

Understanding Acid Formulations of Phenoxies

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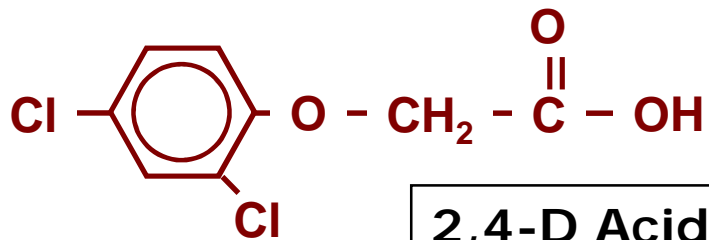
2,4-D
Acid

Dicamba
Acid

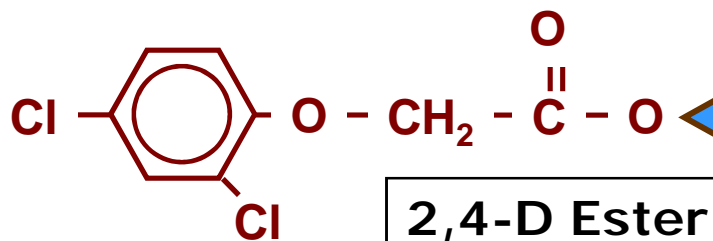
2,4-D Acid &
Dicamba
Acid



Forms of 2,4-D's On The Market Today

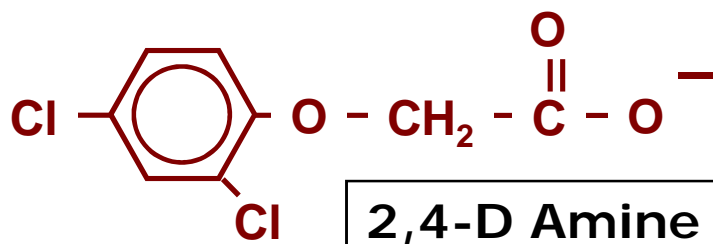


Free Acid Form

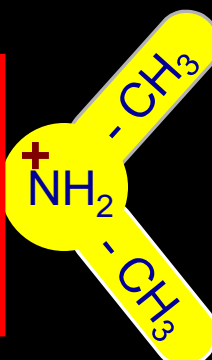


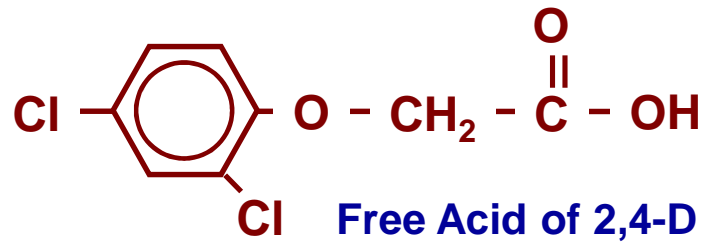
Ester Form

CH₂ CH₂ CH₂ CH₂ CH₂ CH₂ CH₂ CH₃



Amine Form





***Free Acid Causes
The Twisting***



Comparisons of 2,4-D Forms

	Esters	Amines	Free Acid
<i>Volatility</i>	High	Low	Very Low
<i>Odorless</i>	No	No	Yes
<i>Compatibility</i>	Good	Good	Excellent
<i>Active Form</i>	No	No	Yes
<i>Activity</i>	High	Lower	High Plus
<i>Surfactant Load</i>	No	No	Yes
<i>Hard Water</i>	No	Yes	No
<i>Less Active Used</i>	No	No	Yes





LATIGO™



LATIGO™



Position

A specialized formulation of dicamba and 2,4-D acids that is designed to maximize weed control in a variety of environmental conditions, while minimizing spray application and mixing problems.

The first "acid / acid" (Acid²) with "in-can" adjuvant system.





Formulation

- 1.8 lbs of dicamba acid combined with 2.4 lbs 2,4-D acid
- Solventless formulation
- "Ester free" active ingredients
- Contains no fillers or diluents
- "In-can" adjuvant system that functions as both a nonionic surfactant and water conditioning agent





Enhances Glyphosate Applications

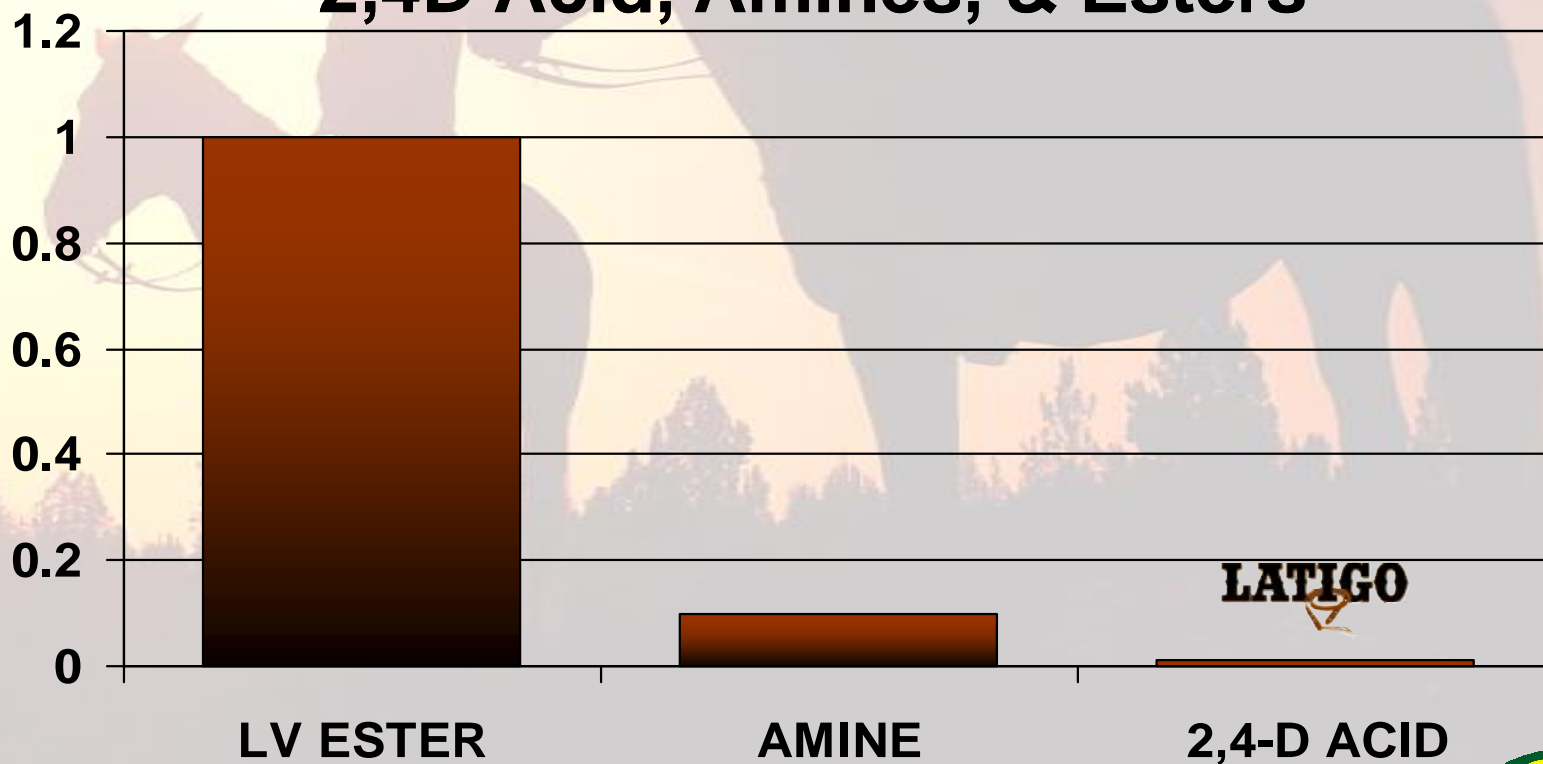
- “In-can” surfactant system capable of enhancing glyphosate coverage
- Adjuvant & formulation components capable of enhancing the speed and degree of glyphosate absorption
- Increasing broad leaf weed control spectrum (e.g. glyphosate resistant mares tail / horseweed)
- Minimizing water quality problems
- Providing 100% compatibility with all glyphosate products





Reduced Volatility Potential

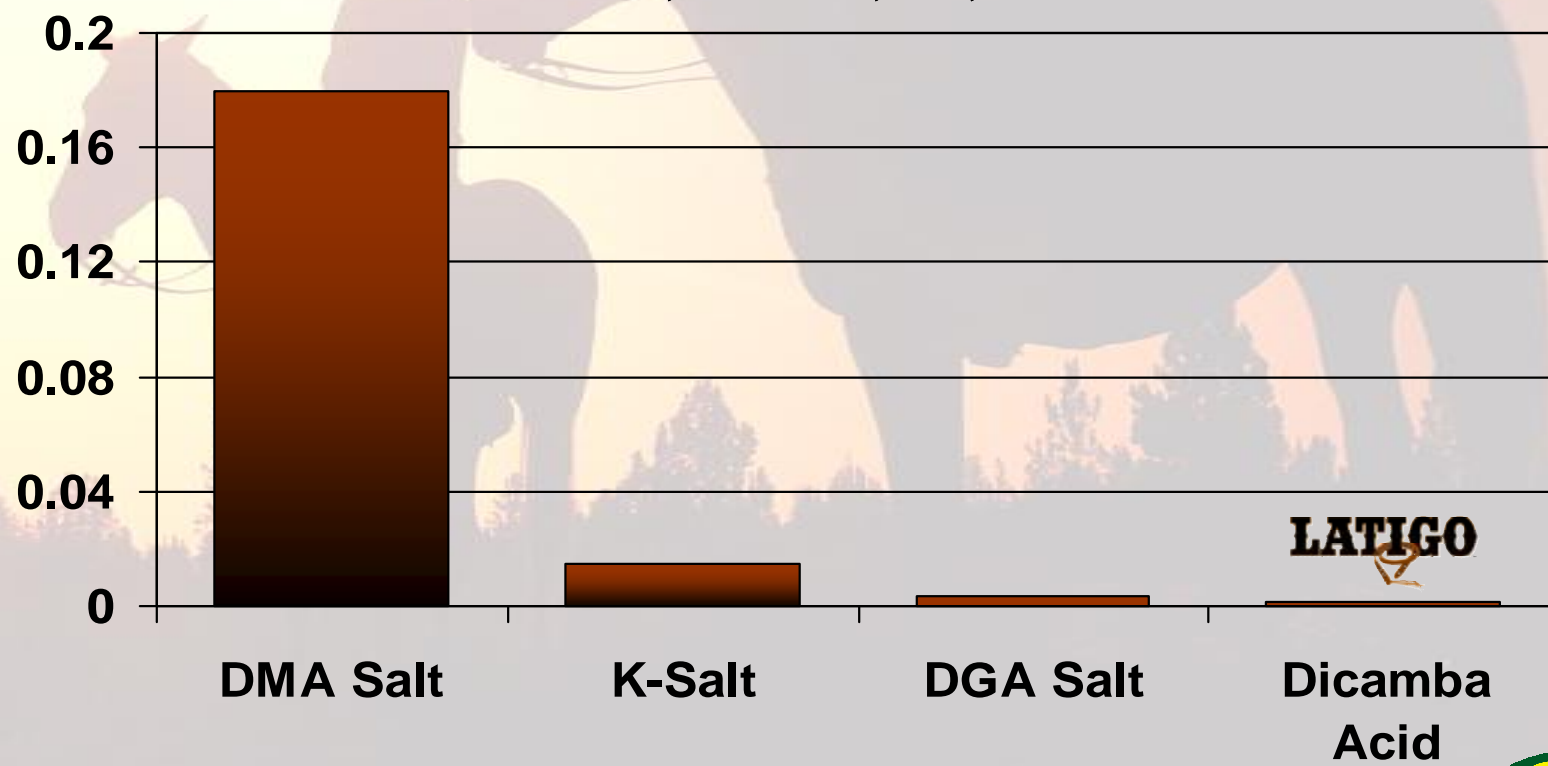
Relative Vapor Pressure Comparisons 2,4D Acid, Amines, & Esters





Reduced Volatility Potential

Relative Vapor Pressure Comparisons Dicamba Acid, DGA, K, and DMA Salts



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K Salt Dicamba



Volatility @ 36 Hrs



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Labeled Uses

- Pasture
- Rangeland
- Grass (Hay, Silage)
- Fall Wheat
- Spring Wheat
- Sugarcane
- Non-Food/Feed Use
 - ü Preplant Burndown
 - ü Fallow
 - ü Crop Stubble
 - ü Set-Aside
 - ü Post Harvest
- CRP & General Farmstead





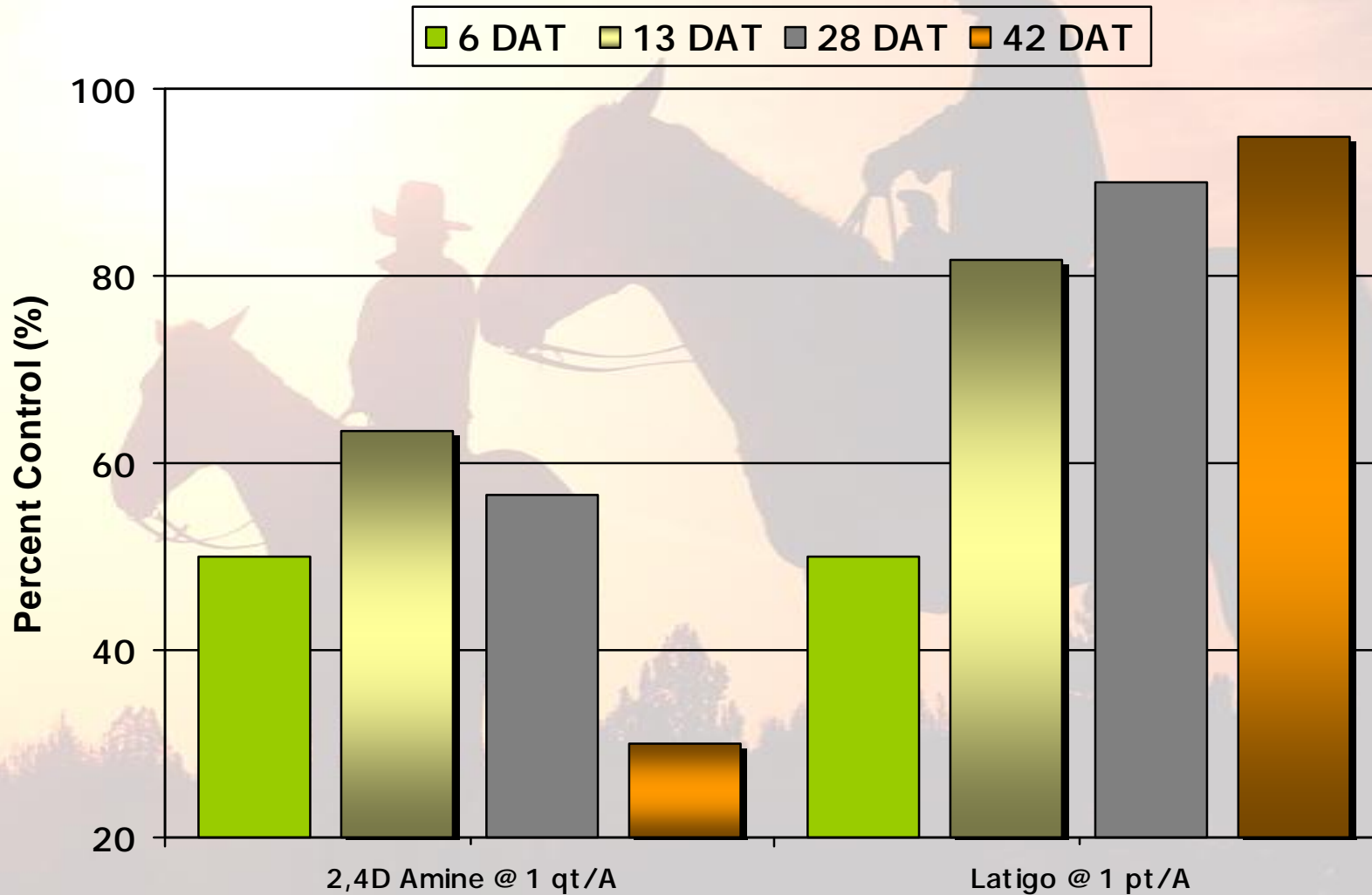
Plantback Restrictions

Crop	Pints/A with Rainfall/Irrigation >0.5" after application			Pints/A with Rainfall/Irrigation <0.5" after application		
	0.67-1	1-3.5	>3.5	0.67-1	1-3.5	>3.5
Corn	14	21	120	30	60	120
Cotton	21	45	120	30	90	120
Grain Sorghum	120	120	None	120	120	None
Rice	120	120	None	120	120	None
Small Grains	14	21	120	21	60	120
Soybeans	30	45	120	45	90	120
All other	120	120	None	120	120	None





2009 LA Burndown Trial- Marestail



All treatments applied w/Hoss Ultra @ 1 qt/A + Quest @ 0.25% v/v

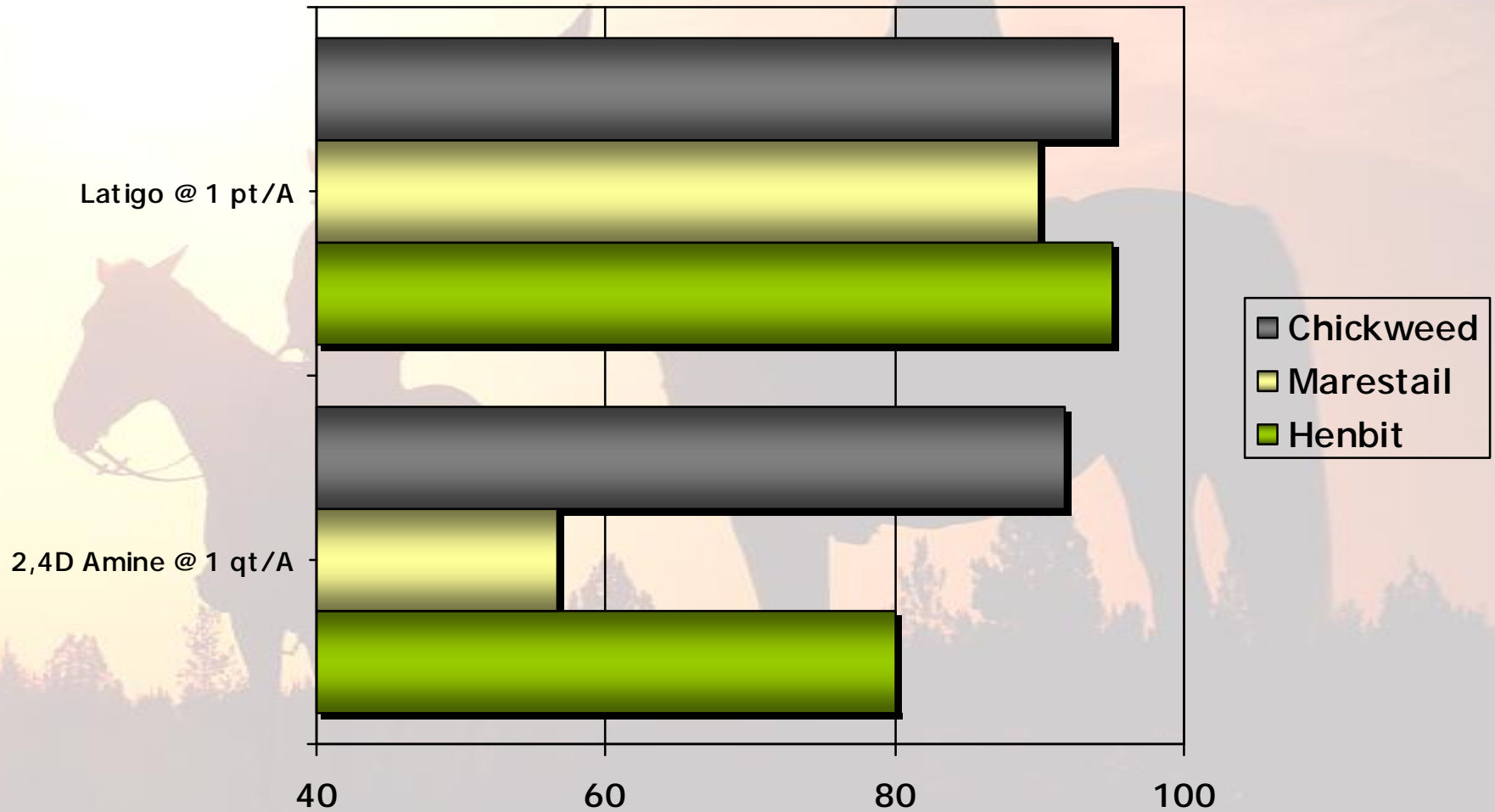
Trial conducted by Bill Williams, PhD, LSU AgCenter, St. Joseph, LA - 2009





2009 LA Burndown Trial

Percent Control (%) 28 DAT



All treatments applied w/Hoss Ultra @ 1 qt/A + Quest @ 0.25% v/v

Trial conducted by Bill Williams, PhD, LSU AgCenter, St. Joseph, LA - 2009





Overview

- Helena's unique double acid formulation – 2,4-D acid and Dicamba Acid provides:
 - A powerful herbicide to aid in the control of glyphosate resistant weeds
 - Broader spectrum of broadleaf weed control
 - More cost effective weed control
- Suggested use rates of 16 -20 oz/A at burndown with glyphosate





***Any
Questions?***