and conditions apply.
Free delivery available on qualifying orders.

Understanding Requirements for Using Adjuvants

To get the most out of your crop protection program, it's critical to choose the right adjuvant for your spray solution. Eliminate a necessary adjuvant, and it could negatively impact product performance. Select the wrong adjuvant, and it could increase the risk of crop injury.



How to Know If You Need an Adjuvant

Start by reading the product label for the crop protection product(s) you intend to use. When you review the label, you'll likely come across one of four types of statements about adjuvant use listed below.

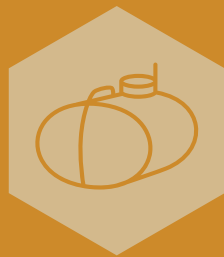
Always read and follow label instructions before using any crop protection or adjuvant product.

Required	Label specifically calls for use of a particular adjuvant type.	<hr/> ADJUVANT USE INSTRUCTIONS <hr/> Always use a crop oil concentrate* at 1.0 qt./A by ground or 1% w/v (but not less than 1 pt./A) in the finished spray volume by air.
Recommended	Label suggests adjuvants that may improve performance. Adjuvants may be general or crop-specific.	Other Adjuvants than COOs or NIS* can be used if the adjuvant is: <ol style="list-style-type: none">1. Comprised solely of EPA exempt ingredients.2. Nonphytotoxic to the target crop.3. Compatible in mixture. (Compatibility can be established with a jar test.)4. Locally approved for use with Willowood Fomesafen 1.88SL on the target crop by university and extension instructions provided through proven field trials.
No Statement	Label does not address adjuvant use. Farmers may legally use whichever adjuvant is best suited agronomically.	N/A
Prohibited	Label explicitly states certain adjuvants that cannot be used. Improper use of adjuvants may be a violation of federal law.	DO NOT mix with liquid nitrogen, surfactants, or zinc.

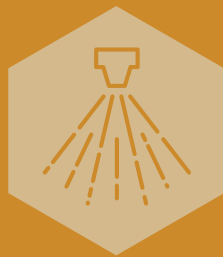
Introducing the MAP System for Selecting Adjuvants

With many types of adjuvants available, making sense of all the options can be a challenge. That's where the MAP System comes in – it's a simple way to help demystify the process of selecting an adjuvant.

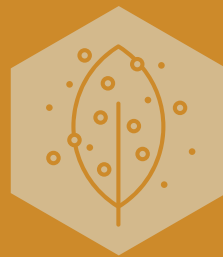
The MAP System groups all products in the Farmers First™ adjuvant portfolio into three key crop protection stages: mix, apply, and perform.



MIX



APPLY



PERFORM



Also known as *utility modifiers*, these products modify or protect your spray solution by ensuring that its elements mix well in the tank before they're applied.

PRODUCT CATEGORIES

Acidifier: Lowers the pH of a spray mixture.

Buffer: Works to resist pH changes in a solution to which it is added. Each buffer is effective over a particular limited range of pH.

Compatibility Agent: Allows a mix of liquid fertilizer and agrichemical, or a formulation of 2+ agrichemicals, to be applied simultaneously and uniformly from the tank. In addition to making this kind of mixture possible, a compatibility agent can also *improve* a mixture by making it more homogeneous and helping it apply it more uniformly.

Water Conditioner: Improves pesticide effectiveness by reducing or eliminating negative impacts from ions present in application water.

Antifoaming & Defoaming Agents: Prevent or suppress foam in the spray tank.

Spray System Cleaner: Removes pesticide residue from tanks, hoses and pumps to reduce the risk of cross-contamination.



Also known as *spray modifiers*, these products modify the behavior of the spray droplet from when it is atomized through the time it is deposited on the target surface. This ensures a consistent, effective application of the spray solution on the plant material.

PRODUCT CATEGORIES

Drift Reduction Agent: Reduces spray drift in liquid spray mixtures.

Deposition Aid: Improves the ability of agrichemical sprays to deposit on targeted surfaces.

Canopy Penetrating Agent: Increases the penetration of the spray material in the crop canopy.

Retention Aid: Modifies or reduces surface tension to enhance the ability of a droplet to spread across or remain on the leaf surface.

Volatility Reducer: Reduces volatility potential of components in the tank.



Also known as *activators*, these products maximize your spray solution's performance potential by enhancing the biological activity of the crop protection product applied to your crops.

PRODUCT CATEGORIES

Surfactant (surface-active

agent): Modifies how a liquid interacts with another liquid or a surface with which it comes into contact.

MSO (modified vegetable oil) / HSMO (high surfactant modified vegetable oil): An oil, extracted from seeds, that has been chemically modified (for example, via methylation).

COC (crop oil concentrate): An emulsifiable petroleum oil-based product containing 15-20% w/w surfactant and a minimum of 80% w/w phytoblend oil.

HSOC (high surfactant oil concentrate): An emulsifiable oil-based product containing 25-50% w/w surfactant in a minimum of 50% w/w oil.



The Farmers First™ Adjuvant Portfolio

Farmers First™ proudly offers a wide range of quality adjuvant products that help you effectively mix, apply and get the best performance out of your crop protection.

Product Name	Category	Description	Rate / 100 Gallons			V/V %		Pack Size	Water Conditioner	Buffer	Acidifier	Anti-foaming Agent	Defoaming Agent	Spray System Cleaner	Canopy Penetrant	Drift Reduction	Deposition Aid	Reduce Volatility	Spreader/Wetter	Humectant	Activator	Evaporation Reduction Agent	Fall Retention Agent	Leaf Penetrant	
			Low	High	UOM	Low	High		Mix	Mix	Mix	Mix	Mix	Mix	Apply	Apply	Apply	Apply	Perform	Perform	Perform	Perform	Perform	Perform	Perform
			Stable in solution	pH Balance	Lower pH	Prevent foam	Suppress foam		Clean tank, pumps, and hoses	Penetrate canopy	Less Driftable (Fine Time)	Consistent Droplet Size and Placement	Less Volatility	Disperse droplets	Increase dry time	Increase efficacy	Less evaporation	Stay on leaf longer	Penetrate leaf						
IN-Zorb™ ADV	APE Free Nonionic Surfactant	IN-Zorb ADV is an APE-free nonionic surfactant designed to improve the effectiveness of crop protection products by reducing surface tension of spray droplets for uniform spreading and coverage of leaf surfaces. IN-Zorb ADV meets pesticide label requirements for a nonionic surfactant.	1	4	pints	0.125%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Zorb™ 90	Nonionic Surfactant	IN-Zorb 90 is a general-purpose nonionic surfactant designed to improve the performance of pesticide sprays by modifying the wetting and spreading properties of droplets on the leaf or target surface.	2	4	pints	0.25%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Plant™	Crop Oil Concentrate	IN-Plant is a crop oil concentrate adjuvant containing paraffinic oil, emulsifiers and surfactants. It is designed to provide uniform spray deposits and improve penetration into the crop canopy and into leaf surfaces. Use with pesticides where an oil concentrate is recommended.	1	1	gallon	1.00%	1.00%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Plant™ ADV	Crop Oil Replacement	IN-Plant ADV is a unique hybrid adjuvant that combines the functions of a nonionic surfactant, oil concentrate and penetrant in a single product. It may be used as a replacement for crop oil concentrates and high surfactant oil concentrates. IN-Plant ADV may also be used where the spray mixture benefits from a nonionic surfactant. IN-Plant ADV contains agents that can also improve spray deposition and rainfastness while increasing uptake of active ingredients.	1	4	pints	0.125%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Cert™ MSO	Modified Vegetable Oil (MSO)	IN-Cert MSO is a methylated vegetable oil + surfactant blend formulated to enhance pesticide performance through improved leaf cuticle penetration and uniform droplet coverage of target surfaces. It forms a stable emulsion in the spray tank for an even, consistent application across the field. IN-Cert MSO meets pesticide label requirements for a methylated seed oil (MSO) adjuvant.	1	1	gallon	1.00%	1.00%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Cert™ HighSurf MSO	High Surfactant MSO	IN-Cert HighSurf MSO is a specialized blend of modified seed oil and surfactant designed to enhance the performance of herbicides. It may be used at reduced rates compared to conventional MSO. IN-Cert HighSurf MSO may also be used with insecticides, fungicides and PGRs.	2	3	quarts	0.50%	0.75%	1x275 Gal Tote, 2x2.5 Gal Case																	
IN-Cert™ Organosil MSO	Organosilicone MSO	IN-Cert Organosil MSO is a multifunction adjuvant that rapidly penetrates leaf surfaces and provides superior surface coverage compared to ordinary silicone blends, MSO or crop oil. IN-Cert Organosil MSO contains a methylated seed oil (MSO) for improved crop canopy and leaf cuticle penetration. This low phytotoxicity dual silicone surfactant system spreads both the water phase and oil phase of spray droplets to assure uniform coverage of the target surface.	1	5	pints	0.125%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
FieldGrip™ DRA	Drift Reduction & Deposition Aid	FieldGrip DRA is a high-concentrate emulsifiable deposition aid and drift management adjuvant. FieldGrip DRA can increase deposition of spray deposits and improve spray droplet retention on the leaf or target surface. When used according to the label FieldGrip DRA minimizes formation of spray fines that can move off-target or evaporate. FieldGrip DRA is suitable for use with most agrochemicals and spray nozzle types when used at recommended rates. FieldGrip DRA requires no special handling or mixing procedures. FieldGrip DRA is an APE-free formula designed for use with herbicides, fungicides, and insecticides. APE (alkyl phenol ethoxylate) has been linked to Arrested Ear Syndrome in corn.	1	1	quart	0.25%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
FieldGrip™ VRA	Volatility Reduction Agent	FieldGrip VRA, a VaporGrip® Xtra Agent may be used as an additional tool to reduce volatility potential when tank mixed with dicamba. Use of FieldGrip VRA does not replace an approved drift reduction adjuvant (DRA).	20	32	*oz/acre	See Label	See Label	1x275 Gal Tote, 2x2.5 Gal Case																	
Tether™ DC	Multifunction (Dicamba) Drift Reduction Water Conditioner Nonionic Surfactant Humectant	Tether DC is a multifunction adjuvant designed to protect the performance of dicamba-based herbicides from hard water tie-up and to reduce the risk of drift. Tether DC contains an optimized combination of water conditioning and drift reduction technology designed to improve the performance of pesticide sprays. Tether DC is an approved DRA for dicamba-based herbicides. Check manufacturer labels and websites for confirmation. Tether DC may be used with other herbicides where water conditioning and drift reduction are beneficial.	1	5	pints	0.125%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
Tether™ 24	Multifunction (Enlist) Drift Reduction Water Conditioner Nonionic Surfactant Humectant	Tether 24 is a multifunction adjuvant that reduces drift risk and protects 2,4-D, glyphosate and other herbicides from hard water tie-up. Tether 24 contains an optimized combination of water conditioners, drift reduction agents and humectants designed to improve spray performance.	1	2	quarts	0.25%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
Tether™ 700	LI-700 Replica	Tether 700 is a low foaming non-ionic penetrant designed to enhance the efficacy of agricultural, horticultural, and industrial spray solutions. Tether 700 can increase crop canopy and leaf penetration while improving spray deposition and uniformity. The degree of drift hazard varies with the type of pesticide and application conditions. Tether 700 will help control, but not eliminate, drift. Tether 700 can minimize alkaline hydrolysis of pesticides sensitive to high pH by acidifying the spray solution. Tether 700 is compatible with most pesticide formulations.	1	4	pints	0.125%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
Clear-UP™	Tank Cleaner	Clear-UP is a complete spray system cleaner that neutralizes and removes pesticide residue from tanks, hoses and pumps. It solubilizes oil-based chemicals and removes deposits from suspension concentrates, dry flowables and water based pesticides. The high pH formula breaks down susceptible active ingredients. When used as a part of a regular equipment hygiene program, Clear-UP will reduce the risk of cross-contamination. Where permitted, rinsate may be applied to soil or growing crops.	2	4	pints	0.25%	0.50%	4x1 Gal Case																	
Fit-2G™	Compatibility Agent	Fit-2G is a compatibility agent developed to reduce or eliminate incompatibility problems associated with tank mixing crop protection products in water, suspension fertilizers, UAN or ATS. Fit-2G improves the dispersion and stability of spray mixtures containing multiple pesticides or pesticides + fertilizer.	1	6	pints	0.125%	0.75%	2x2.5 Gal Case																	
Head-OUT™	Anti-Foamer	Head-OUT delivers quick initial foam knockdown and suppresses foam regeneration in the spray tank. Head-OUT may be used in hard or soft water and in fertilizer spray solutions.	0.5	4	ounces	0.004%	0.03%	4x1 Gal Case																	
Even™ L Pro	Multifunction AMS Nonionic Surfactant Drift Reduction Humectant Defoamer	Even L Pro is an optimized premix of drift management agents, deposition aids, AMS and surfactant. It is designed to enhance the performance and activity of pesticide sprays by reducing tie-up of herbicides in hard water, improving spray application coverage and minimizing spray drift.	1	2.5	gallons	1.00%	2.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
Even™ 34L	Liquid AMS	Even 34L is a liquid ammonium sulfate (AMS) water conditioner designed to reduce the antagonism of spray water impurities that can interfere with the performance of glyphosate, glufosinate and other herbicides.	1	5	gallons	1.00%	5.00%	1x275 Gal Tote, 2x2.5 Gal Case																	
Even™ LR	Low Rate AMS Replacement	Even LR is a reduced-rate AMS-replacement adjuvant designed to deliver similar water conditioning activity at lower rates than plain AMS. Even LR can enhance the performance of spray applications by improving spray tank water quality and minimizing hard water interference with herbicide activity. Even LR is designed for use with herbicides and other crop protection products where the spray mixture benefits from the addition of a water conditioner. This product contains a defoamer to retard foam formation in the spray tank.	1	2	quarts	0.25%	0.50%	1x275 Gal Tote, 2x2.5 Gal Case																	
Even™ DR	Low Rate Dry AMS Replacement	Even DR is a water soluble blend of reduced rate water conditioning and sequestering agents. It is intended for use with glyphosate and other herbicide spray applications that recommend the use of ammonium sulfate or nitrogen fertilizer as a spray additive. Even™ DR is a fully soluble spray-grade granule that readily goes into solution. Even DR improves weed control by conditioning and acidifying the water. Even DR helps maximize herbicide performance by reducing herbicide tie-up from iron, calcium, magnesium and other impurities in water. Even™ DR is compatible with all glyphosate formulations. It is tank-mix compatible with most drift retardants and nonionic surfactants. . Even DR is approved for aquatic use.	3	4	pounds	-	-	1x24 lb bag																	

Match Adjuvants to Your Crop Protection

Farmers First™ proudly offers a wide range of quality crop nutrition products that help you unlock the power of nature on your farm.

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				APPLY			PERFORM						Product Selection Notes				
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS	AND/OR	Drift and Deposition Aid	Volatility Reduction Agent	AND/OR	Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement	MSO		High Surfactant MSO	Organosil MSO		
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA	FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV	IN-Cert™ MSO		IN-Cert™ HighSurf MSO	IN-Cert™ Organosil MSO		
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V			
GCS Azoxy 2SC	azoxystrobin	SC	F										Permitted for Use				*Label Recommended							Use APE/NPE free surfactants for best crop safety	
Propaz	azoxystrobin / propiconazole	SE	F										Permitted for Use				*Label Recommended							Use APE/NPE free surfactants for best crop safety	
Trivapro Fungicide	benzovin-diflupyr / propiconazole / azoxystrobin	SE	F										Permitted for Use				*Label Recommended							Use APE/NPE free surfactants for best crop safety	
Echo 720	chorothalanil	SC	F														*Label Recommended							Do not use adjuvants where an oil is the primary ingredient.	
Topguard Terra	flutriafol	SC	F										Permitted for Use				*Label Recommended							No adjuvant required.	
Headline AMP	metconazole / pyraclostrobin	SC	F										Permitted for Use				*Label Recommended	Label Recommended						Use APE/NPE free surfactants for best crop safety	
Willowood Propicon 3.6EC	propiconazole	EC	F										Permitted for Use				*Label Recommended		Label Recommended					Use APE/NPE free surfactants for best crop safety	
Headline SC	pyraclostrobin	SC	F										Permitted for Use				*Label Recommended	Label Recommended						Use APE/NPE free surfactants for best crop safety	
Priaxor Xemium	pyraclostrobin / fluxapyroxad	SC	F										Permitted for Use				*Label Recommended	Label Recommended						Use APE/NPE free surfactants for best crop safety	
Willowood Teb 3.6SC	tebuconazole	SC	F										Permitted for Use				*Label Recommended		Label Recommended					Use APE/NPE free surfactants for best crop safety	
Willowood Teb 45DF 24/2	tebuconazole	DF	F										Permitted for Use				*Label Recommended		Label Recommended					Use APE/NPE free surfactants for best crop safety	
Prosaro 421SC	tebuconazole / prothioconazole	SC	F										Permitted for Use			Label Recommended	*Label Recommended							Use APE/NPE free surfactants for best crop safety	
Incognito 4.5F	thio-phante-methyl	FC	F										Permitted for Use				*Label Recommended							Spreader sitcker required for conifers. Other uses have no comment, so an adjuvant may be used.	
Stratego YLD	trifloxystrobin / prothioconazole	SC	F										Permitted for Use			Label Recommended	*Label Recommended		Label Recommended					Use APE/NPE free surfactants for best crop safety	
Super Tin 4L	trphenyltin hydroxide	FC	F										Permitted for Use											Adjuvants not recommended.	
Acephate 97 WDG 0	acephate	WDG	I										Permitted for Use			Permitted for Use	Permitted for Use		Permitted for Use				*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	
Acephate 97UP	acephate	SP	I										Permitted for Use			Permitted for Use	Permitted for Use		Permitted for Use				*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	
Willowood Bifenthrin 2EC	bifenthrin	EC	I										Permitted for Use			Permitted for Use	Permitted for Use		Permitted for Use				*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	
Bifenture LFC	bifenthrin	SC	I										Permitted for Use			Permitted for Use	Permitted for Use		Permitted for Use				*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	
Prevathon Dupont	chlorantraniliprole	SC	I										Permitted for Use										*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	
Chlorpyrifos 4E-AG	chlorpyrifos	EC	I										Permitted for Use				*Label Recommended	Label Recommended							None required. Consult label for specific crop recommendations
Willowood Imidacloprid 4SC	imidacloprid	SC	I										Permitted for Use			Permitted for Use	Permitted for Use		Permitted for Use				*FBN Recommended	*If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.	

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				AND/ OR	APPLY		AND/ OR	PERFORM							Product Selection Notes
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS		Drift and Deposition Aid	Volatility Reduction Agent		Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement	MSO	High Surfactant MSO	Organosil MSO	
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA	FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV	IN-Cert™ MSO	IN-Cert™ HighSurf MSO	IN-Cert™ Organosil MSO	
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V	
Willowood Lambda 1EC	lambda-cyhalothrin	EC	I									Permitted for Use			Permitted for Use	Permitted for Use	Permitted for Use	Permitted for Use				*FBN Recommended	Use APE/NPE free surfactants for best crop safety, *If using IN-Cert™ Organosil MSO, FieldGrip™ DRA not required.
Enlist One	2,4-D (choline salt)	SL	I		*FBN Recommended																		See approved tank mix partners at www.enlist.com
Alligare 2,4-D Amine	2,4-D (DMA salt)	SL	H		*FBN Recommended							Permitted for Use			Permitted for Use	Label Recommended						*FBN Recommended	Tether 24 is all-in-one; otherwise InZorb90 w or w/o FieldGrip DRA; IN-Fuse Organosil MSO good for Range and pasture under hot and dry conditions. Adjuvant use is crop specific-Read label.
Alligare 2,4-D LV6	2,4-D (ester)	EC	H		*FBN Recommended							Permitted for Use			Permitted for Use	Label Recommended						*FBN Recommended	Tether 24 is all-in-one; otherwise InZorb90 w or w/o FieldGrip DRA; IN-Fuse Organosil MSO good for Range and pasture under hot and dry conditions. Adjuvant use is crop specific-Read label.
Enlist Duo Herbicide with Colex D Technology	2,4-D choline salt	SL	H		*FBN Recommended																		See approved tank mix partners at www.enlist.com
Defy LV6	2,4-D ester	EC	H		*FBN Recommended							Permitted for Use			Permitted for Use	Label Recommended						*FBN Recommended	Tether 24 is all-in-one; otherwise InZorb90 w or w/o FieldGrip DRA; IN-Fuse Organosil MSO good for Range and pasture under hot and dry conditions. Adjuvant use is crop specific-Read label.
Resicore	acetochlor / mesotrione / clopyralid	SL	H									Permitted for Use			Label Recommended	*Label Recommended	Label Recommended						Do not use AMS when applied alone; AMS may be added when required by another tank-mix partner, as specified on the tank mix partner label. COC is also recommended but NIS is better choice due to crop safety.
Acifluorfen 2	acifluorfen (Na salt)	LC	H		*Label Recommended		Permitted for Use	Permitted for Use							Label Recommended	Label Recommended					*Label Recommended		
GrazonNext HL	aminopyralid / 2,4-D (DMA salt)	SL	H									Permitted for Use			Label Recommended	*Label Recommended						*FBN Recommended	
Atrazine 4L Flowable Herbicide Sipcam	atrazine	FC	H												Label Required	*Label Required	*Label Required						Refer to herbicide label - Some uses require NIS and other uses require COC
Atrazine 90DF Herbicide - Sipcam 1/25	atrazine	DF	H				*FBN Recommended								Label Required	*Label Required	*Label Required						Refer to herbicide label - Some uses require NIS and other uses require COC
BashAzon	bentazon (Na salt)	SL	H				Permitted for Use	Permitted for Use							Label Required	*Label Required	Label Required			*Label Required	Label Required	Label Required	MSO preferred under tougher weed conditions. NIS is best for general purposes. Consult label for specific crop recommendations; some crops prohibit adjuvant use.
Brox-M	bromoxynil / mcpa	EC	H				Permitted for Use					Permitted for Use			Label Recommended	*Label Recommended							Read label for special instructions on flax.
AIM EC 6/1	carfentrazone-ethyl	EC	H		*Label Recommended		Permitted for Use	Permitted for Use				Permitted for Use			Label Recommended	Label Recommended	Label Recommended			Label Recommended	*Label Recommended		Use APE/NPE free surfactants for best crop safety
Chlorimuron 25 WDG	chlorimuron ethyl	WDG	H				Permitted for Use	Permitted for Use				Permitted for Use			Label Required	*Label Required	Label Required			Label Required			NIS is best option for most uses. COC is better under hot, dry conditions or for resilient weeds. AMS required for velvetleaf control. Use adjuvant type authorized for all tank mix partners.
Fierce XLT	chlorimuron ethyl / pyroxasulfone / flumioxazin	WDG	H				Permitted for Use	Permitted for Use				Permitted for Use			Label Recommended	Label Recommended	Label Recommended	Label Recommended		*Label Recommended			Some crops have restrictions and guidance on adjuvant use. Refer to herbicide label.
Willowood Sulfen Chlorim	chlorimuron ethyl / sulfentrazone	WDG	H		*Label Recommended		Permitted for Use	Permitted for Use				Permitted for Use			Label Required		Label Required			Label Required	*Label Required		Label is flexible; MSO, COC or NIS is required but HSMSO can also be used as a substitute for required adjuvants
Willowood Clethodim 2EC	clethodim	EC	H									Permitted for Use					Label Required						HSMSO can be more efficacious in clethodim + glyphosate + dicamba tank mixes
Willowood Clomazone 3ME	clomazone	ME	H									Permitted for Use											None required. DRA can improve coverage of surface. Additional adjuvants dependent on tank mix partners
Bite	clopyralid	EC	H									Permitted for Use				Label Recommended							Consult label for specific crop recommendations

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				AND/OR	APPLY		AND/OR	PERFORM						Product Selection Notes	
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS		Drift and Deposition Aid	Volatility Reduction Agent		Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement	MSO	High Surfactant MSO		Organosil MSO
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA	FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV	IN-Cert™ MSO	IN-Cert™ HighSurf MSO		IN-Cert™ Organosil MSO
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V	
Willowood Cloran DF	cloransulam-methyl	DF	H									Permitted for Use			Label Required			Label Required		Label Required			Adjuvant selection depends on tank mix partners. Read label for proper adjuvant selection.
Authority First DF	cloransulam-methyl / sulfentrazone	DF	H			Label Required						Permitted for Use			Label Required			Label Required		Label Required			Adjuvants needed for burndown applications. Read label for proper adjuvant selection.
Engenia Herbicide	dicamba (BAP-MA salt)	SL	H	*Label Recommended			Permitted for Use						Label Required										See approved tank mix partners at www.engeniaherbicide.com
DiCash DGA-4	dicamba (DGA salt)	SL	H	*Label Recommended			Permitted for Use			*Label Recommended			Label Recommended			Label Recommended	Label Recommended	Label Recommended				*Label Recommended	AMS may spike dicamba volatility - Tether DC is AMS-free. IN-Fuse Organosil MSO good for Range and pasture under hot and dry conditions.
Xtendimax w/ VaporGrip Technology 2020	dicamba (DGA salt) / VaporGrip (K-acetate)	SL	H	*Label Recommended						*Label Recommended				Label Required									See approved tank mix partners at www.xtendimax.com
Alligare Dicamba 4	dicamba (DMA salt)	SL	H	*FBN Recommended						*Label Recommended			Permitted for Use			Label Recommended	*Label Recommended					*Label Recommended	AMS may spike dicamba volatility. Tether provides DRA + non AMS water conditioner. IN-Fuse Organosil MSO best for Range and pasture under hot and dry conditions.
Alligare Dicamba + 2,4-D DMA	dicamba (DMA salt) / 2,4-D (DMA salt)	SL	H	*FBN Recommended						*FBN Recommended			Permitted for Use			Label Recommended	*Label Recommended					*Label Recommended	AMS may spike dicamba volatility. Tether provides DRA + non AMS water conditioner. IN-Fuse Organosil MSO best for Range and pasture under hot and dry conditions.
Status	dicamba (Na salt) / diflufenzopyr	DF	H	Permitted for Use		*Label Required	Permitted for Use	Permitted for Use		*FBN Recommended			Label Recommended			Label Required	Label Required	Label Required		Label Required			AMS may spike dicamba volatility. Tether provides DRA + non AMS water conditioner
Outlook Herbicide	dimethenamid	EC	H																				None required. Dependent on tank mix partners
Armezon Pro	dimethenamid / topramezone	EC	H										Permitted for Use			Label Required	Label Required	Label Required		Label Required	*Label Required		Do not use oil-based adjuvants when tank mixing with atrazine; label requires several adjuvant types; HighSurf MSO is preferred option
Alligare Diuron 4L	diuron	FC	H													Label Recommended							None required. Dependent on tank mix partners
Willowood Ethofumesate 4SC	ethofumesate	SC	H			*Label Required			Permitted for Use				Permitted for Use			Label Required	Label Required			Label Required	Label Required		Even L Pro is best choice when tank mixed with glyphosate. Second option is In-Fuse High Surf MSO + AMS or AMS substitute
Tacoma 1EC	fenoxa-prop-p-ethyl	EC	H																				None required. Dependent on tank mix partners
Everest 3.0 60	flucarbazone-sodium	SC	H				Permitted for Use	Permitted for Use	Permitted for Use				Permitted for Use			Label Required	*Label Required			Label Required	*Label Required		NIS is universal best choice for adjuvant; AMS is required. Label makes no specific mention of AMS substitutes. Dry or liquid AMS or AMS subs is grower's choice. Do not use MSO with EC herbicides >8 fl oz/ac
Valor SX	flumioxazin	WDG	H				Permitted for Use	Permitted for Use	Permitted for Use				*Label Recommended			Label Required	Label Required	Label Required	Label Required	*Label Required			Label makes no specific mention of AMS substitutes. Dry or liquid AMS or AMS subs is grower's choice. DRA may be used. Refer to tank mix partner label for other adjuvant requirements, if any.
Panther SC Herbicide	flumioxazin	SC	H				Permitted for Use	Permitted for Use	Permitted for Use				*Label Recommended			Label Required	Label Required	Label Required	Label Required	*Label Required			Label makes no specific mention of AMS substitutes. Dry or liquid AMS or AMS subs is grower's choice. DRA may be used. Refer to tank mix partner label for other adjuvant requirements, if any.
Valor XLT	flumioxazin / chlorimuron ethyl	WDG	H										*Label Recommended			Label Required	Label Required	*Label Required	Label Required				Label makes no specific mention of AMS substitutes. Dry or liquid AMS or AMS subs is grower's choice. DRA may be used. Refer to tank mix partner label for other adjuvant requirements, if any.
Far Reach	fluroxypyr / clopyralid	EC	H				Permitted for Use						Label Recommended			Label Recommended			*Label Recommended				
GoldSky	fluroxypyr / pyroxulam / florasulam	EC	H			Label Required			Permitted for Use				*Label Recommended			Label Required	*Label Required						Do not add adjuvants when tank mixing with an EC tank mix partners
Willowood Fomesafen 1.88SL	fomesafen	SL	H			*Label Required							Permitted for Use				Label Required	Label Required		*Label Required			Adjuvant choices and AMS usage may vary depending on crop or geography. Read herbicide label for details. Even L Pro is all-in-one, where allowed. Otherwise MSO + AMS is next option.

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				AND/OR	APPLY		AND/OR	PERFORM							Product Selection Notes	
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS		Drift and Deposition Aid	Volatility Reduction Agent		Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement	MSO	High Surfactant MSO	Organosil MSO		
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA	FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV	IN-Cert™ MSO	IN-Cert™ HighSurf MSO	IN-Cert™ Organosil MSO		
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V		
Willowood Glufosinate 280SL	glufosinate	SL	H									*Label Recommended			Permitted for Use	*FBN Recommended								NIS permitted for burndown use only. Addition of Deposition aid or DRA improves performance
Liberty 280 SL	glufosinate	SL	H									*Label Recommended			Label Recommended	Label Recommended								NIS allowed for burndown use only. Addition of Deposition aid or DRA improves performance
AgSaver Glyphosate 53.8%	glyphosate (IPA salt)	SL	H			*Label Recommended						Label Recommended			Label Recommended	Label Recommended				Permitted for Use				HMSO may be substituted for NIS with certain tank mixes
Credit Xtreme	glyphosate (IPA salt) / glyphosate (K salt)	SL	H			*Label Recommended		Permitted for Use	Permitted for Use			Permitted for Use												Certain tank mix partners may require the addition of HMSO; Addition of FieldGrip DRA is recommended if Even L Pro is not used
Roundup Powermax	glyphosate (K salt)	SL	H			*Label Recommended		Permitted for Use	Permitted for Use			Permitted for Use			Label Recommended									Certain tank mix partners may require the addition of HMSO; Addition of FieldGrip DRA is recommended if Even L Pro is not used
Halex GT	glyphosate / s-metolachlor / mesotrione	SC	H			*Label Required						Permitted for Use			Label Required	*Label Required								Even L Pro may be acceptable option to NIS + AMS
Beyond	imazamox (ammonium salt)	SL	H					Permitted for Use				Label Recommended			Label Required	*Label Required	Label Required		Label Required	Label Required				Certain adjuvant restrictions exist for Clearfield wheat. Nitrogen use may not be required in certain geographies. Read the herbicide label for details. Oil adjuvants are restricted by crop type - read label.
Willowood Imazethapyr 2SL	imazethapyr	SL	H			Label Required		Permitted for Use				Permitted for Use			Label Required	*Label Required	Label Required		Label Required					Geographic guidelines on nitrogen additives by geography, check herbicide label. NIS best overall general use option. MSO better when weeds are tough due to hot and/or dry weather.
Willowood Sulfen Imaz	imazethapyr / sulfentrazone	LC	H					Permitted for Use				Permitted for Use					Label Recommended	*Label Recommended	Label Recommended					
Balance Flexx	isoxaflutole	SC	H					Permitted for Use				Permitted for Use				Label Recommended	Label Recommended	*Label Recommended	Label Recommended					Tank-mixtures are not advised for early postemergence applications; adjuvant use preplant burndown only.
Willowood Lactofen 2EC	lactofen	EC	H														Label Required							Drift reduction agents are not advised.
Boa	lactofen	EC	H														Label Required							Drift reduction agents are not advised.
Willowood Mesotrione 4SC	mesotrione	SC	H					Permitted for Use				Permitted for Use				Label Recommended	Label Recommended	*Label Recommended	Label Recommended	Label Recommended				Use MSO pre apps only. Do not add UAN or AMS to sweet or yellow corn.
Stalwart 3W	mesotrione / metolachlor / atrazine	SC	H												Label Recommended	*Label Recommended								Nonionic Surfactant Required. APE-Free best for crop safety.
Acuron	mesotrione / s-metolachlor / atrazine / bicyclopyrone	ZC	H			*Label Recommended		Permitted for Use				Permitted for Use			Label Recommended	*Label Recommended	Label Recommended							Use only NIS in-crop. Use HMSO prior to crop emergence
Stalwart C	metolachlor	EC	H					Permitted for Use																
Prefix	metolachlor / fomesafen	EC	H									Permitted for Use				Label Required								NIS only in post applications. Dependent on tank mix partners in burndown applications
Drexel Mes-O-Sate	metolachlor / glyphosate / mesotrione	LC	H									*FBN Recommended				Label Required								Addition of Deposition aid or DRA improves performance
Willowood Metribuzin 75DF	metribuzin	DF	H			Label Recommended		Permitted for Use							Label Recommended									
Metrixx SC	metribuzin	AS	H			Label Recommended		Permitted for Use							Label Recommended									
Willowood Sulfen Met DF	metribuzin / sulfentrazone	DF	H									Permitted for Use					Label Recommended	*Label Recommended	Label Recommended					
Willowood OxyFlo 2EC	oxyfluorfen	EC	H														Label Recommended	*Label Recommended						Adjuvant use depends on crop; refer to herbicide label

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				APPLY		AND/OR	PERFORM						Product Selection Notes				
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS	AND/OR	Drift and Deposition Aid		Volatility Reduction Agent	AND/OR	Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement		MSO	High Surfactant MSO	Organosil MSO	
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA		FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV		IN-Cert™ MSO	IN-Cert™ HighSurf MSO	IN-Cert™ Organosil MSO	
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V			
Willowood Paraquat 3SL	paraquat	SL	H									Permitted for Use			Label Required	*Label Required	Label Required							see label for specific instructions on when to use NIS or COC	
Satellite HydroCap	pendimethalin	ME	H									*FBN Recommended					Label Recommended	*Label Recommended						DRA may improve soil coverage. Adjuvants only needed when tank mixed with postemerge herbicides; Tank-mix partners may have specific or different adjuvant requirements.	
Huskie Complete	pyrasulfotole / bromoxynil / thiencazone	EC	H				Permitted for Use					*FBN Recommended												AMS is only adjuvant recommendation on label; DRA may improve coverage	
Huskie	pyrasulfotole / bromoxynil octanoate / bromoxynil heptanoate	EC	H									*FBN Recommended												Do not add adjuvants when tank mixing with an EC tank mix partners; DRA may improve coverage	
Fierce	pyroxasulfone / flumioxazin	WDG	H									*Label Recommended			Label Required	Label Required	Label Required			*Label Required				DRA may improve coverage; NIS or COC is required, although MSO may be substituted	
Anthem Maxx	pyroxasulfone / fluthiacet-methyl	SC	H				Permitted for Use					*Label Recommended			Label Required	Label Required	Label Required			Label Required	*Label Required			HighSurf MSO best option	
Prize	quinclorac	SC	H				Permitted for Use					*Label Required			Label Recommended		Label Required			*Label Required				NIS may be substituted ONLY when tank mix partner restricts use of oils. Read herbicide label for details. DRA required for rice.	
Se-Cure EC	quizalofop-P-ethyl	EC	H			Label Recommended	Permitted for Use					*Label Recommended				Label Required	*Label Required							Adjuvant required; COC preferred over NIS	
Pruvin	rimsulfuron	DF	H			*Label Recommended	Permitted for Use					Permitted for Use			Label Required	Label Required	Label Required	Label Required	Label Required	Label Required	Label Required	*Label Required		Adjuvant required; label allows most adjuvant types; read label for details	
Sharpen	safinufenacil	SC	H																	*Label Required				Do not substitute NIS for MSO.	
Verdict	safinufenacil / dimethenamid	EC	H																	Label Required	*Label Required				
Zidua PRO powered by Kixor herbicide	safinufenacil / pyroxasulfone / imazethapyr	SC	H																	Label Required	*Label Required				HighSurf MSO preferred option
Willowood Sulfen 4SC	sulfentrazone	SC	H									Permitted for Use						Label Recommended	*Label Recommended	Label Recommended					See label for specific uses
Spartan® Charge	sulfentrazone / carfentrazone-ethyl	SL	H				Permitted for Use	Permitted for Use				Permitted for Use				Label Required	Label Required	Label Required	Label Required	Label Required	Label Required			Consult label for specific crop recommendations	
Willowood Sulfen Cloran	sulfentrazone / cloransulam-methyl	DF	H				Permitted for Use	Permitted for Use				Permitted for Use			Label Required	Label Required	Label Recommended			Label Recommended				Post-uses require adjuvant; see label for specifics; COC or MSO may be substituted for NIS; NIS preferred	
Laudis®	tembotrione	SC	H														Label Recommended	Label Recommended	Label Required	*Label Required				Bromoxynil tank-mixes recommend COC. Read label for details	
Corvus®	thiencazone	SC	H																					Tank-mixtures are not advised for early postemergence applications	
Capreno®	thiencazone / tembotrione	SC	H														*Label Required			Label Required	Label Required			HighSurf MSO preferred under adverse conditions; some tank mixes may require a different recommendation, read herbicide label	
Rapport® Broadspec	thifensulfuron-methyl / tribenuron-methyl	WDG	H			*Label Required						Permitted for Use			Label Required	Label Required	*Label Required			Label Required				COC best under arid conditions. NIS for general use under lighter-duty conditions. AMS may be used but not required; Even L Pro contains AMS + surfactant in a single product.	
Rapport® Tankmix	thifensulfuron-methyl / tribenuron-methyl	WDG	H			*Label Required						Permitted for Use			Label Required	Label Required	*Label Required			Label Required				COC best under arid conditions. NIS for general use under lighter-duty conditions. AMS may be used but not required; Even L Pro contains AMS + surfactant in a single product.	
Willowood Thioben 8EC	thiobencarb	EC	H																					None required. Dependent on tank mix partners. Do not use adjuvants with propanil.	
Impact®	topramezone	SC	H									Permitted for Use			Label Recommended	Label Recommended	Label Recommended			Label Required	*Label Required			NIS, COC may be substituted for MSO where MSO is prohibited by the tank-mix partner. See tank-mix partner label for details.	

Product	Active Ingredient(s)	Formulation Type	Pesticide Type	MIX APPLY PERFORM			OR	MIX				AND/OR	APPLY		AND/OR	PERFORM							Product Selection Notes	
				Multi-Function DRA + Water Conditioner (AMS-Free) Dicamba Compatible	Multi-Function DRA + Water Conditioner (AMS-Free) 2,4-D Compatible	Multi-Function AMS + NIS + Drift Reduction + Antifoaming		Liquid AMS Free Water Conditioner	Dry AMS Replacement Water Conditioner	Liquid AMS	Dry AMS		Drift and Deposition Aid	Volatility Reduction Agent		Nonionic Surfactant	Premium Nonionic Surfactant	Crop Oil	Hybrid Oil Replacement	MSO	High Surfactant MSO	Organosil MSO		
				Tether™ DC	Tether™ 24	Even L Pro		Even™ LR	Even™ DR	Even™ 34L	Dry AMS		FieldGrip™ DRA	FieldGrip™ VRA		IN-Zorb™ 90	IN-Zorb™ ADV	IN-Plant™	IN-Plant™ ADV	IN-Cert™ MSO	IN-Cert™ HighSurf MSO	IN-Cert™ Organosil MSO		
				1 to 5 pints/100 gal 0.125 to 0.50% V/V	1 to 2 quarts/100 gal 0.25 to 0.50% V/V	1 to 2.5 pints/100 gal 1.0% to 2.5% V/V		1 to 2 quarts/100 gal 0.25 to 0.50% V/V	3 to 4 lbs/100 gal	1 to 5 gal/100 gal	9 to 18 lbs/100 gal		1 quart/100 gal 0.25 to 0.50% V/V	20 to 32 oz/acre		2 to 4 pints/100 gal 0.25 to 0.50% V/V	2 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	1 to 4 pints/100 gal 0.125 to 0.50% V/V	1 gal/100 gal 1.0% V/V	2 to 3 quarts/100 gal 0.50% to 0.75% V/V	1 to 5 pints/100 gal 0.125 to 0.50% V/V		
Triflurex® HFP	trifluralin	EC	H										*FBN Recommended											Dependent on tank mix partners. DRA may improve coverage.
Alligare® Triumph 22K	picloram	LC	H										Permitted for Use			Label Recommended	Label Recommended	Label Recommended	Label Recommended	Label Recommended	Label Recommended	*FBN Recommended		
Zidua® SC Herbicide	pyoxasulfone	SC	H																					None required. Dependent on tank mix partners
Moccasin®II Plus	s-metolachlor	EC	H																					None required. Dependent on tank mix partners
Willowood Sulfen Met DF 2	metribuzin / sulfentrazone	DF	H																					None required. Dependent on tank mix partners
Axial® XL	pinoxaden	EC	H																					No adjuvant required, even with certain tank mix partners. See label for details.
Willowood Propanil 80 CHS	propanil	DF	H																					Adjuvants not recommended
Willowood Propanil 4EC	propanil	EC	H																					Adjuvants not recommended
Willowood Propanil 4SC	propanil	SC	H												Label Required		*Label Required							
Willowood Thionil EC	propanil / thioencard	EC	H																					Adjuvants not recommended, except with Newpath according to Newpath label
Arrest® CS	acetochlor	CS	H																					None required. Dependent on tank mix partners
Arrest® Plus	acetochlor	EC	H																					None required. Dependent on tank mix partners
Volley ATZ NXT	acetochlor / atrazine	LC	H																					None required. Dependent on tank mix partners
Surestart II	acetochlor / clopyralid / flumetsulam	EC	H																					None required. Dependent on tank mix partners
Cinch ATZ	atrazine / s-metolachlor	LC	H																					None required. Dependent on tank mix partners
Willowood Bifenazate 50WDG	bifenazate	WDG	H													Permitted for Use	*FBN Recommended							Adjuvant will improve coverage
Hexy 1E	hexythiazox	EC	A & M										Permitted for Use			Permitted for Use	*FBN Recommended							Adjuvant will improve coverage
Willowood Abamectin 0.7SC	abamectin	SC	A & M													*Label Required	Label Required	*Label Required	Label Required	Label Required	Label Required	Label Required		Label allows many adjuvant types. Consult label for specific crop recommendations

Quick Picks for Popular Herbicides

This handy chart will help you easily identify which adjuvants to pair with your go-to crop protection products in order to boost their effectiveness.

Glyphosate Tank Mixes

Glyphosate Type	FBN Recommended	Rate	Notes	Water Conditioner	Defoamer	Drift Control	Canopy Penetration	Leaf Surface Coverage	Spray Droplet Retention	Leaf Surface Penetration	Humectant/ Evaporation Reduction	Spreader/Wetter/ Activator
Unloaded Glyphosate	Even™ L Pro	1-5 gal/100	Highly Recommended									
	IN-Zorb™ 90	2-4 pt/100	For Enhanced Performance									
Loaded Glyphosate	Even™ L or Dry AMS	LIQ: 1-5 gal/100. DRY: 8.5-17 lbs/100	Highly Recommended									
	IN-Zorb™ 90	1 pt/100*	For Enhanced Performance When Spray Volumes Exceed 20 GPA									
	FieldGrip™ DRA	1-6 oz/acre	Improved Canopy Penetration & Drift Control									
Complicated Tank Mixes	Even™ L or Dry AMS	LIQ: 1-5 gal/100. DRY: 8.5-17 lbs/100	Highly Recommended									
	IN-Zorb™ 90	1-4 pt/100	For Enhanced Performance or when Label Required									
	IN-Cert™ HighSurf MSO	10-12 oz/acre	For Enhanced Performance or When Label Required									
	FieldGrip™ DRA	1-6 oz/acre	Improved Canopy Penetration & Drift Control									
Glyphosate + AMS Free Water Conditioner Requirement	Tether™ DC or Tether™ 24	DICAMBA: 5 pt/100 OTHER: 2-3 qt/100	Highly Recommended	AMS Free								
	IN-Zorb™ 90	1 pt/100	For Enhanced Performance or When Label Required									



Dicamba Tank Mixes

Product	Active Ingredient 1	Active Ingredient 2	FBN Recommended	Use Rate	Reduces Antagonism	Improves Coverage	Improves Penetration	Increases Transport	Reduces Physical Drift	Reduces Volatility
Engenia or Xtendimax	Glyphosate	None	Tether™ DC	5 pts/100	BEST	BEST	BEST	BEST	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
	Glyphosate	Clethodim	Tether™ DC	5 pts/100	BEST	BEST	FAIR	FAIR	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
	Glyphosate	Clethodim	Tether™ DC	5 pts/100	BEST	BEST	BEST	BEST	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
IN-Cert™ HighSurf MSO			12 oz/acre							

Product	Active Ingredient 1	Active Ingredient 2	FBN Recommended	Use Rate	Reduces Antagonism	Improves Coverage	Improves Penetration	Increases Transport	Reduces Physical Drift	Reduces Volatility
Tavium	Glyphosate	None	Tether™ DC	5 pts/100	BEST	BEST	BEST	BEST	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
	Glyphosate	Fluazifop	Tether™ DC	5 pts/100	BEST	BEST	FAIR	FAIR	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
	Glyphosate	Fluazifop	Tether™ DC	5 pts/100	BEST	BEST	BEST	BEST	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
			IN-Cert™ HighSurf MSO	12 oz/acre						
	Glyphosate	Fluazifop	Tether™ DRA	5 pts/100	BEST	BEST	GOOD	GOOD	BEST	BEST
			FieldGrip™ VRA	1 gal/100						
			IN-Zorb™ ADV	2 pts/100						

2,4-D Tank Mixes

Product	Tank Mix Partner	Adjuvant	Use Rate	Antagonism	Coverage	Penetration	Transport	Physical Drift	Volatility	
Enlist® One	Loaded Glyphosate	FBN AMS Pro	1.25 - 2.5 gal/100	BEST	BEST	BEST	BEST	NO IMPACT	NO IMPACT	
		FBN AMS 34L	1-5 gal/100							
		Crosslock	4 oz/acre							
	Glufosinate		FBN AMS Pro	1.25 - 2.5 gal/100	BEST	BEST	BEST	BEST	NO IMPACT	NO IMPACT
			FBN AMS 34L	1-5 gal/100						
			Crosslock	4 oz/acre						




FARMERS
FIRST™

SHOP FARMERS FIRST™ ADJUVANTS

Available from



 fbn.com/direct/adjuvants

 844-200-FARM

Always read and follow label instructions before using.

Copyright © 2022 Farmer's Business Network, Inc. All rights Reserved. FBN, FBN Direct, and Farmer's First are registered trademarks, and Catalyst ADV™, Inject-N™ ADV, Inject-Myco ADV™, Inject-PK™, ATARRUS™, Inhabit B™, Inhabit Boost™, Inhabit Build™, Inhabit Fe™, Inhabit N™, Inhabit P™, Inhabit Start™, Inhabit Zn™, Nourish Vitals™, Nourish Fe™, NOURISH Zn™, Nourish B™, Nourish Mn™, Nourish Ca™ and Nourish ZnMn™ are trademarks of Farmer's Business Network, Inc. All other trademarks are the property of their respective owners.

FBN Direct crop nutrition products and other products available through FBN Direct are offered by FBN Inputs, LLC and are available only in states or provinces where FBN Inputs, LLC is licensed and where those products are registered, if applicable. Consult an agronomist before any use not addressed on the product label. Individual results from use of crop nutrition products may vary and are dependent upon additional factors, including but not limited to weather, agronomic conditions and practices, crop selection, soil type and condition, time, method and manner of application, application rate, and geography. Terms and conditions apply.