

# Summary of new information in the 2018 Weed Control Guide:

[www.ndsu.edu/weeds](http://www.ndsu.edu/weeds) - Web version of ND Weed Control Guide.

## HERBICIDE UPDATE:

**Discontinued products:** Rowel.

## **Restricted Use Products (RUP):**

Dicamba formulations of Engenia, FeXapan, and XtendiMax.

## **Chemical company purchase/mergers:**

**Purchase: Bayer will buy Monsanto in 2018.**

**Merger: Dow + Dupont**

Dupont small grain and sugarbeet sulfonylurea herbicides from

DuPont will be marketed by FMC:

Affinty BroadSpec, Affinity TankMix, Ally, Express, Harmony,

Panoflex, Sentrallas, UpBeet, and Travallas.

The following herbicides will be retained by Dow/DuPont:

- Alluvex = rimsulfuron + Harmony 16.7 + 16.7% - corn EPP/PRE
- Basis Blend = rimsulfuron+Harmony 20%+10% - corn PRE/POST
- LeadOff = rimsulfuron + Harmony 16.7 + 16.7% - corn EPP/PRE
- Resolve Q = rimsulfuron+Harmony 18.4%+4% - corn PRE/POST
- Require Q = rimsulfuron + dicamba 6.25%+53% - corn POST
- Realm Q = rimsulfuron + Callisto 7.5% + 31.25% - corn POST
- Revulin Q = Accent + Callisto 14.4%+36.8% - corn POST
- Afforia = Harmony + Express + Valor. EPP/PRE in soybean.

## **New products/formulations:**

- Engenia (BASF) = dicamba-BAPMA salt 5SL
- Enlist Duo (Dow) = 2,4-D-choline salt + glyphosate-dma salt
- Enlist One (Dow) = 2,4-D-choline salt 3.8SL
- Everest 3.0 (Arysta) = flucarbazone 1.75OD
- FeXapan (Dupont) = XtendiMax = dicamba-dga+VaporGrip 2.9SL
- Harness Max (Monsanto) = acetochlor + mesotrione
- OpenSky (Dow) = pyroxulam & fluroxypyr in wheat
- Panther SC (Nufarm) = flumioxazin
- Panther Pro (Nufarm) = flumioxazin & metribuzin & imazethapyr
- Quelex (Dow) = florasulam & halauxifen in small grains
- Roundup Xtend (Monsanto) = glyphosate-mea + dicamba-dga + VaporGrip - Registration pending
- Vaquero (Wilbur Ellis) = clethodim 2 EC
- XtendiMax (Monsanto) = dicamba-dga + VaporGrip 2.9SL
- Zidua Pro (BASF) = Zidua + Sharpen + Pursuit
- Zidua SC (BASF) = pyroxasulfone 4.17SC

## **Major Weed Guide Updates**

**Fababean** added to Small Acreage Crops - page 17.

**Liberty** rate structure changed to 32 to 43 fl oz/A for burndown.

- LL Corn = 32 fl oz/A POST
- LL Soybean = 32 to 43 fl oz/A POST
- LL Canola = 22 to 29 fl oz/A POST
- Season total = 87 fl oz/A.

**Roundup Xtend soybean** - strongly advised to read page 28 and paragraph E4 on page 81.

Refer to Monsanto and BASF web sites for application information. Follow label with extreme exactness!

Herbicide registration pending:

1. RU Xtend = glyphosate-mea + dicamba-dga + Vapor Grip  
64 fl oz/A = dicamba at 1 pt/A (0.5 lb ae/A) +  
glyphosate at 1 lb ae/gal

**Aim** added as a preharvest desiccant in dry bean and field pea.

**Zidua** registered in sunflower.

**Spartan Charge** registered in safflower.

**Willowwood Sulfentrazone** registered in potato.

**Spray Adjuvants** wording restored from Web - page 74

**Spray Water Quality** wording restored from Web - page 76.

**Wick Application** wording restored from Web - page 77.

**Backpack Sprayer Calibration** wording restored from Web - page 77.

**Calculating Herbicides Mixtures** section added to help calculate herbicide concentration in small volume backpack/ handboom application - page 77.

**Crop rotation restrictions** clarified for several herbicides, including Everest and dicamba formulations - Banvel and Clarity - page 104-105.

## **Herbicide Resistant Weeds:**

Palmer amaranth documented in MN from contaminated native seed mixtures primarily for pollinator plots. Please continue to watch for any Palmer amaranth in ND from transported seed.

- Group 14 PPO resistant waterhemp documented in MN.
- Group 14 PPO resistant common ragweed suspected in ND.
- Group 14 PPO and Group 4 (dicamba) resistant kochia likely to develop in ND.

**Herbicide residue and fall cover crop establishment** section expanded - page 107.

**Collecting tissue samples and interpreting residue test results** section added - page 108.

**Amount of herbicide active ingredient from a postemergence application to cause injury** section added - page 108.

**Dicamba residue levels in plant tissue to cause injury/loss** section added - page 109.

**Glyphosate residue levels in plant tissue to cause injury** section added - page 109.

**Weed of the Year** - Narrowleaf hawksbeard - page 132-133.

## **Emerging New Active ingredients:**

- tolpyralate (ISK Biosciences) - HPPD (Group 27) in corn

## **Expected Weed Management Traits:**

1. Enlist Weed Control System (Dow)  
DHT 1 technology in corn = resistance to 2,4-D and "fops"  
DHT 2 technology in soybean = resistance to 2,4-D, MCPA, fluroxypyr, and triclopyr.  
Enlist Duo herbicide =  
2,4-D-choline salt + glyphosate-dma (1.6 + 1.7 lb ae/gal)  
3.5 to 4.75 pt/A = 0.7 to 0.95 lb ai/A 2,4-D +  
0.75 to 1 lb ae/A glyphosate
2. HPPD resistant soybean (Bayer/Syngenta)
  1. Balance Bean - isoxaflutole herbicide in soybean
  2. Balance GT - HPPD + glyphosate in soybean

## **IR-4 Residue Studies to be Conducted in 2018:**

Dry bean/dry pea - sulfoxaflor  
Safflower - cyclaniliprole  
Sunflower - cyclaniliprole  
Carinata - quizalofop

**Quick reference information:**

1. NDSU Weed Science Home Page:  
<http://www.ndsu.edu/weeds/>
2. <agdakota> list serve: Timely updates in pesticide registration and crop production information. To subscribe, send email to [r.zollinger@ndsu.edu](mailto:r.zollinger@ndsu.edu)
3. U.S. registered pesticide labels:  
<http://www.cdms.net/manuf/manuf.asp>
4. North Dakota Department of Ag registered pesticide database:  
<http://www.kellysolutions.com/nd/>
5. SAFETY AND EMERGENCY PHONE NUMBERS:  
ND Poison Control Line: 800-222-1222  
ND Emergency Assistance Line: 800-472-2121  
Report pesticide incident to NDDA: 701-328-2232

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