

Is this a new herbicide actually new or is it just re-packaging and re-branding?

Mike Cowbrough, OMAFRA (Guelph)

Open any Ontario farm publication from January to April and you'll easily come across advertisements for herbicides. There seemingly are so many names, some claim to be new. At the same time it's been said that there are "no new row-crop herbicide sites of action coming to the marketplace". So which is it? Largely the later and as a consumer there are so many brand names out there that it would be nice to clearly understand what is new versus what is simply the marketing of an existing brand.

Let's start with "equivalent" herbicides. Equivalent meaning the "new" herbicide brand has the exact same concentration of active ingredient(s) as the original brand that was first in the marketplace. Below are the most common examples of equivalent herbicide brands used in Ontario field crop production.

ROUNDUP WEATHERMAX (RR crops), contains the active ingredient: glyphosate at 540 g a.e. / L.

Equivalent brand(s): Credit Xtreme, Dupont Polaris Max, Factor 540 and Roundup Transorb HC

ARMEZON (Corn), contains the active ingredient: topramezone at 336 g/L.

Equivalent brand(s): IMPACT

BASAGRAN FORTÉ (Soybean, Edible beans, corn), contains the active ingredient: bentazon at 480 g/L.

Equivalent brand(s): Broadloam

CLASSIC 75 DF (soybean), contains the active ingredient: chlorimuron-ethyl at 25% of mass.

Equivalent brand(s): Chaperone

EMBUTOX (alfalfa), contains the active ingredient: 2,4-DB at 625 g/L.

Equivalent brand(s): Caliber 625 and Cobutox 625

PURSUIT (soybean, edible bean, alfalfa), contains the active ingredient: imazethapyr at 240 g/L.

Equivalent brand(s): DuPont imazethapyr, Nu-Image and Phantom 240

SENCOR 75DF (soybean), contains the active ingredient: metribuzin at 75% of mass.

Equivalent brand(s): Squadron and Tricor 75DF

NEW SOYBEAN HERBICIDES FOR 2018

- 1) **Zidua (pyroxasulfone):** applied pre-plant or pre-emergence of soybean. Controls sensitive annual grass and broadleaf weeds prior to their emergence. It controls grassy weeds like the foxtail species, barnyard grass, witchgrass and in limited studies, annual bluegrass. On the broadleaf weed side it is strong on the amaranth family (pigweed and waterhemp) and eastern black nightshade.
The skinny: It has the same active ingredient (pyroxasulfone) that is in "Focus" herbicide (by FMC), which does most of the heavy lifting. Focus also includes the active ingredient that is found in "Aim EC" which has limited activity on a few emerged annual broadleaf weeds (notably: mustards, volunteer canola). Zidua

differentiates itself from Dual II Magnum and Frontier Max by being stronger on waterhemp and pigweed.

- 2) **Tiedown (s-metolachlor + metribuzin):** This is essentially a co-pack of Dual II Magnum + Sencor.
- 3) **Hurricane (acifluorfen + bentazon):** This is Basagran Forté and Blazer combined into one formulation. It controls emerged broadleaf weeds that are no more than at the 6-leaf growth stage (< 5 cm tall). Ragweed, pigweed, waterhemp, lamb's-quarters and velvetleaf.
- 4) **Broadloam (bentazon):** This herbicide is equivalent to Basagran Forté.
- 5) **Authority Supreme (sulfentrazone + pyroxasulfone):** More or less, this is a combination of Authority and Zidua into one formulation. If you are familiar with "Fierce" herbicide, Authority Supreme is similar. It should be applied pre-plant or pre-emergence of soybean. It controls sensitive annual grass and broadleaf weeds prior to their emergence. It controls many annual grassy weeds and is very effective on broadleaf weeds like pigweed, waterhemp, nightshade and lamb's-quarter. It's main weakness is ragweed species.

Soybean combination-packs (co-packs):

- 1) Assignment = Roundup Weathermax + Pursuit
- 2) Bifecta = Valtera + Tricor (Sencor)
- 3) Canopy Pro = Classic + Sencor
- 4) Cleansweep = Pursuit + Basagran Forté
- 5) Conquest LQ = Pursuit + Sencor
- 6) Freestyle = Classic + DuPont Imazethapyr (Pursuit)
- 7) Guardian Max = Classic + glyphosate (540 g/L)
- 8) Guardian Plus II = Classic + Valtera + glyphosate
- 9) Step Up = Chaperone (Classic) + Valtera
- 10) Tiedown (NEW) = Dual II Magnum + Sencor
- 11) Triactor = Valtera + Tricor (Sencor) + Nu-Image (Pursuit)

Soybean herbicide brands containing multiple active ingredients made into one formulation:

- 1) Authority Supreme = pyroxasulfone 85 (Zidua) + Authority
- 2) Blackhawk = 2,4-D + pyraflufen-ethyl (group 4 herbicide, similar to Ergaon LQ)
- 3) Boundary LQD = Dual II Magnum + Sencor
- 4) Flexstar GT = Reflex + glyphosate
- 5) Focus = Zidua + Aim EC
- 6) Hurricane = Blazer + Basagran
- 7) Integrity = Eragon LQ + Frontier Max

NEW CORN HERBICIDES FOR 2018:

- 1) **Zidua (pyroxasulfone):** applied pre-plant, pre-emergence or early post-emergence in corn. See description in the soybean section for more information on what this herbicide can do.

Corn combination packs (co-packs): A few years ago, there were several co-packs available for use in corn, but now there are only a couple. Instead of co-packs, the recent trend has been to blend different active ingredients into one formulation. This is more convenient for the user.

- 1) Battalion = Elim + Dual II Magnum + Banvel II
- 2) Converge XT = Converge Flexx + Converge 480 (Aatrex 480 - atrazine)

Corn herbicide brands containing multiple active ingredients made into one formulation:

1. ACURON = Callisto + Primextra II Magnum + a new active ingredient called bicyclopyrone which is in the same chemical family as Callisto and mainly controls broadleaf weeds.
2. ARMEZON PRO = Armezon + Frontier Max
3. DESTRA IS = Elim + Callisto (the only difference between DESTRA IS and ENGARDE POST is that DESTRA IS contains a crop safener that allows for applications to corn in the “late” post-emergence window (i.e. up to 8 leaf stage).
4. ENGARDE POST = Elim + Callisto
5. FOCUS = Zidua (pyroxasulfone) + Aim
6. HALEX GT = glyphosate + Dual II Magnum + Callisto
7. INTEGRITY + Eragon + Frontier Max
8. LUMAX EZ = Primextra II Magnum + Callisto
9. ZIDUA = Focus (pyroxasulfone) without Aim

NEW CEREAL HERBICIDES FOR 2018:

1. ENFORCER M is a new postemergence offering in winter wheat, spring wheat and barley. It contains three active ingredients (bromoxynil, MCPA and fluroxypyr) that are already registered for use in cereal crops. There are two ways you could describe this “new” herbicide. The first being that’s its similar to tank-mixing Buctril M with Perimeter II (fluroxypyr - a component of Barricade M). The second being that is similar to a tank-mix of Trophy with Pardner...either way, all three active ingredients control a wide spectrum of weeds. On paper this is a solid herbicide, but there is hardly anything new about it. This herbicide cannot be applied to winter wheat that is under-seeded to red clover, severe injury will occur.
2. SIMPLICITY GoDRI (pyroxsulam) was technically available in 2017 but had a limited launch. It is a post-emergence herbicide that can be used only on spring and winter wheat. It does control some broadleaf weeds (cleavers, lady’s-thumb, pigweed, shepherd’s-purse and stinkweed) but its main strength is its activity on grassy weeds like downy brome, chess and even small annual bluegrass. It can be applied to winter wheat in the fall or spring. This herbicide cannot be applied to winter wheat that is under-seeded to red clover, or barley as severe injury will occur.

Corn combination packs (co-packs):

1. BARRICADE = Refine SG + Perimeter II (fluroxypyr - which is found in Trophy and Pixxaro)
2. BOOST M = Boost Herbicide (Refine SG) + MCPA Ester 600 (similar to REFINE M co-pack)
3. REFINE M = Refine SG + MCPA Ester 600
4. PIXXARO = PIXXARO A (halauxifen and fluroxypyr) + MCPA ESTER 600
5. TROPHY = Nufarm fluroxypyr + MCPA Ester 600

