

## Summary of new information in the 2011 Weed Control Guide:

Address for NDSU Weed Science home page: [www.ndsu.edu/weeds](http://www.ndsu.edu/weeds) - Web version of ND Weed Control Guide.

### New products/formulations:

- **Integrity** (BASF) - premix of Sharpen + Outlook.  
Name changed to **Verdict**.  
Soybean added to list of registered crops with wheat and corn.

- **Pyroxasulfone** - (Kumiai) - New ai for 2011. Same mode of action as acetanilides (15) but use rates are 3 to 8 times lower and gives longer residual control than Dual, Harness, Outlook, etc. Controls annual grasses but also has much greater broadleaf activity. Rainfall activation required as with other soil-applied herbicides. Kumiai owns the active ingredient and has allowed marketing right to other chemical companies. In addition to **Fierce** (See Soybean herbicide section below) from Valent, FMC will market pyroxasulfone with fluthiacet (Cadet) and BASF will market pyroxasulfone alone (**Zidua**) and in premix formulations. Registered in wheat, corn, and soybean. Later registrations may include sunflower, pulse crops, and other tolerant crops. Fierce has an 18 month rotation restriction to all crops except labeled crops. The rotation restrictions may decrease in time and with other product registrations.

### Discontinued herbicides:

Cutback, Cutback M, Garrison, GlyKamba, KambaMaster, Pursuit Plus, Recoil, and Silverado.

### New generic equivalent products (partial list):

Thunder (Albaugh) = Pursuit  
Thunder Master (Albaugh) = Extreme  
Top Gun (CPS) = Reflex  
Tap Out (Helena) = Select  
Trump Card (Helena) = Starane + 2,4-D  
Ironclad (MANA) = Steadfast  
Adapt (MANA) = Accent  
Rule (MANA) = Resolve  
Ryzon (MANA) = Paramount  
Framework (Winfield) = Prowl 3.3  
Tacoma (Winfield) = Puma  
Commit (Winfield) = Outlook

**Plant-back interval** - Page 6 = Added Boundary, Dual Magnum, FirstStep, Select, Select Max, and Vida.

### Small Grains herbicides:

**Everest 2.0** (Arysta) - added safener and formulation changed from 70WDG to 3.5SC. Rates = 0.5 to 1 fl oz/A.

**FirstStep** (Dow) - glyphosate + florasulam (a.i. in Orion). EPP to planting of small grains.

**Huskie** (Bayer) - added statement, "Do not plant lentil for 18 months after application".

**Raze** (Arysta) - (flucarbazone + fluroxypyr or Everest + Starane). Registration Pending, contains safener. Rates = 5 to 9 fl oz/A.

**Supremacy** (Arysta) - (thifensulfuron + tribenuron + fluroxypyr or Audit + Starane), Registration pending, Rates = 4 to 6 oz/A.

**Starane Flex** (Dow) - florasulam + fluroxypyr (Starane). Contains the broadleaf component of GoldSky. 13.5 fl oz/A.

**Grass weed control table** (Page 13) = added volunteer barley.

### Corn herbicides:

**Valor** (Valent) - added as a EPP application.

**Callisto Xtra** (Syngenta) - (Callisto + atrazine), at 20 to 24 fl oz/A contains 2.5 to 3 fl oz of Callisto and 0.5 to 0.6 lb ai atra.

**TripleFlex** (Monsanto) - equivalent to SureStart from Dow.

### Soybean herbicides:

**Fierce** (Valent) - (flumioxazin (Valor) + pyroxasulfone). See pyroxasulfone above.

**Matador** (CPS) - Registration pending. A premix of metolachlor + metribuzin + imazethapyr or Dual + Sencor + Pursuit. Matador at 2 qt/A contains the equivalent of 2 pt Dual + 6 oz Sencor + 4 fl oz Pursuit which will limit use in ND.

**Makaze Yield Pro** (CPS) - A combination of glyphosate + indolebutyric acid and kinetin (growth regulator hormones) that may improve crop yield when applied to the early vegetative stage of RR crops.

**Warrant** (Monsanto) - microencapsulated acetochlor. Smaller encapsulation than Degree for quicker activation. Applied POST (ONLY) to soybean for residual PRE control of glyphosate resistant/tolerant weed flushes like waterhemp and lambsquarters. Does not control emerged weeds.

**Flexstar GT** - (Syngenta) - Glyphosate + Flexstar

### Dry bean:

**Permit** (Gowan) - POST registration pending.

**Spartan Charge** (FMC) - growers assume all liability for use.

### Lentil:

**Clearfield lentil section added.**

**Valor** (Valent) - added as a preharvest desiccant.

### Flax:

**Spartan 4F** = Section 18 and 3 registration pending.

### Canola:

**Reglone** = added as a preharvest desiccant.

### Potato:

**Rely 280** - desiccant with changed formulation from Rely 200.

**Vida** = added as a preharvest desiccant.

### Legume forages:

**Prowl H2O** - added to both 'establishment' and 'established' sections.

### Noxious and Troublesome Weeds:

**Field bindweed** - removed as ND noxious weed.

**Yellow starthistle** - removed as ND noxious weed.

**Yellow toadflax** - added as ND noxious weed.

**Paramount** - 309 day grazing restriction removed and replaced with "Allow 7 days before haying.

**Leafy spurge** - Plateau + Sharpen + adjuvant treatment added. Multiple year control of leafy spurge observed from researchers across central and western U.S.

**Toadflax** - added Tordon + Overdrive treatment.

**Absinth wormwood** - added Milestone and Chaparral.

**Troublesome weeds in pasture/rangeland** - added Dame's rocket and hoary cress.

**Glyphosate** - (Text - pages 69-71) Revised, expanded, and updated with new information to improve efficacy. List of glyphosate formulations updated - new DF formulation to be released by Helm Agro that contains NIS + AMS in the formulation. The DF has 50% of the volume of liquid formulations.

**Spray Adjuvants** - (Text - pages 72-73) Revised and updated.

**Spray Carrier Water Quality** - (Text - pages 74-75) Revised and updated.

**Herbicide Resistant Weeds** - (Text and Table - pages 102-105) Revised and updated with new sources of glyphosate resistance.

**Herbicide Compendium** (Pages 122-129) - added several new generic names and formulations.

**Weed of the Year** - Common ragweed - biology and control information on page 133.

**Other Update Information:**

**Emerging New Active ingredients:**

Aminocyclopyrachlor	DuPont	Pasture/range	<u>Launch</u> 2011-12
Perspective (aminocyclopyrachlor + chlorsulfuron (Glean)			
Plainview (aminocyclopyrachlor + residual SUs)			
Streamline (aminocyclopyrachlor + residual Sus)			
Viewpoint (aminocyclopyrachlor + residual SUs)			

**Emerging Weed Management Traits:**

ALS Resistant Camelina	Great Plains/Agragen	<u>Launch</u> 2011?
Optimum GAT	DuPont Soy/Corn	2013/15

Herbicides for ND:

Trigate = Resolve & Express & Callisto  
 Freestyle = Harmony & Express & Classic (low rate)  
 Affinity BroadSpec = Harmony & Express  
 Enlite = Classic & Valor

Herbicides not for ND: (high rates of Classic)

Instigate (corn), Diligent (soy), Traverse (soy)

Dow Herbicide Tolerant (DHT) Corn/Soy 2013-15  
 DHT 1 technology in corn = expresses resistance to 2,4-D, and "fop" herbicides.  
 DHT 2 technology in soybean = expresses resistance to 2,4-D, MCPA, fluroxypyr, and triclopyr.

- Dicamba resistant soybean Mon/U of NE 2013
- Glyphosate + HPPD + Ignite resistance Bayer 2014?  
Multiple crops
- ACCase resistant sorghum Kansas St U. ?
- ALS resistant sorghum Kansas St U. ?
- Atrazine resistant sunflower? Kansas St U. ?

**Possible Section 18 or Section 3 (Fed) exemptions:**

Spartan on Flax  
 Harmony on Safflower

**IR-4 Residue Studies to be Conducted in 2010:**

Entomolgy = flonicamid on mint, anthraquinone on snfl, cyantraniliprole (ssed trt) on snfl  
 Weed Science = sulfentrazone on mint (change in application), rimsulfuron/nicosulfuron on sorghum, MCPB on pea, and rimsulfuron on grasses (seed).

**Possible Future IR-4 Studies:**

Safflower Spartan (sulfentrazone)  
 Sunflower (Express resistant) - Harmony (thifensulfuron)

### **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. North Dakota Pesticide Training and Certification Program:

<http://www.ag.ndsu.nodak.edu/aginfo/pesticid/pesticid.htm>

6. 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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