Lakeside GRAIN & FEED LIMITED

PRECISION AGRICULTURE COMPLIANCE EXCELLENCE

THE Agromart GROUP

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Newsletter

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A is for Adjuvant

Spraying herbicide can feel like a never-ending job. It starts in the spring to prepare a field for planting and continues through the summer months to keep fields clean for harvest. The technology available to growers when selecting a herbicide has made great strides, however one aspect of the herbicide world that can easily get over looked is the important role of adjuvants.

The easiest way to define an adjuvant is as something that gets added to your sprayer's tank that changes or enhances the pesticide's action. Some products that you use on your farm may already have a strong adjuvant built into them, but more often adjuvants need to be added separately to your herbicide. Examples like this include Eragon and Merge or Reflex and Turbocharge. From here, adjuvants can be loosely grouped into three categories: activators, spray modifiers and utility modifiers.

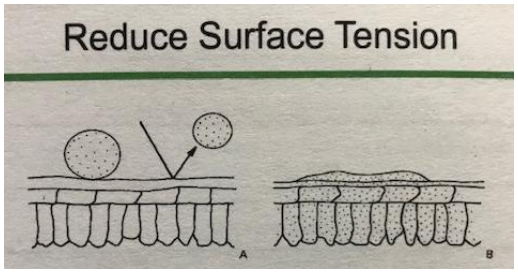

Figure 1: Left (A), a spray droplet easily bounces off the leaf surface. Right (B), the surfactant used in the spray mix has reduced the surface tension of water so it can spread more readily on the surface of the leaf.

Utility modifiers are products like buffering agents or anti-foaming agents used in the spray tank, while spray modifiers are adjuvants that are used to enhance the sticking or spreading of a herbicide to a weed's leaf surface. Most popular of all are activator adjuvants, like surfactants, that are used to enhance post-emerge herbicides. This group of adjuvants allows for more contact between the spray droplet and targeted plant, which is especially important for weeds that have waxy or hairy leaves! Non-Ionic Surfactants (NIS) are the choice for many producers because of their broad uses. LI 700 is a great NIS to use because it is dual purpose; while it acts as a surfactant, it's unique formulation also acidifies the water in the sprayer. This means your sprayer water will have a lower pH, which is crucial when dealing with various herbicides and their stability in the spray tank. Take Dicamba, a product that is commonly used in Southwestern Ontario. Most often, well water in Ontario has a pH of 7.8-8.0 but Dicamba is only stable in a pH of 5-6. It may seem like something little but adding in a surfactant can be the different between decent weed control and excellent weed control.

Nutrient Removal Chart

With soybean harvest wrapping up around the countryside, there is plenty of fall fertilizer to be spread. Below is a quick nutrient removal chart that can be used in helping to decide what type and how much fertilizer to apply after harvest:

	Nitrogen (N)	Phosphorous (P)	Potassium (K)	Sulfur (S)	Magnesium (Mg)
Corn	0.9	0.4	0.3	0.1	0.1
Soybeans	3.3	0.9	1.4	0.2	0.2
Wheat	1.2	0.5	0.3	0.1	0.15

To help you in using this chart, each number represents the amount of actual nutrient removed per bushel harvested. For instanced, on a 50 bu per acre soybean crop to replace the K that the crop removed would be 70 lbs of actual K per acre (50 bu x 1.4 = 70 lbs of K). This then is translated into roughly 117 pounds per acre of muriate of potash that would need to be applied to cover off nutrient removal (70 lbs removed / 60% K in muriate of potash).