Adjuvants

• Utility Modifier
  – Compatibility Agents
  – Defoaming Agents
  – Drift Control
  – Deposition Agents
  – Water Conditioning
  – Acidifying Agents
  – Buffering Agents
  – Colorant

• Activators
  – Wetter-Spreader
  – Sticker Adjuvants
  – Humectants
  – Penetration Agents
  – Herbicide Modifiers

Adjuvants

• A material added to a tank-mix intended to modify the activity of a herbicide or the physical characteristics of the mixture
  – Utility Modifier Adjuvants
  – Activator Adjuvants

• Increase herbicide efficacy
• Increase foliar wetting
• Increase resistance to rain
• Increase penetration
• Improve compatibility
• Increase crop safety
• Reduce drift hazard
• Decrease volatility

Wetter/Spreader

• Reduces water surface tension

Stickers

• Increase stickiness of particles
**Humectants**

- Decrease evaporation of droplets

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**Penetrants**

- Break down waxy barrier to absorption

**Examples**

- **Non-ionic surfactants**
  - No net electrical charge
  - Water is polar and non-ionic surfactants won’t interfere with polarity of water

- **Crop oils**
  - Used when AI is oil soluble
  - Enhance foliar activity
  - Ex: Atrazine/crop oil for enhanced control of quackgrass in corn

- **Organosilicone surfactants**
  - Penetrants
  - Rain fastness