Common Commercial Pre-packaged Herbicide Mixtures

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Nursery Production

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Turfgrass Weed Management
## COMMON PRE-PACKAGED HERBICIDE MIXTURES - Updated January 4, 2008*

### Common Pre-packaged Herbicides and Common Names, Ratios and Site/Mode of Action of the Component Chemicals

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Company</th>
<th>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/lb product (dry) represented in parentheses]</th>
<th>Site/Mode of action of herbicides represented in this product†‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>875 BrushKiller</td>
<td>PBI Gordon</td>
<td>2,4-D (1.81 lbs or 19.49%) + mecoprop-p (0.96 lb or 10.37%) + dicamba (0.32 lb or 3.52%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>ACE Dilutable Concentrate Lawn Weed Killer</td>
<td>Chemsico</td>
<td>2,4-D (0.54 lb) + mecoprop-p (0.13 lb) + dicamba (0.06 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Accent Gold</td>
<td>DuPont</td>
<td>clopyralid (51.4%) + flumetsulam (15.9%) + nicosulfuron (5.4%) + rimsulfuron (5.4%)</td>
<td>ALS-inhibitors- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Affinity Broadspec</td>
<td>DuPont</td>
<td>tribenuron (25%) + thifensulfuron (25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Affinity Tank Mix</td>
<td>DuPont</td>
<td>tribenuron (10%) + thifensulfuron (40%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Agility SG</td>
<td>DuPont</td>
<td>tribenuron (2.4%) + thifensulfuron (4.7%) + metsulfuron (1.9%) + dicamba (57.8%)</td>
<td>ALS-inhibitors- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>All-In-One Lawn Weed &amp; Crabgrass Killer Ready-to-spray</td>
<td>Bayer Advanced</td>
<td>2,4-D (4.03%) + quinclorac (1.61%) + dicamba (0.37%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>All-In-One Weed Killer for Lawns Concentrate</td>
<td>Bayer Advanced</td>
<td>MSMA (9.81%) + 2,4-D (2.64%) + mecoprop-p (1.32%) + dicamba (0.66%)</td>
<td>unknown- 17 (Z)-organoarsenicals, auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>All-In-One Weed Killer for Lawns Ready-to-use</td>
<td>Bayer Advanced</td>
<td>MSMA (0.36%) + 2,4-D (0.1%) + mecoprop-p (0.05%) + dicamba (0.02%)</td>
<td>unknown- 17 (Z)-organoarsenicals, auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>AllPro BK32 Brush Killer</td>
<td>Value Garden Supply</td>
<td>2,4-D (0.92 lbs or 10.6%) + dichlorprop-p (0.94 lb or 10.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>All-Season Brush-No-More</td>
<td>PBI Gordon</td>
<td>2,4-D (0.49 lb or 6.46%) + dichlorprop-p (0.24 lb or 3.23%) + dicamba (0.12 or 1.65%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Ally Extra</td>
<td>DuPont</td>
<td>tribenuron (18.75%) + thifensulfuron (37.5%) + metsulfuron (15%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Arrosolo 3.3E</td>
<td>RiceCo.</td>
<td>molinate (33.1%) + propanil (33.1%)</td>
<td>Inhibitor of lipid synthesis- 8 (N), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Atra-bute</td>
<td>Syngenta</td>
<td>atrazine (14.2%) + butylate (56.8%)</td>
<td>PSII site A- 5 (C1), inhibitor of lipid Synthesis- 8 (N)</td>
</tr>
<tr>
<td>Authority First</td>
<td>FMC</td>
<td>sulfentrazone (62.1%) + cloransulam-methyl (7.9%)</td>
<td>PPO inhibitor-14 (E), ALS-inhibitor-2 (B), PPO inhibitor-14 (E),</td>
</tr>
<tr>
<td>Authority MTZ</td>
<td>FMC</td>
<td>sulfentrazone (18%) + metribuzin (27%)</td>
<td></td>
</tr>
<tr>
<td>Axiom</td>
<td>Bayer</td>
<td>flufenacet (54.4%) + metribuzin (13.6%)</td>
<td>Inhibitor of very long chain fatty acid</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product††</td>
</tr>
<tr>
<td>----------------------------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Axiom AT</td>
<td>Bayer</td>
<td>flufenacet (19.6%) + metribuzin (4.9%) + atrazine (50.5%)</td>
<td>biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Backdraft</td>
<td>BASF</td>
<td>glyphosate (14.1% as its isopropylamine salt) + imazaquin (2.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1) EPSP synthase- 9 (G), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Banvel + 2,4-D</td>
<td>Micro Flo/Arysta</td>
<td>dicamba (1 lb or 10.3%) + 2,4-D (2.87 lb or 29.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Banvel T20</td>
<td>Syngenta/BASF</td>
<td>dicamba (1 lb) + 2,4-D (1.9 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Banvel-K + Atrazine</td>
<td>Micro Flo/Arysta</td>
<td>dicamba (1.1 lbs or 11.45%) + atrazine (2.1 lbs or 22.23%)</td>
<td>auxin mimic- 1 (O), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Barespot Monobor-chlorate</td>
<td>Pro-Serve</td>
<td>sodium chlorate (30%) + sodium metabolate (48.5%)</td>
<td>unknown- 26 (Z)- fumigants</td>
</tr>
<tr>
<td>Basic Solutions Lawn Weed Killer</td>
<td>Ortho</td>
<td>2,4-D (0.26 lb) + dichlorprop-p (0.13 lb) + mecoprop-p (0.13 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Basic Solutions Lawn Weed Killer</td>
<td>DuPont</td>
<td>rimsulfuron (50%) + thifensulfuron (25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Basis</td>
<td>DuPont</td>
<td>atrazine (82.4%) + nicosulfuron (1.34%) + rimsulfuron (1.34%)</td>
<td>ALS-inhibitors- 2 (B), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Basis Gold</td>
<td>DuPont</td>
<td></td>
<td>PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Battleship</td>
<td>Helena</td>
<td>triclopyr (0.27 lb) + clopyralid (0.13 lb) + MCPA (3 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Betamix</td>
<td>Bayer</td>
<td>desmedipham (8%) + phenmedipham (8%)</td>
<td>PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep</td>
<td>Syngenta</td>
<td>atrazine (2.67 lbs or 28.9%- atrazine + related triazines) + metolachlor (3.28 lbs or 35.6%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep Lite</td>
<td>Syngenta</td>
<td>atrazine (1.67 lbs or 18.3%- atrazine + related triazines) + metolachlor (3.35 lbs or 36.6%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep II</td>
<td>Syngenta</td>
<td>atrazine (2.67 lbs or 28.8%- atrazine + related triazines) + metolachlor (3.18 lbs or 34.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep Lite II</td>
<td>Syngenta</td>
<td>atrazine (1.67 lbs or 18.3%- atrazine + related triazines) + metolachlor (3.23 lbs or 35.3%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep II Magnum</td>
<td>Syngenta</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep II Magnum FC</td>
<td>Syngenta</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bicep II Magnum FC</td>
<td>Syngenta</td>
<td>atrazine (2.67 lbs or 28.7%- atrazine + related triazines) + s-metolachlor (3.33 lbs or 35.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Bison</td>
<td>Agriliance</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs or 21.8%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Bison Advanced</td>
<td>Agriliance</td>
<td>bromoxynil (2.5 lbs) + MCPA (2.5 lbs)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>BnB Plus</td>
<td>United Phosphorous/ Cerexagri</td>
<td>pharmedipham (0.6 lb or 7%) + desksmedipham (0.6 lb or 7%) + ethofumesate (0.6 lb or 7%)</td>
<td>PSII site A- 5 (C1), Shoot inhibitor through Inhibition of cell division- Shoot inhibitor Site- 17 (N)</td>
</tr>
<tr>
<td>Boundary 6.5EC</td>
<td>Syngenta</td>
<td>s-metolachlor (5.25 lbs or 58.2%) + metribuzin (1.25 lbs or 13.8%)</td>
<td>Inhibitor of very long chain fatty acid Biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/lb product (dry) represented in parentheses]</td>
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<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Brash</td>
<td>Agriliance</td>
<td>dicamba (1 lb or 10.3%) + 2,4-D (2.87 lb or 29.6%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brawl II ATZ</td>
<td>Tenkoz</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis 15-(K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Brawn</td>
<td>Syngenta</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Breakfree ATZ</td>
<td>DuPont</td>
<td>acetochlor (3 lbs or 32.6%) + atrazine (2.25 lbs or 24.4%- atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis 15-(K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Breakfree ATZ Lite</td>
<td>DuPont</td>
<td>acetochlor (4 lbs or 43.4%) + atrazine (1.5 lbs or 16.3%- atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Broadstrike + Dual</td>
<td>Syngenta (Novartis)</td>
<td>flumetsulam (0.2 lb) + metolachlor (7.47 lb)</td>
<td>ALS-inhibitor-2 (B), Inhibitor of very long chain fatty acid biosynthesis-15 (K3)</td>
</tr>
<tr>
<td>Broadstrike SF + Dual</td>
<td>Syngenta (Novartis)</td>
<td>flumetsulam (0.25 lb) + metolachlor (7.47 lb)</td>
<td>ALS-inhibitor-2 (B), Inhibitor of very long chain fatty acid biosynthesis-15 (K3)</td>
</tr>
<tr>
<td>Broadstrike + Treflan</td>
<td>Dow</td>
<td>flumetsulam (0.25 lb) + trifluralin (3.4 lb)</td>
<td>ALS-inhibitor-2 (B), Inhibitor of microtubule assembly-3 (K1)</td>
</tr>
<tr>
<td>Bromac</td>
<td>UAP-Loveland</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Bromac Advanced</td>
<td>UAP-Loveland</td>
<td>bromoxynil (2.5 lbs) + MCPA (2.5 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Bromacil/Diuron 40/40</td>
<td>Alligare</td>
<td>bromacil (40%) + diuron (40%)</td>
<td>PSII site A-5 (C1), PSII site A2-7 (C2)</td>
</tr>
<tr>
<td>Bromox/MCPA</td>
<td>Micro Flo</td>
<td>bromoxynil (2 lbs) + MCPA (2 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Bronate</td>
<td>Bayer</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Bronate Advanced</td>
<td>Bayer</td>
<td>bromoxynil (2.5 lbs) + MCPA (2.5 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Bronco</td>
<td>Monsanto</td>
<td>alachlor (2.6 lbs) + glyphosate (1.04 lbs acid)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), EPSP synthase-9 (G)</td>
</tr>
<tr>
<td>Brox-M</td>
<td>Albaugh/Agri Star</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brox-M Ultra</td>
<td>Albaugh/Agri Star</td>
<td>bromoxynil (2.5 lbs) + MCPA (2.5 lbs)</td>
<td>PSII site B-6 (C3), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Broxine</td>
<td>UAP-Loveland</td>
<td>bromoxynil (1 lb or 10.81%) + atrazine (2 lbs or 21.62%)</td>
<td>PSII site B-6 (C3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Brushbuster</td>
<td>BASF</td>
<td>2,4-D (1.9 lbs) + dicamba (1 lb)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brush Buster Woody Plant</td>
<td>Lawn &amp; Garden Products</td>
<td>2,4-D (0.78 lb or 10.6%) + dichlorprop-p (0.4 lb or 5.4%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brush Killer</td>
<td>PBI Gordon</td>
<td>2,4-D (1.98 lbs or 21.54%) + mecoprop-p (0.53 lb or 5.73%) + dicamba (0.21 lb or 2.29%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brush Killer 2-2</td>
<td>Dow</td>
<td>2,4-D (34.7% of its 2-ethylhexyl ester) + 2,4,5-T (33.1% of its 2-ethylhexyl ester)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brush Killer Concentrate</td>
<td>Spectrum Group/ Spectracide</td>
<td>2,4-D (0.51 lb or 6.46%) + dichlorprop-p (0.24 lb or 3.23%) + dicamba (0.13 lb or 1.65%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brushmaster</td>
<td>PBI Gordon</td>
<td>dicamba (0.24 lb or 3.01%) + 2,4-D (1.02 lbs or 12.5%) + dichlorprop-p (0.51 lb or 6.25%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
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<td>Trade Name</td>
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<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
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</tr>
<tr>
<td>Brush-no-more</td>
<td>PBI Gordon</td>
<td>2,4-D (0.51 lb) + dicamba (0.13 lb) + dichlorprop-p (0.51 lb)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Brush-Rhap</td>
<td>Helena</td>
<td>dicamba (1.8 lbs or 18.28%) + 2,4-D (2.4 lbs or 24.62%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Buckle</td>
<td>Gowan</td>
<td>triallate (10%) + trifluralin (3%)</td>
<td>Inhibitor of lipid synthesis-8 (N), PSII site B-6 (C3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Buctril + Atrazine</td>
<td>Bayer</td>
<td>bromoxynil (1 lb) + atrazine (2 lb)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Bullet</td>
<td>Monsanto</td>
<td>alachlor (2.5 lbs or 25.4%) + atrazine (1.5 lbs or 15.3%) + related triazines</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Cadence ATZ</td>
<td>UAP-Loveland</td>
<td>acetochlor (3 lbs or 32.6%) + atrazine (2.25 lbs or 24.4%) + related triazines</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Cadence ATZ Lite</td>
<td>UAP-Loveland</td>
<td>acetochlor (4 lbs or 43.4%) + atrazine (1.5 lbs or 16.3%) + related triazines</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Camix</td>
<td>Syngenta</td>
<td>s-metolachlor (3.34 lbs or 36.8%) + mesotrione (0.33 lb or 3.68%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), HPPD inhibitor-27 (F2)</td>
</tr>
<tr>
<td>Campaign</td>
<td>Monsanto</td>
<td>glyphosate (1.2 lbs or 12.9% as its isopropylamine salt) + 2,4-D (1.9 lbs or 20.6%)</td>
<td>EPSP synthase-9 (G), auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Cannon</td>
<td>Monsanto</td>
<td>alachlor (2.5 lbs) + trifluralin (0.5 lb)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), Inhibitor of microtubule assembly-3 (K1)</td>
</tr>
<tr>
<td>Canon broadleaf weed killer</td>
<td>Miller &amp; Sons/ Canon Chemical</td>
<td>2,4-D (3.4% as its dimethylamine salt) + MCPP (4.3% as its diethanolamine salt)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Canopy</td>
<td>DuPont</td>
<td>chlorimuron (10.7%) + metribuzin (64.3%)</td>
<td>ALS-inhibitor-2 (B), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Canopy XL</td>
<td>DuPont</td>
<td>chlorimuron (9.4%) + sulfentrazone (46.9%)</td>
<td>ALS-inhibitor-2 (B), PPO inhibitor-14 (E)</td>
</tr>
<tr>
<td>Canopy EX</td>
<td>DuPont</td>
<td>chlorimuron (22.7%) + tribenuron (6.8%)</td>
<td>ALS-inhibitors-2 (B)</td>
</tr>
<tr>
<td>Canvas</td>
<td>DuPont</td>
<td>metsulfuron (15%) + thifensulfuron (37.5%) + tribenuron (18.75%)</td>
<td>ALS-inhibitors-2 (B)</td>
</tr>
<tr>
<td>Celebrity</td>
<td>BASF</td>
<td>dicamba (69.3% as its sodium salt) + nicosulfuron (7.5%)</td>
<td>auxin mimic-1 (O), ALS-inhibitor-2 (B)</td>
</tr>
<tr>
<td>Celebrity Plus</td>
<td>BASF</td>
<td>dicamba (42.4%) + nicosulfuron (10.6%) + diflufenzopyr (17%)</td>
<td>auxin mimic-1 (O), ALS-inhibitor-2 (B)</td>
</tr>
<tr>
<td>Charger MAX ATZ</td>
<td>Agriliance</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Charger MAX ATZ Lite</td>
<td>Agriliance</td>
<td>atrazine (2.67 lbs or 28.7%- atrazine + related triazines) + s-metolachlor (3.33 lbs or 35.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis-15 (K3), PSII site A-5 (C1)</td>
</tr>
<tr>
<td>Chaser</td>
<td>Verdicon/UAP</td>
<td>triclopyr (1 lb or 16.5% as its butoxyethyl ester) + 2,4-D (2 lbs or 34.4% as its butoxyethyl ester)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Chaser 2</td>
<td>Verdicon/UAP</td>
<td>triclopyr (1.07 lbs) + 2,4-D (2.78 lbs)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Chaser Ultra</td>
<td>Verdicon/UAP</td>
<td>MCPA (3.2 lbs) + dicamba (0.18 lb) + dichlorprop-p (0.64 lb)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Chaser Ultra 2</td>
<td>Verdicon/UAP</td>
<td>MCPA (3.2 lbs 33.97%) + fluroxypyr (0.32 lb or 3.4%) + dichlorprop-p (0.64 lb or 6.79%)</td>
<td>auxin mimic-1 (O)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product†*</td>
</tr>
<tr>
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<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Cheyenne</td>
<td>Bayer</td>
<td>fenoxaprop (0.79 lb) + MCPA (4 lbs)</td>
<td>ACCCase inhibitor- 1 (A), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Cimarron Max</td>
<td>DuPont</td>
<td><strong>Part A</strong>: metsulfuron (60%) <strong>Part B</strong>: dicamba (1 lb or 10.3%) + 2.4-D (2.87 lb or 29.6%)</td>
<td>ALS-inhibitors- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Cimarron Plus</td>
<td>DuPont</td>
<td>metsulfuron (48%) + chlorsulfuron (15%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Cimarron X-tra</td>
<td>DuPont</td>
<td>metsulfuron (30%) + chlorsulfuron (37.5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Cinch ATZ</td>
<td>DuPont</td>
<td>atrazine (3.1 lbs or 33.7%- atrazine + related triazines) + s-metolachlor (2.4 lbs or 26.1%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Cinch ATZ Lite</td>
<td>DuPont</td>
<td>atrazine (2.67 lbs or 28.7%- atrazine + related triazines) + s-metolachlor (3.33 lbs or 35.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Clarion</td>
<td>DuPont</td>
<td>nicosulfuron (37.5%) + rimsulfuron (37.5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Cleanout Brush &amp; Stump Spray</td>
<td>PBI Gordon</td>
<td>2,4-D (0.49 lb or 6.46%) + mecoprop-p (0.24 lb or 3.23%) + dicamba (0.12 lb or 1.65%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>CleanWave</td>
<td>Dow</td>
<td>aminopyralid (0.085 lbs or 1%) + fluroxypyr (1.2 lbs or 14.03%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Clearmax</td>
<td>BASF</td>
<td><strong>Part A</strong>: imazamox (1 lb) + <strong>Part B</strong>: MCPA (3.7 lbs)</td>
<td>ALS-inhibitors- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Clearpath</td>
<td>BASF</td>
<td>imazethapyr (13.02%) + quinclorac (61.98%)</td>
<td>ALS-inhibitors- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Colt</td>
<td>UAP-Loveland</td>
<td>clopyralid (0.75 lb or 8.6%) + fluroxypyr (0.75 lb or 8.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Colt AS</td>
<td>UAP-Loveland</td>
<td>clopyralid (0.75 lb or 8.6%) + fluroxypyr (0.75 lb or 8.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Conclude Ultra</td>
<td>BASF</td>
<td>bentazon (1.69 lbs) + acifluorfen (0.84 lb) + sethoxydim (1.29 lbs)</td>
<td>PSII site B- 6 (C3), PPO inhibitor- 14 (E), ACCase inhibitor- 1 (A)</td>
</tr>
<tr>
<td>Conclude Xact</td>
<td>BASF</td>
<td>bentazon (2.67 lbs) + acifluorfen (1.33 lbs) + sethoxydim (2 lbs)</td>
<td>PSII site B- 6 (C3), PPO inhibitor- 14 (E), ACCase inhibitor- 1 (A)</td>
</tr>
<tr>
<td>Conclude Xtra B</td>
<td>BASF</td>
<td>bentazon (2.67 lbs) + acifluorfen (1.33 lbs)</td>
<td>PSII site B- 6 (C3), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Confidence Xtra</td>
<td>Agrilance</td>
<td>acetochlor (4.3 lbs or 46.3%) + atrazine (1.7 lbs or 18.3%- atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Confidence Xtra 5.6L</td>
<td>Agrilance</td>
<td>acetochlor (3.1 lbs or 33.4%) + atrazine (2.5 lbs or 26.9%- atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Confront</td>
<td>Dow</td>
<td>clopyralid (0.75 lb or 7.9%) + triclopyr (2.25 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Contour</td>
<td>BASF</td>
<td>imazethapyr (0.38 lb) + atrazine (3 lbs- atrazine + related triazines)</td>
<td>ALS-inhibitor- 2 (B), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Cool Power</td>
<td>Nufarm</td>
<td>dicamba (0.3 lb and 3.6%) + MCPA (3 lbs or 36%) + triclopyr (0.3 lb and 3.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Commando</td>
<td>Albaugh/Agri Star</td>
<td>clopyralid (0.38 lb or 3.9%) + 2,4-D (2 lbs or 20.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Commando M</td>
<td>Albaugh/Agri Star</td>
<td>clopyralid (0.42 lb or 5%) + MCPA (2.35 lbs or 27.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Contour</td>
<td>BASF</td>
<td>imazethapyr (0.38 lb) + atrazine (3 lbs)</td>
<td>ALS-inhibitors- 2 (B), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>CoStarr</td>
<td>Albaugh/Agri Star</td>
<td>glyphosate (1.1 lbs) + dicamba (0.5 lb)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Crabgrass Preventer with Team</td>
<td>Green Light Co.</td>
<td>benefin (1.33%) + trifluralin (0.67%)</td>
<td>Inhibitors of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Trade Name</td>
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</tr>
<tr>
<td>Crossbow</td>
<td>Dow, other</td>
<td>triclopyr (1 lb or 11.9%) + 2,4-D (2 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Crossbow L</td>
<td>UAP-Loveland</td>
<td>triclopyr (1 lb or 11.9%) + 2,4-D (2 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Crossroad</td>
<td>Albaugh/Agri Star</td>
<td>triclopyr (1 lb or 11.9%) + 2,4-D (2 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Curtail</td>
<td>Dow</td>
<td>clopyralid (0.38 lb or 3.9%) + 2,4-D (2 lbs or 20.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Curtail M</td>
<td>Dow</td>
<td>clopyralid (0.42 lb or 5%) + MCPA (2.35 lbs or 27.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Cutback</td>
<td>Nufarm</td>
<td>clopyralid (0.38 lb or 3.9%) + 2,4-D (2 lbs or 20.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Cutback M</td>
<td>Nufarm</td>
<td>clopyralid (0.42 lb or 5%) + MCPA (2.35 lbs or 27.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Dakota</td>
<td>Bayer</td>
<td>fenoxaprop (0.234 lb) + MCPA (2.8 lbs)</td>
<td>ACCase inhibitor- 1 (A), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Degree Xtra</td>
<td>Monsanto</td>
<td>acetochlor (2.70 lbs or 29%) + atrazine (1.34 lbs or 14.5% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Derby</td>
<td>Syngenta</td>
<td>metolachlor (4%) + simazine (1%)</td>
<td>辅酯类- 1 (O)</td>
</tr>
<tr>
<td>DiBro 2 + 2</td>
<td>Nufarm/Riverdale</td>
<td>diuron (2%) + bromacil (2%)</td>
<td>PSII site A2- 7 (C2), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>DiBro 4 + 2</td>
<td>Nufarm/Riverdale</td>
<td>diuron (4%) + bromacil (2%)</td>
<td>PSII site A2- 7 (C2), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Dissolve premium granular weed killer</td>
<td>Nufarm</td>
<td>MCPP (0.73% as its dimethylamine salt) + 2,4-D (1.4% as its dimethylamine salt) + 2,4-DP (0.71% as its dimethylamine salt)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Distinct</td>
<td>BASF</td>
<td>dicamba (50%) + diflufenzopyr (20%)</td>
<td>auxin mimic- 1 (O), auxin transport inhibitor- 19 (P)</td>
</tr>
<tr>
<td>Domain</td>
<td>Bayer</td>
<td>flufenacet (24%) + metribuzin (36%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Double O E-Pro</td>
<td>Etigra</td>
<td>oxyfluorfen (2%) + oryzalin (1%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>DoublePlay</td>
<td>Syngenta</td>
<td>acetochlor (1.4 lbs or 16.9%) + EPTC (5.6 lbs or 67.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), Inhibitor of lipid synthesis- 8 (N)</td>
</tr>
<tr>
<td>Double Team</td>
<td>MANA</td>
<td>acetochlor (3.5 lbs or 38.2%) + atrazine (1.78 lbs or 19.42% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Double Up B+D</td>
<td>Helena</td>
<td>bromoxynil (2 lbs and 20.69%) + 2,4-D (1.9 lbs and 20.69%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Duet 60DF</td>
<td>RiceCo.</td>
<td>propanil (0.6 lb or 60%) + bensulfuron (2.1 grams or 0.46%)</td>
<td>ALS-inhibitor- 2 (B), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Duet CA</td>
<td>RiceCo.</td>
<td>propanil (4 lbs or 41.2%) + bensulfuron (14 grams or 0.32%)</td>
<td>ALS-inhibitor- 2 (B), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Echelon</td>
<td>FMC</td>
<td>sulfentrazone (13.6%) + prodiamine (27.3%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>EndRun</td>
<td>Helena</td>
<td>2,4-D (2.38 lbs or 25.38%) + mecoprop-P (0.63 lb or 6.75%) + dicamba (0.21 lb or 2.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Enlite</td>
<td>DuPont</td>
<td>chlorimuron (2.85%) + thifensulfuron (8.8%) + flumioxazin (36.21%)</td>
<td>PPO inhibitor- 14 (E), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Envert 171</td>
<td>Bayer</td>
<td>2,4-D (0.95 lb) + dichlorprop-P (1.125 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product*</td>
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</tr>
<tr>
<td>Envive</td>
<td>DuPont</td>
<td>chlorimuron (9.2%) + thifensulfuron (2.9%) + flumioxazin (29.2%)</td>
<td>PPO inhibitor- 14 (E), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Epic</td>
<td>Bayer</td>
<td>flufenacet (48%) + isoxaflutole (10%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), HPPD inhibitor- 27 (F2)</td>
</tr>
<tr>
<td>Equip</td>
<td>Bayer</td>
<td>foramsulfuron (30%) + iodosulfuron (2%)</td>
<td>ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Escalade</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (3.2 lbs or 32.83%) + fluroxypyr (0.8 lb or 8.21%) + dicamba (0.4 lb or 4.1%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Escalade 2</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (3.2 lbs or 32.83%) + fluroxypyr (0.4 lb or 4.1%) + dicamba (0.4 lb or 4.1%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Escalade Low Odor</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (3.2 lbs or 27.12%) + fluroxypyr (0.8 lb or 5.09%) + dicamba (0.4 lb or 3.39%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Escalade Weed and Feed MC</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (69.75% as its 2-methylhexyl ester) + fluroxypyr (16.64% as its 1-methylheptyl ester) + dicamba (5.78% acid)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Establish ATZ</td>
<td>Tenkoz</td>
<td>dimethenamid-P (1.7 lbs or 18.2%) + atrazine (3.3 lbs or 35.3%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Establish Lite</td>
<td>Tenkoz</td>
<td>dimethenamid-P (2.25 lbs or 24.1%) + atrazine (2.75 lbs or 29.5%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Event</td>
<td>BASF</td>
<td>imazapry (0.64%) + imazethapyr (17.26%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Exceed</td>
<td>Syngenta</td>
<td>primisulfuron (28.5%) + prosulfuron (28.5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Expert</td>
<td>Syngenta</td>
<td>s-metolachlor (1.74 lbs or 18.6%) + atrazine (2.14 or 22.9%- atrazine + related triazines) + glyphosate (1 lb or 10.8% as its isopropylamine salt)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), EPSP synthase- 9 (G), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Extreme</td>
<td>BASF</td>
<td>glyphosate (2 lbs or 22% as its isopropylamine salt) + imazethapyr (0.17 lbs or 1.8%)</td>
<td>EPSP synthase- 9 (G), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Fallow Master</td>
<td>Monsanto</td>
<td>glyphosate (1.6 lbs) + dicamba (0.4 lb or 4.1%)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Fallow Star</td>
<td>Albaugh/Agri Star</td>
<td>glyphosate (1.1 lbs) + dicamba (0.5 lb)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Field Master</td>
<td>Monsanto</td>
<td>acetochlor (2 lbs or 21.6%) + atrazine (1.5 lbs or 16.2%- atrazine + related triazines) + glyphosate (0.56 lbs acid or 0.75 lbs or 8.2% of its isopropylamine salt)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), EPSP synthase- 9 (G), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Finesse</td>
<td>DuPont</td>
<td>chlorsulfuron (62.5%) + metsulfuron (12.5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Finesse Grass and Broadleaf</td>
<td>DuPont</td>
<td>chlorsulfuron (25%) + flucarbazone (44%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Fire Power</td>
<td>Monsanto</td>
<td>glyphosate (40% as its isopropylamine salt) + oxyfluorfen (2.5%)</td>
<td>EPSP synthase- 9 (G), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>FirstShot SG</td>
<td>DuPont</td>
<td>thifensulfuron (25%) + tribenuron (25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>ForeFront R&amp;P</td>
<td>Dow</td>
<td>aminopyralid (0.33 lb or 3.4%) + 2,4-D (2.67 lbs or 27.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Four Power Plus</td>
<td>Verdicon/UAP</td>
<td>2,4-D (4 lbs or 40%) + dicamba (0.5 lb or 5%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Freedom</td>
<td>Monsanto</td>
<td>alachlor (2.67 lbs or 31.7%) + trifluralin (0.33 lb or 3.9%)</td>
<td>Inhibitor of very long chain fatty acid</td>
</tr>
<tr>
<td>Trade Name</td>
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<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>Frontrow</td>
<td>Dow</td>
<td><strong>Part A:</strong> cloransulam-methyl (0.84 lb or 84%) + <strong>Part B:</strong> flumetsulam (0.8 lb or 80%)</td>
<td>biosynthesis- 15 (K3), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Fuego</td>
<td>Syngenta</td>
<td><strong>Part A:</strong> dicamba (4 lbs) + <strong>Part B:</strong> triasulfuron (75%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>FuTime</td>
<td>Dow</td>
<td>acetochlor (2.4 lbs or 24.8%) + atrazine (1.6 lbs or 16.6%-atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Fusion</td>
<td>Syngenta</td>
<td>fenoxaprop-P-ethyl (0.56 lb or 6.76%) + fluazifop-P-butyl (2 lbs or 24.15%)</td>
<td>ACCase inhibitors- 1 (A)</td>
</tr>
<tr>
<td>Galaxy</td>
<td>BASF</td>
<td>bentazon (3 lbs or 33.4%) + acifluorfen (0.67 lb or 6.8%)</td>
<td>PSII site B- 6 (C3), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Galigan Slapshot</td>
<td>MANA</td>
<td>glyphosate (1 lb acid or 1.33 lbs or 14.2% as its isopropylamine salt) + oxyfluorfen (2 lbs or 21.1%)</td>
<td>EPSP synthase- 9 (G), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Gangster</td>
<td>Valent</td>
<td><strong>Part V:</strong> flumioxazin (51%) + <strong>Part FR:</strong> cloransulam-methyl (84%)</td>
<td>PPO inhibitor- 14 (E), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>GlyKamba</td>
<td>Nufarm</td>
<td>glyphosate (1.6 lbs acid or 2.2 lbs or 23.3% as its isopropylamine salt) + dicamba (0.4 lb or 4.1%)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>GlyMix MT</td>
<td>Dow</td>
<td>glyphosate (3 lbs) + 2,4-D (0.32 lb)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>G-Max Lite</td>
<td>BASF</td>
<td>dimethenamid-P (2.25 lbs or 24.1%) + atrazine (2.75 lbs or 29.5%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Grazon P+D</td>
<td>Dow</td>
<td>picloram (0.54 lb or 5.7%) + 2,4-D (2 lbs or 21.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>GroundClear Complete</td>
<td>Ortho</td>
<td>glyphosate (5%) + imazapyr (0.08%)</td>
<td>EPSP synthase- 9 (G), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Vegetation Killer</td>
<td>Ortho</td>
<td>glyphosate (1%) + imazapyr (0.016%)</td>
<td>EPSP synthase- 9 (G), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Halex GT</td>
<td>Syngenta</td>
<td>s-metolachlor (2.09 lbs or 20.5%) + glyphosate (2.09 lbs or 20.5%) + mesotrione (0.209 lb or 2.05%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), EPSP synthase- 9 (G), HPPD inhibitor- 27 (F2)</td>
</tr>
<tr>
<td>Harmony Extra</td>
<td>DuPont</td>
<td>thifensulfuron (50%) + tribenuron (25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product*†</td>
</tr>
<tr>
<td>----------------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Harness Xtra</td>
<td>Monsanto</td>
<td>acetochlor (4.3 lbs or 46.3%) + atrazine (1.7 lbs or 18.3% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Harness Xtra 5.6L</td>
<td>Monsanto</td>
<td>acetochlor (3.1 lbs or 33.4%) + atrazine (2.5 lbs or 26.9% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>HiredHand P+D</td>
<td>Dow</td>
<td>picloram (0.54 lb or 5.7%) + 2,4-D (2 lbs or 21.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Horizon 2000</td>
<td>Bayer</td>
<td>fenoxaprop-P-ethyl (0.56 lb or 6.76%) + fluzafop-P-butyl (2 lbs or 24.15%)</td>
<td>ACCase inhibitors- 1 (A)</td>
</tr>
<tr>
<td>Hornet</td>
<td>Dow</td>
<td>clopyralid (62.5%) + flumetsulam (23.1%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Horsepower</td>
<td>Nufarm</td>
<td>MCPA (3.8 lbs or 40%) + triclopyr (0.38 lb or 4%) + dicamba (0.38 lb or 4%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Huskie</td>
<td>Bayer</td>
<td>pyrasulfatoole (3.3%) + bromoxynil (13.4% as its octanoate ester + 12.9% as it heptanoate ester)</td>
<td>HPPD inhibitor- 27 (F2), PSII site B- 6 (C3)</td>
</tr>
<tr>
<td>Imperium</td>
<td>Gowan</td>
<td>acetochlor (1.4 lbs or 16.9%) + EPTC (5.6 lbs or 67.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), Inhibitor of lipid synthesis- 8 (N)</td>
</tr>
<tr>
<td>Journey</td>
<td>BASF</td>
<td>glyphosate (1.5 lbs) + imazapic (0.75 lb or 8.13%)</td>
<td>EPSP synthase- 9 (G), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td></td>
<td>Nufarm</td>
<td>dicamba (1 lb) + 2,4-D (2.87 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td></td>
<td>Scotts</td>
<td>oxadiazon (2%) + pendimethalin (1.25%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Keystone</td>
<td>Dow</td>
<td>acetochlor (3 lbs or 32.6%) + atrazine (2.25 lbs or 24.4% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Keystone LA</td>
<td>Dow</td>
<td>acetochlor (4 lbs or 43.4%) + atrazine (1.5 lbs or 16.3% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Krovar I DF</td>
<td>DuPont</td>
<td>bromacil (40%) + diuron (40%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Laddok S-12</td>
<td>BASF</td>
<td>bentazon (2.5 lbs or 27%) + atrazine (2.5 lbs or 25% - atrazine + related triazines)</td>
<td>PSII site B- 6 (C3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Landmark MP or XP</td>
<td>DuPont</td>
<td>chlorsulfuron (25%) + sulfoeturon (50%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Landmark II MP</td>
<td>DuPont</td>
<td>chlorsulfuron (18.75%) + sulfoeturon (56.25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Landmaster</td>
<td>Monsanto</td>
<td>glyphosate (0.9 lbs acid / 1.2 lbs or 12.9% as its isopropylamine salt) + 2,4-D (1.5 lbs acid / 1.9 lbs or 20.6% as its isopropylamine salt)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Landmaster II</td>
<td>Monsanto</td>
<td>glyphosate (0.9 lbs acid/ 1.2 lbs or 13.3% as its isopropylamine salt) + 2,4-D (0.8 lb acid / 1 lb or 11.1% as its isopropylamine salt)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Landmaster BW</td>
<td>Monsanto</td>
<td>glyphosate (0.9 lbs acid / 1.2 lbs or 12.9% as its isopropylamine salt) + 2,4-D (1.5 lbs acid / 1.9 lbs or 20.6% as its isopropylamine salt)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Lariat</td>
<td>Monsanto</td>
<td>alachlor (2.5 lbs or 27.2%) + atrazine (1.5 lbs or 16.3% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product[^*]</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Layby Pro</td>
<td>DuPont</td>
<td>atrazine + related triazines</td>
<td>biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>linuron (2 lbs or 20.3%) + diuron (2 lbs or 20%)</td>
<td>PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Leadoff</td>
<td>DuPont</td>
<td>dimethenamid (2.33 lbs or 24.8%) + atrazine (2.67 lbs or 28.4%- atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Lexar</td>
<td>Syngenta</td>
<td>s-metolachlor (1.74 lbs or 19%) + atrazine (1.74 lbs or 19%- atrazine + related triazines) + mesotrione (0.224 lbs or 2.44%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1), HPPD inhibitor- 27 (F2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
<td></td>
</tr>
<tr>
<td>Liberator 600</td>
<td>Atco International</td>
<td>bromacil (0.98%) + 2,4-D (1.09%)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Liberty ATZ</td>
<td>Bayer</td>
<td>atrazine (3.3 lbs- atrazine + related triazines) + glufosinate (1 lb)</td>
<td>PSII site A- 5 (C1), Inhibitor of glutamine synthetase- 10 (H)</td>
</tr>
<tr>
<td>Lightning</td>
<td>BASF</td>
<td>imazapyr (17.5%) + imazethapyr (52.5%)</td>
<td>ALS inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Lineage Clearstand</td>
<td>DuPont</td>
<td>imazapyr (63.2%) + metsulfuron (9.5%)</td>
<td>ALS inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Lineage HWC</td>
<td>DuPont</td>
<td>imazapyr (37.5%) + metsulfuron (7.5%) + sulfometuron (28.1%)</td>
<td>ALS inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Lineage Prep</td>
<td>DuPont</td>
<td>imazapyr (54.5%) + metsulfuron (4.1%) + sulfometuron (15.3%)</td>
<td>ALS inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Lumax</td>
<td>Syngenta</td>
<td>s-metolachlor (2.68 lbs or 29.4%) + atrazine (1 lb or 11%-atrazine + related triazines) + mesotrione (0.268 lbs or 2.94%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1), HPPD inhibitor- 27 (F2)</td>
</tr>
<tr>
<td>Maestro D</td>
<td>Nufarm</td>
<td>bromoxynil (2 lbs or 20.69%) + 2,4-D (1.9 lbs or 20.69%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Maestro MA</td>
<td>Nufarm</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs or 21.8%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Marksman</td>
<td>BASF</td>
<td>atrazine (2.1 lbs or 22.23%) + dicamba (1.1 lbs or 11.45%)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Mec Amine-D Turf</td>
<td>Verdicon</td>
<td>2,4-D (2.44 lbs or 25.38%) + mecoprop-p (0.65 lb or 6.75%) + dicamba (0.22 lb or 2.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Medal II AT</td>
<td>Syngenta</td>
<td>s-metolachlor (2.4 lbs or 26.1%) + atrazine (3.1 lbs or 33.7%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Milestone VM Plus</td>
<td>Dow</td>
<td>aminopyralid (0.1 lb or 1.15%) + triclopyr (1 lb or 11.63%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Millennium Ultra 2</td>
<td>Lesco</td>
<td>clopyralid (0.183 lb or 1.93%) + dicamba (0.375 lb or 3.86%) + 2,4-D (3 lbs or 31%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Misty 2 Plus 2</td>
<td>Amrep</td>
<td>bromacil (2%) + diuron (2%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Momentum Premium</td>
<td>Lesco</td>
<td>triclopyr (0.27 lb) + clopyralid (0.13 lb) + 2,4-D (2.67 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Momentum FX</td>
<td>Lesco</td>
<td>triclopyr (0.229 lb) + fluroxypyr (0.571 lb) + 2,4-D (2.286 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Momentum FX2</td>
<td>Lesco</td>
<td>triclopyr (0.263 lb or 2.77%) + fluroxypyr (0.278 lb or 2.92%) + 2,4-D (2.254 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Momentum Force</td>
<td>Lesco</td>
<td>2,4-D (0.955%) + mecoprop-P (0.319%) + dicamba (0.08%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed and Feed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moxy+Atrazine</td>
<td>Agriliance</td>
<td>bromoxynil (1 lb) + atrazine (2 lbs)</td>
<td>PSII site B- 6 (C3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>NorthStar</td>
<td>Syngenta</td>
<td>dicamba (39.9%) + primisulfuron (7.5%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B)</td>
</tr>
</tbody>
</table>

[^*]: Site/Mode of action of herbicides represented in this product.
<table>
<thead>
<tr>
<th>Trade Name</th>
<th>Company</th>
<th>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</th>
<th>Site/Mode of action of herbicides represented in this product*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oasis</td>
<td>BASF</td>
<td>2,4-D (58.2% as its 2-ethylhexyl ester) + imazapic (19.4%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>OH2 (Ornamental Herbicide)</td>
<td>Scotts</td>
<td>oxyfluorfen (2%) + pendimethalin (1%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Olympus Flex</td>
<td>Bayer</td>
<td>propoxycarbazone-sodium (6.75%) + mesosulfuron-methyl (4.5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>OneStep</td>
<td>BASF</td>
<td>imazapry (0.637 lb or 6.82%) + glyphosate (1.531 lbs or 16.4%)</td>
<td>ALS-inhibitor- 2 (B), EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>One-Step Non-Selective Weed Killer</td>
<td>Momar</td>
<td>bromacil (0.98%) + 2,4-D (1.09%)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>OpTill</td>
<td>BASF</td>
<td>dicamba (1 lb) + dimethenamid (5 lbs)</td>
<td>auxin mimic- 1 (O), Inhibitor of very long chain fatty acid biosynthesis- 15 (K3)</td>
</tr>
<tr>
<td>Ornamental Herbicide II</td>
<td>Scotts</td>
<td>oxyfluorfen (2%) + pendimethalin (1%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Oustar</td>
<td>DuPont</td>
<td>hexazinone (63.2%) + sulfometuron (11.8%)</td>
<td>PSII site A- 5 (C1), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Oust Extra</td>
<td>DuPont</td>
<td>metsulfuron (15%) + sulfometuron (56.25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Outlaw</td>
<td>Albaugh/Agri Star</td>
<td>dicamba (1.09 lbs or 12.18%) + 2,4-D (1.45 lbs or 16.1%)</td>
<td>auxin mimic- 1 (O), auxin transport inhibitor- 19 (P)</td>
</tr>
<tr>
<td>Overdrive</td>
<td>BASF</td>
<td>dicamba (0.5 lb or 50%) + diflufenzopyr (0.2 lb or 20%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Overtime ATZ</td>
<td>Helena</td>
<td>acetochlor (32.6%) + atrazine (24.4%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Overtime ATZ Lite</td>
<td>Helena</td>
<td>acetochlor (43.4%) + atrazine (16.3%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Parallel Plus</td>
<td>MANA</td>
<td>metolachlor (2.7 lbs or 28.9%) + atrazine (2.8 lbs or 30.5%-atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>PastureGard</td>
<td>Dow</td>
<td>triclopyr (1.5 lbs or 17.97%) + fluroxypyr (0.5 lb or 5.99%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>PastureMaster</td>
<td>Nufarm</td>
<td>2,4-D (1.9 lbs) + dicamba (1 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Pasture MD</td>
<td>Nufarm</td>
<td>2,4-D (17.9% as its diethylamine salt) + dicamba (6.2% as its dimethylamine salt) + metsulfuron (30%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Patron 170</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (1.71 lbs or 21.3%) + dichlorprop-p (0.87 lb or 10.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Pathway</td>
<td>Dow</td>
<td>picloram (3%) + 2,4-D (11.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>PD 2</td>
<td>Albaugh/Agri Star</td>
<td>picloram (0.5 lb or 5.7%) + 2,4-D (2 lbs or 21.2%) + dicamba (0.5 lb or 5.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Perdition Granular</td>
<td>Drummond</td>
<td>bromacil (4%) + diuron (2%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Phenaban 801</td>
<td>PBI Gordon</td>
<td>2,4-D (3.06 lbs) + dicamba (0.4 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Phenomec</td>
<td>PBI Gordon</td>
<td>2,4-D (1 lb) + mecoprop (2 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Phos Free Weed &amp; Feed 5M</td>
<td>Spectrum Group/ Vigoro</td>
<td>2,4-D (0.64%) + mecoprop-p (0.16%) + dicamba (0.03%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trade Name</td>
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</tr>
<tr>
<td>Power Zone</td>
<td>PBI Gordon</td>
<td>carfentrazone (0.04 lb or 0.48%) + dicamba (0.22 lb or 2.69%) + mecoprop-p (0.44 lb or 5.39%) + MCPA (2.21 lbs or 26.92%)</td>
<td>PPO inhibitor- 14 (E), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Pramitol 5 PS</td>
<td>MANA/UAP</td>
<td>prometon (5%) + simazine (0.76%) + sodium chlorate (39.8%) + sodium metabolate (40%)</td>
<td>PSII site A- 5 (C1), unknown site (Z)</td>
</tr>
<tr>
<td>PrePair</td>
<td>Verdicon/UAP</td>
<td>napropamide (4%) + oxadiazon (2%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PPO inhibitor- 14 (E) auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Preen Brush Weed Killer Concentrate</td>
<td>Lebanon Seabord Corp.</td>
<td>2,4-D (0.87 lb or 10.05%) + mecoprop-p (0.21 lb or 2.42%) + dicamba (0.1 lb or 1.11%)</td>
<td></td>
</tr>
<tr>
<td>Preen Brush Weed Killer Ready-to-use</td>
<td>Lebanon Seabord Corp.</td>
<td>2,4-D (0.03 lb or 0.33%) + mecoprop-p (0.02 lb or 0.18%) + dicamba (0.1 lb or 0.06%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Prefix</td>
<td>Syngenta</td>
<td>s-metolachlor (4.34 lb or 46.4%) + fomesafen (0.95 lb or 9.7%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Preview</td>
<td>DuPont</td>
<td>chlorimuron (6.5%)+ metribuzin (68.5%)</td>
<td>ALS-inhibitor- 2 (B), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Priority</td>
<td>Tenkoz</td>
<td>carfentrazone-ethyl (50%)+ halosulfuron-methyl (12.5%) atrazine (17.5%) + bentazon (19.1% as its sodium salt)</td>
<td>PPO inhibitor- 14 (E), ALS-inhibitor- 2 (B) PSII site A- 5 (C1), PSII site B- 6 (C3)</td>
</tr>
<tr>
<td>Prompt</td>
<td>BASF</td>
<td>atrazine (2.5 lbs or 25%) + bentazon (2.5 lbs or 27% as its sodium salt)</td>
<td>PSII site A- 5 (C1), PSII site B- 6 (C3)</td>
</tr>
<tr>
<td>Prompt 5L</td>
<td>Micro Flo/Arysta</td>
<td>phennedipham (0.6 lb or 7% + desmedipham (0.6 lb or 7%) + ethofumesate (0.6 lb or 7%)</td>
<td>PSII site A- 5 (C1), Shoot inhibitor through inhibition of cell division- unknown site- 17 (N)</td>
</tr>
<tr>
<td>Progress</td>
<td>Bayer</td>
<td>glyphosate (0.66 lb acid) + dicamba (0.03 lb)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Prosecutor Swift-Acting Herbicide</td>
<td>Lesco</td>
<td>imazethapyr (0.2 lb or 2.24%) + pendimethalin (2.7 lbs or 30.24%)</td>
<td>ALS-inhibitor- 2 (B), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Pursuit Plus</td>
<td>BASF</td>
<td>quinclorac (0.5 lb or 5.69%) + sulfentrazone (0.06 lb or 0.69%) + 2,4-D (0.88 lb or 9.98%) + dicamba (0.1 lb or 1.15%)</td>
<td>auxin mimic- 1 (O), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Q4</td>
<td>PBI Gordon</td>
<td>diquat (0.03 lb or 2.9% as it dibromide salt) + glyphosate (1 lb or 73.3% as its ammonium salt)</td>
<td>Photosystem I electron diverter- 22 (D), EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>QuikPro</td>
<td>Monsanto</td>
<td>flufenacet (3.57 lbs or 35.7%) + isoxaflutole (0.43 lbs or 4.29%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), HPPD inhibitor- 27 (F2)</td>
</tr>
<tr>
<td>Radius</td>
<td>Bayer</td>
<td>carfentrazone (0.13 lb or 1.44%) + 2,4-D (3.93 lbs)</td>
<td>PPO inhibitor- 14 (E), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rage D-Tech</td>
<td>FMC</td>
<td>propachlor (3 lbs) + atrazine (1 lb)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Ramrod/Atrazine</td>
<td>Monsanto</td>
<td>dicamba (1 lb or 10.3%) + 2,4-D (2.87 lbs or 29.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Range Star</td>
<td>Albaugh/ Agri Star</td>
<td>diquat (0.11 lb active diquat or 0.21 lb or 2.1% as its Photosystem I electron diverter- 22 (D), EPSP synthase- 9 (G)</td>
<td></td>
</tr>
<tr>
<td>Rave</td>
<td>Syngenta</td>
<td>triasulfuron (8.8%) + dicamba (55%)</td>
<td>ALS-inhibitor- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Razor Burn</td>
<td>Nufarm</td>
<td>diquat (0.03 lb or 2.9% as it dibromide salt) + glyphosate (1 lb or 73.3% as its ammonium salt)</td>
<td>Photosystem I electron diverter- 22 (D), EPSP synthase- 9 (G)</td>
</tr>
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<tr>
<td>Ready Master ATZ</td>
<td>Monsanto</td>
<td>dibromide salt) + glyphosate (3 lbs or 30.4% acid or 4 lbs or 41% as its isopropylamine salt)</td>
<td>EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>Recoil</td>
<td>Nufarm</td>
<td>atrazine (2 lbs or 20.9%) + glyphosate (1.5 lbs acid or 2 lbs or 20.9% as its isopropylamine salt)</td>
<td>PSII site A- 5 (C1), EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>Redeem R&amp;P</td>
<td>Dow</td>
<td>glyphosate (1.58 lbs acid or 2.13 lbs or 23.03% as its isopropylamine salt) + 2,4-D (1.07 lbs or 11.38%)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Refute</td>
<td>Albaugh/ Agri Star</td>
<td>clopyralid (0.75 lb or 7.9%) + triclopyr (2.25 lbs or 23.7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Regal O-O</td>
<td>Regal</td>
<td>oxadiazon (1%) + oxyfluorfen (2%)</td>
<td>PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>RegalStar G or II</td>
<td>Regal</td>
<td>oxadiazon (1%) + prodiamine (0.2%)</td>
<td>PPO inhibitor- 14 (E), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Resolve SG</td>
<td>BASF</td>
<td>dicamba (56.25% or 61.9% as its sodium salt) + imazethapyr (18.7%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Resolve Q</td>
<td>DuPont</td>
<td>rimsulfuron (18.4%) + thifensulfuron (4%) + isoxadifen-ethyl safener</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Require Q</td>
<td>DuPont</td>
<td>rimsulfuron (6.25%) + dicamba (52.94%) + isoxadifen-ethyl safener</td>
<td>ALS-inhibitor- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rezult</td>
<td>BASF</td>
<td><strong>Part B:</strong> bentazon (5 lbs or 53%) <strong>Part G:</strong> sethoxydim (1 lb or 13%)</td>
<td>PSII site B- 6 (C3), ACCase inhibitor- 1 (A)</td>
</tr>
<tr>
<td>Rhino</td>
<td>Bayer</td>
<td>bromoxynil (2.5 lbs) + MCPA (1.9 lbs)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rifle D</td>
<td>UAP-Loveland</td>
<td>2,4-D (2.87 lbs or 29.6%) + dicamba (1 lb or 10.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rifle Plus</td>
<td>UAP-Loveland</td>
<td>atrazine (2.1 lbs or 22.23%) + dicamba (1.1 lbs or 11.45%)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rimfire</td>
<td>Bayer</td>
<td>propoxycarbazone-sodium (8.14%) + mesosulfuron-methyl (2.03%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Roundup Poison Ivy and Tough Brush Killer Plus Concentrate</td>
<td>Monsanto</td>
<td>glyphosate (18%) + triclopyr (2%)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Rout</td>
<td>Scotts</td>
<td>oryzalin (1%) + oxyfluorfen (2%)</td>
<td>Inhibitor of microtubule assembly- 3 (K1), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>RT Master</td>
<td>Monsanto</td>
<td>glyphosate (3 lbs) + 2,4-D (0.32 lb)</td>
<td>EPSP synthase- 9 (G), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Sahara DG</td>
<td>BASF</td>
<td>diuron (62.22%) + imazapyr (7.78%)</td>
<td>PSII site A2- 7 (C2), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Salute</td>
<td>Miles/ Mobay Corp./ Bayer</td>
<td>metribuzin (14%) + trifluralin (28%)</td>
<td>PSII site A- 5 (C1), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Schultz Lawn Weed Killer Concentrate</td>
<td>Schultz</td>
<td>2,4-D (0.54 lb or 6.3%) + mecoprop-p (0.129 lb or 1.51%) + dicamba (0.059 lb or 0.69%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Schultz Lawn Weed</td>
<td>Schultz</td>
<td>2,4-D (0.493%) + mecoprop-p (0.119%) + dicamba</td>
<td>auxin mimic- 1 (O)</td>
</tr>
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</tr>
<tr>
<td>Killer Ready-to-use</td>
<td>Dow</td>
<td>2,4-D (50%) + clopyralid (25%) + flumetsulam (9.3%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Scorpion III</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Season-Long MAX Weed and Grass Killer plus Preventer Concentrate</td>
<td>Ortho</td>
<td>oxyfluorfen (1.5%) + glyphosate (8%) + diquat (0.1%)</td>
<td>PPO inhibitor- 14 (E), EPSP synthase- 9 (G), Photosystem I electron diverter- 22 (D)</td>
</tr>
<tr>
<td>Season-Long MAX Weed and Grass Killer plus Preventer Ready-to-use</td>
<td>Ortho</td>
<td>oxyfluorfen (0.25%) + glyphosate (0.25%)</td>
<td>PPO inhibitor- 14 (E), EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>Sequence</td>
<td>Syngenta</td>
<td>s-metolachlor (3 lbs or 29%) + glyphosate (2.25 lbs or 21.8%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), EPSP synthase- 9 (G), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>SFM + MSM E-Pro</td>
<td>Etigra</td>
<td>sulfometuron (56.25%) + metsulfuron (15%)</td>
<td></td>
</tr>
<tr>
<td>Shotgun</td>
<td>UAP-Loveland</td>
<td>atrazine (2.25 lbs or 24.74%- atrazine + related triazines) + 2,4-D (1 lb of 2,4-D or 16.58% as its 2-ethylhexyl ester)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Showcase</td>
<td>Dow</td>
<td>trifluralin (2%) + isoxaben (0.25%) + oxyfluorfen (0.25%)</td>
<td>Inhibitor of microtubule assembly- 3 (K1), Inhibitor of cellulose synthase- 21 (L), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Simazat 4L</td>
<td>Drexel</td>
<td>atrazine (2 lbs or 21.42%- atrazine + related triazines) + simazine (2 lbs or 21.41%)</td>
<td>PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Simazat 90DF</td>
<td>Drexel</td>
<td>atrazine (45.01%- atrazine + related triazines) + simazine (45%)</td>
<td>PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Snapshot 80DF</td>
<td>Dow</td>
<td>isoxaben (20%) + oryzalin (60%)</td>
<td>Inhibitor of cellulose synthase- 21 (L), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Snapshot 2.5TG</td>
<td>Dow</td>
<td>isoxaben (0.5%) + trifluralin (2%)</td>
<td>Inhibitor of cellulose synthase- 21 (L), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Sonic</td>
<td>Dow</td>
<td>cloransulam (7.9%) + sulfentrazone (62.1%)</td>
<td>ALS-inhibitor- 2 (B), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Southern Weed Killer for Lawns Concentrate or Ready-to-spray</td>
<td>Bayer Advanced</td>
<td>2,4-D (0.311% as its dimethylamine salt) + mecoprop-p (0.075% as its dimethylamine salt) + dicamba (0.034% as its dimethylamine salt)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Southern Weed Killer for Lawns Concentrate or Ready-to-use</td>
<td>Bayer Advanced</td>
<td>2,4-D (6.3%) + mecoprop-p (1.51%) + dicamba (0.69%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Speed Zone</td>
<td>PBI Gordon</td>
<td>carfentrazone (0.05 lb or 0.62%) + dicamba (0.14 lb or 1.71%) + mecoprop (0.48 lb or 5.88%) + 2,4-D (1.53 lbs or 18.95%)</td>
<td>PPO inhibitor- 14 (E), auxin mimic- 1 (O)</td>
</tr>
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</tr>
<tr>
<td>Speed Zone Southern</td>
<td>PBI Gordon</td>
<td>carfentrazone (0.04 lb or 0.54%) + dicamba (0.05 lb or 0.67%) + mecoprop (0.2 lb or 2.66%) + 2,4-D (0.52 lbs or 6.96%)</td>
<td>PPO inhibitor- 14 (E), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Spike Trelan 6G</td>
<td>Dow</td>
<td>tebuthiuron (2%) + trifluralin (4%)</td>
<td>PSII site A2- 7 (C2), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Sprakil SK-13 Granular Weed Killer</td>
<td>SSI Maxim</td>
<td>tebuthiuron (1%) + diuron (3%)</td>
<td>PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Sprakil SK-26 Granular Weed Killer</td>
<td>SSI Maxim</td>
<td>tebuthiuron (2%) + diuron (6%)</td>
<td>PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Spirit</td>
<td>Syngenta</td>
<td>primisulfuron (42.8%) + prosulfuron (14.2%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Squadron</td>
<td>BASF</td>
<td>imazaquin (0.33 lb or 3.84% as its monoammonium salt) + pendimethalin (2 lbs or 21.85%)</td>
<td>ALS-inhibitor- 2 (B), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Stalwart Xtra</td>
<td>Sipcam Agro</td>
<td>metolachlor (2.4 lbs or 26.1%) + atrazine (3.1 lbs or 33.7% - atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1) auxin mimic- 1 (O), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Stampede CM</td>
<td>Dow / Rohm and Haas</td>
<td>MCPA (0.85 lbs acid or 1.4 lbs or 15% as its isooctyl ester) + propanil (3 lbs or 33%)</td>
<td></td>
</tr>
<tr>
<td>Staple Plus</td>
<td>DuPont</td>
<td>pyrithiobac (1.7%) + glyphosate (40.2% as its isopropylamine salt)</td>
<td>ALS-inhibitor- 2 (B), EPSP synthase- 9 (G)</td>
</tr>
<tr>
<td>Starane NXT</td>
<td>Dow</td>
<td>fluroxypyr (0.583 lb or 6.4%) + bromoxynil octanoate (2.33 lbs or 25.62%)</td>
<td>auxin mimic- 1 (O), PSII site B- 6 (C3)</td>
</tr>
<tr>
<td>Starane NXTcp</td>
<td>Dow</td>
<td><strong>Part A</strong>: fluroxypyr (1.5 lbs or 18.2%) + <strong>Part B</strong>: bromoxynil octanoate (2 lbs or 22.9%)</td>
<td>auxin mimic- 1 (O), PSII site B- 6 (C3)</td>
</tr>
<tr>
<td>Starane + Esteron</td>
<td>Dow</td>
<td>fluroxypyr (0.75 lb) + 2,4-D (3 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Starane + MCPA</td>
<td>Dow</td>
<td>fluroxypyr (0.71 lb) + MCPA (2.84 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Starane + Saber</td>
<td>Dow/UAP-Loveland</td>
<td>fluroxypyr (0.5 lb or 5.5%) + 2,4-D (2 lbs or 22%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Starane + Salvo</td>
<td>Dow/UAP-Loveland</td>
<td>fluroxypyr (0.75 lb or 8.4%) + 2,4-D (3 lbs or 33.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Starane + Sword</td>
<td>Dow/UAP-Loveland</td>
<td>fluroxypyr (0.71 lb or 8.3%) + MCPA (2.84 lbs or 33.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Status</td>
<td>BASF</td>
<td>dicamba (40%) + diflufenzopyr (16%) + isoxadifen-ethyl safener</td>
<td>auxin mimic- 1 (O), auxin transport inhibitor- 19 (P)</td>
</tr>
<tr>
<td>Steadfast</td>
<td>DuPont</td>
<td>nicosulfuron (50%) + rimsulfuron (25%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Steadfast ATZ</td>
<td>DuPont</td>
<td>atrazine (85.3%) + nicosulfuron (2.7%) + rimsulfuron (1.3%)</td>
<td>PSII site A- 5 (C1), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Steel</td>
<td>BASF</td>
<td>imazaquin (1.9%) + imazethapyr (1.9%) + pendimethalin (25.4%)</td>
<td>ALS-inhibitors- 2 (B), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Stellar</td>
<td>Valent</td>
<td>flumiclorac (7.6%) + lactofen (26.6%)</td>
<td>PPO inhibitors- 14 (E)</td>
</tr>
<tr>
<td>Sterling Plus</td>
<td>Agriliance</td>
<td>atrazine (2.1 lbs or 22.23%) + dicamba (1.1 lbs or 11.45%)</td>
<td>PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
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<td>Trade Name</td>
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</tr>
<tr>
<td>Stout</td>
<td>DuPont</td>
<td>nicosulfuron (67.5%) + thifensulfuron (5%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Strategy</td>
<td>UAP-Loveland</td>
<td>clomazone (0.5 lb or 5.6%) + ethalfluralin (1.6 lbs or 18.2%)</td>
<td>DOXP synthase- 13 (F4), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Strike 3</td>
<td>Agriliance</td>
<td>2,4-D (2.44 lbs or 25.38%) + dicamba (0.22 lb or 2.3%) + mecoprop-p (0.63 lb or 6.75%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Strike 3 Ultra</td>
<td>Agriliance</td>
<td>2,4-D (2.9 lbs or 30%) + cloyralid (0.15 lb or 1.5%) + dichlorprop-p (0.75 or 7.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Strike 3 Ultra 2</td>
<td>Agriliance</td>
<td>2,4-D (3.2 lbs or 32.64%) + fluroxypyr (0.4 lb or 4.08%) + dichlorprop-p (0.8 lb or 8.16%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Stronghold</td>
<td>PBI Gordon</td>
<td>2,4-D (79.3%) + trifloxysulfuron (0.7%)</td>
<td>ALS-inhibitors- 2 (B) + plant growth regulator</td>
</tr>
<tr>
<td>SuperBrush Killer</td>
<td>PBI Gordon</td>
<td>2,4-D (1.89 lbs or 21.54%) + dichlorprop-p (0.94 lb or 10.77%) + dicamba (0.47 lb or 5.38%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Super Trimec</td>
<td>PBI Gordon</td>
<td>2,4-D (1.89 lbs or 21.54%) + dicamba (0.47 lb or 5.38%) + 2,4- DP-p (0.94 lbs or 10.77%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Suprend</td>
<td>Syngenta</td>
<td>prometryn (79.3%) + trifloxysulfuron (0.7%)</td>
<td>PSII site A- 5 (C1), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Surefire</td>
<td>UAP-Loveland</td>
<td>paraquat (2 lbs) + diuron (1 lb)</td>
<td>Photosystem I electron diverter- 22 (D), PSII site A2- 1 (C2)</td>
</tr>
<tr>
<td>SureStart</td>
<td>Dow</td>
<td>acetochlor (3.75 lb or 41.67%) + flumetsulam (0.12 lb or 1.3%) + cloyralid (0.29 lb or 3.24%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), ALS-inhibitor- 2 (B), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Surge</td>
<td>PBI Gordon</td>
<td>2,4-D (1.4 lbs or 15.66%), mecoprop-p (0.5 lb or 5.62%), dicamba (0.22 lb or 2.52%), sulfentrazole (0.06 lb or 0.67%)</td>
<td>auxin mimic- 1 (O), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Surmount</td>
<td>Dow</td>
<td>picloram (0.67 lb acid or 1.19 lb or 13.24% as its trisopropalamaine salt) + fluroxypyr (0.67 lb acid or 0.96 lb or 10.64% as its methylheptyl ester)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Synchrony STS DF</td>
<td>DuPont</td>
<td>chlorimuron (18.7%) + thifensulfuron (6.3%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Synchrony XP</td>
<td>DuPont</td>
<td>chlorimuron (21.5%) + thifensulfuron (6.9%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>STS Broadleaf</td>
<td>DuPont</td>
<td>chlorimuron (10%) + thifensulfuron (30%)</td>
<td>ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Storm</td>
<td>BASF/United Phosphorous</td>
<td>bentazon (2.67 lb or 29.2% as its sodium salt) + acifluorfen (1.33 lbs or 13.4% as its sodium salt)</td>
<td>PSII site B- 6 (C3), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Tailspin</td>
<td>UAP-Loveland</td>
<td>fluroxypyr (0.33 lb or 3.87%) + triclopyr (1 lb or 11.62%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Team 2G</td>
<td>Dow</td>
<td>benefin (1.33%) + trifluralin (0.67%)</td>
<td>Inhibitors of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Team Pro</td>
<td>Dow</td>
<td>benefin (0.43%) + trifluralin (0.43%) + fertilizer</td>
<td>Inhibitors of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Telone C-15</td>
<td>TRICAL</td>
<td>chloropicrin (14.8%) + 1,3-dichloropropene (82.9%)</td>
<td>unknown (Z)- fumigants</td>
</tr>
<tr>
<td>Telone C-17</td>
<td>Dow</td>
<td>chloropicrin (1.75 lbs or 16.5%) + 1,3-dichloropropene (8.6 lbs or 81.2%)</td>
<td>unknown (Z)- fumigants</td>
</tr>
<tr>
<td>Telone C-35</td>
<td>Dow</td>
<td>chloropicrin (3.89 lbs or 34.7%) + 1,3-dichloropropene (7.1)</td>
<td>unknown (Z)- fumigants</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product*</td>
</tr>
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</tr>
<tr>
<td>Thunder Master</td>
<td>Albaugh/Agri Star</td>
<td>glyphosate (2 lbs or 22% as its isopropylamine salt) + imazethapyr (0.17 lb or 1.8%)</td>
<td>EPSP synthase- 9 (G), ALS-inhibitors- 2 (B)</td>
</tr>
<tr>
<td>Tiller</td>
<td>Bayer</td>
<td>fenoxaprop (0.44 lb) + MCPA (1.75 lb) + 2,4-D (0.58 lb) 2,4-D (71.2%) + metribuzin (18.8%)</td>
<td>ACCase inhibitor- 1 (A), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Top gun</td>
<td>UAP-Loveland</td>
<td>diuron (2%) + imazapyr (0.5%)</td>
<td>auxin mimic- 1 (O), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Topsite 2G</td>
<td>SSI Maxim/BASF</td>
<td></td>
<td>PSII site A2- 7 (C2), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Tordon 101 Mixture</td>
<td>Dow</td>
<td>picloram (0.54 lb or 5.7%) + 2,4-D (2 lbs or 21.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Tordon RTU</td>
<td>Dow</td>
<td>picloram (3%) + 2,4-D (11.2%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Total</td>
<td>Agrilance</td>
<td>bromacil (2%) + diuron (2%) + sodium chloride (40%) + sodium metaborate (40%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2), unknown (Z)- fumigants</td>
</tr>
<tr>
<td>Three-way Ester II Selective</td>
<td>Lesco</td>
<td>MCPA (3 lbs) + triclopyr (0.3 lb) + dicamba (0.3 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Throttle XP</td>
<td>DuPont</td>
<td>chlorosulfuron (9%) + sulfometuron (18%) + sulfentrazine (48%)</td>
<td>ALS-inhibitors- 2 (B), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Triamine</td>
<td>Nufarm/ Riverdale</td>
<td>mecoprop-p (0.62 lb or 6.8%) + 2,4-D (1.24 lbs or 13.6%) + dichlorprop-p (0.62 lb or 6.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triamine Jet Spray Spot Weed Killer</td>
<td>Nufarm/ Riverdale</td>
<td>mecoprop-p (0.01 lbs or 0.135%) + 2,4-D (0.023 lbs or 0.27%) + dichlorprop-p (0.01 lb or 0.135%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triamine II</td>
<td>Nufarm/ Riverdale</td>
<td>mecoprop-p (0.63 lb or 7%) + MCPA (1.27 lbs or 14%) + dichlorprop-p (0.63 lb or 7%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triangle</td>
<td>Tenkoz</td>
<td>metolachlor (3.2 lbs or 34.5%) + atrazine (2.7 lbs or 29.1%) + related triazines</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Tri-Ester</td>
<td>Nufarm/ Riverdale</td>
<td>MCP (24.4% as its isooctyl ester) + 2,4-D (24% as its 2-ethylhexyl ester) + 2,4-D (33.5% as its isooctyl ester)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Tri-Ester TM II</td>
<td>Nufarm/ Riverdale</td>
<td>MCP (25% as its 2-ethylhexyl ester) + MCPA (25.6% as its 2-ethylhexyl ester) + 2,4-D (24.2% as its 2-ethylhexyl ester)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec 899</td>
<td>PBI Gordon</td>
<td>dicamba (0.21 lb) + mecoprop-p (0.63 lb) + 2,4-D (2.38 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec 959</td>
<td>PBI Gordon</td>
<td>dicamba (0.29 lb) + mecoprop-p (0.63 lb) + 2,4-D (2.97 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec 992 or Trimec Turf Herbicide (891)</td>
<td>PBI Gordon</td>
<td>dicamba (0.21 lb or 2.3%) + mecoprop-p (0.63 lbs or 6.75%) + 2,4-D (2.38 lbs or 25.38%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Bentgrass Formula</td>
<td>PBI Gordon</td>
<td>dicamba (0.18 lb or 2.1%) + mecoprop-p (0.71 lbs or 8.2%) + 2,4-D (0.44 lbs or 5.08%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Classic</td>
<td>PBI Gordon</td>
<td>dicamba (0.21 lb or 2.29%) + mecoprop-p (0.53 lb or 5.73%) + 2,4-D (1.98 lbs or 21.54%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec DMB 32 S.I.</td>
<td>PBI Gordon</td>
<td>dicamba (4.3%) + mecoprop-p (10.2%) + 2,4-D (45.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Encore</td>
<td>PBI Gordon</td>
<td>MCPA (2.97 lb or 31.59%) + mecoprop-p (0.63 lb or 6.74%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product*</td>
</tr>
<tr>
<td>------------------------------</td>
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<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Broadleaf</td>
<td>PBI Gordon</td>
<td>+ dicamba (0.29 lbs or 3.16%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec LAF-637</td>
<td>PBI Gordon</td>
<td>dicamba (0.093 lb) + mecoprop-p (0.22 lb) + 2,4-D (0.75 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Lawn Weed Killer</td>
<td>PBI Gordon</td>
<td>dicamba (0.13 lb or 1.39%) + mecoprop-p (0.55 lbs or 5.75%) + 2,4-D (3.28 lbs or 34.12%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Plus</td>
<td>PBI Gordon</td>
<td>dicamba (0.12 lb or 1.21%) + mecoprop-p (0.24 lb or 2.42%) + 2,4-D (0.48 lb or 4.84%) + MSMA (1.8 lbs or 18%)</td>
<td>auxin mimic- 1 (O), unknown 17 (Z)-organoarsenicals</td>
</tr>
<tr>
<td>Trimec Southern Broadleaf Weed Killer</td>
<td>PBI Gordon</td>
<td>dicamba (0.3 lb or 3.2%) + mecoprop-p (1.32 lbs or 14.35%) + 2,4-D (1.44 lbs or 15.57%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec (Super)</td>
<td>PBI Gordon</td>
<td>2,4-D (1.89 lbs or 21.54%) + dicamba (0.47 lb or 5.38%) + 2,4-DP-p (0.94 lb or 10.77%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Turf</td>
<td>PBI Gordon</td>
<td>dicamba (0.22 lb or 2.33%) + mecoprop (1.3 lbs or 13.5%) + 2,4-D (2.44 lbs or 25.38%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triple Strike Grass Weed Root Killer</td>
<td>Spectrum Group/ Spectracide Total Solutions</td>
<td>diquat (2.3% as its dibromide salt) + fluazifop-p-butyl (0.75%) + dicamba (0.51% as its dimethylamine salt) + diclorprop (0.33 lb or 3.8%)</td>
<td>Photosystem I electron diverter- 22 (D), ACCase inhibitor- 1 (A), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trimec Plus</td>
<td>PBI Gordon</td>
<td>2,4-D (0.33 lb or 3.8%) + mecoprop (0.33 lb or 3.8%) + diclorprop (0.33 lb or 3.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triplet Hi-D</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (3.3 lb or 34.12%) + mecoprop-p (0.56 lbs or 5.75%) + dicamba (0.13 lb or 1.39%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triplet Low Odor</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (2.38 lb or 25.38%) + mecoprop-p (0.63 lbs or 6.75%) + dicamba (0.22 lb or 2.30%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triplet Selective</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (2.38 lb or 25.38%) + mecoprop-p (0.63 lbs or 6.75%) + dicamba (0.22 lb or 2.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triplet Sensitive</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (0.82 lb or 9.02%) + mecoprop-p (1.43 lbs or 15.63%) + dicamba (0.35 lb or 3.84%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Triplet SF</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (2.38 lb or 25.38%) + mecoprop-p (0.63 lbs or 6.75%) + dicamba (0.22 lb or 2.30%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Tri-Scept</td>
<td>BASF</td>
<td>Imazaquin (4.72% as its monoammonium salt) + trifluralin (28.6%)</td>
<td>ALS-inhibitor- 2 (B), Inhibitor of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Trizmet II</td>
<td>Drexel</td>
<td>metolachlor (2.4 lbs or 26.1%) + atrazine (3.1 lbs or 33.7%-atrazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>TruPower</td>
<td>Nufarm/Riverdale</td>
<td>clopyralid (0.37 or 3.93%) + dicamba (0.37 lb or 3.93%) + MCPA (3.75 lbs or 39.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>TruPower II</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (2.45 lbs or 26%) + dicamba (0.31 lb or 3.24%) + mecoprop-p (0.61 lb or 6.5%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Turbo</td>
<td>Bayer</td>
<td>metolachlor (6.55 lbs or 70%) + metribuzin (1.45 lbs or 15%)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Turf Weed &amp; Brush</td>
<td>Nufarm/Riverdale</td>
<td>2,4-D (1.71 lbs or 21.3%) + dichlorprop-p (0.87lb or 10.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td><strong>Trade Name</strong></td>
<td><strong>Company</strong></td>
<td><strong>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</strong></td>
<td><strong>Site/Mode of action of herbicides represented in this product</strong></td>
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<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Turfon D</td>
<td>Dow</td>
<td>2,4-D (2 lbs) + triclopyr (1 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Turfon II Amine</td>
<td>Dow</td>
<td>2,4-D (2.78 lbs or 28.4%) + triclopyr (1.07 lbs or 10.9%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Typhoon</td>
<td>Syngenta</td>
<td>fluazifop-p-butyl (5.3%) + fomesafen (11% as its sodium salt)</td>
<td>ACCase inhibitor- 1 (A), PPO inhibitors- 14 (E)</td>
</tr>
<tr>
<td>Ureabor</td>
<td>Pro-Chem</td>
<td>sodium metaborate (66.5%) + sodium chloride (30%) + bromacil (1.5%)</td>
<td>unknown (Z)- fumigants, PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Vegemac</td>
<td>PBI Gordon</td>
<td>2,4-D (1%) + premeton (3.6%)</td>
<td>auxin mimic- 1 (O), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Valor XLT</td>
<td>Valent</td>
<td>flumioxazin (30%) + chlorimuron (10.3%)</td>
<td>PPO inhibitors- 14 (E), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>Velpar Alfamax</td>
<td>DuPont</td>
<td>hexazinone (35.3%) + diuron (42.4%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Velpar Alfamax Gold</td>
<td>DuPont</td>
<td>hexazinone (23.1%) + diuron (55.4%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Velpar K-4 Max</td>
<td>DuPont</td>
<td>hexazinone (17.3%) + diuron (61.5%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Vendetta</td>
<td>Wilbur-Ellis</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs or 21.8%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Vengeance</td>
<td>Wilbur-Ellis</td>
<td>2,4-D (2.5 lbs) + dicamba (1.25 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Vengeance Plus</td>
<td>Wilbur-Ellis</td>
<td>MCPA (3.72 lbs or 38.27%) + triclopyr (0.75 lb or 7.65%) + dichlorprop-p (0.75 lb or 7.65%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Vessel</td>
<td>Prokoz Inc.</td>
<td>dicamba (0.21 lb) + mecoprop-p (0.63 lb) + 2,4-D (2.38 lbs)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Vigoro Ultra Turf Lawn Weed Control</td>
<td>Spectrum Group/ Vigoro</td>
<td>2,4-D (1.37%) + mecoprop-p (0.31%) + dicamba (0.13%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Vigoro Ultra Turf Weed and Feed</td>
<td>Spectrum Group/ Vigoro</td>
<td>2,4-D (0.26 lb or 2.7%) + mecoprop-p (0.13 lb or 1.35%) + dichlorprop-p (0.13 lb or 1.35%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Volley ATZ</td>
<td>Tenkoz</td>
<td>acetochlor (3 lbs or 32.6%) + atrazine (2.25 lbs or 24.4%)-atriazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Volley ATZ Lite</td>
<td>Tenkoz</td>
<td>acetochlor (4 lbs or 43.4%) + atrazine (1.5 lbs or 16.3%)-atriazine + related triazines)</td>
<td>Inhibitor of very long chain fatty acid biosynthesis- 15 (K3), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Weed and Grass Killer</td>
<td>Spectrum Group/ Spectracide</td>
<td>diquat (0.18% as its dibromide salt) + fluazifop-p-butyl (0.06%) + dicamba (0.04% as its dimethylamine salt)</td>
<td>Photosystem I electron diverter- 22 (D), ACCase inhibitor- 1 (A), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed-B-Gon MAX plus Crabgrass Control Ready-to-use</td>
<td>Ortho</td>
<td>2,4-D (0.12%) + quinclorac (10%) + MCPP (0.22%) + dicamba (0.05%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed-B-Gon MAX Weed Killer for Lawns Ready-to-use</td>
<td>Ortho</td>
<td>2,4-D (0.12%) + MCPP (0.22%) + dicamba (0.05%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed-B-Gon MAX Weed Killer for Lawns</td>
<td>Ortho</td>
<td>triclopyr (1.56%) + MCPP (13.72%) + dicamba (1.35%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Trade Name</td>
<td>Company</td>
<td>Common Name of Individual Herbicides [percent ai (liquid or dry) or lbs ai/gal (liquid) or lb ai/ lb product (dry) represented in parentheses]</td>
<td>Site/Mode of action of herbicides represented in this product*</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Weed-B-Gon for Southern Lawns Ready-spray or Concentrate</td>
<td>Ortho</td>
<td>2,4-D (3.05%) + MCPP (5.3%) + dicamba (1.3%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed Blast</td>
<td>UAP- Loveland</td>
<td>bromacil (4%) + diuron (4%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Weed Blast 4G</td>
<td>SSI Maxin</td>
<td>bromacil (2%) + diuron (2%)</td>
<td>PSII site A- 5 (C1), PSII site A2- 7 (C2)</td>
</tr>
<tr>
<td>Weed &amp; Feed 5M</td>
<td>Spectrum Group/Vigoro</td>
<td>2,4-D (0.64%) + mecoprop-p (0.16%) + dicamba (0.03%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed &amp; Feed 15M</td>
<td>Spectrum Group/Vigoro</td>
<td>2,4-D (1.108% as its ethylhexyl ester) + mecoprop-p (0.167%) + dicamba (0.71%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed Free 75</td>
<td>Harrell’s</td>
<td>trifluralin (3%) + oxyfluorfen (2%)</td>
<td>Inhibitors of microtubule assembly- 3 (K1), PPO inhibitors- 14 (E)</td>
</tr>
<tr>
<td>Weedking</td>
<td>Control Solutions</td>
<td>2,4-D (2.87 lbs) + dicamba (1 lb)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weedmaster</td>
<td>BASF</td>
<td>dicamba (1 lb or 10.3%) + 2,4-D (2.87 lbs or 29.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Weed Out</td>
<td>Pro-Chem</td>
<td>2,4-D (1.09%) + bromacil (0.98%)</td>
<td>auxin mimic- 1 (O), PSII site A- 5 (C1)</td>
</tr>
<tr>
<td>Weed Stop 2X</td>
<td>Spectrum Group/Spectracide</td>
<td>2,4-D (0.54 lb or 6.31%) + mecoprop-p (0.19 lb or 2.25%) + dicamba (0.05 lb or 0.59%) + sulfentrazone (0.02 lb or 0.18%)</td>
<td>auxin mimic- 1 (O), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Weed Killer for Lawns Concentrate</td>
<td>Spectrum Group/Spectracide</td>
<td>2,4-D (0.285%) + mecoprop-p (0.102%) + dicamba (0.027%) + sulfentrazone (0.008%)</td>
<td>auxin mimic- 1 (O), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Weed Killer for Lawns Ready-to-use</td>
<td>Spectrum Group/Spectracide</td>
<td>2,4-D (0.285%) + mecoprop-p (0.102%) + dicamba (0.027%) + sulfentrazone (0.008%)</td>
<td>auxin mimic- 1 (O), PPO inhibitor- 14 (E)</td>
</tr>
<tr>
<td>Westar</td>
<td>DuPont</td>
<td>hexazinone (68.6%) + sulfometuron (6.5%)</td>
<td>PSII site A- 5 (C1), ALS-inhibitor- 2 (B)</td>
</tr>
<tr>
<td>WideMatch</td>
<td>Dow</td>
<td>clopyralid (0.75 lb or 8.6%) + fluopyrpyr (0.75 lb or 8.6%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>WideMatch M</td>
<td>Dow</td>
<td>Part S: fluopyrpyr (1.5 lbs or 18.2%) + Part CM: clopyralid (0.42 lb or 5%) + MCPA (2.35 lbs or 27.8%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Wildcard Xtra</td>
<td>Helena</td>
<td>bromoxynil (2 lbs or 21.8%) + MCPA (2 lbs or 21.8%)</td>
<td>PSII site B- 6 (C3), auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>Wil-Power</td>
<td>Wilbur-Ellis</td>
<td>MCPA (3.72 lbs or 38.27%) + triclopyr (0.75 lb or 7.65%) + dichlorprop-p (0.75 lb or 7.65%)</td>
<td>auxin mimic- 1 (O)</td>
</tr>
<tr>
<td>XL 2G</td>
<td>Helena</td>
<td>benefin (1%) + oxyzalin (1%)</td>
<td>Inhibitors of microtubule assembly- 3 (K1)</td>
</tr>
<tr>
<td>Yukon</td>
<td>Gowan</td>
<td>dicamba (55% as its sodium salt) + halosulfuron (12.5%)</td>
<td>auxin mimic- 1 (O), ALS-inhibitor- 2 (B),</td>
</tr>
</tbody>
</table>

Disclaimer: Great efforts were made to incorporate the most recent information regarding the herbicide products listed above; however, some of the products above may no longer be registered or other products with similar names may be present in the marketplace. This document is not intended to replace any product labels, therefore, please consult specific product labels for the most recent and accurate information regarding the use of any.
product(s) mentioned above. When possible, all percentage and lb ai/gallon ratios are based on active ingredient or acid equivalent and not on specific salts or esters of these active ingredients. If the percentage ai or lb ai/gallon ratios are based on a specific type of salt or ester of an active ingredient, it should be designated as such in parentheses (especially where a multitude of various salt and/or ester combinations are possible for a specific herbicide active ingredient).

**Herbicide Sites of Action†**

† For each site of action represented in this publication there is an associated number and letter group code (i.e., auxin mimic has the number code “1” and the letter code “(O)”). The number code represents the herbicide site of action classification system used by the Weed Science Society of America (WSSA), while the letter code corresponds to the classification system used by the Herbicide Resistance Action Committee (HRAC). These systems were created to aid decision makers in rotating herbicides with different sites of action to prevent or manage resistant weed populations. Currently, the Canadian Pest Management Regulatory agency requires that all herbicide manufacturers place the corresponding site of action number code (WSSA system) for each individual herbicide active ingredient on all herbicide labels in Canada. In contrast, the United States Environmental Protection Agency (EPA) announced that such site of action disclosures on labels in the United States would be strictly voluntary. Currently, some companies like Dow Agrosciences and Syngenta Crop Protection voluntarily include this information on their new herbicide labels (Mallory-Smith and Retzinger 2003).

1 (A)- **Inhibitor of acetyl CoA carboxylase (ACCase)** – inhibits long chain fatty acid biosynthesis in grasses with concurrent safety to broadleaf weeds and crops. Most of the herbicides that inhibit this site of action have little to no soil residual activity, so the majority of the activity comes from foliar applications. Activity generally appears within the first week of application with chlorosis and a loss of apical dominance in the meristem with concurrent reddening in certain leaf tissue. Complete control of susceptible species may require two to three weeks following applications. Many of these herbicides are systemic in nature and can have activity on both annual and perennial grass weeds. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with auxin mimic- 1 (O) herbicides or ALS inhibitors- 2 (B). Currently, there are 35 different species in more than 120 locations that have demonstrated resistance to this herbicide site of action; some of those species of importance to Tennessee include Italian ryegrass and johnsongrass.

2 (B)- **Inhibitor of acetolactate synthase (ALS)** – inhibits the formation of the branched chain amino acids valine, leucine and isoleucine. Five major classes of chemistry inhibit this enzyme and residual activity, crop selectivity and the spectrum of weeds controlled can vary greatly depending on the herbicide selected. Activity generally appears within the first week of application as chlorosis with the possibility of some purple leaf veins appearing on the leaves of some plants; roots may have a bottlebrush appearance in some species. Complete control of susceptible species may require two to three weeks following applications. Many of these herbicides are systemic in nature and can have activity on both annual and perennial weed species. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with ACCase inhibitors- 1 (A) or HPPD inhibitors- 27 (F2). Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of EPSP synthase- 9 (G). Currently, there are 95 different species in more than 275 locations that have demonstrated resistance to this herbicide site of action; some of those species of importance to Tennessee include common cocklebur, common waterhemp and Palmer amaranth.
3 (K1)- Inhibitor of microtubule assembly – inhibits tubulin formation in cells, which blocks the completion of cell division (mitosis) and in turn prevents shoot elongation and the lateral root development in emerging weeds. In general, chemicals that inhibit microtubule assembly are volatile and susceptible to photolytic degradation, so the activity of many of these herbicides can be enhanced by immediate incorporation following preemergence applications. These herbicides typically control many annual grasses and certain small seeded broadleaf weeds in several grass or broadleaf crops. Weed seedlings that absorb inhibitors of microtubule assembly generally emerge abnormally with rapid cessation of vertical shoot growth. Seedlings appear stunted and roots appear club-shaped. Complete plant death occurs within one to two weeks after seedling emergence. Even though these herbicides are readily absorbed by plants, they are not systemic and therefore are only effective for preemergence control of annual weeds. Crop selectivity to inhibitors of microtubule assembly can generally be attributed to three different things: 1) the herbicide is placed in the soil where it can come in contact with emerging weed seedlings, but not emerging crop seedlings 2) crop seeds are generally larger with more energy reserves than many smaller seeded weed species and this difference allows them to better withstand the herbicidal activity of inhibitors of microtubule assembly 3) herbicide safeners are incorporated with these herbicides to improve crop safety by enhancing metabolism of the herbicide. Currently, there are 10 different species in more than 25 locations that have demonstrated resistance to this herbicide site of action; one species of particular importance to Tennessee is goosegrass.

4 (O)- Synthetic auxins (auxin mimic) – herbicides that mimic the internal plant hormone indole-3-acetic acid (IAA or auxin). These herbicides cause uncontrolled plant growth that leads to twisting, leaf cupping, stem cracking and ultimately plant death in susceptible annual and perennial broadleaf weeds and crops. Grass weeds and crops are generally safe to standard use rates of auxin herbicides due to an extra layer of specialized cells (schlerenchyma) that protect the vascular transport system (xylem and phloem) from closure due to stem twisting (epinasty). With few exceptions (i.e., picloram), auxin herbicides typically have only moderate to low residual activity, with the majority of their activity coming from foliar absorption. Symptoms typically appear within one day after application; however, susceptible plants may take up to two to four weeks to completely die. Many of these herbicides are systemic in nature and can have activity on both annual and perennial broadleaf weed species. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with ACCase inhibitors- 1 (A). Synergism (or improved herbicidal activity) has been observed in certain weeds species when applied in mixtures with inhibitors of indoleacetic acid transport- 19 (P). Currently, there are 25 different species in more than 35 locations that have demonstrated resistance to this herbicide site of action; so far, no resistant biotypes to this mode of action have been confirmed in Tennessee.

5 (C1)- Inhibitor of photosynthesis at photosystem II site A (PSII site A) – inhibitors of photosystem II bind to one of two sites (A or B). Through this binding they prevent the orderly flow of electrons (free electrons are generated by plants through absorption of sunlight) out of photosystem II, causing cell membrane degradation and necrosis in plant tissue. Symptoms generally appear as yellow leaf tissue in between leaf veins (interveinal chlorosis) on older leaf tissue within one to three days after application and these symptoms progress to the new leaves (meristem) of plants as the herbicide moves upward from the roots with water and other nutrients (apoplastically) over time. This chlorotic tissue typically becomes necrotic quite rapidly, but symptoms and timing can differ among various inhibitors of photosystem II. PSII inhibitors that bind to site A (C1) generally provide selective residual control of several broadleaf weeds and certain grasses in a variety of crop and non-crop environments, but a majority of the herbicides that bind to this site are used in monocot crops (i.e., turf, rice, corn, cereals, sugarcane, etc.). Because of its apoplastic movement, the success of foliar activity is generally dependent on aggressive adjuvants and applications made to smaller weeds. Synergism (or improved herbicidal activity) has been observed in certain weeds species when applied in mixtures with inhibitors of PPO- 14 (E), HPPD- 27 (F2), Photosystem I electron diverters- 22 (D) and DOXP synthase- 13 (F4). Currently, there are 66 different species in nearly 400 locations that have demonstrated resistance to this specific herbicide site of action; one species of particular importance to Tennessee is common lambsquarters.
7 (C2)- **Inhibitor of photosynthesis at photosystem II site A different binding behavior than C1 (PSII site A2)** – herbicides that bind at site A2 of photosystem II are usually applied preemergence in crop and non-crop areas, but most also have some significant postemergence foliar activity. Typically, herbicides that bind at this site of action generally have less movement in soil in comparison to PSII inhibitors that bind at site A-5 (C1). This usually impacts the spectrum of weeds controlled and the type of crop selectivity when comparing these two different herbicide sites of action. Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of PPO- 14 (E), HPPD- 27 (F2), Photosystem I electron diverters- 22 (D) and DOXP synthase- 13 (F4). Currently, there are 21 different species in more than 50 locations that have demonstrated resistance to this specific herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

6 (C3)- **Inhibitor of photosynthesis at photosystem II site B (PSII site B)** – herbicides that bind to site B of the D1 protein in photosynthesis behave slightly different than those that bind to site A. Typically these compounds have little to no soil residual activity, and in general the majority of their activity is from foliar applications. In addition, susceptible weeds typically display rapid necrosis within one to two days after application, with plant death ensuing rapidly. Also, PSII site B inhibitors are generally only active against broadleaf weeds and have little to no activity on grasses. This is the reason why all are registered for use in corn and/or certain specialty crops. Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of PPO- 14 (E), HPPD- 27 (F2) and DOXP synthase- 13 (F4). Currently, there is only one weed (common groundsel) in only one location (Oregon) that has demonstrated resistance to this specific herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

8 (N)- **Inhibitors of lipid synthesis** – thiocarbamates are the only class of chemistry that function as lipid synthesis inhibitors, but the specific site(s) of action that these herbicides target is/are not fully understood. These herbicides not only decrease the production of lipids (leading to destabilization of cell membranes and cessation of cell division or enlargement) but have also been found to inhibit the production of the plant hormone gibberellic acid (leading to plant growth reductions) and can affect chromosome and general nuclei development in the shoot cells of susceptible seedlings. In addition, many of the herbicides that target this mode of action are extremely volatile and are therefore incorporated immediately after application. Lipid synthesis inhibitors provide broad-spectrum control of many grasses and broadleaf weeds and often get their selectivity to target crops through the use of safeners or through specific placement of the herbicide in the soil profile to avoid contact with emerging crop shoots (similar to inhibitors of microtubule assembly). Typical symptoms from lipid synthesis inhibitors include stunting, dark green leaf tissue, puckered leaves (broadleaf weeds) and a special symptom called “buggy whipping” whereby the leaves of certain grasses have trouble releasing from the protective sheath of the shoot tip (coleoptile). Currently, there are eight different species in more than 15 locations that have demonstrated resistance to this specific herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

9 (G)- **Inhibitor of 5-enolpyruvyl-shikimate-3-phosphate synthase (EPSP synthase)** – inhibits the formation of the aromatic amino acids phenylalanine, tryptophan and tyrosine. Currently, glyphosate is the only commercial product that targets this specific site of action. Following postemergence treatment, susceptible plants become chlorotic and stunted within five to seven days after application. Complete plant death may take up to two to four weeks following application. Glyphosate is systemic and can therefore provide excellent control of both annual and perennial weeds. However, its lack of soil residual activity creates a need for tank mix partners or multiple applications for full-season weed control. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with Photosystem I electron diverters- 22 (D) or PPO inhibitors- 14 (E). Synergism (or improved herbicidal activity) has been observed in certain weeds species when applied in
mixtures with ALS inhibitors- 2 (B). Currently, there are 13 different species in more than 50 locations that have demonstrated resistance to this herbicide site of action; two species of particular importance to Tennessee are horseweed and Palmer amaranth.

**10 (H)- Inhibitor of glutamine synthetase** – inhibits the conversion of the amino acid glutamate plus ammonia to the amino acid glutamine. This leads to an impairment of nitrogen metabolism and an accumulation of toxic levels of ammonia in susceptible plants, which in turn inhibits photosynthesis causing lipid peroxidation of cell membranes in the presence of sunlight. Currently, glufosinate is the primary commercial product that targets this specific site of action. This herbicide only has postemergence activity (no soil residual activity) and since it does not translocate effectively, it must be evenly applied to sufficiently control most target plants. In addition, glufosinate is very sensitive to extremes in temperature and humidity, which can impact its performance. While glufosinate is considered a non-selective herbicide, it does tend to provide more consistent control of most annual broadleaf weeds in comparison to certain grass species. Following postemergence application of glufosinate, susceptible plants tend to become chlorotic/necrotic within one to three days after application; total plant death generally occurs within five to 10 days after application. Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of
Photosystem I electron diverters- 22 (D).

**13 (F4)- Inhibitor of 1-deoxy-D-xylulose-5-phosphate synthetase (DOXP synthase)** – prevents carotenoid production by inhibition of the terpenoid pathway. Currently, clomazone is the only commercial product that targets this specific site of action. Following preemergence applications, susceptible weed seedlings emerge bleached or chlorotic in appearance. These plants then become necrotic and die within five to 14 days after emergence. Clomazone controls many broadleaf and grass weeds in several horticultural crops (i.e. pumpkins, peppers, cucumbers, sweet potato, etc.), tobacco and soybean, but must be applied carefully as it is extremely volatile and can cause damage to sensitive non-target plants if used improperly. Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with PSII site A inhibitors- 5 (C1). Currently, there are no weeds that have demonstrated resistance to this herbicide site of action.

**14 (E)- Inhibitor of protoporphyrinogen IX oxidase (PPO or Protox)** – cause cell membrane degradation by causing protoporphyrin IX to accumulate in the cytoplasm where it can react with oxygen and sunlight to create toxic oxygen species that lead to cell membrane degradation. In addition, PPO inhibitors also impair the production of chlorophyll in plants. Given these dual roles in membrane and chlorophyll degradation, it is not surprising that PPO inhibitors cause rapid burn in susceptible weeds and crops within one day after postemergence treatment. Certain PPO inhibitors also have some soil residual activity (i.e., sulfentrazone, flumioxazin, etc.), which causes susceptible weeds to germinate with yellow- to orange-colored foliage. Following exposure to sunlight, they turn necrotic quite rapidly. Many PPO inhibitors are applied for weed control in soybeans; however, more recent chemistry has established the use of PPO inhibitors in several grass and horticultural crops as well. PPO inhibitors are typically more active on broadleaf weeds in comparison to most grasses and are better on annual weeds as opposed to perennial weeds because they do not translocate well in plants. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with EPSP synthase inhibitors- 9 (G). Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with PSII site B inhibitors- 6 (C3) or HPPD inhibitors- 27 (F2). Currently, there are three different species in five locations that have demonstrated resistance to this herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

**15 (K3)- Inhibitors of synthesis of very long chain fatty acid** – inhibit cell growth and cell division by impairing membrane formation, which leads to inhibition of shoot and root growth in seedling weeds. In general, preemergence applications either prevent seedlings from emerging through the soil surface or seedlings emerge stunted with either very dark green or sometimes chlorotic foliage. Inhibitors of very long chain fatty acids generally provide preemergence control of many annual grasses, sedges and some small-seeded broadleaf weeds (i.e., pigweed). Herbicides in this group are
registered in a number of grass and broadleaf crops; however, much of the safety afforded with many of these products in grass crops is due to the incorporation of a herbicide safener into their formulation. Currently, there are three different species in six locations that have demonstrated resistance to this herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

19 (P)- **Inhibitor of indoleacetic acid transport** – inhibit a transport protein on the plasmalemma of cells that prevents internal plant auxins from moving out of the cells. This leads to a build-up of internal plant auxin in cells that creates symptoms similar to those caused by auxin mimic- 1 (O) herbicides. There are only two commercial compounds that inhibit this site of action 1) naptalam (Alanap) – a preemergence specialty crop herbicide (i.e., pumpkins, etc.) 2) diflufenzopyr – an auxin synergist that is currently only sold in combinations with dicamba (Distinct, Overdrive, Status). As diflufenzopyr demonstrates, inhibitors of indoleacetic acid transport- 19 (P) can be used to synergize the activity of auxin mimic- 1 (O) herbicides because they prevent these herbicides from leaving plant cells, just as they prevent internal plant auxins from doing the same thing. In addition to improving the control of certain broadleaf weeds in combinations with auxin herbicides (O) (i.e., dicamba), combinations of diflufenzopyr plus dicamba also improve herbicidal activity on certain annual grasses. Currently, there are no weeds that have demonstrated resistance to this herbicide site of action.

21 (L)- **Inhibitor of cellulose synthase** – inhibits cellulose production which prevents the proper formation of the cell wall during mitosis. Most inhibitors of cellulose synthase- 21 (L) prevent weeds from emerging above the soil surface, but those that do are often stunted, club-like in appearance and often have cracked stems. Inhibitors of cellulose synthase are generally active on a broad range of annual grasses and broadleaf weeds. Selectivity of these herbicides to certain plants is due to applications made after the target plant (i.e., crop, turf, ornamental, tree, etc.) has emerged or established and prior to the germination of weed species. Currently, there is one weed in one location that has demonstrated resistance to this herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

22 (D)- **Photosystem I electron diverter** – accept free radicals near the ferrodoxin site in Photosystem I, which leads to the production of the highly oxidative compounds hydrogen peroxide, superoxide and various hydroxyl radicals that quickly peroxidize cell membranes leading to rapid cell degradation. Currently, paraquat and diquat are two bipyridylium herbicides that target this site of action. Symptoms from postemergence applications of these two herbicides can appear within one hour after application. Plants initially appear wilted and water-stressed but eventually rapid necrosis appears and plants can be completely dead in just a day or two following application. This rapid herbicidal response, coupled with no soil residual activity, has made these compounds ideal for rapid burndown of vegetation prior to planting, for use in between the rows of specialty crops or for use as a late-season crop desiccant. Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with EPSP synthase inhibitors- 9 (G). Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of PSII site A- 5 (C1), PSII site A2- 7 (C2) and glutamine synthetase- 10 (H). Currently, there are 23 different species in almost 40 locations that have demonstrated resistance to this herbicide site of action; so far, no resistant biotypes to this mode of action have been discovered in Tennessee.

27 (F2)- **Inhibitor of 4-hydroxyphenyl-pyruvate-dioxygenase (HPPD)** – inhibits carotenoid production by impeding the production of plastoquinone, a key co-factor in carotenoid biosynthesis. In addition, the inhibition of HPPD also prevents the production of the anti-oxidant α-tocopherol (vitamin E) in susceptible plants. Plants treated with HPPD inhibitors typically develop bleaching symptoms in the new leaves (meristematic tissue) during the first week after application. These bleaching symptoms progress toward necrosis and susceptible plants generally die within two to three weeks after treatment. Most HPPD inhibitors (F2) provide postemergence control of key broadleaf weeds and certain grasses in corn; however, other herbicides in this class also provide weed control in wheat, rice and certain horticultural crops. In addition, some HPPD inhibitors (F2) have some soil residual
activity and can provide preemergence weed control (i.e., mesotrione, isoxaflutole, etc.). Antagonism (or reduced herbicidal activity) has been observed in certain weed species when applied in mixtures with ALS inhibitors (A). Synergism (or improved herbicidal activity) has been observed in certain weed species when applied in mixtures with inhibitors of PSII site A- 5 (C1), PSII site B- 6 (C3) and PPO- 14 (E). Currently, there are no weeds that have demonstrated resistance to this herbicide site of action.

**Literature cited:**


