

# New soybean/corn trait technology

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- RR Xtend soybeans – dicamba resistance
  - PRE/POST use of dicamba/glyphosate
- Xtend status – February 2017
  - Soybeans approved for export and all trade
  - Labels for XtendiMax, Engenia, Fexapan approved
- Enlist corn, soybeans – 2,4-D/glufosinate resistance
  - PRE/POST use of 2,4-D/glufosinate/glyphosate
- Enlist status – February 2017
  - Soybeans/corn not approved for all export markets
  - Seed not really being sold (some corn for onfarm use)
  - Enlist Duo herbicide approved

# XtendiMax/Fexapan label stuff - soybeans

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- DGA salt of dicamba (Clarity) + “VaporGrip”
  - 2.9 lb gal liquid
  - 22 oz = 0.5 lb (= 16 oz of Clarity)
  - PRE – anytime prior to soybean emergence
  - Maximum PRE rate and total = 44 oz
  - Maximum POST rate = 22 oz; Max POST total = 44 oz
  - POST – emergence up to and including R1
  - POST - Weeds less than 4 inches tall
  - Do not use AMS

# Engenia label stuff - soybeans

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- Engenia = BAMPA salt of dicamba
  - 5 lb gal liquid
  - 12.8 oz = 0.5 lb (= 16 oz of Clarity)
  - PRE – anytime prior to soybean emergence
  - Maximum single PRE/POST app rate = 12.8 oz
  - Can make up to two PRE and two POST apps
  - Maximum per season = 51.2 oz
  - POST – emergence up to and including R1
  - POST - Weeds less than 4 inches tall, rosettes less than 2 inches in diameter
  - Do not use AMS

# XtendiMax/Fexapan/Engenia label stuff

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- No tank mixing with any other herbicides, adjuvants, foliar nutrients, drift reducers, snake oils, silver bullets, etc
  - Except for those allowed per the list at [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com) and [www.fexapanapplicationrequirements.dupont.com](http://www.fexapanapplicationrequirements.dupont.com) and [www.engeniatankmix.com](http://www.engeniatankmix.com)
- Some approved herbicides and adjuvants starting to show up on these websites (as of late Feb)
  - Primarily for XtendiMax so far

# XtendiMax/Engenia label stuff

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- Use only approved nozzles
  - per the list at [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com) and [www.engeniatankmix.com](http://www.engeniatankmix.com) and [www.fexapanapplicationrequirements.dupont.com](http://www.fexapanapplicationrequirements.dupont.com)
- XtendiMax - approved nozzles (late Feb)
  - TeeJet TTI11003-11006, AI11003, AI8003/8005
  - Greenleaf TADF-D11003/11006, TCXL-D1103-1106
  - Hypro ULD12004/12005
  - Lechler ID11003-11005, ID8004
  - Wilger DR11010
- Engenia - approved nozzles (late Feb)
  - TeeJet TTI11004, 11005
- Fexapan - approved nozzles (late Feb)
  - TeeJet TTI11004

# XtendiMax/Fexapan label stuff

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- No application if rain within next 24 hours
- No aerial application
- Do not apply during temperature inversion
- Triple rinse sprayer cleanout
- Specific wind speed info:
  - Less than 3 mph – do not apply
  - 3 to 10 mph – optimum
  - >10 to 15 mph – do not apply if wind in direction of “sensitive crops”
  - >15 mph – do not apply

# Engenia label stuff

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- No application if rain within next 4 hours
- No aerial application
- Do not apply during temperature inversion
- Triple rinse sprayer cleanout
- Specific wind speed info:
  - Less than 3 mph – apply only if no temperature inversion
  - 3 to 10 mph – optimum
  - >10 to 15 mph – do not apply if wind in direction of “sensitive crops”
  - >15 mph – do not apply

# XtendiMax/Fexapan/Engenia label stuff

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- Minimum of 10 gpa, max ground speed = 15 mph
- Boom height – max of 24 inches above target
- Do not apply when wind blowing toward adjacent commercially grown “dicamba-sensitive” crops, including but not limited to tomatoes, cucurbits, grapes
- Applicator is responsible for:
  - surveying site for neighboring non-target “susceptible” crops
  - checking sensitive crop registries to ID commercial specialty or certified organic crops near the application site



# XtendiMax/Fexapan/Engenia label stuff

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- Buffer zones – when wind blowing in direction of "sensitive areas"
  - Between treated area and the sensitive area
  - XtendiMax/Fexapan: 22 oz = 110 feet, 44 oz = 220 feet
  - Engenia: 12.8 oz = 110 feet
- What are "sensitive areas"?
  - Habitat for endangered or threatened species
  - Non-target sensitive crop
  - Residential areas
  - Greenhouses

## **Buffer = area not treated with dicamba between treated area and downwind sensitive area**

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- Areas that can count as buffer along with untreated part of the soybean field:
  - Road, paved or gravel surfaces
  - Fields prepared for planting but not planted yet
  - Fields that have been planted with Xtend soybeans, sorghum, or small grains
  - Areas covered by footprint of a building, silo, grain bin, or other man made structure with walls and/or roof

# XtendiMax/Fexapan/Engenia label stuff - resistance

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- Scouting and non-performance
  - Scout fields after application to detect weed escapes or weed species shifts
  - Report incidence of non-performance to retailer, Monsanto/DuPont/BASF
  - 1-844-RRXTEND
  - [www.non-performance.BASF.US](http://www.non-performance.BASF.US)
  - If resistance is suspected, treat escapes with herbicide other than group 4 to prevent seed production
  - Monsanto/DuPont/BASF have to keep records and report on this to EPA, with the goal of preventing development of resistant populations?

## XtendiMax/Fexapan/Engenia label stuff - resistance

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- Do not use less than labeled rate in single application
- Use as many resistance management practices as practical:
  - Use PRE residual herbicides as foundation
  - Alternate site of action over applications
  - Rotate use of XtendiMax/Fexapan/Engenia with non group 4 herbicides
  - No more than 2 apps per season unless mixed with another effective herbicide site of action (this one is fairly worthless)
  - Use cultivation, cover crops, crop rotation, etc