

Relative Response of Cover Crops and Weeds to Burndown Herbicides

HERBICIDE	COVER CROPS									WEEDS															
	Alfalfa	Clover, Red	Clover, White	Fescue, Tall	Orchardgrass	Rye	Ryegrass, Annual	Vetch, Hairy	Wheat	Brome spp.	Chickweed, Common	Dandelion	Dock, Curly	Fleabane, Annual	Foxtails	Wild Garlic	Henbit/Deadnettle	Lettuce, Prickly	Horseweed (Marestail)*	Mustard spp.	Thistle, Musk	Johnsongrass (seedling)	Johnsongrass (rhizome)	Pokeweed	Ragweed, Giant
Atrazine + Oil	3	5	4	6	3	6	5	6	6	7	9	4	4	-	6	-	8	8	7	8	4	0	0	2	8
Dicamba ¹ (Clarity)	8	9	8	0	0	0	0	8	0	0	7	8	7	8	0	6	6	9	7	7	7	0	0	6	9
2,4-D Ester	6	8	5	0	0	0	0	8	0	0	5	8	4	6	0	6	4	8	8	8	7	0	0	5	8
Expert / Sequence	4	4	3	5	3	6	6	4	7	8	8	4	2	6	9	-	8	7	8	7	4	9	7	4	8
Express	-	-	-	-	-	0	0	7	0	0	9	-	8	-	-	8	8	-	-	7	-	0	0	-	-
Harmony Extra	-	-	-	-	-	0	0	7	0	0	9	-	8	-	-	9	8	-	-	8	-	0	0	-	-
Harmony SG / Unity WDG	-	-	-	-	-	0	0	7	0	0	6	-	8	-	-	8	6	-	-	8	-	0	0	-	-
Glyphosate ²	6	6	5	7	5	8	7	6	9	9	9	6	4	8	9	-	8	8	8*	8	6	9	8	6	9
FieldMaster	4	4	3	5	3	6	6	4	7	8	8	4	2	6	9	-	8	7	8	7	4	9	7	4	8
Paraquat (Gramoxone)	3	7	5	5	3	7	6	7	7	7	9	4	2	6	9	8	8	5	4	6	3	7	3	4	7
Paraquat (Gramoxone) + Atrazine	4	7	5	8	6	8	7	8	9	8	9	7	5	6	9	8	9	9	8	9	5	7	3	4	9

GOOD= 8-9

FAIR = 6-7

POOR = 5 or less

- Insufficient Data

This table should be used only as a guide. Information presented in this table is the relative burndown response of emerged plants to herbicides applied at normal rates for no-till corn. This information generally does not reflect soil residual effects of the herbicides. The relative response values are based on a numerical scale from 0 to 9 and compare effectiveness of herbicides to control a particular cover crop or weed species. A herbicide may perform better or worse than indicated in the table due to weed size, environmental conditions or when tank mixed with other herbicides. If a farmer is achieving satisfactory results under their conditions, they should not necessarily change products as a result of information in this table.

¹ Examples of DICAMBA products labeled for use as a burndown treatment in corn include Clarity, Banvel, Oracle, and Sterling.

² Examples of GLYPHOSATE products labeled for use as a burndown treatment in corn include: **Buccaneer, ClearOut 41 Plus, Nufarm Credit, Duramax, DurangoDMA, Glyphosate, GlyStar Plus, Honcho, Roundup Original, Roundup PowerMAX, Roundup WeatherMAX, Touchdown Total.** Consult the label for specific use directions including use of additives, if needed. [See page 20 for list of other GLYPHOSATE products]

*Glyphosate will not effectively control biotypes of horseweed (marestail) that are tolerant to this herbicide.

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Volunteer Corn or Crop Replant Situations

Emerged corn can be a problem in fields where corn must be replanted due to poor stands, flooding and other unforeseen weather conditions, or where volunteer corn plants emerge prior to planting. For conventional corn hybrids Roundup or other glyphosate products are often used to kill emerged corn prior to replanting. With the introduction of herbicide-tolerant crops such as “Roundup Ready” corn and “Liberty Link” corn hybrids, herbicide options are more limited for control of emerged corn prior to replanting. The table below indicates herbicide options depending on the genetic tolerance of the previous corn hybrid grown.

Herbicide options for replanting field corn or control of volunteer corn based on previous corn hybrid grown.				
HERBICIDE	Previous Corn Hybrid			
	Conventional hybrid	Roundup Ready	Liberty Link	Clearfield IMI-corn
Glyphosate (Roundup, etc.)	++	X	++	++
Paraquat + Linex (linuron)	+	+	+	+
Select MAX	+	++	+	+
+ = Recommended; ++ = Highly recommended; X = No control				

Herbicide treatments for control of volunteer corn plants or killing existing stands of corn for replant situations.

GLYPHOSATE

See page 20 for examples of glyphosate formulations. Consult label for specific rate of product and if a surfactant is needed and the type and rate of surfactant to include. Dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gal) or an equivalent amount of AMS in a liquid formulation may improve glyphosate activity under certain conditions such as dry weather, or when mixed in hard water or with certain herbicides. Will not control hybrids with Roundup Ready corn technology.

GLYPHOSATE Product	Volunteer Corn Plant Height		
	6" tall (0.38 lb ae/A)	12" tall (0.56 lb ae/A)	20" tall (0.75 lb ae/A)
Roundup (3 lb ae/gal)	16 oz	24 oz	32 oz
Duramax (4 lb ae/gal)	12oz	18 oz	24 oz
Touchdown Total (4.17 lb ae/gal)	12 oz	17 oz	24 oz
Roundup PowerMax (4.5 lb ae/gal)	11 oz	16 oz	22 oz
Touchdown HiTech (5 lb ae/gal)	10 oz	14 oz	20 oz

GRAMOXONE INTEON (2.5 to 3.5 pt/A) + LINEX 4L (0.67 to 1 pt/A) + NIS (0.25% to 0.5% v/v)

For control of volunteer corn up to 6 inches in height. Apply the higher rate of both herbicides for corn 7 to 12 inches in height. FIRESTORM and PARAZONE are similar paraquat products applied at 1.67 to 2.33 pt/A. Apply with a non-ionic surfactant (NIS). Corn, grain sorghum, or soybeans may be planted at anytime following application provided the combined maximum label rate has not been exceeded (consult label).

SELECT MAX (6 fl oz/A) + NIS (0.25% v/v) + AMS (2.5 to 4 lbs/A)

For control of an existing stand of Roundup Ready field corn or volunteer corn prior to replanting field corn. Apply on field corn up to 12 inches tall. **Replant no sooner than 6 days after application.** Apply with a non-ionic surfactant (NIS) plus Ammonium Sulfate (AMS). Do not use COC or MSO as a spray additive. Do not apply more than 6 oz/A per season.

NO TILLAGE

NOTE: *Herbicides used in no tillage corn production can be applied as either an early preplant treatment (15 to 30 days before planting) or at time of planting (prior to or after planting but before crop emerges). Consult the herbicide labels for specific directions.*

EARLY PREPLANT treatments are soil residual herbicides applied in early spring before weeds emerge, generally 15 to 30 days before planting; thus, the use of a "burndown" herbicide may not be necessary. If vegetation is present, a "burndown" herbicide may be included at time of application to kill the existing weedy vegetation. In addition, use of an early preplant program may require a sequential herbicide treatment applied at or after planting to provide additional length of weed control. Tillage after application may reduce effectiveness of the herbicide treatment.

AT PLANTING treatments include foliar "burndown" herbicides to kill existing vegetation plus a soil residual herbicides for preemergence control of annual grasses and broadleaf weeds. Depending on the amount of vegetation present and herbicide used, spray volume per acre may vary between 10 to 40 gallons of liquid per acre.

Foliar "Burndown" Herbicides for No-Tillage Corn

	<u>Rate/A</u>	<u>[2,4-D acid equivalent]</u>
2,4-D LV Ester or Amine [3.8 lb ae/gal] (various)	1 to 2 pt/A	[0.47 to 0.95 lb ae/A]
or		
WEEDONE 638 [2.8 lb ae/gal]	1.5 to 2.5 pt/A	[0.52 to 0.88 lb ae/A]
or		
WEEDONE 650 [5.64 lb ae/gal]	0.67 to 1.33 pt/A	[0.47 to 0.94 lb ae/A]

[NOTE: Rates vary with formulation of 2,4-D product used (consult label)]

Weeds Controlled: For control of annual and certain perennial broadleaf weeds including dandelion, prickly lettuce, marehail, mustard spp., and giant ragweed.

Additives: An additive may be used to increase the effectiveness on some weeds. Consult product labels on use of additives in tank mixtures.

Spray Volume: Apply in 10 or more gallons per acre of spray solution.

General Comments: Product formulations vary from 3 to 6 lb ai/gal. Most 2,4-D ESTER or 2,4-D AMINE products can be applied preplant or preemergence to corn for control of emerged broadleaf weeds. *Apply 7 to 14 days before planting corn or 3 to 5 days after planting, but before corn emerges.* Be cautious about applications near sensitive broadleaf crops, such as tobacco, soybean, vegetables or ornamental plantings, and avoid potential injury caused by spray drift.

Tank Mixtures: Consult other herbicide product labels for the tank mix partner(s) to be used.

	<u>Rate/A</u>	<u>(dicamba)</u>
DICAMBA [eg. BANVEL, CLARITY, ORACLE, STERLING, etc.]	0.5 to 1 pt/A	[0.25 to 0.5 lb ai/A]

Weeds Controlled: For control of annual and perennial broadleaf weeds including dandelion, annual fleabane, prickly lettuce, musk thistle, and giant ragweed. Consult label for applications to legume sods such as alfalfa or clover.

Additives: Although not required, the addition of a Surfactant, Crop Oil, or sprayable fluid fertilizer may improve control of emerged weeds. Do not apply with a spray additive after corn has emerged. Consult product labels on use of additives in tank mixtures.

Spray Volume: Apply at 3 to 50 GPA with ground equipment.

General Comments: Apply before, during, or after corn planting to emerged and actively growing broadleaf weeds. For legume sods (e.g. alfalfa and clover) apply after 4-6" of growth has occurred. Be cautious about applications near sensitive broadleaf crops, such as tobacco, soybean, vegetables or ornamental plantings, and avoid potential injury caused by spray drift.

Tank Mixtures: Atrazine, Axiom, Bicep II Magnum, Bullet, Define, Degree, Degree Xtra, Dual II Magnum, Epic, FieldMaster, FulTime, Glyphosate, Gramoxone, Guardsman, Harness, Harness Xtra, Hornet, Keystone, Outlook, Princep, Roundup, TopNotch, Touchdown. Tank mixes with 2,4-D should be applied 7 to 14 days prior to planting corn.

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GLYPHOSATE

Below are examples of GLYPHOSATE formulations and their rates for burndown applications in no-till corn. The application rate of product may vary depending on GLYPHOSATE product used. Dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gal) may be included with any of the of the following products to improve weed control during dry weather conditions, or when mixed in hard water or with certain other herbicides.

Recommendations for use of surfactants will vary depending on product. ALWAYS CONSULT THE PRODUCT LABEL FOR SPECIFIC DIRECTIONS.

Glyphosate formulation ¹	Annuals <6" tall	Annuals >6" tall
Roundup, Glyphosate, etc. (3 lb ae/gal)	1.5 to 2 pt/A (24 to 32 fl oz/A) (0.56 to 0.75 lb ae/A)	2 to 3 pt/A (32 to 48 fl oz/A) (0.75 to 1.13 lb ae/A)
Buccaneer 5 (3.75 lb ae/gal)	1.2 to 1.75 pt/A (19 to 28 oz/A) (0.56 to 0.82 lb ae/A)	1.75 to 2.5 pt/A (28 to 40 oz/A) (0.82 to 1.17 lb ae/A)
Duramax Durango DMA (4 lb ae/gal)	1.13 to 1.5 pt/A (18 to 24 fl oz/A) (0.56 to 0.75 lb ae/A)	1.5 to 2.25 pt/A (24 to 36 fl oz/A) (0.75 to 1.13 lb ae/A)
Touchdown Total Traxion (4.17 lb ae/gal)	1.1 to 1.4 pt/A (17 to 23 oz/A) (0.56 to 0.75 lb ae)	1.5 to 2.2 pt/A (24 to 35 oz/A) (0.78 to 1.14 lb ae/A)
Roundup PowerMAX Roundup Weather MAX (4.5 lb ae/gal)	1 to 1.4 pt/A (16 to 22 fl oz/A) (0.56 to 0.77 lb ae/A)	1.4 to 2 pt/A (22 to 32 fl oz/A) (0.77 to 1.13 lb ae/A)
Touchdown Hi-Tech (5 lb ae/gal)	0.9 to 1.2 pt (14 to 20 oz/A) (0.56 to 0.78 lb ae/A)	1.2 to 3 pt/A (20 to 48 oz/A) (0.78 to 1.88 lb ae/A)
¹ See page 20 for a detailed list of glyphosate products		

Annual Weeds Controlled: Annual fleabane, barnyardgrass, brome spp., chickweed, common ragweed, crabgrass, fall panicum, giant foxtail, giant ragweed, henbit, johnsongrass (seedling), lambsquarters, mustards, prickly lettuce, rye, smartweed,, wheat.

Perennial Weeds: CONSULT LABEL FOR GLYPHOSATE RATE FOR SPECIFIC PERENNIAL WEED SPECIES. Best control of perennial weeds is usually achieved at late growth stages approaching maturity and when soil moisture is adequate for active plant growth. At normal application times for no-till corn, perennial weeds may not be at the proper growth stage. Control may be reduced if plants are mowed or grazed and not allowed to regrow to recommended growth stage. Perennial weeds may require multiple applications for optimum control.

Spray Volume: Apply in 10 to 20 gallons of clean water/A when mixing with other herbicides. A spray volume of 3 to 10 gallons of water/A is often recommended when glyphosate is used alone at reduced labeled rates for certain annual weed species.

General Comments: Apply before, during, or after planting but before crop emergence. Glyphosate is a translocated herbicide. Rainfall soon after application may reduce effectiveness. Reduced control may occur if mixed with such products as Micro-Tech.

Tank Mixtures: Other foliar and soil residual herbicides are labeled for tank mixing with glyphosate products (consult the label of product used).

GRAMOXONE INTEON 2S	<u>Rate/A</u>	<u>(paraquat)</u>
Annual weeds 1-3 " tall	2 to 2.5 pt/A	0.5 to 0.625 lb ai/A
Annual weeds 3-6 " tall	2.5 to 3.0 pt/A	0.65 to 0.75 lb ai/A
Annual weeds >6 " tall	3.0 to 4.0 pt/A	0.75 to 1.0 lb ai/A
OR	OR	OR
FIRESTORM or PARAZONE 3S	<u>Rate/A</u>	<u>(paraquat)</u>
Annual weeds 1-3 " tall	1.3 to 1.7 pt/A	0.5 to 0.65 lb ai/A
Annual weeds 3-6 " tall	1.7 to 2.0 pt/A	0.65 to 0.75 lb ai/A
Annual weeds >6 " tall	2.0 to 2.7 pt/A	0.75 to 1.0 lb ai/A

Weeds Controlled: Controls small annual grasses and broadleaf weeds including foxtails, common chickweed, and henbit. Regrowth may occur from treated perennial grasses and broadleaf weeds, legume sods, perennial grass sods, or grass cover crops such as wheat treated between tillering and boot stage of growth. Also, emerged annual weeds such as marehail, prickly lettuce, smartweed, and giant ragweed may not be effectively controlled. Split applications 5 to 7 days apart may be more effective on certain hard-to-control weeds.

Additives: Non-Ionic Surfactant at 1 to 2 pt/100 gal or Crop Oil Concentrate at 4 qt/100 gal.

Spray Volume: Apply with at least 10 to 20 GPA of clean water or in a complete clear liquid fertilizer solution. Do not use suspension type fertilizers. A spray volume of more than 20 GPA may be needed if weeds exceed 6" tall.

General Comments: GRAMOXONE, FIRESTORM, and PARAZONE (paraquat) are non-selective contact-type herbicide that are RESTRICTED USE PESTICIDES due to acute toxicity. It is essential to obtain complete coverage to get good control. Apply as a broadcast spray before, during, or after planting, but before crop emergence. Split applications may be more effective on hard-to-control grass species. Rainfall occurring within 15 to 30 minutes after application should not reduce effectiveness. Do not use around home gardens, schools, recreational parks, golf courses or playgrounds.

Tank Mixtures: Atrazine, Balance PRO, Banvel, Bicep II Magnum, Callisto, Camix, Cinch, Cinch ATZ, Clarity, 2,4-D, Define, Degree, Degree Xtra, Distinct, Dual II Magnum, Epic, FulTime, Guardsman, Harness, Harness Xtra, Hornet, Keystone, Lexar, Lumax, Outlook, Princep, Prowl, Python, Simazine, Surpass, TopNotch. Tank mixtures with 2,4-D Ester should be applied 7 to 14 days prior to planting corn.

EXPRESS (TotalSol) 50 DF	0.25 to 0.5 oz./A	tribenuron-methyl (0.008 to 0.016 lb ai/A)
OR		
HARMONY SG 50 DF or	0.45 to 0.9 oz/A	thifensulfuron (0.014 to 0.028 lb ai/A)
UNITY 75DF	0.3 to 0.6 oz/A	
OR		
HARMONY EXTRA (XP) 75DF	0.3 to 0.6 oz/A	[thifensulfuron:tribenuron (0.009:0.005) to (0.019:0.009) lb ai/A]

Weeds Controlled: EXPRESS controls wild garlic and certain broadleaf weeds such as common chickweed, henbit, curly dock, and suppression of mustard species; HARMONY SG, and UNITY WDG provide control of wild garlic, curly dock and wild mustard species; HARMONY EXTRA is a premix of HARMONY (thifensulfuron) and EXPRESS (tribenuron-methyl) .

Additives: Apply with a nonionic surfactant at 0.25 - 0.5% v/v (1-2 qt/100 gal spray solution), or with a petroleum based crop oil concentrate or vegetable-seed oil-based product at 1% v/v (1 gal/100 gal of spray solution). An ammonium nitrogen fertilizer or a high quality, sprayable grade of ammonium sulfate may be added to enhance control.

General Comments: Apply pre-plant for "burndown" control of emerged wild garlic and cool-season broadleaf weeds. Apply to actively growing wild garlic and other broadleaf weeds when temperatures are generally above 60 F or more. For EXPRESS and HARMONY EXTRA allow at least 14 days between application and planting of corn. HARMONY or UNITY may be applied to corn anytime pre-plant, at-planting (0 days before planting), and/or postemergence. Do not make more than one pre-plant application per growing season.

Tank Mixtures: Tank mixtures in corn may include other pre-plant burndown products such as paraquat, glyphosate (eg. Roundup), dicamba (eg. Banvel/Clarity), and/or 2,4-D (consult individual labels).

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Preplant Foliar “Burndown” plus Residual Herbicides

ATRAZINE [various products] Rate varies depending on herbicide product(s) used

Weeds Controlled: For “burndown” of small annual weeds (generally less than 3" tall) and soil residual control.

Additives: A Crop Oil (2 qt/A) or Liquid Fertilizer additive is generally recommended to enhance “burndown” activity unless another foliar “burndown” herbicide is used.

General Comments: All ATRAZINE containing products are Restricted Use Pesticides. [NOTE: See page 29 for precautions on use of ATRAZINE near ground or surface water.] Soil-applied herbicide products with atrazine may be applied as part of an EARLY PREPLANT treatment either as a single or split application. Use higher rates where heavy crop residue exists. Consult the soil-applied section of this publication for more details concerning use of atrazine containing herbicides in corn. A sequential herbicide application may be necessary at planting to provide additional length of weed control. If annual grasses and broadleaf weeds exceed 3 inches in height at time of application, use of a foliar herbicide such as Gramoxone or Glyphosate (eg. Roundup Original, Roundup WeatherMAX, Touchdown) is recommended.

Tank Mixtures: Consult the product label of the tank mix partner(s) to be used.

BALANCE PRO 4SC 3 fl.oz./A (isoxaflutole 0.094 lb ai/A)

Weeds Controlled: For “burndown” and residual control of small annual weeds (generally less than 3" tall) such as foxtails, lambsquarters, black nightshade, fall panicum, pigweed, common ragweed, smartweed, and velvetleaf.

Additives: When applied alone Crop Oil Concentrate or Methylated Seed Oil is recommended to enhance “burndown” activity of labeled weeds. For weeds not controlled by BALANCE PRO or when weeds are greater than 3 inches the addition of a “burndown” herbicide such as Gramoxone MAX, Roundup Ultra, or 2,4-D is recommended.

General Comments: May be applied up to 21 days before planting field corn (30 days when applied as a planned sequential program with a postemergence applied herbicide). Do not apply after crop emergence or crop injury may occur. Consult label for soil characteristic limitations, crop rotations, and other precautions.

Tank Mixtures: Tank mix BALANCE PRO with Atrazine, an Atrazine based premix product, or a preemergence grass herbicide such as Dual II Magnum, Harness, Surpass, TopNotch, or Princep, for improved residual control.

EXPERT	<u>Rate/A</u>	<u>(S-metolachlor:atrazine:glyphosate)</u>
Annual weeds <6 " tall	3 qt/A	[1.3:1.6:0.75 lb ai/A]
Annual weeds 6-12 " tall	3.75 qt/A	[1.6:2.0:0.94 lb ai/A]

Weeds Controlled: Provides “burndown” of existing vegetation and soil residual “preemergence” control of various annual grasses and broadleaf weeds such as barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, prickly sida, common ragweed, smartweed. Regrowth may occur from treated perennial grasses and broadleaf weeds, legume sods, perennial grass sods, or grass cover crops such as wheat treated between tillering and boot stage of growth.

Additives: Dry Ammonium Sulfate at 2% by weight (17 lb/100 gal) may increase performance if emerged annual weeds are growing under adverse conditions.

Spray Volume: Apply with at least 10 to 20 gallons of clean water.

General Comments: Apply before or after weed emergence for control of many annual grass and broadleaf weeds in corn. Apply up to 30 days before, during or after planting for all types of corn grown under no-tillage or reduced tillage practices, **but prior to emergence of corn that is not designated as Roundup Ready.** EXPERT also provides preemergence control of annual grasses and broadleaf weeds.

Environmental Statements: EXPERT is a RESTRICTED-USE pesticide with a GROUNDWATER ADVISORY statement on the label. Do not apply to sand or loamy sand soils where the water table is close to the surface and where these soils are very permeable. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products near ground or surface water].

Rain Delay: Rainfall within 2 hours of application may reduce control of emerged weeds.

Rotation Restrictions: Corn, sorghum (milo), or soybeans may be planted the spring following application. Do not plant tobacco, vegetables, or small-seeded legumes the year following application, or injury may occur.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days following application.

Tank Mixtures: When applied before corn emergence EXPERT may be applied in a tank mixture with the following products: Atrazine, Dual II Magnum, Hornet, Princep, Prowl, Python, Roundup (glyphosate), Touchdown. Banvel or 2,4-D (when applied 7 days before planting) may be added as a tank mix partner to obtain acceptable “burndown” control of emerged vegetation prior to corn planting.

SEQUENCERate/A

3.5 pt/A

4 pt/A

(S-metolachlor:glyphosate)

[1.3:1.0lb ai/A]

[1.5:1.13 lb ai/A]

Weeds Controlled: Provides “burndown” of existing vegetation and soil residual “preemergence” control of the following annual grasses and broadleaf weeds such as barnyardgrass, crabgrass, fall panicum, foxtails, black nightshade.

Crop Stage: SEQUENCE may be applied before, during, or after planting. ***Do not apply to emerged conventional corn (i.e. hybrids not designated as Glyphosate Tolerant) or severe crop injury will occur.*** SEQUENCE may be applied to Glyphosate Tolerant corn hybrids after crop emergence until corn plants reach 30 inches in height.

General Comments: SEQUENCE 4.25L contains S-metolachlor + glyphosate [3.0+2.25 lb ai/gal].

Environmental Statements: SEQUENCE has GROUNDWATER ADVISORY statements on the label. Do not use on very permable soil or where ground water is close to the soil surface.

Rain Delay: Rainfall soon application may reduce control of emerged weeds.

Rotation Restrictions: Corn, sorghum (with Concep treated seed), and soybean may be planted immediately; alfalfa after 4 months; wheat, barley, rye, and oats after 4.5 months; clover after 9 months; and tobacco in the spring following application.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 30 days following application.

Tank Mixtures: When applied before corn emergence SEQUENCE may be applied in a tank mixture with the following products: Atrazine, Aim, Axom, Balance Pro, Bicep II Magnum, Callisto, Camix, Clarity, 2,4-D, Degree, Degree Xtra, Dicamba, Distinct, Dual II Magnum, Guardsman, Harness, Harness Xtra, Hornet, Lexar, Lumax, Marksman, Princep, Prowl, Touchdown.

Guide to Weed and Crop Response to Soil Applied Herbicides¹

	Barnyardgrass	Broadleaf Signalgrass	Crabgrass	Fall Panicum	Foxtail	Johnsongrass (seedling)	Johnsongrass (rhizome)	Shattercane (Wild Cane)	Yellow Nutsedge	Black Nightshade	Burcucumber	Cocklebur	Lambsquarters	Morningglory	Pigweed, Smooth	Prickly Sida (Teaweed)	Ragweed, Common	Ragweed, Giant (Horseweed)	Sicklepod	Smartweed	Velvetleaf	Crop Response ²
Acetochlor ³	8	7	8	8	9	5	0	5	7	8	0	0	7	0	8	0	6	0	4	5	0	1
Atrazine	6	4	5	3	6	0	0	0	5	9	7	9	9	8	9	9	9	8	7	9	8	0
Balance PRO	7	7	6	8	8	6	0	6	2	9	7	3	9	4	9	7	9	6	4	8	9	2
Bicep II Magnum / Cinch ATZ	8	7	8	8	9	5	0	5	7	9	6	8	9	7	9	9	9	7	6	9	7	1
Camix (PRE only)	8	7	8	8	9	5	0	5	7	9	-	7	9	6	9	6	7	6	5	9	9	2
Degree Xtra	8	7	8	8	9	5	0	5	7	9	5	7	9	7	9	9	9	6	5	9	6	1
Dual II Magnum / Cinch	8	7	8	8	9	5	0	5	7	8	0	0	5	0	7	0	5	0	4	5	0	1
Expert	8	7	8	8	9	5	0	5	7	9	6	8	9	7	9	9	9	7	6	9	7	1
Guardsman MAX	8	7	8	8	9	5	0	5	7	9	6	8	9	7	9	9	9	7	6	9	7	1
HarnessXtra ⁴	8	7	8	8	9	5	0	5	7	9	6	8	9	7	9	9	9	7	6	9	7	1
Keystone/BreakfreeATZ/FulTime	8	7	8	8	9	5	0	5	7	9	6	8	9	7	9	9	9	7	6	9	7	1
Lexar (PRE only)	8	7	8	8	9	5	0	5	7	9	6	7	9	7	9	7	8	7	5	9	9	2
Lumax (PRE only)	8	7	8	8	9	5	0	5	7	9	6	7	9	6	9	6	8	7	5	9	9	2
Outlook	8	7	8	8	9	5	0	5	7	8	0	0	6	0	8	0	5	0	4	5	0	1
Princep	8	5	7	6	8	2	0	3	2	9	6	7	9	7	9	9	9	7	7	9	8	0
Prowl (PRE only)	8	7	8	8	9	6	2	6	0	0	0	0	8	2	8	2	0	0	0	6	6	2
Python	0	0	0	0	0	0	0	0	0	8	3	6	9	5	9	8	8	6	6	8	7	2
Resolve SG	8	6	5	6	8	-	-	-	-	4	-	6	7	6	8	-	7	-	-	6	6	2
SureStart	8	7	8	7	9	5	0	5	7	8	3	8	9	7	9	8	8	6	6	8	7	1

GOOD = 8-9

FAIR = 6-7

POOR = 5 or less

- Insufficient Data

¹This table should be used only as a guide. The relative response value is based on a numerical scale from 0 to 9 comparing the effectiveness of herbicides to a particular weed. Under certain weather or environmental conditions, a herbicide may perform better or worse than indicated in the table. Response may be less in no-tillage than in conventional tillage. If a farmer is getting satisfactory results under their conditions, they should not necessarily change products as a result of the information in the table.

²A rating of 3 or less will not result in a crop yield loss under normal conditions. Certain corn hybrids vary in their injury response to a herbicide treatment.

³Acetochlor containing products include Breakfree, Confidence, Degree, Harness, Surpass, and Volley.

⁴Ratings are based on Harness Xtra 5.6L formulation.

CORN

SOIL APPLIED HERBICIDES

PRECAUTIONS ON USE OF HERBICIDES CONTAINING ATRAZINE AND SIMAZINE NEAR GROUND OR SURFACE WATER

Herbicide products which contain **atrazine** (i.e. AAtrex, Bicep II Magnum, Brawl II ATZ, Breakfree ATZ, Bullet, Cinch ATZ, Charger Max ATZ, Confidence Xtra, Degree Xtra, Expert, FieldMaster, FulTime, Guardsman Max, Harness Xtra, Keystone, Lexar, Lumax, Marksman, Metal II AT, Parallel Plus, Simazat, Stalwart Xtra, Sterling Plus, Stratos, Volley ATZ, etc.) and **simazine** (Princep, Simazine, Simazat) have special label restrictions for use near ground or surface waters. Current label guidelines emphasize the use of low rates, buffer zones, and conservation tillage practices as methods for reducing the risk of contamination of water sources. The maximum rate of these herbicide products for early preplant, preplant incorporated, or preemergence applications depends on soil erodibility, as defined by the Natural Resources Conservation Service, and percent of ground covered with plant residue.

Rate Restrictions - For soils that are not highly erodible the maximum use rate for **atrazine** or **simazine** is 2.0 lb ai (active ingredient) per acre. For highly erodible soils the maximum rate is also 2.0 lb ai per acre if conservation tillage is utilized and at least 30% of the soil is covered with plant residue. If ground cover is less than 30%, the maximum atrazine or simazine rate is 1.6 lb ai per acre for highly erodible soils. The total amount of atrazine or simazine applied to a field should not exceed 2.5 lb ai per acre per calendar year. For atrazine the rate for postemergence applications should not exceed 2.0 lb ai per acre if no previous atrazine applications were made.

Setbacks - Caution is needed when mixing, loading, or applying **atrazine** and **simazine** near sources of water. According to label directions, atrazine containing products should not be **mixed** or **loaded** within 50 feet of wells (including abandoned wells, drainage wells, or sink holes), rivers, intermittent streams, lakes, or reservoirs. This setback does not apply to the use of properly designed impervious pads and properly diked mixing/loading areas.

These products should not be **applied** within 50 feet of wells or sink holes, within 66 feet of points where field surface water enters permanent or intermittent streams or rivers, or within 200 feet around lakes or reservoirs. If applied to highly erodible soils, the 66 feet buffer area must be planted to a crop or seeded with grass. When atrazine or simazine is to be applied near tile riser pipes applicators can choose to: 1) use a 66 feet setback buffer around the tile riser pipes; 2) apply atrazine and simazine products if field is under no-tillage practices and high crop residue management is maintained; or 3) incorporate atrazine and simazine products in the soil to a depth of 2-3 inches.

Some situations will require a high level of management in order to comply with these restrictions. The maximum labeled rate of atrazine or simazine may not be sufficient to provide season-long control of some problem weeds. Therefore, more emphasis may be needed on using postemergence herbicides, tillage, or crop rotation to help manage such problem weeds as burcucumber, cocklebur, morningglory, giant ragweed, and velvetleaf.

Preemergence Surface

Apply the following soil-residual herbicide treatments to the soil surface before weeds emerge. Rainfall is needed to move the herbicide into the soil for preemergence control of weeds.

CAMIX

CAMIX 2 to 2.4 qt/A

[S-metolachlor:mesotrione (1.67:0.17) to (2.0:0.2) lb ai/A]

[use higher rate when OM \geq 3%]

Weeds Controlled: Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, lambsquarters, pigweeds, smartweed, velvetleaf.

Crop Stage: Apply preemergence on the soil surface no more than 14 days before planting or early postemergence before corn exceeds 12 inches in height.

General Comments: CAMIX contains S-metolachlor + mesotrione [3.34 + 0.33 lb ai/gal] plus benoxacor (corn safener). Do not apply CAMIX early postemergence if corn received an at-plant application of "Counter" insecticide. Consult label before use with other organophosphate or carbamate insecticides. Do not apply other mesotrione products (eg. Callisto, Lexar, Lumax) in the same season as CAMIX.

Environmental Statements: CAMIX contains GROUND and SURFACE WATER advisory statements on the label. Do not use on very permeable soils or where groundwater is close to the soil surface or where the potential exists to enter surface water.

Rain Delay: None.

Rotation Restrictions: Corn may be replanted immediately. Do not plant crops other than corn, soybeans, sorghum, wheat, barley, oats, or rye the spring following application. If applied after June 1, do not rotate to crops other than corn or sorghum. Winter wheat, barley, or rye may be planted 4½ months after application. For other crops wait 18 months before planting as a rotational crop.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 45 days following application.

Tank Mixtures: Atrazine, Princep, 2,4-D, Gramoxone, Roundup, Touchdown, and Warrior insecticide.

Early postemergence tank mixtures include Atrazine, Accent, Basis, Liberty (LL-corn hybrids), Steadfast, Steadfast ATZ.

LEXAR

LEXAR 3 qt/A

[S-metolachlor:mesotrione:atrazine (1.3:0.17:1.3) lb ai/A]

Weeds Controlled: Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, lambsquarters, pigweeds, prickly sida, common ragweed, smartweed, velvetleaf.

Crop Stage: Apply preemergence on the soil surface no more than 14 days before planting or early postemergence before corn exceeds 12 inches in height.

General Comments: LEXAR contains S-metolachlor + mesotrione + atrazine [1.74 + 0.224 + 1.74 lb ai/gal] plus benoxacor (corn safener). Do not apply LEXAR early postemergence if corn received an at-plant application of "Counter" insecticide. Consult label before use with other organophosphate or carbamate insecticides. Do not apply mesotrione products (eg. Callisto, Camix, Lumax) in the same season as LEXAR.

Environmental Statements: LEXAR is a RESTRICTED-USE pesticide with a GROUNDWATER ADVISORY statement. Do not use on very permeable soils or where groundwater is close to the soil surface or where the potential exists to enter surface water. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. LEXAR) near ground or surface water].

Rain Delay: None.

Rotation Restrictions: Do not plant crops other than corn, soybeans, sorghum, or small grain cereals the spring following application. If applied after June 1, do not rotate to crops other than corn or sorghum. For other crops wait 18 months before planting as a rotational crop.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 45 days following application. Do not harvest forage, grain, or stover within 60 days after application.

Tank Mixtures: Atrazine, Gramoxone, Princep, Roundup, Touchdown, and Warrior insecticide. Tank mixtures for early postemergence applications (before corn exceeds 12 inches) include Atrazine, Accent, Basis, Glyphosate products [glyphosate tolerant hybrids], Liberty [LL-corn], Steadfast, Stout. Tank mixtures with 2,4-D is allowed; however, check compatibility before mixing.

LUMAX

LUMAX 2.5 to 3 qt/A
[use higher rate when OM \geq 3%]

[S-metolachlor:mesotrione:atrazine (1.68:0.17:0.47)
to (2.0:0.2:0.75) lb ai/A]

Weeds Controlled: Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, lambsquarters, pigweeds, common ragweed, smartweed, velvetleaf.

Crop Stage: Apply preemergence on the soil surface no more than 14 days before planting or early postemergence before corn exceeds 12 inches in height.

General Comments: LUMAX contains S-metolachlor + mesotrione + atrazine [2.68 + 0.268 + 1.0 lb ai/gal] plus benoxacor (corn safener). Do not apply LUMAX early postemergence if corn received an at-plant application of "Counter" insecticide. Consult label before use with other organophosphate or carbamate insecticides. Do not apply other mesotrione products (eg. Callisto, Camix, Lexar) in the same season as LUMAX.

Environmental Statements: LUMAX is a RESTRICTED-USE pesticide with a GROUNDWATER ADVISORY statement. Do not use on very permeable soils or where groundwater is close to the soil surface or where the potential exists to enter surface water. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. LUMAX) near ground or surface water].

Rain Delay: None.

Rotation Restrictions: Do not plant crops other than corn, soybeans, or sorghum the spring following application. If applied after June 1, do not rotate to crops other than corn or sorghum. Winter wheat, barley, or rye may be planted 4.5 months following application. For other crops wait 18 months before planting as a rotational crop.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 45 days following application.

Tank Mixtures: Atrazine, 2,4-D, Gramoxone, Princep, Roundup, Touchdown. Tank mixtures for early postemergence applications (before corn exceeds 12 inches) include Atrazine, Accent, Basis, Glyphosate products [glyphosate tolerant hybrids], Liberty [LL-corn], Steadfast, Steadfast ATZ, Stout.

PROWL

PROWL 3.3E 2.4 to 3.6 pt/A
OR

(pendimethalin 1 to 1.5 lb ai/A)
OR

PROWL H2O 3 pt/A

(pendimethalin 1.4 lb ai/A)

Weeds Controlled: Barnyardgrass, crabgrass, fall panicum, foxtails, lambsquarters, pigweeds.

Crop Stage: Corn injury can result when PROWL contacts the germinating corn seed; therefore, apply to the soil surface after corn planting. **Do not incorporate PROWL or severe corn injury can result.** To reduce the risk of corn injury, plant at least 1 1/2 inches deep; corn seed must be completely covered with soil. In minimum or no-tillage situations ensure good seed coverage. PROWL may be applied on emerged corn when tank mixed with certain herbicides (consult label).

General Comments: PROWL 3.3E contains 3.3 lb ai/gal pendimethalin. PROWL H2O 3.8L contains 3.8 lb ai/gal pendimethalin. Other pendimethalin products include PENDIMAX.

Environmental Statements: None

Rain Delay: None

Rotation Restrictions: Most crops may be planted following normal growth and harvest of corn. For wheat and barley wait 4 months after application of PROWL before planting. Do not feed forage or graze livestock for 75 days after planting wheat or barley as rotational crops. If tank mixed or used with other herbicides consult the labels for additional crop rotation guidelines.

Harvest & Forage Restrictions: Livestock can graze or be fed forage 21 days after treatment with PROWL H2O.

Tank Mixtures: Atrazine, Banvel, Bicep, Bullet, Dual, Guardsman, Harness, Harness Xtra, Marksman. Early postemergence mixtures include Accent, Atrazine, Banvel, Basis Gold, Beacon, Marksman. Consult label to apply PROWL with other soil-applied or postemergence herbicides regarding maximum corn growth stages, weed heights, and other precautions.

32 Corn

PROWL 3.3E 2.4 to 3.6 pt/A or

PROWL H2O 3 pt/A

+

ATRAZINE 4L 1 to 1.5 qt/A or

AATREX NINE-O 1.1 to 1.6 lb/A

(pendimethalin 1 to 1.5 lb ai/A)

(pendimethalin 1.4 lb ai/A)

+

(atrazine 1 to 1.5 lb ai/A)

Weeds Controlled: Barnyardgrass, black nightshade, cocklebur, common ragweed, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglories, pigweeds, prickly sida, smartweed

Crop Stage: Corn injury can result when PROWL contacts the germinating corn seed; therefore, apply to the soil surface after corn planting. **Do not incorporate PROWL or severe corn injury can result.** To reduce the risk of corn injury, plant at least 1 1/2 inches deep; corn seed must be completely covered with soil. In minimum or no-tillage situations ensure good seed coverage. PROWL may be applied on emerged corn when tank mixed with certain herbicides (consult label).

General Comments: See comments above for use of PROWL on corn.

Environmental Statements: ATRAZINE containing products are RESTRICTED-USE pesticides and contain a GROUND and SURFACE WATER ADVISORY statement on the label. Do not use on very permeable soils or where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of ATRAZINE (i.e. AATREX) near ground or surface water]

Rain Delay: None

Rotation Restrictions: Do not plant small grains or small-seeded legumes and grasses in the fall of the same year or the year following application, or injury may occur. Plant only corn, sorghum or soybeans in the spring following use of ATRAZINE. If applied after June 10, plant only corn or sorghum the following season.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days following application.

RESOLVE Q

RESOLVE SG 1 to 1.5 oz/A

(rimsulfuron 0.015 to :0.023 lb ai/A)

Weeds Controlled: Barnyardgrass, foxtail, pigweeds.

Crop Stage: Apply RESOLVE SG to field corn hybrids with a relative maturity rating of 77 days or more. Do not apply to seed corn, popcorn, or sweet corn. Consult with your seed supplier before applying to corn hybrids known to be sensitive to ALS-type herbicides. For residual control apply preplant to corn and before susceptible weeds emerge. Can also be applied to corn that is up to 12 inches tall or exhibiting 6 or fewer collars, whichever is more restrictive.

General Comments: RESOLVE SG contains 0.25 lb rimsulfuron per lb product. RESOLVE SG is a selective herbicide for foliar and residual control of certain annual grass and broadleaf weeds. Control of emerged weeds will require the addition of spray adjuvants such as a Non-Ionic Surfactant plus an Ammonium Nitrogen fertilizer (28% or 32% Liquid Nitrogen or Ammonium Sulfate). If applied with glyphosate (eg. Roundup) or glufosinate (eg. Liberty) that contains a built-in adjuvant no additional surfactant needs to be added to the spray tank. Do not apply more than 2 oz/A RESOLVE SG during the crop year or a total of 0.5 oz active ingredient of rimsulfuron from applications of other products (consult label). DO NOT apply to corn when certain soil insecticides such as "Counter" will be applied at planting or as a layby treatment. Consult label directions before applying RESOLVE SG with other organophosphate insecticides or foliar herbicides. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Rainfall Delay: Not indicated on the label (6 to 8 hours suggested).

Rotation Restrictions: Rotational crops which may be planted when a maximum of 2 oz/A has been applied per season include field corn anytime; STS-soybean after 4 months; wheat after 4 months; or soybean, popcorn, and sweet corn after 10 months following a RESOLVE SQ application. Other crops may require an 18 month waiting period. If a maximum of 1 oz/A has been applied crops such as STS-soybean may be planted after 1 months; soghum, alfalfa, and red clover after 10 months following application (check label for specific guidelines).

Harvest & Forage Restrictions: Do not graze, feed forage, grain or fodder from treated areas to livestock within 30 days of RESOLVE SG application.

Tank Mixtures: May be tank mixed with other products registered for use in corn unless these mixtures conflict with the RESOLVE SG label. Specific tank mixes listed include glyphosate (eg. Roundup, etc.) glufosinate (eg. Liberty), or Impact + atrazine. RESOLVE SG may also be tank mixed with soil-residual herbicides such as Atrazine, Balance Pro, Cinch, Cinch ATZ, Harness, Lexar, Lumax, Outlook (consult label for use of adjuvants).

Preemergence or Preplant Incorporate

The following soil-residual herbicide treatments may be applied before or after planting but before crop and weeds emerge using one of the following methods: 1) preemergence surface applied in no-tillage; 2) preemergence surface applied in conventional tillage; or 3) shallowly incorporated (surface blended) usually within the upper 1 to 2 inches of soil in conventional tillage. Preemergence surface applied treatments need rainfall to move the herbicide into the soil for preemergence control of weeds.

ACETOCHLOR

DEGREE 3.8CS 3.25 to 4.25 pt/A OR (acetochlor 1.5 to 2 lb ai/A)
 HARNESS 7E 1.75 to 2.25 pt/A
 OR OR
 TOPNOTCH 3.2CS 2 to 2.5 qt/A OR (acetochlor 1.6 to 2 lb ai/A)
 BREAKFREE or SURPASS 6.4EC 2 to 2.5 pt/A

Weeds Controlled: Barnyardgrass, crabgrass, fall panicum, foxtails, black nightshade, pigweed.

Crop Stage: Apply preplant incorporated, preemergence, or early postemergence for control of annual grasses and certain broadleaf weeds. Acetochlor products and certain tank mixtures may be applied up to 30 days before planting. For treatments after planting, apply prior to weed seedling emergence and before corn reaches 11 inches in height.

General Comments: DEGREE 3.8CS is an encapsulated herbicide that contains 3.8 lb ai per gal acetochlor plus MON 13900 (corn safener). HARNESS 7E contains 7 lb ai per gal acetochlor plus MON 13900 (corn safener). TOPNOTCH 3.2CS is an encapsulated herbicide that contains 3.2 lb ai per gal acetochlor plus dichlormid (corn safener); BREAKFREE and SURPASS 6.4EC contain 6.4 lb ai per gal acetochlor plus dichlormid (corn safener). Similar products include VOLLEY 6.4EC. Application rates may vary depending on soil texture, percent organic matter, tillage system, weed species, and tank mixture components. Incorporation and higher use rates will improve control of some weeds.

Environmental Statements: These herbicides have a GROUNDWATER ADVISORY statement on the label and some products are classified as RESTRICTED USE pesticides. Do not use in areas where soils are very permeable, particularly where the groundwater is shallow. Do not apply to coarse soils where depth of groundwater is within 30 feet of the soil surface. Acetochlor products may not be mixed or loaded within 50 feet of wells, sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and to impervious pads or properly diked mixing/loading areas.

Rain Delay: None

Rotation Restrictions: Consult individual product labels for specific guidelines on rotational crops.

Harvest & Forage Restrictions: None.

Tank Mixtures: Atrazine, Balance Pro, Banvel, Clarity, 2,4-D, Glyphosate (Roundup, etc.), Gramoxone, Hornet, Princep, Prowl, Python. Consult the product label to apply early postemergence with Accent, Aim, Atrazine, Banvel, Beacon, Buctril, Clarity, Distinct, Liberty, Lightning, Marksman, Permit, Spirit, Steadfast.

ATRAZINE

ATRAZINE 4L 3 to 4 pt/A or
 AATREX NINE-O 1.6 to 2.2 lb/A (atrazine 1.5 to 2 lb ai/A)

Weeds Controlled: Black nightshade, burcucumber, cocklebur, jimsonweed, lambsquarters, morningglories, pigweeds, prickly sida, common ragweed, giant ragweed, smartweed, velvetleaf.

Crop Stage: Apply to the soil either preplant incorporated or preemergence. ATRAZINE can also be applied up to 30 days before planting, either as a single or split application.

General Comments: AATREX 4L or ATRAZINE 4L contains 4 lb ai atrazine per gal. AATREX NINE-O contains 0.9 lb ai of atrazine per lb product. When applied at or before planting, ATRAZINE can provide "burndown" of small annual weeds that have emerged. Foliar weed control is improved when applied with crop oil and/or a liquid fertilizer solution. Low soil moisture or soil pH above 7.0 may increase persistence; whereas, ATRAZINE dissipates more rapidly when soil pH is acidic.

Environmental Statements: ATRAZINE containing products are RESTRICTED-USE pesticides and contain a GROUND and SURFACE WATER ADVISORY statement on the label. Do not use on very permeable soils or where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of ATRAZINE (AATREX) near ground or surface water]

Rain Delay: None

Rotation Restrictions: Do not plant small grains or small-seeded legumes and grasses in the fall of the same year or the year following application, or injury may occur. Plant only corn, sorghum or soybeans in the spring following use of ATRAZINE. If applied after June 10, plant only corn or sorghum the following season.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days following application.

Tank Mixtures: Dual, Glyphosate, Gramoxone, Micro-Tech, Partner, Princep, Prowl, Simazine, Roundup.

34 Corn

BALANCE PRO

BALANCE PRO 4SC 2.25 to 3 fl.oz/A

(isoxaflutole 0.07 to 0.09 lb ai/A)

[NOTE: apply up to 3.75 fl.oz/A for applications 8 to 21 days prior to planting. [Use lower rates for course soils.]

Weeds Controlled: Foxtails, jimsonweed, lambsquarters, black nightshade, fall panicum, pigweed, common ragweed, smartweed, velvetleaf.

Crop Stage: BALANCE PRO may be preplant incorporated or preplant surface-applied up to 21 days prior to corn planting (30 days when applied as a planned sequential program). When applied preemergence, do not apply after crop emergence or crop injury may occur. Corn should be planted a minimum of 1.5 inches deep with complete soil coverage of the seed furrow.

General Comments: BALANCE PRO contains 4 lb ai isoxaflutole per gal. For use on field corn to control certain grasses and broadleaf weeds. Do not use on other types of corn such as popcorn and sweet corn. BALANCE PRO is not recommended on course soils that have <1.5% O.M. and soil pH >7.5. Apply up to 3.75 oz/A for applications 8 to 21 days prior to planting. Use lower rates for course soils.

Environmental Statements: BALANCE PRO is a RESTRICTED-USE pesticide and has GROUND and SURFACE water advisory statements on the label. Do not apply BALANCE on certain loamy sand and sandy soil types found in Kentucky if the water table is less than 25 feet below ground (consult label for restrictive soils). BALANCE should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.

Rain Delay: None.

Rotation Restrictions: Crops that may be planted include wheat after 4 months; soybeans, barley, popcorn, sweet corn, and grain sorghum after 6 months; and alfalfa after 10 months; Other crops may require an 18 month waiting period with a minimum of 15 inches of cumulative precipitation from time of application to planting of rotational crop.

Harvest & Forage Restrictions: None indicated on the label.

Tank Mixtures: Atrazine, Axiom, Bicep II Magnum, 2,4-D, Dual II Magnum, FulTime, Gramoxone, Guardsman MAX, Harness, Harness Xtra, Micro-Tech, Princep, Roundup, simazine, TopNotch.

BICEP II MAGNUM or CINCH ATZ

BICEP II MAGNUM 1.6 to 2.1 qt/A or
CINCH ATZ 1.6 to 2.1 qt/A

[S-metolachlor:atrazine (1.0:1.2) to (1.3:1.6) lb ai/A]

OR

DUAL II MAGNUM or CINCH 1.33 pt/A

OR

(S-metolachlor 1.3 lb ai/A)

+

AATREX 4L 1.2 to 2 qt/A or

+

(atrazine 1.2 to 2 lb ai/A)

AATREX NINE-O 1.3 to 2.2 lb/A

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglories, black nightshade, pigweeds, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated, preplant surface, or preemergence. These products may be applied up to 30 days before planting as a single application. When applying 30 to 45 days before planting, apply 2/3 full rate early, followed by 1/3 full rate at planting. BICEP II MAGNUM or CINCH ATZ can be applied after planting, but as a broadcast treatment before corn exceeds 5 inches in height and weeds pass the 2-leaf stage.

General Comments: BICEP II MAGNUM and CINCH ATZ are prepackage mixtures containing S-metolachlor + atrazine [2.4 + 3.1 lb ai/gal] plus benoxacor (corn safener). Other products include BRAWL II ATZ, CHARGER MAX ATZ, METAL II AT, PARALLEL PLUS, and STALWART XTRA.

Environmental Statements: These products are RESTRICTED-USE pesticides with a GROUNDWATER ADVISORY statement. Do not use on very permeable soils or where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. BICEP II MAGNUM, BRAWL II ATZ, CINCH ATZ, METAL II AT, PARALLEL PLUS, STALWART XTRA) near ground or surface water].

Rain Delay: None

Rotation Restrictions: Do not plant small grains or small-seeded legumes in the fall of the same year or the year following application, or injury may occur. Plant only corn, sorghum or soybeans in the spring following application. If applied after June 10, plant only corn or sorghum the following season.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days following application.

Tank Mixtures: AAtrex, Atrazine, Balance, Banvel, Cinch, 2,4-D, Dual II Magnum, Gramoxone, Princep, Roundup. Postemergence tank mixtures include Exceed, Spirit alone or plus Accent, and Liberty (LL-corn) or Roundup Ultra (RR-corn). Consult label to apply with other herbicides regarding corn growth stages, weed heights, and other precautions.

DEGREE XTRA

DEGREE XTRA 4.04CS	2.9 to 3.7 qt/A	[acetochlor:atrazine (1.95:0.97) to (2.49:1.23) lb ai/A]
	OR	OR
DEGREE 3.8CS	3.25 to 4.25 pt/A	(acetochlor 1.5 to 2 lb ai/A)
	+	+
ATRAZINE 4L	1.0 to 1.5 qt/A or	(atrazine 1 to 1.5 lb ai/A)
AATREX NINE-O	1.1 to 1.6 lb/A	

Weeds Controlled: Barnyardgrass, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated, preemergence, or early postemergence before weed seedlings reach the 2-leaf stage and corn is no more than 11 inches in height. DEGREE XTRA may be applied up to 30 days before planting.

General Comments: DEGREE XTRA 4.04CS is a pre-package mixture containing encapsulated acetochlor +atrazine [2.7 + 1.34 lb ai/gal] plus MON 13900 (corn safener). Rate may vary depending on soil texture, percent organic matter, tillage system, weed species, and tank mixture components. Incorporation and higher use rates will improve control of some weeds.

Environmental Statements: DEGREE XTRA and ATRAZINE are RESTRICTED-USE pesticides with a GROUNDWATER ADVISORY statement on the label. Do not use in areas where soils are very permeable, particularly where the groundwater is shallow. Do not apply to coarse soils where depth of groundwater is within 30 feet of the soil surface. NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. DEGREE XTRA) near ground or surface water].

Rain Delay: None

Rotation Restrictions: Do not rotate to crops other than corn, soybeans, sorghum (milo), wheat, or tobacco. The possibility of crop injury can occur to soybeans or other nonlabeled crops planted in the year following application.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days following application.

Tank Mixtures: Atrazine, 2,4-D, Gramoxone, Harness, Princep, Roundup. Consult label to apply early postemergence with Accent, Banvel, Clarity, Marksman, or Permit. DEGREE XTRA may also be tank mixed with Hornet, Python, Prowl, or Roundup (RR-corn).

DUAL II MAGNUM [S-metolachlor]

DUAL II MAGNUM	1.33 to 1.67 pt/A or	(S-metolachlor 1.3 to 1.6 lb ai/A)
CINCH	1.33 to 1.67 pt/A	
	OR	OR
PARALLEL 7.8E	1.33 to 1.67 pt/A or	
STALWART C 7.8E	1.33 to 1.67 pt/A	(metolachlor 1.3 to 1.6 lb ai/A)

Weeds Controlled: Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails. Incorporation and higher use rates will improve control of weeds such yellow nutsedge, black nightshade, and triazine resistant pigweed.

Crop Stage: Apply preplant incorporated or preemergence for control of annual grasses and certain broadleaf weeds. Metolachlor products may be applied up to 30 days before planting as a single or split application and/or when tank mixed with atrazine. May also be applied as a broadcast treatment after planting, but before weed seedlings have emerged and before corn exceeds 5 inches tall.

General Comments: Other metolachlor containing products include CHARGER MAX, CINCH, PARALLEL, and STALWART C. DUAL II MAGNUM, CHARGER MAX, CINCH, METAL II contain 7.64 lb ai S-metolachlor per gal plus benoxacor (corn seed safener). PARALLEL and STALWART C contain 7.8 lb ai metolachlor per gal plus a corn seed safener.

Environmental Statements: These products have a GROUNDWATER ADVISORY statement on the label. Do not use on very permeable soils or where groundwater is close to the soil surface.

Rain Delay: None

Rotation Restrictions: Corn, soybean and grain sorghum (use Concep or Screen treated sorghum seed) may be planted anytime following application. Small grains may be planted 4 1/2 months, alfalfa 4 months, and clover 9 months following application. Other crops may require a 12 month waiting period.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 30 days following application.

Tank Mixtures: AAtrex, Atrazine, Balance, Banvel, 2,4-D, Gramoxone, Princep, Prowl, Roundup. Postemergence tank mixtures include Liberty (LL-corn) or Roundup (RR-corn). Consult label to apply with other herbicides regarding corn growth stages, weed heights, and other precautions.

36 Corn

FULTIME

FULTIME 4CS 2.7 to 3.3 qt/A	[acetochlor:atrazine (1.62:1.1) to (1.98:1.3) lb ai/A]
OR	OR
TOPNOTCH 3.2CS 2 to 2.5 qt/A	(acetochlor 1.6 to 2 lb ai/A)
+	+
ATRAZINE 4L 1.25 to 1.5 qt/A or	(atrazine 1.25 to 1.5 lb ai/A)
AATREX NINE-O 1.4 to 1.6 lb/A	

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated, preemergence, or early postemergence. FULTIME may also be applied up to 40 days before planting. For treatments after planting, apply before corn reaches 11 inches in height.

General Comments: FULTIME is a pre-package mixture containing a micro-encapsulated combination of acetochlor + atrazine [2.4+1.6 lb ai/gal] plus dichlormid (corn safener). Application rate may vary depending on soil texture, percent organic matter, tillage system, time of application, and tank mixture components. Incorporation and higher use rates will improve control of some weeds.

Environmental Statements: FULTIME is a RESTRICTED-USE pesticide with a GROUNDWATER advisory statement on the label. Do not use in areas where soils are very permeable, particularly where the groundwater is shallow. Do not apply to areas having high groundwater tables. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. FULTIME) near ground or surface water].

Rain Delay: None

Rotation Restrictions: Corn may be replanted immediately if crop is lost. Do not apply FulTime after June 10, unless only corn will be planted the following year. Otherwise, sorghum or soybean may be planted the spring following application. Alfalfa, barley, millet, oats, rye, tobacco, or wheat may be planted 15 months after application. The potential for injury to tobacco may occur because of atrazine carryover.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days.

Tank Mixtures: FULTIME tank mixes include Atrazine, Clarity, 2,4-D, Gramoxone, TopNotch, Touchdown, Princep. Consult FULTIME label to apply early postemergence with other tank mix products.

GUARDSMAN MAX

GUARDSMAN MAX 5S 3 to 4.6 pt/A	[dimethenamid-P:atrazine (0.64:1.2) to (0.98:1.9) lb ai/A]
OR	OR
OUTLOOK 6E 14 to 21 oz/A	(dimethenamid-P 0.66 to 0.98 lb ai/A)
+	+
ATRAZINE 4L 1 to 2 qt/A or	(atrazine 1 to 2 lb ai/A)
AATREX NINE-O 1.1 to 2.2 lb/A	

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated or preemergence for control of annual grasses and broadleaf weeds. GUARDSMAN MAX may be applied up to 30 days before planting as a single or split application. For treatments after planting, apply before corn exceeds 12" tall and before weeds are greater than 1.5 inches.

General Comments: GUARDSMAN MAX 5S contains dimethenamid-P + atrazine [1.7 + 3.3 lb ai per gal]. Rates may vary depending on soil CEC (Cation Exchange Capacity) or soil texture and organic matter. Higher use rates, incorporation, and/or a tank mixture with other herbicides will improve control of some weeds.

Environmental Statements: GUARDSMAN MAX and ATRAZINE are RESTRICTED-USE pesticides with GROUNDWATER ADVISORY statements on the label. Do not use on very permeable or course soils and where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. GUARDSMAN MAX) near ground or surface water].

Rain Delay: None

Rotation Restrictions: Plant only corn, sorghum, or soybeans in the spring following use of GUARDSMAN MAX. Do not plant small grains, small-seeded legumes, grasses, tobacco, or vegetable crops the year following application.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days.

Tank Mixtures: Atrazine, Balance, Banvel, Clarity, 2,4-D, Gramoxone, Hornet, Outlook, Princep, Prowl, Python, Roundup, Touchdown. Consult product labels to apply early postemergence with Accent, Accent Gold, Atrazine, Banvel, Basis Gold, Beacon, Clarity, Liberty (LL-corn), Lightning (IMI-corn), Marksman, Permit, Prowl, Pursuit (IMI-Corn), ReadyMaster ATZ (RR-corn), Roundup Ultra (RR-corn).

HARNESS XTRA (5.6L)

HARNESS XTRA 5.6L 2.3 to 2.4 qt/A	[acetochlor:atrazine (1.78:1.4) to (1.86:1.5) lb ai/A]
OR	OR
HARNESS 7E 1.75 to 2.25 pt/A	(acetochlor 1.5 to 2 lb ai/A)
+	+
ATRAZINE 4L 1.25 to 1.5 qt/A or AATREX NINE-O 1.4 to 1.6 lb/A	(atrazine 1.25 to 1.5 lb ai/A)

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated, preemergence, or early postemergence before weed seedlings reach the 2-leaf stage and corn is no more than 11 inches in height. HARNESS XTRA may be applied up to 30 days before planting.

General Comments: HARNESS XTRA 5.6L is a pre-package mixture containing acetochlor + atrazine [3.1 + 2.5 lb ai/gal] plus MON 13900 (corn safener). Similar products include CONFIDENCE XTRA 5.6L. Rate may vary depending on soil texture, percent organic matter, tillage system, weed species, and tank mixture components. Incorporation and higher use rates will improve control of some weeds.

Environmental Statements: HARNESS XTRA and ATRAZINE are RESTRICTED-USE pesticides with a GROUNDWATER ADVISORY statement on the label. Do not use in areas where soils are very permeable, particularly where the groundwater is shallow. Do not apply to coarse soils where depth of groundwater is within 30 feet of the soil surface. NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. HARNESS XTRA, etc.) near ground or surface water].

Rain Delay: None

Rotation Restrictions: For HARNESS XTRA corn, sorghum (milo), and soybeans may be planted in the year following application. The possibility of crop injury can occur to soybeans or other nonlabeled crops planted in the year following application.

Harvest & Forage Restrictions: Do not graze or feed forage from treated areas for 60 days.

Tank Mixtures: Atrazine, 2,4-D, Gramoxone, Harness, Princep, Roundup. Consult HARNESS XTRA label to apply early postemergence with Accent, Banvel, Clarity, Marksman, or Permit.

KEYSTONE or BREAKFREE ATZ

KEYSTONE 5.25S 2.4 to 2.8 qt/A or BREAKFREE ATZ 2.4 to 2.8 qt/A	[acetochlor:atrazine (1.8:1.3) to (2.1:1.6) lb ai/A]
OR	OR
BREAKFREE 2.5 pt/A	(acetochlor 2 lb ai/A)
+	+
ATRAZINE 4L 1 to 2 qt/A or ATRAZINE NINE-O 1.1 to 2.2 lb/A	(atrazine 1 to 2 lb ai/A)

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply preplant incorporated, preemergence, or early postemergence. These herbicides may also be applied up to 30 days prior to planting. For treatments after planting apply before corn reaches 11 inches in height.

General Comments: KEYSTONE and BREAKFREE ATZ are premixes containing acetochlor + atrazine [3 + 2.25 lb ai/gal] plus dichlormid (corn safener). Similar products include VOLLEY ATZ. Application rate may vary depending on soil texture, percent organic matter, tillage system, time of application, and tank mixture components. Incorporation and higher use rates will improve control of some weeds.

Environmental Statements: KEYSTONE, BREAKFREE ATZ, and VOLLEY ATZ are RESTRICTED-USE pesticides with a GROUNDWATER ADVISORY statement on the label. Do not use in areas where soils are very permeable, particularly where the groundwater is shallow. Do not apply to areas having high groundwater tables. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products (eg. KEYSTONE, BREAKFREE ATZ, VOLLEY ATZ) near ground or surface water].

Rain Delay: None

Rotation Restrictions: Corn may be replanted immediately if crop is lost. Do not apply after June 10, unless only corn will be planted the following year. Otherwise, sorghum or soybean may be planted the spring following application. Alfalfa, barley, millet, oats, rye, tobacco, or wheat may be planted 15 months after applicaton. The potential for injury to tobacco may occur because of atrazine carryover.

Harvest & Forage Restrictions: Do not graze or feed forage for 60 days following application.

Tank Mixtures: Atrazine, Balance Pro, Banvel, Clarity, 2,4-D, glyphosate (Glyphomax Plus, Roundup, Touchdown), Gramoxone, Hornet WDG, Marksman, Princep, Prowl, Python, Surpass EC. Consult label to apply early postemergence with other tank mix products.

38 Corn

OUTLOOK

OUTLOOK 6E 14 to 21 oz/A

(dimethenamid-P 0.66 to 0.98 lb ai/A)

Weeds Controlled: Barnyardgrass, crabgrass, fall panicum, foxtails, black nightshade, pigweed. Incorporation and higher rates will improve control of some weeds.

Crop Stage: Apply preplant, preemergence or early postemergence for control of annual grasses and certain broadleaf weeds. OUTLOOK may be applied up to 30 days before planting as a single or split application and/or when tank mixed with other herbicides. When used after crop emergence but prior to weed germination, apply OUTLOOK as a broadcast application to corn up to 12 inches tall. As a lay-by treatment, apply to corn that is between 12" to 36" tall (directed applications are recommended for best performance).

General Comments: OUTLOOK 6E contains 6 lb ai diethenamid-P per gal. Application rate may vary depending on soil CEC (cation exchange capacity) or soil texture and percent organic matter.

Environmental Statements: OUTLOOK has a GROUNDWATER ADVISORY statements on the label. Do not use on very permeable soils or where groundwater is close to the soil surface. OUTLOOK may not be mixed or loaded within 50 feet of wells, sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and to impervious pads or properly diked mixing/loading areas.

Rain Delay: None

Rotation Restrictions: Fall-seeded small grains may be planted 4 months or more following treatment. Other rotational crop may be planted the following spring.

Harvest & Forage Restrictions: Corn may be grazed or fed to livestock 40 days after application.

Tank Mixtures: 2,4-D, Acquire, Atrazine, Balance, Banvel, Clarity, Gramoxone, Princep, Prowl, Roundup, Touchdown. Consult product labels to apply early postemergence with Accent, Atrazine, Banvel, Beacon, Clarity, Liberty (LL-corn), Lightning (IMI-corn), Marksman, Ready Master ATZ (RR-corn).

PYTHON

PYTHON 80WDG 1 to 1.33 oz/A

(flumetsulam 0.5 to 0.67 lb ai/A)

Weeds Controlled: Lambsquarters, black nightshade, pigweed, prickly sida, common ragweed, smartweed.

Crop Stage: Apply as a preplant surface, preplant incorporated or postplant preemergence treatment. PYTHON may be applied up to 30 days before planting or from corn emergence (cracking stage) up to 2 inches in height (NOTE: do not use liquid fertilizer when applied during the spike stage of corn).

General Comments: PYTHON 80WDG contains 0.8 lb ai flumetsulam per lb product. Use the higher use rate on soils with >3% organic matter and/or when applied 14 to 30 days before planting. Do not apply in areas where 1) soil pH is greater than 7.8, or 2) soil pH <5.9 and organic matter exceeds 5%. Corn planting depth should be at least 1.5 inches. Do not apply PYTHON if Counter or Thimet insecticide are to be applied to corn. Use of a soil insecticide should be applied in a T-band or a band to avoid potential crop injury. Do not exceed 0.07 lb ai flumetsulam in a single crop year applied either as PYTHON (1.4 oz/A) or as the active ingredient in sequential or tank mix applications with other herbicide products that contain flumetsulam.

Environmental Statements: PYTHON has a GROUNDWATER ADVISORY statement on the label.

Rain Delay: None

Rotation Restrictions: The following rotational crops may be planted following an application of PYTHON. For alfalfa, wheat, barley, oats, and rye wait 4 months; popcorn and tobacco 9 months; grain sorghum 12 months; and sweet corn 18 months following application. Other crops such as forage grasses require a 26 month waiting period and a successful field bioassay.

Harvest & Forage Restrictions: An interval of 85 days is required between PYTHON application and field corn harvest.

Tank Mixtures: 2,4-D, Gramoxone, Roundup, Touchdown. May also be tank mixed with other soil-applied herbicides unless prohibited by the label of a tank mix partner.

SIMAZAT

SIMAZAT 4L 4 to 6 pt/A	[simazine:atrazine (1.0:1.0) to (1.5:1.5) lb ai/A]
OR	OR
ATRAZINE 4L 2 to 3 pt/A or AATREX NINE-O 1.1 to 1.6 lb/A	(atrazine 1 to 1.5 lb ai/A)
+	+
PRINCEP 4L 2 to 3 pt/A or PRINCEP CALIBER 90 1.1 to 1.6 lb/A	(simazine 1 to 1.5 lb ai/A)

Weeds Controlled: Black nightshade, cocklebur, foxtails, giant ragweed, jimsonweed, lambsquarters, morningglories, pigweeds, prickly sida, common ragweed, smartweed, velvetleaf.

Crop Stage: Apply to the soil either preplant incorporated or preemergence. May be applied early preplant within 2 weeks prior to planting. Do not apply after corn emergence.

General Comments: SIMAZAT 4L is a premixture containing simazine + atrazine [2.0 + 2.0 lb ai/gal]. Low soil moisture or soil pH above 7.0 may increase persistence; whereas, simazine and atrazine dissipate more rapidly when soil pH is acidic.

Environmental Statements: SIMAZAT is a RESTRICTED-USE pesticide and contains a GROUND and SURFACE WATER ADVISORY statement on the label. Do not use on very permeable soils or where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of SIMAZAT near ground or surface water]

Rain Delay: None

Rotation Restrictions: Land treated with SIMAZAT should not be planted to any crop except corn or sorghum until the following year or injury may occur. Do not plant tobacco, vegetables, small grains or small-seeded legumes and grasses in the fall of the same year or the year following application, or injury may occur. When applied after June 10, plant only corn or sorghum the following season. If SIMAZAT is applied at rates higher than 4 pt/A a crop of untreated corn or sorghum should precede the next rotational crop.

Harvest & Forage Restrictions: Do not graze treated areas or feed treated forage to livestock for 60 days after application.

Tank Mixtures: Atrazine, Paraquat

SIMAZINE

PRINCEP 4L 2 to 4 pt/A or PRINCEP CALIBER 90 1.1 to 2.2 lb/A	(simazine 1 to 2 lb ai/A)
or	
SIMAZINE 4L 2 to 4 pt/A or SIMAZINE 90DF 1.1 to 2.2 lb/A	

Weeds Controlled: Barnyardgrass, black nightshade, foxtails, lambsquarters, pigweeds, prickly sida, common ragweed, smartweed, velvetleaf.

Crop Stage: Apply to the soil either preplant incorporated or preemergence. Do not apply after corn emergence. PRINCEP is also labeled for applications the previous fall before corn planting to target weed problems such as Italian ryegrass and other cool-season annual weeds.

General Comments: PRINCEP 4L and SIMAZINE 4L contains 4 lb ai simazine per gal. PRINCEP CALIBER 90 and SIMAZINE 90DF contains 0.9 lb ai of simazine per lb product. PRINCEP is more persistent in soil than atrazine. Low soil moisture or soil pH above 7.0 may increase persistence. Whereas, PRINCEP dissipates more rapidly when soil pH is acidic.

Environmental Statements: PRINCEP and SIMAZINE have a GROUNDWATER ADVISORY statements. Do not use on very permeable soils or where groundwater is close to the soil surface. [NOTE: See page 29 for PRECAUTIONS on use of Simazine near ground or surface water.]

Rain Delay: None

Rotation Restrictions: Do not plant small grains or small-seeded legumes in the fall of the same year. Plant only corn or soybeans in the spring following use of PRINCEP (simazine). If rate exceeds 3 lb active ingredient per acre, a crop of untreated corn should precede the next rotational crop.

Harvest & Forage Restrictions: Do not graze corn treated with PRINCEP (simazine). No label restrictions which prohibit use of treated corn for silage or haylage.

Tank Mixtures: Atrazine, Glyphosate, Gramoxone Extra.

40 Corn

SURESTART

SURESTART 4.25 SE 1.75 pt/A

[acetochlor:flumetsulam:clopyralid (0.82 :0.03:0.08) lb ai/A]

Weeds Controlled: Barnyardgrass, cocklebur, crabgrass, foxtails, lambsquarters, morningglory, black nightshade, pigweed, common ragweed, prickly sida, smartweed.

Crop Stage: Apply preplant surface, preplant incorporated, postplant preemergence, or early postemergence (up to 11 inch tall corn). SURESTART may also be applied up to 30 days before planting.

General Comments: SURESTART 4.25SE is a pre-package mixture containing acetochlor + flumetsulam + clopyralid [3.75 + 0.12 + 0.38 lb ai per lb product] plus dichlormid corn safener. Corn planting depth should be at least 1.5 inches. Do not apply in areas where 1) soil pH>7.8, 2) soil pH<5.9 and organic matter exceeds 5%, or 3) soils that average less than 1.5% organic matter, unless the risk of crop injury is acceptable. Do not apply SURESTART if Counter or Thimet insecticide has been applied to corn. Soil applied organophosphate insecticide should be applied in a T-band or a band to avoid potential crop injury. The maximum application amount of SURESTART on corn is 3.5 pt/A per crop season.

Environmental Statements: SURESTART has ground and surface water advisory statements on the label. Do not use on very permeable soils or where groundwater is close to the soil surface.

Rain Delay: None

Rotation Restrictions: The following rotational crops may be planted as indicated: wheat after 4 months; alfalfa, barley, clover, oats, rye, soybean the spring following application; sorghum 12 months; and tobacco 18 months following application.

Harvest & Forage Restrictions: An interval of at least 85 days is required between SURESTART application and field corn harvested for grain.

Tank Mixtures: Glyphosate products [eg. Durango, Roundup, Touchdown], glufosinate [eg. Liberty], paraquat [eg. Gramoxone], and 2,4-D. Do not tank mix with another pesticide product that contains the same active ingredient as this product.

Tank Mixtures Labeled for Postemergence Corn Herbicides

	ACCENT	AIM	ATRAZINE	CALLISTO	CLARITY (dicamba)	2,4-D	GLYPHOSATE	LAUDIS	OPTION	PERMIT	SPIRIT	STATUS	STEADFAST
Accent	-	L	L	L	L	X	NL	L	NL	L	L	L	X
Aim	L	-	L	L	L	L	L	NL	L	L	L	L	L
Atrazine	L	L	-	L	L	NL	L	L	L	L	L	L	L
Callisto	L	L	L	-	NL	NL	NL	NL	L	L	NL	L	L
Clarity (dicamba)	L	L	L	NL	-	NL	NL	NL	L	L	L	X	L
2,4-D	X	L	NL	NL	NL	-	NL	NL	NL	L	L	X	X
Equip	NL	L	L	NL	L	NL	NL	NL	NL	L	NL	L	NL
Glyphosate (eg. Roundup)	NL	L	L	NL	NL	NL	-	L	NL	L	L	L	NL
Impact	L	NL	L	X	L	L	NL	NL	L	L	NL	L	L
Laudis	L	NL	L	NL	NL	NL	L	-	L	NL	NL	NL	L
Liberty	L	L	L	L	L	NL	X	L	NL	L	NL	L	NL
Lightning	NL	L	L	L	L	L	NL	NL	NL	NL	NL	L	X
Option	NL	L	L	L	L	NL	NL	L	-	L	L	L	X
Permit	L	L	L	L	L	L	L	NL	L	-	NL	L	L
Prowl	L	NL	L	NL	NL	NL	NL	NL	NL	NL	NL	NL	L
Require Q	-	-	L	-	X	NL	L	-	-	-	-	X	-
Resolve Q	-	-	L	-	L	-	L	-	-	-	-	NL	-
Spirit	L	L	L	NL	L	L	L	NL	L	NL	-	L	L
Status	L	L	L	L	X	X	L	NL	L	L	L	-	L
Steadfast	X	L	L	L	L	X	NL	L	X	L	L	L	-
Stout	X	NL	L	L	L	X	NL	L	X	X	L	L	X
Touchdown	NL	L	L	NL	L	L	NL	L	NL	NL	NL	L	NL

L = Labeled tank mixture. Consult labels for use of additives and precautions.

NL = Not a labeled tank mixture. Consult each herbicide label for precautions or restrictions that may limit mixing with chemicals not listed on the label.

X = Do not tank mix these products since severe crop injury, maximum herbicide active ingredient use rates per calendar year may be exceeded, herbicide carryover, or herbicide antagonism may occur.

Guide to Weed and Crop Response to Postemergence Corn Herbicides¹

	Barnyardgrass	Broadleaf Signalgrass	Crabgrass	Fall Panicum	Foxtail	Johnsongrass (seedling)	Johnsongrass (rhizome)	Ryegrass, Annual (Italian)	Shattercane (Wild Cane)	Yellow Nutsedge	Black Nightshade	Burcucumber	Cocklebur	Lambsquarters	Morningglory	Pigweed, Smooth	Prickly Sida (Teaweed)	Ragweed, Common	Ragweed, Giant	Sicklepod	Smartweed	Velvetleaf	Crop Response ²
Accent / NIC-IT	8	8	5	7	8	9	8	7	9	5	2	7	6	5	6	8	2	2	2	4	6	5	3
Aim	1	0	1	1	1	1	0	-	1	0	8	3	7	8	7	7	6	6	3	1	6	9	3
Atrazine + Crop Oil	6	6	5	5	6	0	0	1	3	6	9	7	9	9	7	9	7	9	8	6	9	8	0
Callisto	6	6	6 ⁵	2	3	0	0	2	0	5	8	7	8	9	7	8	5	7	8	-	8	9	2
2,4-D	0	0	0	0	0	0	0	0	0	0	7	3	9	9	9	9	8	9	9	6	7	8	3
Dicamba [Clarity, etc.]	0	0	0	0	0	0	0	0	0	0	9	7	9	9	9	9	8	9	9	7	9	8	2
Equip	8	7	6	7	8	9	7	7	9	4	8	8	8	8	7	8	-	8	8	7	8	8	2
Expert/Sequence (RR-corn) ⁴	9	9	9	9	9	9+	9	8	9	6	7	8	9	9	7	9	7	9	8	7	9	8	1
Glyphosate ³ (RR-corn) ⁴	9	9	9	9	9	9+	9	8	9	6	8	8	9	8	7	9	7	7	8	8	8	8	0
Halex GT (RR-corn) ⁴	9	9	9	9	9	9+	9	8	9	6	8	8	9	9	7	9	7	7	8	8	8	9	2
Impact	6	-	6	5	7	5	0	-	6	5	9	7	8	9	6	9	-	7	7	-	9	9	1
Laudis	6	-	6	-	6	-	0	-	-	-	8	-	8	8	6	8	-	-	8	-	-	8	1
Liberty / Ignite (LL-corn) ⁴	7	7	7	8	9 ⁶	8	6	7	8	5	8	7	9	8	8	8	8	9	8	7	9	8	0
Lightning (CLEARFIELD) ⁴	8	8	7	8	9	8	7	7	9	6	9	6	9	8	8	9	8	7	8	7	9	9	3
Option	8	7	6	7	8	9	8	7	9	4	8	6	7	7	5	7	4	7	6	5	4	7	2
Permit	2	2	2	3	3	3	0	-	3	8	4	3	9	4	4	8	7	8	7	2	7	8	2
Require Q	7	-	6	7	8	-	-	-	9	-	8	7	8	8	7	9	-	7	7	6	8	8	2
Resolve Q	7	-	6	7	8	-	-	-	9	-	3	-	7	7	6	9	-	6	4	-	7	8	2
Spirit	3	2	3	6	6	8	6	5	9	5	8	8	9	6	6	8	7	9	9	6	8	7	3
Status	5	1	3	5	5	5	2	0	5	0	8	7	9	9	8	9	8	9	9	8	8	8	2
Steadfast	8	8	6	7	8	9	8	7	9	6	2	7	6	5	6	8	2	2	2	4	6	5	3
Stout	8	8	5	7	8	9	8	7	9	5	2	7	6	8	7	8	4	6	4	4	8	8	3
	EXCELLENT = 9+					GOOD = 8-9			FAIR = 6-7			POOR = 5 or less			- Insufficient Data								

¹ This table should be used only as a guide. The relative response value is based on a numerical scale from 0 to 9 comparing the effectiveness of herbicides to a particular weed. Under certain weather or environmental conditions, a herbicide may perform better or worse than indicated in the table. If a farmer is getting satisfactory results under their conditions, they should not necessarily change products as a result of the information in the table.

² A rating of 3 or less will not result in a crop yield loss under normal conditions. Certain corn hybrids vary in their injury response to a herbicide treatment.

³ Examples of GLYPHOSATE products labeled for use on Roundup Ready corn include: **Buccaneer Plus, ClearOut 41 Plus, Credit, Durango, Glyfos X-tra, Glyphomax XRT, GlyStar Plus, Roundup Original MAX, Roundup WeatherMAX, Touchdown Total.**

⁴ Apply only on selected field corn hybrids designated with GENETIC resistance/tolerance to imidazolinone herbicides (CLEARFIELD hybrids) or to LibertyLink (LL-corn) or to Roundup-Ready (RR-corn). Consult the label for guidelines and specific directions.

⁵ Effectiveness on large crabgrass; less effective on smooth crabgrass. ⁶ Effectiveness of LIBERTY on yellow foxtail may be lower (7)

Response of Perennial Broadleaf Weeds to Postemergence Corn Herbicides¹

	Bindweed, Field	Dandelion	Dogbane, Hemp	Horsenettle	Milkweed, Common	Milkweed, Honeyvine	Pokeweed, Common	Thistle, Canada	Thistle, Musk	Trumpetcreepe
Accent / NIC-IT	3	7	6	3	6	6	4	5	2	2
Callisto	-	7	5	6	-	-	7	6	-	-
2,4-D	5	7	5	4	4	4	5	5	7	-
Dicamba [Clarity, Banvel, etc]	6	7	6	6	6	6	7	6	7	7
Expert (RR-corn) ²	7	7	7	7	7	6	7	7	5	7
Glyphosate (RR-corn) ²	7	8	7	7	7	6	7	8	5	7
Liberty / Ignite (LL-corn) ²	5	7	6	4	6	6	5	4	-	-
Lightning (CLEARFIELD) ²	6	-	-	4	6	7	7	5	-	3
Permit	3	5	3	-	6	7	5	2	-	-
Spirit	6	6	6	7	6	7	6	6	3	3
Status	6	8	6	-	6	7	7	6	7	-
Steadfast	3	7	5	3	-	-	3	5	2	2
Stout	-	7	6	-	-	-	6	6	-	-

GOOD = 8-9 FAIR = 6-7 POOR = 5 or less - Insufficient Data

¹ **Effectiveness of in-season herbicide treatments for perennial and biennial broadleaf weeds often provides only partial control or suppression.** The response value indicated is based on a numerical scale from 0 to 9 comparing the relative effectiveness of the herbicides listed to a particular weed. Under certain weather or environmental conditions, a herbicide may perform better or worse than indicated in the table. **Therefore, this table should be used only as a guide for selecting treatments to deal with problem weeds.**

² Apply only on selected field corn hybrids designated with GENETIC resistance/tolerance to imidazolinone herbicides (CLEARFIELD hybrids) or to LibertyLink (LL-corn) or to Roundup-Ready (RR-corn). Consult the label for guidelines and specific directions.

Maximum Weed Size Labeled for Postemergence Herbicide Applications

HERBICIDE	Rate/A	Barnyardgrass	Broadleaf Signalgrass	Crabgrass, Large	Fall Panicum	Foxtail	Johnsongrass (seedling)	Johnsongrass (rhizome)	Ryegrass, Annual (Italian)	Shattercane (Wild Cane)	Yellow Nutsedge
Accent	0.67 oz	4"	2"	X	4"	4"	12"	18"	6"	12"	X
Equip	1.5 oz	4"	2"	2"	3"	3"	8"	8"	4"	8"	X
Halex GT	3.6 - 4 pt	4"	4"	4"	4"	4"	4"	4"	X	4"	4"
Ignite 280 SL (LL-corn)	22 oz	3"	3"	3" ³	3"	6" ³	3"	X	X	6"	X
Impact	0.75 fl.oz	4"	3" ¹	3"	3" ¹	3" ²	4" ¹	X	X	X	X
Laudis	3 fl.oz	5"	4"	3"	X	3"	5"	X	X	6"	X
Liberty (LL-corn)	32 fl.oz	3"	4"	3" ³	3"	6" ³	6"	X	X	6"	X
Lightning (CLEARFIELD hybrids)	1.28 oz	3"	8"	3"	3"	3"	8"	16" ¹	6"	8"	3" ¹
Option	1.5 oz	4"	2"	2"	3"	3"	16"	16"	8"	12"	X
Permit	0.67 oz	X	X	X	X	X	X	X	X	X	12" ¹
	1.33 oz	X	X	X	X	X	X	X	X	X	12"
Require Q	4 oz	2"	2" ¹	0.5"	2"	2"	2" ¹	X	2" ¹	4"	2" ¹
Resolve Q	1.25 oz	2"	2" ¹	0.5"	2"	2"	2" ¹	X	2" ¹	4"	2" ¹
GLYPHOSATE 4S (RR-corn)	1.5 pt	5"	5"	18"	6"	12"	18"	X	X	18"	X
	2 pt	7"	7"	18"	8"	20"	18"	Boot stage	6"	18"	<6" ¹
Roundup WeatherMAX (RR-corn)	16 fl.oz	3"	3"	6"	4"	12"	12"	X	X	12"	X
	22 fl.oz	6"	6"	12"	6"	20"	18"	Boot stage	6"	20"	<6" ¹
Steadfast	0.75 oz	4"	2"	1"	4"	4"	12"	12"	4"	6"	2" ¹
Stout	0.5 oz	2"	X	X	2"	2"	6"	6"	X	6"	X
	0.75 oz	4"	2"	X	3"	4"	12"	18"	6"	12"	X

X = Not labeled for control. Some weeds may be labeled for suppression or partial control.

¹ Suppression, partial control, or reduced competition.

² Maximum size for giant foxtail with IMPACT is 4 inches; suppression or partial control of green and yellow foxtail.

³ Crabgrass and yellow foxtail must be treated prior to tiller initiation. Maximum size for yellow foxtail with LIBERTY and IGNITE 280SL is 3 inches.

Maximum Weed Size Labeled for Postemergence Herbicide Applications

HERBICIDE	Rate/A	Black Nightshade	Burcucumber	Cocklebur	Lambsquarters	Morningglory	Pigweed	Prickly Sida	Ragweed, Common	Ragweed, Giant	Sicklepod	Smartweed	Velvetleaf
Accent	0.67 oz	X	3"	X	X	3"	4"	X	X	X	X	4"	X
Aim	0.5 oz	4"	X	4" ¹	4"	3 lf	4"	X	X	X	X	4" ¹	24"
Callisto	3 oz	5"	X	5"	5"	5" ¹	5"	X	5" ¹	5"	X	5"	5"
Equip	1.5 oz	4"	4"	6"	4"	2"	3"	X	4"	4"	X ¹	4"	4"
Halex GT	3.6–4 pt	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
Ignite 280 SL (LL-corn)	22 oz	6"	6"	6"	4"	6"	3"	4"	6"	6"	4"	6"	3"
Impact	0.75 fl.oz	6"	X	8"	6"	6" ¹	6"	3"	6"	8"	X	3"	8"
Laudis	3 fl.oz	<6"	<6" ¹	<6"	<6"	<6" ¹	<6"	X	<6"	<6"	<6" ¹	<6"	<6"
Liberty (LL-corn)	32 oz	6"	6"	6"	4"	6"	4"	6"	6"	6"	6"	6"	5"
Lightning (CLEARFIELD)	1.28 oz	3"	X	8"	3"	2-3"	8"	3"	3" ¹	3"	3"	3"	3"
Option	1.5 oz	4"	3"	2"	2"	3" ¹	X	X	2"	3" ¹	X	X	2"
Permit	0.67 oz	X	3" ¹	9"	2" ¹	X	3"	X	9"	3"	X	2"	9" ²
	1.33 oz	X	12" ¹	14"	2" ¹	3" ¹	6" ²	X	12"	6"	X	2"	12" ²
Require Q	4 oz	3" ¹	X	3" ¹	3" ¹	3" ¹	3"	X	3" ¹	3" ¹	3" ¹	3" ¹	3"
Resolve Q	1.25 oz	X	X	3" ¹	3" ¹	3" ¹	3"	X	3" ¹	X	X	3" ¹	3"
GLYPHOSATE 4S (RR-corn)	1.5 pt	12"	6"	18"	8"	2"	18"	2"	6"	4"	2"	6"	3"
	2 pt	12"	12"	24"	12"	4"	24"	3"	8"	6"	4"	8"	4"
Roundup WeatherMAX (RR-corn)	16 oz	4"	6"	18"	6"	X	12"	2"	6"	6"	2"	X	X
	22 oz	6"	12"	24"	12"	3"	18"	4"	12"	12"	4"	6"	6"
Spirit	1 oz	5"	6"	8"	3"	4" ¹	4"	3" ¹	9"	9"	3"	6"	6" ²
Steadfast	0.75 oz	X	4"	4" ¹	2" ¹	4"	4"	X	X	X	X	2"	4" ¹
Stout	0.75 oz	X	3"	X	4"	3"	4"	X	X	X	X	4"	4"

NOTE: 2,4-D, STATUS and other Dicamba products do not indicate size of weeds. Most seedling broadleaf weeds, <3" can be effectively controlled; however, some species may be more difficult to control at the use rates labeled for corn and may depend on timing of the application.

X = Not labeled for control. Some weeds may be labeled for suppression or partial control.

¹ Suppression, partial control, or reduced competition.

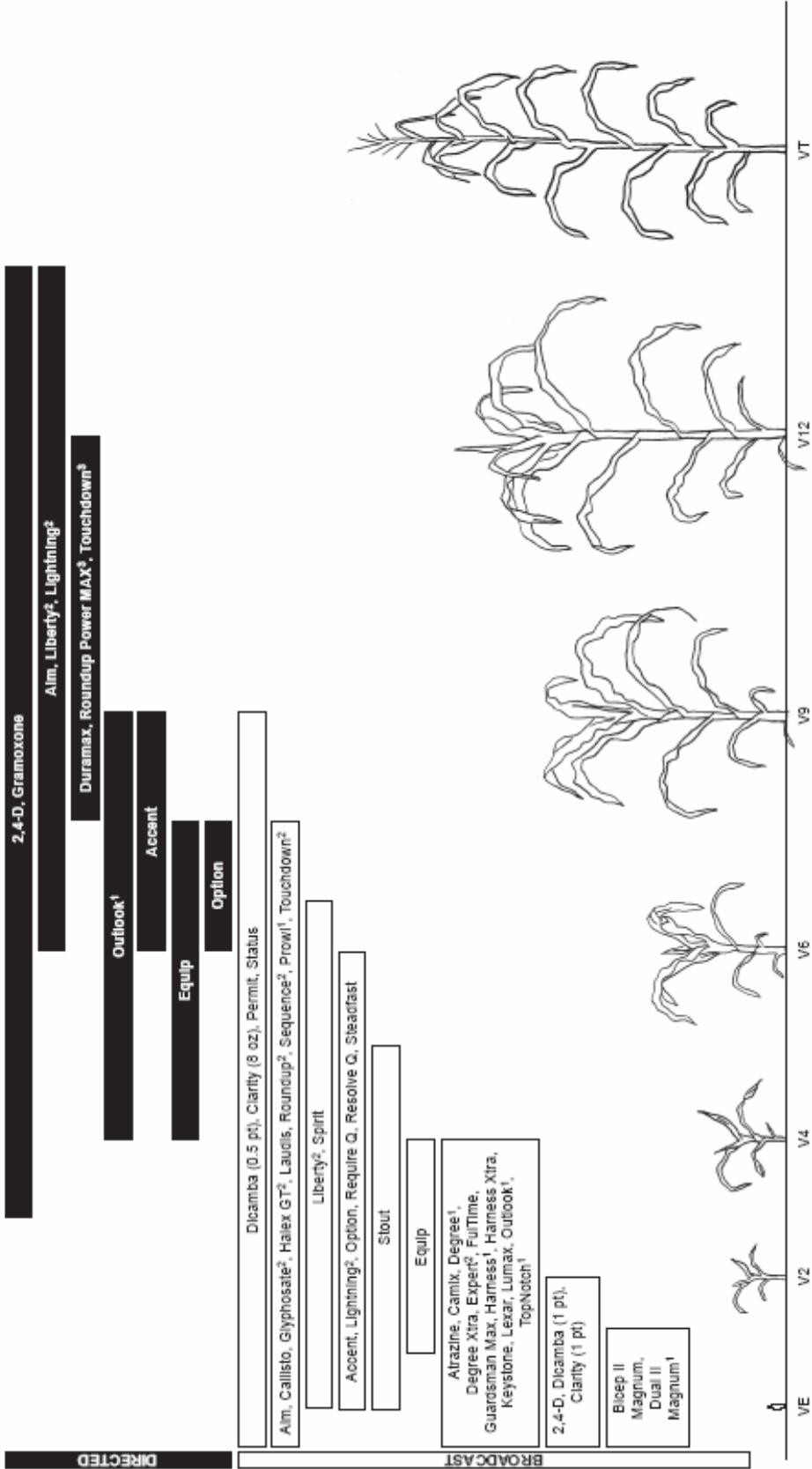
² Liquid Nitrogen or Ammonium Sulfate may be added to improve control (consult label)

46 Corn

Corn Growth Stages, Adjuvants, and Rain-Free Periods			
Herbicide	Adjuvant¹	Crop Stage	Rainfast²
Accent / NIC-IT	COC, MSO, or NIS plus UAN or AMS	Broadcast up to 20" tall corn or that exhibits 6 or fewer collars (V6); Use only drop nozzles for corn between 20" to 36" tall. Do not apply to corn that exceeds 36" tall or that has 10 or more collars.	4 hours
Aim	NIS	Apply from prior to planting up to 14-leaf collar growth stage. Use directed applications to corn greater than V8 growth stage for better weed coverage.	6 to 8 hours
Atrazine	COC or Crop Oil	Apply before corn reaches 12" tall	**
Callisto	COC plus UAN or AMS	Broadcast on corn up to 30" tall or up to the 8-leaf stage of corn growth.	1 hour
2,4-D	generally not recommended	Broadcast apply before corn exceeds 8" tall; Use directed applications when corn is 8" tall till tassel emergence	**
Dicamba [Banvel, Clarity, Oracle, Sterling, etc]	NIS, UAN, or AMS may be added. Consult label for use of COC	Apply 8 to 16 oz/A (0.5 to 1 pt/A) from emergence through 5th leaf stage or until corn reaches 8" tall, whichever occurs first; Apply 8 oz/A when corn is from 8" to 36" tall, if 6th true leaf is emerging from whorl, or 15 days before tassel emergence.	4 hours
Equip	MSO or ESO plus UAN or AMS Do not add NIS or COC	Broadcast applications must be made when field corn is in the V1 (i.e. exhibiting 1 visible collar) through V4 growth stage. Drop nozzles must be used when corn is >V4 and <V8 stage of growth.	2 hours
Expert (RR-corn) ³	generally not required (may include AMS)	Apply from emergence until the corn reaches 12 inches tall.	2 hours
Halex GT (GT-corn) ³	NIS plus AMS	Corn emergence up to 30" height or the 8-leaf (V8) growth stage.	**
Ignite 280SL (LL-corn) ³	Add AMS	Apply as a broadcast treatment from emergence through 5 th leaf collar stage (V5 growth stage).	4 hours
Impact	MSO or COC plus UAN or AMS	May be applied anytime after corn emergence up to 45 days prior to harvest.	1 hour
Laudis	MSO or COC plus UAN or AMS	Corn emergence up to the V8 growth stage (exhibits 8 collars)	1 hour
Liberty (LL-corn) ³	Add AMS. Do not add NIS, COC, or use Liq. Nitrogen	Apply from emergence until corn is 24" tall or V-7 stage (exhibits 7 developed collars), whichever comes first. For corn 24" to 36" tall, apply only with drop nozzles.	4 hours
Lightning (CLEARFIELD hybrid) ³	NIS or COC plus Liquid Nitrogen	Broadcast on corn up to 20" tall; Use drops nozzles (post-direct onto weeds) if corn is >20" tall or if corn has 6 or more collars (V6), whichever is more restrictive. Do not apply within 45 days of harvest.	1 hour
Option	MSO plus UAN or AMS Do not add NIS or COC	Broadcast when field corn is in the V1 through V6 growth stage. Drop nozzles must be used for applications when corn is greater than V6 and less than V8 stage of growth.	2 hours
Permit	NIS or COC (may add 28% Liq N)	Apply from the spike through layby stage of field corn.	4 hours
Require Q	NIS plus UAN (28-32%) or AMS	Apply postemergence after corn has reached 4" in height (V2) and before corn is taller than 20" or exhibiting 7 or more leaf collars.	**
Resolve Q	NIS plus UAN (28-32%) or AMS	Apply postemergence to corn that is up to 20" tall. Do not apply to corn taller than 20" or exhibiting 7 or more leaf collars.	**
Roundup and other GLYPHOSATE products (RR-corn) ³	Adjuvant requirements vary with product used	Apply broadcast over-the-top from corn emergence through V8 corn stage or 30 inches, whichever occurs first. For "Roundup Ready 2 Corn" and other hybrids designated as Glyphosate Tolerant drop nozzles can be used to direct applications on corn 30 to 48 inches.	**
Spirit	COC or NIS (may include 28% to 34% Liquid Nitrogen)	Apply to corn between 4" to 24" tall; Drop nozzles recommended when corn is >20" tall or exhibits more than 6 collars (V6), whichever comes first. Applications to popcorn are more restrictive.	4 hours
Status	NIS, COC, or MSO plus UAN (28-34%) or AMS	Apply from 4-inch tall (V2) to 36-inch tall (V10) corn. Do not apply if corn is more than 36", or within 15 days before tassel emergence.	4 hours
Steadfast	COC, MSO, or NIS plus UAN or AMS	Apply to corn up to 20" tall. Do not apply to corn >20" tall or exhibiting 7 or more leaf collars (V7), whichever is more restrictive.	4 hours
Stout	COC, MSO, or NIS plus UAN or AMS	Apply to corn up to 16" tall. Do not apply to corn >12" tall or exhibiting 5 or more leaf collars (V5), whichever is more restrictive.	4 hours

¹ COC - Crop Oil Concentrate; NIS - Non-Ionic Surfactant (at least 80% active ingredient); AMS - Ammonium Sulfate; UAN - Urea Ammonium Nitrate (28% to 32% nitrogen fertilizer); MSO - Methylated Seed Oil; ESO - Ethylated Seed Oil
² A "***" indicates no specific time period on label for rainfastness, 6 to 8 hours of rain-free period is suggested.
³ Apply only on selected field corn hybrids which have GENETIC resistance/tolerance to imidazolinone herbicides (CLEARFIELD hybrid); to Liberty Link (LL-corn); or to Roundup Ready and Glyphosate-Tolerant (RR-corn or GT-corn).

Timing of Herbicides Relative to Corn Growth Stages



Relative corn growth stages of development (eg. V6 indicates 6 leaf collars are visible).

¹ Soil active herbicides which must be applied before weeds emerge.
² Apply only on selected field corn hybrids which have GENETIC resistance/tolerance to imidazolinone herbicides (CLEARFIELD corn); to Liberty Link (LL-corn); or to Roundup Ready (RR-corn).
³ Use drop nozzles for directed applications on corn designated as "Roundup Ready Corn 2" hybrids.

Corn Herbicide-Insecticide Precautions and Restrictions

Herbicide	Insecticide Statements
Accent or NIC-IT	<p>Before using ensure that ACCENT is compatible with any insecticide previously applied to the corn crop.</p> <p>*Accent may be applied to corn previously treated with Fortress, Aztec, Force, or other non-organophosphate (OP) soil insecticides.</p> <p>*DO NOT APPLY ACCENT to corn previously treated with Counter 15G or to corn treated with Counter 20CR in-furrow or over the row. Applications of Accent to corn previously treated with Counter 20CR, Lorsban, or Thimet may cause unacceptable crop injury.</p> <p>*Accent may be tank mixed with pyrethroid or carbamate insecticides such as Asana XL and Lannate insecticides.</p> <p>*Do not tank mix Accent with foliar-applied organophosphate insecticides such as Lorsban, malathion, parathion, etc., as severe injury may occur.</p>
Callisto	<p>*Severe corn injury may occur when Callisto is applied postemergence to fields treated with soil-applied Counter or Lorsban insecticide. [Note: Dow AgroSciences supplemental label permits soil-applied Lorsban 15G as a T-band application that may be followed by post-applied Callisto herbicide].</p> <p>*Severe corn injury may occur when Callisto is applied as a foliar postemergence treatment in a tank mix with any organophosphate or carbamate type insecticide or when applied within 7 days before or 7 days after a Callisto application.</p> <p>*Callisto may be applied with pyrethroid type insecticides such as Warrior.</p>
Camix	<p>*Do not apply Camix postemergence to corn that has received an at-plant application of Counter insecticide, as severe corn injury may occur. Temporary corn injury may occur if applied to emerged corn where other organophosphate insecticides other than Counter were applied at planting.</p> <p>*Do not make postemergence applications of Camix in a tank mix with any organophosphate or carbamate insecticide, or severe injury may occur.</p> <p>*Do not make a postemergence application of any organophosphate or carbamate type insecticide within 7 days before or 7 days after application, or severe corn injury may occur.</p>
Equip	<p>*Do not use Equip in the same season as Counter 15G, Counter 20CR (In-furrow), Dyfonate, or Thimet insecticides. Temporary injury may occur when Equip is applied following soil-applied Lorsban 15G.</p> <p>*No use precautions when Aztec, Capture, Force, or Regent insecticides have been soil-applied.</p> <p>*Foliar applications of an organophosphate insecticide should not be made within 7 days of an Equip application or injury may result.</p> <p>*Equip may be tank mixed with Ambush, Asana XL, Baythroid, Capture, Mustang, Pounce, and Warrior foliar insecticides.</p>
Halex GT	<p>*Severe corn injury may occur if Halex GT is applied postemergence to corn fields treated with soil-applied Counter, Lorsban or other organophosphate containing soil insecticides.</p> <p>*Severe corn injury may occur if Halex GT is applied as a foliar postemergence treatment in a tank mix with any organophosphate or carbamate type insecticide or if applied within 7 days before or 7 days after a Halex GT application.</p> <p>*Halex GT may be applied with pyrethroid insecticides such as Warrior.</p>
Ignite 280 SL	<p>* Applications following the use of soil-applied insecticides will not injury corn.</p>
Impact	<p>*May be applied sequentially or in combination with all soil or foliar applied insecticides registered for use on corn.</p>
Laudis	<p>*May be tank mixed with Ambush, Asana XL, Capture, Lorsban, Mustang, Pounce, Warrior EC or other foliar insecticides.</p>
Lexar or Lumax	<p>*Do not apply Lexar or Lumax postemergence to corn that has received an at-plant application of Counter insecticide, as severe corn injury may occur. Temporary corn injury may occur if applied to emerged corn where other organophosphate insecticides other than Counter were applied at planting.</p> <p>*Do not make postemergence applications of Lexar or Lumax in a tank mix with any organophosphate or carbamate insecticide, or severe injury may occur.</p> <p>*Do not make a postemergence application of any organophosphate or carbamate type insecticide within 7 days before or 7 days after application, or severe corn injury may occur.</p>
Liberty	<p>*May be tank mixed with Ambush, Asana XL, Furadan 4F, Lorsban 4E, Pounce 3.2EC, or Warrior EC.</p>
Lightning	<p>*Do not use Counter 15G insecticide when Lightning is applied to imidazolinone tolerant (IT) corn hybrids. Counter CR and Thimet in banded applications may be used when imidazolinone tolerant (IT) corn hybrids are planted.</p> <p>*All soil insecticides labeled for use on corn, including banded or in-furrow applications, may be used in combination with Pioneer imidazolinone resistant (IR) corn hybrids and Lightning.</p>

Option	<p>*Do not use Option in the same season as Counter 15G, Counter 20CR (In-furrow), Dyfonate, or Thimet insecticides. Temporary injury may occur when Option is applied following soil-applied Lorsban 15G insecticide.</p> <p>*No use precautions when Aztec, Capture, Force, or Regent insecticides have been soil-applied.</p> <p>*Foliar applications of an organophosphate insecticide should not be made within 7 days of an Option application or injury may result.</p> <p>*Option may be tank mixed with Ambush, Asana XL, Pounce, and Warrior foliar insecticides.</p>
Permit	None indicated on the label.
Require Q or Resolve Q	<p>*REQUIRE Q or RESOLVE Q may be applied to corn previously treated with Fortress, Aztec, Force, or other non-organophosphate (OP) soil insecticides.</p> <p>*Do not apply REQUIRE Q or RESOLVE Q within 60 days of crop emergence where an organophosphate insecticide (such as Counter) was applied as an in-furrow treatment. Also, allow at least 60 days between a pre-plant application of REQUIRE Q or RESOLVE Q and application of an organophosphate insecticide.</p> <p>*Do not apply REQUIRE Q or RESOLVE Q to corn previously treated with Counter 15G or to corn treated with Counter 20CR in-furrow or over the row. Applications to corn previously treated with Counter 20CR, Lorsban, or Thimet may cause unacceptable crop injury.</p>
Spirit	<p>*Do not apply Spirit to “normal” or Imidazolinone-Tolerant (IT) corn hybrids when Counter 15G (all labeled methods) or when Counter 20CR insecticide is applied in-furrow. Unacceptable injury may result when Counter 20CR is applied in a T-band or surface-band.</p> <p>*Spirit may be used on fields treated with an organophosphate insecticide, including Counter, if an Imidazolinone-Resistant (IR) or IRM corn hybrid is planted.</p> <p>*Spirit applied after Dyfonate, Lorsban or Thimet has been soil-applied may result in temporary injury.</p> <p>*Do not make any foliar organophosphate insecticide applications 10 days before or 7 days after Spirit application, or severe crop injury may occur.</p>
Status or Distinct	*Status or Distinct may be used sequentially with all soil-applied insecticides or tank mixed with other foliar insecticides except as follows: Do not tank mix with foliar-applied Lorsban EC , Ambush EC , or Warrior insecticides. Sequential treatments may be used if applications are separated by at least 7 days.
Steadfast	<p>Before using STEADFAST ensure that it is compatible with any insecticide previously applied to the corn crop.</p> <p>*DO NOT APPLY to corn previously treated with Counter 15G or when treated with Counter 20CR in-furrow or over the row. Applications to corn previously treated with Counter 20CR, Thimet, or Lorsban may cause unacceptable injury.</p> <p>*May be applied to corn previously treated with Aztec, Force, Fortress, or non-organophosphate (OP) soil insecticides.</p> <p>*DO NOT tank mix with foliar-applied organophosphate insecticides such as Lorsban, malathion, parathion, etc., as severe injury may occur.</p> <p>*May be tank mixed with pyrethroid or carbamate insecticides such as Asana XL and Lannate insecticides.</p>
Stout (mp)	<p>Before using ensure that STOUT is compatible with any insecticide previously applied to the corn crop.</p> <p>*May be applied to corn previously treated with Fortress, Aztec, Force, or other non-organophosphate (OP) soil insecticides.</p> <p>*DO NOT APPLY to corn previously treated with Counter 15G or to corn treated with Counter 20CR in-furrow or over the row. Applications of STOUT to corn previously treated with Counter 20CR, Lorsban, or Thimet may cause unacceptable crop injury.</p> <p>*Do not tank mix STOUT with foliar-applied organophosphate insecticides such as Lorsban, malathion, parathion, etc., as severe injury may occur.</p>

POSTEMERGENCE

ACCENT or NIC-IT

ACCENT SP (75DF) 0.67 oz/A or NIC-IT (2L) 2 fl.oz/A	(nicosulfuron 0.031 lb ai/A)
+	+
CROP OIL CONCENTRATE [1% v/v] 2 pt/25 gal or MODIFIED SEED OIL (MSO) [0.5% v/v] 1 pt/25 gal or SURFACTANT (Non-Ionic 80%) 0.5 pt to 1 pt/25 gal	(additive)
+	+
AMMONIUM NITROGEN FERTILIZER (28% to 32% UAN) 2 qt/A	(additive)
Or	
AMMONIUM SULFATE 2 lb/A	

Weeds Controlled: Barnyardgrass, broadleaf signalgrass, foxtails, jimsonweed, johnsongrass, pigweeds, shattercane.

Crop Stage: ACCENT or NIC-IT are labeled for use on field corn grown for grain or silage. Consult label for specific use directions on field corn grown for seed and use on popcorn and sweet corn. When applied alone ACCENT or NIC-IT can be broadcast on field corn up to 20 inches tall or that exhibits 6 or fewer collars (V6 growth stage). Use drop nozzles for a post-directed application on corn between 20 to 36 inches tall. DO NOT APPLY to corn that is taller than 36 inches or that has developed 10 or more collars (V10), whichever is the most restrictive. When tank mixed with other herbicides consult the label for maximum crop growth stage.

General Comments: ACCENT SP (75DF) contains 0.75 lb ai of nicosulfuron per lb of product. NIC-IT (2L) contains 2.0 lb ai per gallon. Optimum size for control of johnsongrass and shattercane is when plants are 4 to 12 inches tall. Johnsongrass arising from rhizomes should be 8 to 18 inches tall when treated. For use to control other weeds, apply when weeds are less than 4 inches in height. Sequential applications may be used to control late flushes of weeds or regrowth of perennial grasses such as rhizome johnsongrass. Apply in a spray volume of at least 10 gallons per acre. The total amount of ACCENT applied per season may not exceed 1.33 oz/A. Before using ACCENT or NIC-IT consult the Soil Insecticide Interaction information on the label to ensure that it is compatible with any insecticides previously applied to the corn. For example, applications to corn previously treated with "Counter", "Lorsban", or "Thimet" may cause unacceptable crop injury. Also, consult label directions before applying ACCENT or NIC-IT with foliar applied insecticides or other foliar herbicides. Consider planting a MDM/MCD virus tolerant corn variety in fields where rhizome johnsongrass has overwintered. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Environmental Statements: Avoid direct spray drift to nearby crops or vegetation.

Rain Delay: Allow 4 hours between application and expected rainfall.

Rotation Restrictions: Rotational crops which may be planted include soybean 15 days; wheat, barley or rye 4 months following ACCENT application (consult label for cereal crops when using NIC-IT); and alfalfa or red clover 10 months following application. Sorghum may be planted after 10 months if soil pH is 7.5 or less. For all other crops, the rotation interval is 10 months where soil pH is 6.5 or less, and 18 months where soil pH is greater than 6.5.

Harvest & Forage Restrictions: Wait 30 days after application before utilizing treated corn for grain, forage feed or grazing.

Tank Mixtures: On field corn the following tank mixtures may be used – Atrazine, Bicep II Magnum, Callisto, Cinch, Cinch ATZ, dicamba (eg. Clarity), Distinct, Dual II Magnum, Exceed, Impact, Lexar, Lumax, Marksman, Northstar, Outlook, Prowl, Surpass EC. Consult label before mixing with Callisto or Lumax. When ACCENT or NIC-IT is tank mixed with other herbicides consult the label for crop growth stage, rates, and use of adjuvants. DO NOT tank mix ACCENT or NIC-IT with Basagran, Laddok or certain insecticides as severe crop injury may occur. DO NOT tank mix with 2,4-D since poor control of grasses may occur.

AIM

AIM EW	0.5 to 1.0 fl.oz/A		(carfentrazone 0.008 to 0.016 lb ai/A)
	+		+
SURFACTANT (Non-Ionic 80%)	0.5 pt/25 gal		(additive)

Weeds Controlled: Black nightshade, lambsquarters, velvetleaf.

Crop Stage: For use on field corn, seed corn, and popcorn. Apply from prior to planting up to 14-leaf collar growth stage. Use directed applications to corn greater than V8 growth stage for better weed coverage.

General Comments: AIM EW contains 1.9 lb ai carfentrazone per gal. It is a contact herbicide with little or no residual activity. For best results apply to actively growing weeds up to 2 to 4 inches tall and rosettes less than 3 inches across; velvetleaf may be treated up to 36 inches. The application of AIM to corn may result in temporary crop response such as speckling or necrosis of the leaves. When tank mixing AIM EW with other products, be sure to add AIM to the spray tank water first. Under dry conditions the use of crop oil concentrate may improve weed control; however, the use of crop oil may increase crop response. Do not apply more than 2 fl.oz/A (0.031 lb ai/A) of AIM EW per acre per season.

Environmental Statements: Avoid direct spray drift to nearby crops or vegetation.

Rain Delay: Avoid application within 6 to 8 hours of rainfall.

Rotation Restrictions: Following an application of AIM crops such as corn, soybeans, grain sorghum, wheat, barley, oats, tobacco and other registered crops may be planted at any time. All non-registered crops may be planted after 12 months.

Harvest & Forage Restrictions: Preharvest interval is 14-leaf collars.

Tank Mixtures: Accent, Accent Gold, Atrazine, Banvel, Basis, Basis Gold, Beacon, Callisto, Clarity, 2,4-D (amine), Distinct, Equip, Exceed, Hornet, Liberty, Lightning, Marksman, NorthStar, Option, Permit, Glyphosate products (eg. Roundup), Spirit, Steadfast, Sterling, Touchdown. When tank mixing follow corn height limits of tank mix partner if more restrictive and use the adjuvant recommended on the tank mix partner label of certain products (consult label).

CALLISTO

CALLISTO 4SC	3 fl. oz/A		(mesotrione 0.094 lb ai/A)
	+		+
Crop Oil Concentrate (1% v/v)	1 qt/25 gal		(additive)
	+		+
Urea Ammonium Nitrate [28-0-0]	(2.5% v/v) 2.5 qt/25gal		(additive)
	or		
Ammonium Sulfate	8.5 lb/100 gal		

Weeds Controlled: Black nightshade, cocklebur, jimsonweed, lambsquarters, pigweeds, giant ragweed, smartweed, velvetleaf.

Crop Stage: CALLISTO is labeled for use on field corn or corn grown for silage. Do not apply to popcorn or sweet corn. Broadcast on corn up to 30 inches tall or up to the 8-leaf stage of corn growth.

General Comments: CALLISTO 4SC contains 4 lb ai mesotrione per gal. Do not use Methylated Seed Oils or MSO blend adjuvants as a spray additive. For postemergence control apply CALLISTO when broadleaf weeds are less than 5 inches tall and actively growing. When applying take necessary precautions to reduce the potential for spray drift. Do not apply CALLISTO if the corn crop was treated with Counter or Lorsban insecticide. Do not make foliar postemergence applications in a tank mixture with any organophosphate or carbamate type insecticides and consult label directions before applying CALLISTO as a sequential with foliar insecticides. Do not make more than two applications of CALLISTO per season and do not exceed 3 oz/A per application. The total amount per season of mesotrione may not exceed 0.24 lb ai/A applied as CALLISTO (7.7 fl.oz./A) or from all other mesotrione containing products, including Lexar, Lumax, and Camix.

Environmental Statements: CALLISTO has a SURFACE WATER advisory statement on the label.

Rain Delay: 1 hour.

Rotation Restrictions: Corn may be replanted immediately. Small grains may be planted 120 days (4 months) after CALLISTO application. Soybeans, sorghum, canola, tobacco, alfalfa, and sweet corn may be planted back the following season, but not less than 10 months after application. Red clover and most other rotational crops may be planted 18 months after application.

Harvest & Forage Restrictions: Do not harvest for forage, grain, or stover within 45 days of application.

Tank Mixtures: Accent, Atrazine, Basis, Buctril, Liberty, Lightning, Steadfast, Stout. DO NOT apply postemergence in a tank mixture with an emulsifiable concentrate grass herbicide or injury may occur.

52 Corn

2,4-D

2,4-D AMINE 0.5 to 1 pt/A or
2,4-D ESTER 0.5 to 0.75 pt/A
[4 lb ai/gal formulation]

(2,4-D Amine 0.25 to 0.5 lb ai/A) or
(2,4-D Ester 0.25 to 0.375 lb ai/A)

Weeds Controlled: Cocklebur, common ragweed, giant ragweed, lambsquarters, morningglories, pigweeds, prickly sida, smartweed, velvetleaf.

Crop Stage: Make broadcast applications before corn exceeds 8 inches tall. Use only DIRECTED applications when corn is from 8 inches to tassel emergence.

Preharvest: May be used at higher application rates when applied as a preharvest treatment [consult label]. Apply after hard dough or denting stage of growth.

General Comments: Several 2,4-D ESTER and 2,4-D AMINE products are available (formulations vary from 3 to 6 lb ai of 2,4-D per gal). Adjust rates accordingly for other product formulations (consult individual product labels for specific rates). Additives are generally not recommended for postemergence applications, except in tank mixtures with other products (consult individual product labels). Crop injury may occur when using higher rates or if applied during periods of rapid growth. Brittleness of corn may result in broken stalks if windstorms or cultivation follow within a week after application.

Environmental Statements: Be cautious about applications of 2,4-D near sensitive broadleaf crops such as tobacco, soybean, grapes, vegetables or ornamental plantings to avoid potential injury caused by spray drift. Do not apply when air temperatures are above 85 F.

Rain Delay: None indicated on label; 4 to 6 hours suggested.

Rotation Restrictions: None indicated on label following normal growth and harvest of corn.

Harvest & Forage Restrictions: A 7 day waiting period is generally indicated on most 2,4-D labels before utilizing corn for forage or feed.

Tank Mixtures: Consult label.

DICAMBA

Dicamba 4S 8 to 16 oz/A (0.5 to 1 pt/A)
[i.e. BANVEL, CLARITY, ORACLE, STERLING, etc.]

(dicamba 0.25 to 0.5 lb ai/A)

Weeds Controlled: Black nightshade, cocklebur, common ragweed, giant ragweed, jimsonweed, lambsquarters, morningglories, pigweeds, prickly sida, sicklepod, smartweed, velvetleaf.

Crop Stage: Apply 8 to 16 oz/A (0.5 to 1 pt/A) as a broadcast spray from corn emergence through 5th leaf stage or until corn is 8 inches tall, whichever comes first. Apply at a maximum of 8 oz/A (1 pt/A), if 6th true leaf is emerging from whorl, when corn size reaches 8 to 36 inches tall, or up to 15 days before tassel emergence, whichever comes first. Use DIRECTED spray applications when 1) corn leaves prevent proper weed coverage, 2) sensitive crops are growing nearby, or 3) tank mixing with 2,4-D.

General Comments: CLARITY 4S contains 4 lb ae/gal of the diglycolamine salt of dicamba. BANVEL, ORACLE, and STERLING contain 4 lb ae/gal of the dimethylamine salt of dicamba. Additives are generally not required when applied alone, but a Surfactant or Liquid Fertilizer (UAN or AMS) may be added to tank mixes with other herbicides or to improve weed control. Consult label for use of crop oil concentrate as an additive. Avoid applications to crops under stress due to environmental conditions or other factors.

Environmental Statements: Some crops such as tobacco, soybeans, grapes, vegetables, and ornamental plants can be extremely susceptible to DICAMBA spray drift and vapors. Do not apply where sensitive crops are growing nearby, if winds over 5 MPH and are moving in the direction of sensitive crops, or if air temperatures on the day of application will exceed 85 degrees.

Rain Delay: None indicated on label for BANVEL, ORACLE, or STERLING; 4 hours for CLARITY.

Rotation Restrictions: Any rotational crop may be planted following normal growth and harvest of corn. However, for between crop or post harvest applications delay planting soybeans a minimum of 30 days per each pint/acre of DICAMBA applied and delay planting wheat 20 days per pint of DICAMBA treated per acre. For CLARITY: Any rotational crop may be planted at 120 days or more following application. For barley, wheat, and other grass seedlings, wait at least 15 days per 8 oz/A of CLARITY applied.

Harvest & Forage Restrictions: Do not graze or harvest treated corn for dairy or beef feed until the crop has reached the ensilage (milk) stage or late in maturity.

Tank Mixtures: Accent, Atrazine, Beacon, Buctril, Exceed, Hornet, Liberty (LL-corn), Lightning (IMI-corn), Permit, Roundup Ultra (RR-corn), Spirit. Tank mixtures with other products containing DICAMBA (e.g. Marksman, etc.) must not exceed a combined rate of 0.5 lb of dicamba per acre. DICAMBA plus 2,4-D (0.25 pt/A) may be applied as a DIRECTED treatment using drop nozzles in corn (apply when corn is at least 8 inches tall, but less than 36 inches in height or until 15 days before tassel emergence). Consult label for tank mixes with soil applied herbicides.

EQUIP CORN Herbicide

EQUIP Corn Herbicide 32WDG	1.5 oz/A	[foramsulfuron:iodosulfuron 0.028:0.002 lb ai/A]
	+	+
Methylated or Ethylated Seed Oil	1.5 pt/A	(additive)
	+	+
Liq. Nitrogen (28% to 32% UAN)	1.5 to 2 qt/A or	(additive)
Ammonium Sulfate (AMS)	1.5 to 3 lb/A	

Weeds Controlled: Barnyardgrass, cocklebur, foxtails, johnsongrass, lambsquarters, black nightshade, pigweeds, common ragweed, giant ragweed, shattercane, smartweed, velvetleaf.

Crop Stage: EQUIP Corn Herbicide is labeled for use only on field corn. It is not recommended on corn known to be hybrid sensitive to sulfonylurea or ALS inhibiting herbicides. Broadcast applications must be made when field corn is in the V1 (i.e. exhibiting 1 visible collar) through V4 growth stage. Drop nozzles must be used when corn is greater than V4 and less than V8 stage of growth to direct applications between corn rows. Do not apply to corn that is more mature than V8 (i.e. more than 8 visible collars). When EQUIP is tank mixed with other herbicides consult the label for the most restrictive crop growth stage.

General Comments: EQUIP 32WDG contains foramsulfuron + iodosulfuron [30% + 2% per lb of product] plus isoxadifen (a crop safener). Apply with Methylated or Ethylated Seed Oil plus Urea Ammonium Nitrate (28% or 32% UAN) or Ammonium Sulfate (AMS). Use of non-ionic surfactants, crop oil concentrate, or refined vegetable oils ARE NOT recommended including with tank mix partners (consult label). Applications should be made to young actively growing weeds. Maximum size for johnsongrass and shattercane control is when plants are 8 inches tall. Do not apply more than once per season or exceed a 1.5 oz/A. Apply in a minimum spray volume of 10 gallons water per acre. DO NOT use EQUIP herbicide in the same season as organophosphate (OP) insecticides such as Counter 15G, Counter 20CR (In-furrow), Dyfonate, and Thimet. Consult label directions before applying EQUIP with other soil applied or foliar insecticides.

Rain Delay: Allow 2 hours before rainfall.

Rotation Restrictions: Corn can be replanted 15 days after application. Rotational crops which may be planted include wheat, barley, rye after 2 months; soybeans, grain or forage sorghum, or oats after 9 months; and alfalfa or red clover after 18 months following application. All other crops can be planted 18 months after application.

Harvest & Forage Restrictions: Wait 70 days before harvesting corn for grain or 45 days before harvesting corn forage. Do not graze within 45 days of EQUIP application.

Tank Mixtures: Atrazine, Confidence Xtra, Degree, Degree Xtra, Dicamba, Distinct, Fultime, Gardsman Max, Harness, Harness Xtra, Keystone, Marksman, Outlook, Permit, Prowl, Sterling, TopNotch, Volley, Yukon.

EXPERT**(Glyphosate Tolerant Corn Hybrids ONLY)**

EXPERT 3 to 3.75 pt/A [S-metolachlor:atrazine:glyphosate (1.3:1.6:0.75 to 1.6:2.0:0.94 lb ai/A)]

Weeds Controlled: Barnyardgrass, broadleaf signalgrass, burcucumber, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, johnsongrass, lambsquarters, pigweeds, common ragweed, giant ragweed, shattercane, smartweed, velvetleaf.

Crop Stage: Use only on selected FIELD CORN HYBRIDS which are designated with Glyphosate Tolerance or the Roundup Ready gene. Apply from seedling emergence of corn until 12 inches in height.

General Comments: EXPERT is a pre-package mixture containing S-metolachlor + atrazine + glyphosate (isopropylamine salt) [1.74+2.14+1.0 lb ai/gal]. Additional surfactants are not required with EXPERT; however, Liquid fertilizer as carriers are not recommended for use over-the-top of Roundup Ready corn. Addition of dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gallons of water) may increase performance on emerged weeds under adverse growing conditions. For control of annual grasses and broadleaf weeds and for suppression of certain perennial weed species. Make only one in-season application.

Environmental Statements: EXPERT is a RESTRICTED-USE pesticide and contains GROUND and SURFACE WATER ADVISORY statements on the label. [NOTE: See page 29 for PRECAUTIONS on use of atrazine containing products near ground or surface water].

Rain Delay: Apply a minimum of 2 hours before expected rainfall.

Rotation Restrictions: Corn, sorghum (milo), or soybeans may be planted the year following application. If applied after June 10, do not rotate with crops other than corn or sorghum next year. Do not plant tobacco, vegetables, or small-seeded legumes the year following application.

Harvest & Forage Restrictions: To avoid possible illegal residues, do not graze or feed forage from treated areas for 60 days following application.

Tank Mixtures: If additional weed control is needed apply an appropriate herbicide labeled for control of that species. Do not apply EXPERT in tank mixture with any other products after crop emergence.

GLYPHOSATE¹

(Glyphosate-Tolerant Corn Hybrids ONLY)

The information below provides guidelines for postemergence applications of GLYPHOSATE on corn hybrids designated as "Roundup Ready Corn 2", "Roundup Ready Corn", "Agrisure GT", or GT-corn hybrids. The maximum corn growth stage for postemergence treatments and the labeled application rates for use on Glyphosate-Tolerant (GT) corn hybrids may depend on the genetic event of the corn hybrid planted and the specific glyphosate product used. Consult your seed dealer for specific guidelines for corn tolerance. Dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gal) may be included with glyphosate to improve weed control. Some Glyphosate products do not need additional surfactant; but some products require addition of a non-ionic surfactant. **ALWAYS CONSULT THE PRODUCT LABEL FOR SPECIFIC DIRECTIONS.**

Glyphosate, Roundup Original, and similar Glyphosate products¹			
[3 lb ae/gal formulation] (4 lb ai/gal)	1.5 up to 2 pt/A* (24 to 32 fl.oz/A)	[glyphosate 0.56 to 0.75 ae/A] (0.75 to 1.0 lb ai/A)	Roundup Ready Corn and GT-corn hybrids ^{^*}
* NOTE: For certain glyphosate products up to 3 pt/A may be made with single in-season applications and/or drop nozzles may be used when corn height is 30 to 40 inches (consult specific product label for details).			
Buccaneer 5			
[3.75 lb ae/gal formulation]	1.25 to 1.6 pt/A (20 to 26 fl.oz/A)	[glyphosate 0.58 to 0.75 lb ae/A]	Roundup Ready Corn or other GT-corn hybrids [^]
Duramax / Durango DMA			
[4 lb ae/gal formulation] (5.4 lb ai/gal)	1.12 to 2.25 pt/A (18 to 37.5 fl.oz/A)	[glyphosate 0.56 to 1.15 lb ae/A] (0.75 to 1.5 lb ai/A)	Roundup Ready Corn [#]
	1.12 to 1.5 pt/A (18 to 24 fl.oz/A)	[glyphosate 0.56 to 0.75 lb ae/A] (0.75 to 1.0 lb ai/A)	Roundup Ready Corn [^]
Touchdown Total / Traxion			
[4.17 lb ae/gal formulation]	1.1 to 2.2 pt/A (17 to 35 fl.oz/A)	[glyphosate 0.55 to 1.15 lb ae/A]	GT-corn hybrids including "Agrisure GT" and "Roundup Ready Corn" [#]
Roundup PowerMAX / Roundup WeatherMAX			
[4.5 lb ae/gal formulation] (5.5 lb ai/gal)	1 to 2 pt/A (16 to 32 fl.oz/A)	[glyphosate 0.56 to 1.12 lb ae/A] (0.69 to 1.375 lb ai/A)	Roundup Ready Corn [#]
Touchdown HiTech			
[5 lb ae/gal formulation]	0.88 to 1.88 pt/A (14 to 30 fl.oz/A)	[glyphosate 0.56 to 1.17 lb ae/A]	GT-corn hybrids including "Agrisure GT" and "Roundup Ready Corn" [#]
CROP GROWTH STAGE: USE ONLY ON SELECTED FIELD CORN HYBRIDS DESIGNATED AS GLYPHOSATE-TOLERANT.			
[^] May be applied on "Roundup Ready Corn" or other designated GT-corn hybrids from emergence through V8 growth stage or until corn reaches 30 inches, whichever comes first.			
[#] Apply as a broadcast treatment over-the-top of Glyphosate-Tolerant corn hybrids from corn emergence through the V8 growth stage or until corn reaches 30 inches, whichever comes first. On corn hybrids designated as "Roundup Ready Corn 2" and/or with certain glyphosate products drop nozzles may be used when corn height is 30 to 48 inches.			

¹ Glyphosate is available in various formulations. **SEE PAGE 20 FOR A DETAILED LIST OF GLYPHOSATE PRODUCTS.** The concentration of glyphosate may be expressed as the **acid equivalent** which is based on the parent acid of glyphosate or expressed as **active ingredient** which is based on the parent acid plus the salt in the formulated product. Comparing glyphosate rates based on acid equivalents is usually the most logical way to evaluate products on equal terms.

Weeds Controlled: Barnyardgrass, black nightshade, broadleaf signalgrass, burcucumber, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, johnsongrass (seed and rhizomes), lambsquarters, pigweed, giant ragweed, shattercane, sicklepod, smartweed, velvetleaf. Consult label for specific troublesome weed species and their recommended growth stages.

General Comments: Observe label for recommendations for control of specific troublesome weed species. A sequential application may be needed to control regrowth on new weed flushes. For optimum control of perennials, apply when broadleaf plants are in the early bud to flowering stage and when grasses are in the boot to seedhead stage.

Maximum Use Rates: The following table indicates the maximum rate of product for various glyphosate formulations for a single in-crop application and the total combined rate for sequential applications to Roundup Ready corn or other GT-corn hybrids.

Glyphosate Formulation (acid equivalent)	Maximum Rate Preplant Before Crop Emergence	Maximum Rate for Single In-Crop Application	Combined Total of Multiple In-Crop Applications	Maximum Use Rate for Pre-Harvest Application	Combined Season Total for All Applications
Glyphosate, Roundup, etc. (3 lb ae/gal)	5 qt/A	2 pt/A [GT-hybrid]	2 qt/A [GT-hybrid]	1 qt/A	8 qt/A
		3 pt/A [RR-2 hybrid]	3 qt/A [RR-2 hybrid]		
BUccaneer 5 (3.75 lb ae/gal)	4 qt/A	1.6 pt/A	3.2 pt/A	1.6 pt/A	6.5 qt/A
Duramax Durango DMA (4 lb ae/gal)	3.75 qt	1.5 pt/A [GT-hybrid]	1.5 qt/A [GT-hybrid]	0.75 qt/A (1.5 pt/A)	6 qt/A
		2.25 pt/A [RR-2 hybrid]	2.25 qt/A [RR-2 hybrid]		
Touchdown Total Traxion (4.17 lb ae/gal)	3.6 qt/A	35 oz/A	70 oz/A	24 oz/A	5.75 qt/A
Roundup PowerMAX, Roundup WeatherMAX (4.5 lb ae/gal)	3.3 qt/A	32 oz/A (2 pt/A) [RR-2 hybrid]	64 oz/A (2 qt/A) [RR-2 hybrid]	22 oz/A	5.3 qt/A

PREHARVEST USE: Apply after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) with 35 percent grain moisture or less. Allow a minimum of 7 days between application and corn grain harvest.

Environmental Statements: Take precautions to prevent spray particle drift to desirable plants.

Rain Delay: Rainfall soon after application may reduce effectiveness. Some labels indicate 6 hours.

Rotation Restrictions: Any crop may be planted following normal growth and harvest of corn. Wait at least 30 days before planting crops not listed on the label.

Harvest & Forage Restrictions: Allow a minimum of 50 days between application and harvest of corn forage.

Tank Mixtures: Consult label of Glyphosate product used for tank mixtures with other herbicide or insecticide products.

56 Corn

HALEX GT (Glyphosate Tolerant Corn Hybrids ONLY)

HALEX GT	3.6 to 4 pt/A	[S-metolachlor:glyphosate:mesotrione (0.9:0.9:0.094 to 1.0:1.0:0.1 lb ai/A)]
	+	+
SURFACTANT (Non-Ionic 80%)	1 to 2 qt/100 gal	
	+	(additive)
Ammonium Sulfate	8.5 - 17 lb/100 gal	

Weeds Controlled: Barnyardgrass, black nightshade, broadleaf signalgrass, burcucumber, cocklebur, crabgrass, fall panicum, foxtails, johnsongrass, lambsquarters, pigweed, giant ragweed, annual ryegrass, shattercane, sicklepod, smartweed, velvetleaf. Consult label for specific weed species.

Crop Stage: Use only on selected CORN HYBRIDS which are designated with Glyphosate Tolerance or the Roundup Ready gene. Apply from corn emergence up to 30 inches in height or the 8-leaf growth stage.

General Comments: HALEX GT is a pre-package mixture containing S-metolachlor + glyphosate + mesotrione [2.09+2.09+0.209 lb ai/gal]. Apply with Non-Ionic Surfactant plus Ammonium Sulfate. The use of Ammonium Nitrate (UAN) or other suspension fertilizers is not recommended and will result in crop injury. For control of emerged annual grasses and broadleaf weeds and for residual control of weeds. Do not apply more than 4 pt/A of HALEX GT per growing season or do not apply with CALLISTO during the same season.

Environmental Statements: HALEX GT contains ground and surface water advisory statements on the label.

Rain Delay: Rainfall soon after application may reduce effectiveness.

Rotation Restrictions: Corn and grain sorghum may be replanted immediately; barley, rye, and winter wheat may be planted 120 days after application; or alfalfa, soybeans, and tobacco may be planted 10 months after application. Red clover and other crops not listed by the label may be planted 18 months after application.

Harvest & Forage Restrictions: To avoid possible illegal residues, do not graze or feed forage from treated areas for 60 days following application or do not harvest forage, grain, or stover within 45 after application.

Tank Mixtures: Atrazine.

IMPACT

IMPACT 4SC	0.75 fl. oz/A	(topramezone 0.016 lb ai/A)
	+	+
Metylated Seed Oil or COC	1 to 1.5 gal/100 gal	(additive)
	+	+
UAN [28-34%] or 10-34-0	1.25 to 2.5 gal/100 gal	(additive)
	or	
Ammonium Sulfate	8.5 lb/100 gal	

Weeds Controlled: Black nightshade, cocklebur, lambsquarters, pigweeds, smartweed, velvetleaf.

Crop Stage: IMPACT is labeled for use on field corn grown for grain or silage, popcorn, and sweet corn. Apply after corn emergence up to 45 prior to corn harvest.

General Comments: IMPACT 2.8SC contains 2.8 lb ai topramezone per gal. For postemergence control apply IMPACT when susceptible weeds are 3 to 8 inches and actively growing (consult label). When applying take necessary precautions to reduce the potential for spray drift. IMPACT may be used sequentially or in combination with all soil or foliar applied insecticides registered for use in corn. Do not tank mix IMPACT or apply in sequence with products containing isoxaflutole (e.g. Balance, Epic) or mesotrione (e.g. Callisto, Camix, Lexar, Lumax). Do not exceed a total of 0.75 fl.oz/A per growing season.

Environmental Statements: Do not apply directly to water, or areas where surface water is present.

Rain Delay: 1 hour.

Rotation Restrictions: Corn may be replanted immediately. Small grains may be planted 3 months after IMPACT application; alfalfa, sorghum, and soybeans after 9 months. Red clover, tobacco, and most other rotational crops may be planted 18 months after application.

Harvest & Forage Restrictions: Do not graze or harvest for forage at least 45 days after application.

Tank Mixtures: Accent, Atrazine, Buctril, Clarity, 2,4-D, Distinct, Glyphosate, Hornet, Liberty, Lightning, Marksman, Option, Permit, Steadfast. IMPACT may also be tank mixed with soil residual herbicides such as Bicep II Magnum, Degree Xtra, Dual II Magnum, Guardsman Max, Harness Xtra, Keystone, and Prowl.

LAUDIS

LAUDIS	3 fl.oz/A	(tembotrione 0.082 lb ai/A)
	+	+
Metylated Seed Oil (MSO) or COC	1 gal/100 gal	(additive)
	+	+
Ammonium Nitrate [UAN]	1.5 qt/A OR	(additive)
Ammonium Sulfate [AMS]	8.5 lb/100 gal (1.5 lb/A)	

Weeds Controlled: Cocklebur, lambsquarters, black nightshade, pigweeds, giant ragweed, velvetleaf.
Crop Stage: LAUDIS is labeled for use on field corn grown for grain or silage, popcorn, and sweet corn. Apply after corn emergence up to the V8 stage of growth (V7 stage for sweet corn)
General Comments: LAUDIS contains 3.5 lb ai tembotrione per gal. For postemergence control apply LAUDIS when susceptible weeds are <6 inches and actively growing (consult label). When applying take necessary precautions to reduce the potential for spray drift. LAUDIS may be used with foliar applied insecticides registered for use in corn. Do not apply LAUDIS with liquid fertilizers as the primary spray carrier. Do not exceed a total of 6 fl.oz/A per growing season (3 fl.oz/A for sweet corn).
Environmental Statements: Do not apply directly to water, or to areas where surface water is present.
Rain Delay: 1 hour.
Rotation Restrictions: Corn may be replanted immediately. Small grains may be planted 4 months after LAUDIS application; soybean after 8 months; or alfalfa and sorghum after 9 months. Most other rotational crops may be planted 18 months after application.
Harvest & Forage Restrictions: Do not graze or harvest corn forage for at least 45 days after application.
Tank Mixtures: Accent, Atrazine, Buctril, Glyphosate, Liberty, Option, Steadfast, Stout. LAUDIS may be tank mixed with soil residual herbicides such as Define SC. May also be tank mixed with foliar insecticides labeled for corn.

**LIBERTY or IGNITE 280 SL
(Liberty Link Hybrids ONLY)**

LIBERTY 1.67SL	28 to 34 fl.oz/A or	(glufosinate-ammonium 0.36 to 0.44 lb ai/A)
IGNITE 280 SL	22 fl.oz/A	(glufosinate-ammonium 0.40 lb ai/A)
	+	+
Ammonium Sulfate (AMS)	3 lb/A	(additive)

Weeds Controlled: Burcucumber, cocklebur, giant foxtail, green foxtail, jimsonweed, johnsongrass (seedling), lambsquarters, morningglory, black nightshade, fall panicum, pigweed, common ragweed, giant ragweed, prickly sida, shattercane, smartweed, velvetleaf.
Crop Stage: Use only on selected FIELD CORN HYBRIDS designated as "LibertyLink" or warranted to be resistant to LIBERTY or IGNITE 280SL applications (consult label). For LIBERTY Apply as a broadcast treatment from emergence until corn is 24" tall or in the V-7 growth stage (exhibits 7 developed collars), whichever comes first. For corn 24" to 36" tall, use drop nozzles to avoid spraying into whorls of corn stalks. For IGNITE 280SL apply as a broadcast treatment from emergence through the 5th leaf collar stage (V5 growth stage).
General Comments: LIBERTY 1.67SL contains 1.67 lb ai of glufosinate-ammonium per gal; IGNITE 280 SL contains 2.34 lb ai of glufosinate-ammonium per gal. Apply with a spray grade Ammonium Sulfate at 3 lb/A (17 lbs/100 gal). Do not add any other surfactants or crop oils. Do not use a nitrogen solution as a spray carrier. LIBERTY and IGNITE 280 SL are non-selective contact herbicides that control both grasses and broadleaf weeds. See label for optimum stages of weed growth and rate at time of application. Good spray coverage is important for optimum control. Do not apply more than two applications or exceed 62 oz/A of LIBERTY or apply more than 44 fl oz/A of IGNITE 280SL per growing season. Avoid applications when corn shows injury from prior herbicide applications or environmental stress.
Environmental Statements: Use precautions to avoid spray particle drift to nearby crops or sensitive vegetation.
Rain Delay: 4 hours after application.
Rotation Restrictions: Corn and soybeans may be planted anytime. Wheat, barley, rye, oats, or triticale may be planted 70 days after last application. Minimum waiting period for planting other crops is 120 days after application of LIBERTY or 180 days (6 months) after last application of IGNITE 280 SL.
Harvest & Forage Restrictions: Allow 60 days following application before harvesting corn for forage and allow 70 days before harvesting corn grain or corn fodder.
Tank Mixtures: Acetochlor (Harness, Degree, Surpass, TopNotch), Aim, Atrazine, Callisto, Camix, 2,4-D, Distinct, Guardsman Max, Hornet, Impact, Laudis, Lexar, Lumax, S-metolachlor (Dual II Magnum), nicosulfuron (Accent), pendimethalin (Prowl), Permit, Python, Spirit, Status,

58 Corn

LIGHTNING (CLEARFIELD Corn Hybrids ONLY)

LIGHTNING 70DG	1.28 oz/A	[imazethapyr:imazapyr (0.042:0.014) lb ai/A]
	+	+
CROP OIL CONCENTRATE	1.5 to 2 pt/A or	(additive)
SURFACTANT (Non-Ionic 80%)	2 pt/100 gal	
	+	+
FERTILIZER SOLUTION	1 to 2 qt/A	(additive)
	[28% to 32% Nitrogen or 10-34-0]	
	or	
AMMONIUM SULFATE	2.5 lb/A	

Weeds Controlled: Barnyardgrass, broadleaf signalgrass, cocklebur, fall panicum, foxtails, jimsonweed, johnsongrass (seedling), lambsquarters, morningglory, black nightshade, pigweeds, giant ragweed, shattercane, prickly sida, smartweed, velvetleaf.

Crop Stage: Apply only on selected CLEARFIELD corn hybrids which possess GENETIC resistance or tolerance to direct applications of LIGHTNING herbicide. Broadcast on emerged corn up to 20" tall. Use DROP NOZZLES if corn is >20" tall or corn has 6 or more collars (V6), whichever is more restrictive. Do not apply within 45 days of corn harvest.

General Comments: LIGHTNING is a pre-package mixture containing imazethapyr+imazapyr [52.5%+17.5% per lb product]. Apply with a Non-Ionic Surfactant or Crop Oil Concentrate plus a Liquid Fertilizer solution (28 to 32% Nitrogen or 10-34-0). Instead of liquid fertilizer, Ammonium Sulfate may be used at 2.5 lb/A. Dissolve LIGHTNING into clean water before adding spray additives. See label for optimum stages of weed growth at time of application. Temporary yellowing of treated corn may occur under certain environmental conditions. LIGHTNING should not be applied to corn with any other herbicide product during the same year except as indicated by the label. Consult label for information and precautions on use of soil insecticides such as Counter or Thimet in combination with LIGHTNING herbicide. Certain crops such as tobacco, vegetables, and ornamental plants can be extremely susceptible to LIGHTNING when contacting plant roots, stems, or foliage. Do not apply where sensitive crops are growing nearby, if winds are over 5 MPH and moving in the direction of sensitive crops or if soil and surface water movement would cause contact with desirable plants. Make only one LIGHTNING application per season.

Environmental Statements: LIGHTNING has a GROUNDWATER ADVISORY statement on the label. Do not use on very permeable soils or where groundwater is close to the soil surface.

Rain Delay: 1 hour before expected rainfall.

Rotation Restrictions: Crops which may be planted include CLEARFIELD corn hybrids anytime; wheat and rye after 4 months; susceptible field corn hybrids after 8.5 months; soybeans after 9 months; alfalfa, barley, and tobacco after 9.5 months; popcorn, sorghum, sweet corn, and oats after 18 months following LIGHTNING application. Do not plant other rotational crops such as forage grasses within 40 months after treatment.

Harvest & Forage Restrictions: Allow 45 days after LIGHTNING application before harvesting corn for grain, silage, forage, or fodder.

Tank Mixtures: Atrazine, Banvel, Bicep II Magnum, Buctril, Clarity, 2,4-D, Distinct, Dual II Magnum, FulTime, Guardsman Max, Harness, Harness Xtra, Marksman, Outlook, Prowl, Surpass, TopNotch.

OPTION

OPTION 35WG 1.5 oz/A	(foramsulfuron 0.033 lb ai/A)
+	+
METHYLATED or ETHYLATED SEED OIL 1.5 pt/A	(additive)
+	+
LIQ. NITROGEN (28% to 32% UAN) 1.5 to 2 qt/A or AMMONIUM SULFATE (AMS) 1.5 to 3 lb/A	(additive)

Weeds Controlled: Barnyardgrass, foxtails, johnsongrass, black nightshade, shattercane.

Crop Stage: OPTION is labeled for use only on field corn. OPTION is not recommended on corn known to be hybrid sensitive to sulfonylurea or ALS inhibiting herbicides. Broadcast treatments can be applied on field corn in the V1 through V6 growth stage. Drop nozzles must be used for directed applications when corn is greater than V6 and less than V8 stage of growth to direct applications between corn rows. Do not apply to corn that is more mature than V8 (i.e. more than 8 visible collars). When OPTION is tank mixed with other herbicides consult the label for the most restrictive crop growth stage.

General Comments: OPTION 35WG contains 0.35 lb ai of foramsulfuron per lb of product plus isoxadifen (a crop safener). Apply with Methylated or Ethylated Seed Oil plus Urea Ammonium Nitrate (UAN) or Ammonium Sulfate (AMS). Use of non-ionic surfactants, crop oil concentrate, or refined vegetable oils ARE NOT recommended including with tank mix partners. Applications should be made to young actively growing weeds. Maximum size for johnsongrass control is when plants are 16 inches tall. Sequential applications may be used to control late flushes of weeds or for rescue applications apply OPTION at 1.75 oz/A. Do not apply more than two applications of OPTION per season or exceed a total of 3.5 oz/A. Apply in a minimum spray volume of 10 gallons water per acre. DO NOT use OPTION herbicide in the same season as organophosphate (OP) insecticides such as Counter 15G, Counter 20CR (In-furrow), Dyfonate, and Thimet. Consult label directions before applying OPTION with other soil applied or foliar insecticides. OPTION is not recommended on corn known to be hybrid sensitive to sulfonylurea or ALS inhibiting herbicides.

Environmental Statements: Use precautions to avoid spray particle drift to nearby crops or sensitive vegetation.

Rain Delay: Allow 2 hours before rainfall.

Rotation Restrictions: Corn can be replanted 7 days after application. Rotational crops which may be planted include soybean 14 days following OPTION application. All other crops can be planted 60 days after application.

Harvest & Forage Restrictions: Wait 70 days before harvesting corn for grain or 45 days before harvesting corn forage. Do not graze within 45 days of OPTION application.

Tank Mixtures: Atrazine, Beacon, Callisto, Confidence, Confidence Xtra 5.6L, Degree, Degree Xtra, Dicamba, Distinct, Exceed, Fultime, Guardsman Max, Harness, Harness Xtra, Hornet WDG, Keystone, Marksman, NorthStar, Outlook, Permit, Prowl, Spirit, Sterling Plus, Surpass EC, TopNotch, Volley, Yukon.

PARAQUAT

GRAMOXONE INTEON 2S 1 to 2 pt/A	(paraquat 0.25 to 0.5 lb ai/A)
OR	OR
FIRESTORM or PARAZONE 3S 0.7 to 1.3 pt/A	(paraquat 0.25 to 0.5 lb ai/A)

Weeds Controlled: Many small annual broadleaf weeds and grasses.

Crop Stage: Apply only as a POST-DIRECTED treatment to minimize contact with corn leaves. Apply after smallest corn is 10 inches tall. Corn plants less than 10 inches may be injured and may not recover.

Additives: Apply with a Non-Ionic Surfactant (1 to 2 pt/100 gal) or Crop Oil Concentrate (4 qt/100 gal).

General Comments: GRAMOXONE INTEON 2S contain 2 lb ai of paraquat per gal; FIRESTORM 3S and PARAZONE 3SL contains 3 lb ai of paraquat per gal. They are RESTRICTED-USE pesticides due to acute toxicity. Paraquat is a non-selective contact herbicide that controls small annual grasses and broadleaf weeds; weeds 6" tall or more may not be effectively controlled. Apply as a spray solution in a minimum of 10 gallons of water per acre. Arrange nozzles to spray no higher than the lower 3 inches of corn stalks. Use a shielded sprayer to avoid excessive crop phytotoxicity.

Environmental Statements: Use precautions to avoid spray particle drift to nearby crops or sensitive vegetation.

Rain Delay: 15 to 30 minutes following application.

Rotation Restrictions: Any crop may be planted following normal corn growth and harvest.

Harvest & Forage Restrictions: None.

Tank Mixtures: None.

60 Corn

PERMIT

PERMIT 75DF 0.67 to 1.33 oz/A	(halosulfuron 0.032 to 0.063 lb ai/A)
+	+
SURFACTANT (Non-Ionic 80%) 1 to 2 qt/100 gal or	(additive)
CROP OIL CONCENTRATE 1 gal/100 gal	

Weeds Controlled: Cocklebur, pigweeds, common ragweed, velvetleaf, yellow nutsedge.

Crop Stage: Apply from the spike through layby stage of field corn.

General Comments: PERMIT 75DG contains 0.75 lb ai halosulfuron per lb product. Apply with Non-Ionic Surfactant or Crop Oil Concentrate. Liquid nitrogen may be included in the spray solution. Apply for postemergence control of yellow nutsedge and certain broadleaf weeds in field corn and grain sorghum (milo). Consult label for optimum stages of weed growth. Two applications of PERMIT are allowed per season with a total amount not to exceed 2.67 oz product per acre. Avoid applications when crop and weeds are under stress due to drought, excessive moisture, diseases, insect damage, or nutrient deficiency.

Rain Delay: 4 hours after application.

Rotation Restrictions: Crops that may be planted include field corn after 1 month, sorghum, wheat, barley, forage grasses after 2 months, popcorn after 3 months; or soybeans and alfalfa after 9 months following PERMIT application.

Harvest & Forage Restrictions: Allow 30 days following PERMIT application before grazing or harvesting for forage or silage.

Tank Mixtures: Accent, Atrazine, Banvel, Beacon, Buctril, Callisto, Clarity, 2,4-D, Distinct, Glyphosate [various products], Impact, Liberty, Option, Marksman, Status, Steadfast. Consult label for maximum corn heights and use of additives with tank mixtures.

REQUIRE Q

REQUIRE Q (mp) 4 oz/A	[rimsulfuron:dicamba (0.016:0.13) lb ai/A]
+	+
Non-Ionic Surfactant (25% v/v) 1 qt/100 gal	(additive)
+	+
Fertilizer Solution [28% or 32% UAN] 2 qt/A	(additive)
or Ammonium Sulfate 2 lb/A	

Weeds Controlled: Cocklebur, foxtail, lambsquarters, black nightshade, pigweeds, shattercane, smartweed, velvetleaf.

Crop Stage: Apply REQUIRE Q to field corn hybrids with a relative maturity rating of 77 days or more. Do not apply to seed corn, popcorn, or sweet corn. Consult with your seed supplier before applying to any corn hybrids known to be sensitive to ALS-type herbicides. Apply after field corn has reached 4 inches in height (V2). Do not apply to corn taller than 20 inches or exhibiting 7 or more collars, whichever is more restrictive.

General Comments: REQUIRE Q is a unit area pack herbicide which contains rimsulfuron + dicamba [6.25%+52.94% per lb of product] plus a corn safener (isoxadifen). For postemergence applications apply with a Non-Ionic Surfactant plus an Ammonium Nitrogen fertilizer, such as 28% or 32% Liquid Nitrogen or Ammonium Sulfate. If applied with glyphosate (eg. Roundup) or glufosinate (eg. Liberty) that contains a built-in adjuvant no additional surfactant needs to be added to the spray tank. Apply when weeds are young and actively growing (consult label for recommended weed sizes). Apply in a minimum spray volume of 15 gal per acre. Do not make more than 8 oz REQUIRE Q during the crop year. DO NOT apply to corn when certain soil insecticides such as "Counter" has been applied at planting or as a layby treatment. Consult label directions before applying REQUIRE Q with other organophosphate insecticides or foliar herbicides. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Rainfall Delay: Not indicated on the label (6 to 8 hours suggested).

Rotation Restrictions: Rotational crops which may be planted when 4 oz/A has been applied per season include field corn anytime; STS-soybean after 1 month; wheat after 3 months; or soybean, sorghum, popcorn, sweet corn, alfalfa, and red clover after 10 months following a REQUIRE Q application. Other crops may require an 18 month waiting period. Check label if a higher maximum rate was applied per season.

Harvest & Forage Restrictions: Corn may be harvested or grazed once the crop has reached the ensilage (milk) stage or late in maturity. However, do not graze, feed forage, grain or fodder from treated areas to livestock within 30 days of REQUIRE Q application.

Tank Mixtures: May be tank mixed with other products registered for use in corn unless these mixtures conflict with the REQUIRE Q label. Specific tank mixes listed include glyphosate (eg. Roundup, etc.) glufosinate (eg. Liberty), or Impact + atrazine. REQUIRE Q may also be tank mixed with soil-residual herbicides such as Breakfree, Breakfree ATZ, Cinch, Cinch ATZ, Lexar, and Lumax.

RESOLVE Q

RESOLVE Q	1.25 oz/A	[rimsulfuron:thifensulfuron (0.014:0.003) lb ai/A]
	+	+
Non-Ionic Surfactant (25% v/v)	1 qt/100 gal	(additive)
	+	+
Fertilizer Solution [28% or 32% UAN] or Ammonium Sulfate	2 qt/A 2 lb/A	(additive)

Weeds Controlled: Foxtail, pigweeds, shattercane, velvetleaf.

Crop Stage: Do not apply to seed corn, popcorn, or sweet corn. Consult with your seed supplier before applying to any corn hybrids known to be sensitive to ALS-type herbicides. Apply to field corn that is up to 20 inches tall. Do not apply to corn taller than 20 inches or exhibiting 7 or more collars, whichever is more restrictive.

General Comments: RESOLVE Q is a unit area pack herbicide which contains rimsulfuron + thifensulfuron-methyl [18.4% + 4.0% per lb of product] plus a corn safener (isoxadifen). For postemergence applications apply with a Non-Ionic Surfactant plus an Ammonium Nitrogen fertilizer, such as 28% or 32% Liquid Nitrogen or Ammonium Sulfate. If applied with glyphosate (eg. Roundup) or glufosinate (eg. Liberty) that contains a built-in adjuvant no additional surfactant needs to be added to the spray tank. Apply when weeds are young and actively growing (consult label for recommended weed sizes). Apply in a minimum spray volume of 15 gal per acre. Do not apply more than 2.5 oz/A RESOLVE Q during the crop year or a total of 0.5 oz active ingredient of rimsulfuron from applications of other products. DO NOT apply to corn when certain soil insecticides such as "Counter" has been applied at planting or as a layby treatment. Consult label directions before applying RESOLVE Q with other organophosphate insecticides or foliar herbicides. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Rainfall Delay: Not indicated on the label (6 to 8 hours suggested).

Rotation Restrictions: Rotational crops which may be planted when 1.25 oz/A has been applied per season include field corn anytime; STS-soybean after 1 month; wheat after 3 months; or soybean, sorghum, popcorn, sweet corn, alfalfa, and red clover after 10 months following a RESOLVE Q application. Other crops may require an 18 month waiting period. Check label if a higher maximum rate was applied per season.

Harvest & Forage Restrictions: Do not graze, feed forage, grain or fodder from treated areas to livestock within 30 days of RESOLVE Q application.

Tank Mixtures: May be tank mixed with other products registered for use in corn unless these mixtures conflict with the RESOLVE Q label. Specific tank mixes listed include glyphosate (eg. Roundup, etc.) glufosinate (eg. Liberty), or Impact + atrazine. RESOLVE Q may also be tank mixed with soil-residual herbicides such as Breakfree, Breakfree ATZ, Cinch, Cinch ATZ, Lexar, and Lumax.

SEQUENCE
(Glyphosate Tolerant Corn Hybrids ONLY)

SEQUENCE	2.5 pt/A	[S-metolachlor:glyphosate (0.94:0.7 lb ai/A)]
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Weeds Controlled: Barnyardgrass, broadleaf signalgrass, burcucumber, cocklebur, crabgrass, fall panicum, foxtails, jimsonweed, johnsongrass, lambsquarters, pigweeds, common ragweed, giant ragweed, shattercane, smartweed, velvetleaf.

Crop Stage: Use only on selected field corn hybrids which are designated with Glyphosate Tolerance or the Roundup Ready gene. Apply from seedling emergence of corn until 30 inches in height.

General Comments: SEQUENCE 4.25L contains S-metolachlor + glyphosate [3.0+2.25 lb ai/gal]. For control of annual grasses and broadleaf weeds and for suppression of certain perennial weed species. Do not exceed 5 pt/A of SEQUENCE per season. Consult label for maximum use rates when tank mixed with Dual Magnum or Glyphosate.

Environmental Statements: SEQUENCE has GROUNDWATER ADVISORY statements on the label. Do not use on very permeable soil or where ground water is close to the soil surface.

Rain Delay: Rainfall soon application may reduce control of emerged weeds.

Rotation Restrictions: Corn, sorghum (with Concep treated seed), and soybean may be planted immediately; alfalfa after 4 months; wheat, barley, rye, and oats after 4.5 months; clover after 9 months; and tobacco in the spring following application.

Harvest & Forage Restrictions: Make postemergence applications at least 50 days before harvest. Do not graze or feed forage from treated areas for 30 days following application.

Tank Mixtures: When applied postemergence SEQUENCE may be applied in a tank mixture with the following herbicide products - Atrazine, Bicep II Magnum, Callisto, Clarity, 2,4-D, Dual Magnum, Lexar, Lumax, Touchdown or the following insecticides – Karate, Warrior.

62 Corn

SPIRIT

SPIRIT 57DF 1 oz/A	[prosulfuron:primisulfuron (0.009:0.027) lb ai/A]
+	+
CROP OIL CONCENTRATE 1 qt/A or	(additive)
SURFACTANT (Non-Ionic 80%) 0.5 pt/25 gal	

Weeds Controlled: Burcucumber, cocklebur, jimsonweed, black nightshade, pigweeds, common ragweed, giant ragweed, johnsongraas (seedling), shattercane, smartweed.

Crop Stage: SPIRIT is labeled for use on field corn grown for grain or silage, including white corn. Some corn hybrids are classified as "potentially susceptible" to SPIRIT (consult seed dealer or chemical supplier for a listing of sensitive hybrids). Consult the label for use on field corn grown for seed and popcorn. DO NOT apply to sweet corn or ornamental corn. Apply to field corn which is between 4 to 24 inches tall. Applications made after field corn is 20 inches tall or exhibits more than 6 collars (V6), whichever comes first, should be directed using drop nozzles to help achieve optimum spray coverage of weeds and avoid potential injury. Applications to popcorn are more restrictive. When tank mixed with other herbicides consult the labels for maximum crop growth stage and rates for application.

General Comments: SPIRIT 57DF contains prosulfuron + primisulfuron [14.2% + 42.8% per lb product]. Apply with Crop Oil Concentrate or Non-Ionic Surfactant. Liquid Nitrogen or Ammonium Sulfate may be included in tank mixes for enhanced control of some weed species. SPIRIT is recommended for postemergence control of broadleaf weeds, but also controls seedling johnsongrass and shattercane. Consult label for recommended size of weeds for optimum control. DO NOT apply SPIRIT to "normal" or Imidazolinone-Tolerant (IT) corn hybrids when an organophosphate insecticide (such as COUNTER 15G) is applied at planting or as a foliar treatment. If an Imidazolinone-Resistant (IR or IMR) corn hybrid is planted, an organophosphate insecticide (including COUNTER) can be applied at any time. When other foliar herbicides are used, see label directions before applying SPIRIT. Consider planting a virus tolerant corn variety in fields where johnsongrass has over-wintered. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Rain Delay: 4 hours before expected rainfall.

Rotation Restrictions: If soil pH is below 7.8, crops which may be planted include wheat, barley, or rye after 3 months; popcorn or sweet corn after 8 months; soybeans, sorghum, forage grasses, or tobacco after 10 months; and alfalfa or clovers after 18 months following treatment. If soil pH is 7.8 or above, the rotation interval for sensitive broadleaf crops may be longer (consult label).

Do not apply SPIRIT after June 30 if soybeans will be planted next season. STS-soybean varieties should be considered if soil degradation processes has been slowed down by adverse environmental conditions. Other rotational crops not listed on the label should not be planted within 18 months after application.

Harvest & Forage Restrictions: Do not harvest corn for grain within 60 days after a SPIRIT treatment. Do not harvest for silage within 40 days after application. Wait 30 days after application before utilizing treated corn for grazing or forage feed.

Tank Mixtures: Accent, Atrazine, Banvel, Beacon, Buctril, Clarity, 2,4-D, Glyphosate products [glyphosate tolerant corn], Marksman, Stout. When SPIRIT is tank mixed with other herbicides consult the label for crop growth stage, rates, and use of additives. DO NOT tank mix SPIRIT with some insecticides, as severe crop injury can result, or tank mix with Poast or Poast Plus, as grass control may be reduced.

STATUS or DISTINCT

STATUS 56WG 5 to 10 oz/A or	[diflufenzopyr:dicamba (0.05:0.125) to (0.1:0.25) lb ai/A]
DISTINCT 70WG 4 to 6 oz/A	[diflufenzopyr:dicamba (0.05:0.125) to (0.075:0.188) lb ai/A]
+	+
SURFACTANT (Non-Ionic 80%) 1 qt/100 gal or CROP OIL CONCENTRATE 1 to 2 pt/A or METYLATED SEED OIL 1 to 2 pt/A	(additive)
+	+
FERTILIZER SOLUTION 5 qt/100 gal (28% to 34% UAN) or AMS (17 lb/100 gal)	(additive)

Weeds Controlled: Cocklebur, jimsonweed, lambsquarters, morningglory, black nightshade, pigweed, common ragweed, giant ragweed, prickly sida, sicklepod, smartweed, velvetleaf.

Crop Stage: Apply STATUS from 4-inch tall (V2) to 36-inch tall (V10) corn. Apply DISTICNT at 6 oz/A early postemergence when corn is 4 to 10" tall; apply only 4 oz/A of DISTINCT as a mid-postemergence treatment when corn is 10 to 24" tall.

General Comments: STATUS 56WG contains diflufenzopyr + dicamba (0.16 lb + 0.4 lb ae per lb product) + isoxadifen (crop safener). DISTINCT 70WG contains diflufenzopyr + dicamba (0.2 lb + 0.5 lb ae per lb product without a crop safener. Apply with an adjuvant (NIS, COC, or MSO) plus a liquid fertilizer solution (UAN or AMS). STATUS and DISTINCT primarily provides control of broadleaf weeds. For optimum results apply to actively growing weeds and use thorough spray coverage. Crop tolerance may be affected if corn is growing under stress conditions. Allow a minimum of 15 days between sequential applications of STAUS. Do not apply more than a total of 12.5 oz/A of STATUS per acre per season. Do not apply more than a total of 10 oz/A DISTINCT per acre per season.

Environmental Statements: STATUS and DISTINCT have Ground and Surface Water Advisory statements on the label. Avoid applications when conditions favor spray drift or when sensitive crops such as tobacco, soybeans, ornamentals, or vegetable crops are growing nearby.

Rain Delay: 4 hours before expected rainfall.

Rotation Restrictions: Do not plant any crop within 120 days after last application with the following exceptions. If at least 1 inch of rainfall occurs following application of STATUS at ≤ 5 oz/A, crops such as alfalfa, cereal grain crops, grain sorghum, and soybeans may be planted 30 days after the rainfall event. If crop failure occurs, corn can be replanted within 7 or more days after application of STATUS or DISTINCT.

Harvest & Forage Restrictions: Do not apply within 32 days of forage harvest or within 72 days of harvest for corn grain or stover. Do not graze or harvest hay from fields treated with DISTINCT.

Tank Mixtures: STATUS may be applied sequentially or in tank mixes with other corn herbicides except with the following limitations: 1) avoid tank mixes with plant growth regulating herbicides that contain dicamba, 2,4-D, or clopyralid, 2) avoid tank mixes with emulsifiable concentrate (EC) formulations of chloracetamide herbicides [eg. Dual II Magnum, Harness, Outlook, Surpass, etc.], 3) avoid foliar-applied tank-mixes with Lorsban insecticide (consult label). DISTINCT may be applied sequentially or in tank mixes with other corn herbicides, but is not recommended for tank mixes with plant growth regulating herbicides that contain dicamba, 2,4-D, or clopyralid (e.g. Banvel, Clarity, Marksman, NorthStar, Weedone 638, and Hornet) or with Poast or Poast Plus or with some foliar-applied insecticides (consult label).

STEADFAST

STEADFAST 75DF 0.75 oz/A	[nicosulfuron:rimsulfuron (0.024:0.012) lb ai/A]
+	+
Crop Oil Concentrate (1% v/v) 1 qt /25 gal or Modified Seed Oil (MSO) [0.5% v/v] 1 pt/25 gal or Non-Ionic Surfactant (25% v/v) 1 qt/100 gal	(additive)
+	+
Fertilizer Solution [28% or 32% UAN] 2 qt/A or Ammonium Sulfate 2 lb/A	(additive)

Weeds Controlled: Barnyardgrass, broadleaf signalgrass, foxtails, jimsonweed, johnsongrass (seedling), pigweeds, shattercane.

Crop Stage: Apply STEADFAST to field corn hybrids with a relative maturity rating of 77 days or more. Do not apply to seed corn, popcorn, or sweet corn. Apply STEADFAST to field corn up to 20 inches tall. Do not apply to corn taller than 20 inches or exhibiting 7 or more collars, whichever is more restrictive. For applications to corn hybrids with 77 to 88 days of Relative Maturity and for tank mixtures containing atrazine, dicamba (eg. Clarity, Distinct), Exceed, Spirit, and Permit apply before corn exceeds 12" tall.

64 Corn

STEADFAST (continued)

General Comments: STEADFAST 75DF is a prepackage mixture containing nicosulfuron+rimsulfuron [50%+25% per lb of product]. Apply with Crop Oil Concentrate, Modified Seed Oil [MSO], or Non-Ionic Surfactant plus an Ammonium Nitrogen fertilizer is recommended in the tank mixture, such as 28% or 32% Liquid Nitrogen or Ammonium Sulfate. Apply when weeds are young and actively growing (consult label for recommended weed sizes). Apply in a minimum spray volume of 15 gal per acre. Do not make more than one application per cropping season. DO NOT apply STEADFAST to corn when a soil insecticide such as COUNTER has been applied at planting or as a layby treatment. Consult label directions before applying STEADFAST with other organophosphate insecticides or foliar herbicides. The likelihood of corn injury may increase if applied at improper stage of growth or when corn is under stress due to drought, diseases, insect damage, or nutrient deficiency.

Rain Delay: Allow 4 hours.

Rotation Restrictions: Rotational crops which may be planted include soybean after 15 days (0.5 month); wheat and barley after 4 months; popcorn, sweet corn, sorghum (pH<7.5), alfalfa, and clover 10 months following a STEADFAST application. If soil pH<6.5, do not plant other rotational crops not listed within 10 months after application or 18 months when soil pH>6.5.

Harvest & Forage Restrictions: Wait 30 days after application before utilizing corn as forage, hay, or grazing.

Tank Mixtures: Atrazine, Callisto, dicamba (Clarity), Distinct, Exceed, Marksman, Hornet, Permit, Spirit, (see label for application limitations to corn 12" tall for some tank mixtures). STEADFAST may also be tank mixed with Cinch, Dual II Magnum, Lumax, Outlook, and Prowl for preemergence grass control (apply before corn exceeds maximum height of preemergence grass herbicide label). DO NOT tank mix STEADFAST with Basagran, Laddok or some organophosphate insecticides, such as Lorsban, malathion, or parathion as severe crop injury may occur. DO NOT tank mix with 2,4-D since poor control of grasses may occur.

STOUT

STOUT	0.5 to 0.75 oz/A	[nicosulfuron:thifensulfuron-methyl (0.02:0.0016 to 0.03:0.002 lb ai/A)]
	+	+
Crop Oil Concentrate (1% v/v)	1 gal/100 gal	
or Modified Seed Oil [MSO] (0.5% v/v)	0.5 gal/100 gal	(additive)
or Non-Ionic Surfactant (0.25% v/v)	1 qt/100 gal	
	+	+
Fertilizer Solution (28% or 32% UAN)	2 qt/A	(additive)
or Ammonium Sulfate	2 lb/A	

Weeds Controlled: Barnyardgrass, broadleaf signalgrass, foxtails, johnsongrass, lambsquarters, pigweeds, shattercane, smartweed, velvetleaf.

Crop Stage: STOUT is labeled for use on field corn hybrids with a relative maturity (RM) of 77 days or more. Apply to field corn up to 16 inches tall or that exhibits 5 or fewer leaf collars (V5 growth stage). When STOUT is tank mixed with other herbicides consult the label for maximum crop growth stage.

General Comments: STOUT contains 67.5% of nicosulfuron + 5% of thifensulfuron-methyl per lb of product. Apply with Crop Oil Concentrate, Modified Seed Oil, or Non-Ionic Surfactant plus an Ammonium Nitrogen fertilizer, such as 28% or 32% Liquid Nitrogen or Ammonium Sulfate. Apply when weeds are young and actively growing (consult label for recommended weed sizes). Do not make more than one application per cropping season. Before using STOUT consult the Soil Insecticide Interaction information on the label to ensure that it is compatible with any insecticides previously applied to the corn. For example, applications to corn previously treated with "Counter", "Lorsban", or "Thimet" may cause unacceptable crop injury. Also, consult label directions before applying STOUT with foliar applied insecticides or other foliar herbicides. Poor weed control or crop injury may result if applied at improper stage of growth or when corn or weeds are under stress due to environmental conditions, diseases, insects, or other damage.

Rain Delay: Not indicated on the label.

Rotation Restrictions: Rotational crops which may be planted include field corn anytime; soybeans 0.5 month (15 days); or wheat and other winter cereals 4 months; or popcorn, sweet corn, sorghum, canola, alfalfa and red clover after 10 months. Rotation interval may be longer for crops not listed, for certain varieties of sweet corn, or if drought conditions of less than 15" of rainfall is received during the growing season (consult label).

Harvest & Forage Restrictions: Do not graze, feed forage, grain or fodder from treated areas to livestock within 30 days of STOUT application.

Tank Mixtures: Atrazine, Bicep II Magnum, Callisto, Cinch, Cinch ATZ, Dicamba, Distinct, Dual II Magnum, Hornet WDG, Impact, Lexar, Lumax, Outlook, Prowl, Surpass EC. When tank mixed with other herbicides consult the label for additional information such as use of adjuvants, corn growth stages, and other limitations. DO NOT tank mix STOUT with Basagran, Laddok or some insecticides as severe crop injury may occur. DO NOT tank mix with 2,4-D since poor control of grasses may occur.

PREHARVEST or HARVEST AID

GLYPHOSATE

Glyphosate products labeled for preharvest use in corn are listed below. SEE PAGE 20 FOR A DETAILED LIST OF GLYPHOSATE PRODUCTS. Always consult the product label for specific directions.

GLYPHOSATE [3 lb ae/gal formulation]* (4 lb ai/gal)	2 pt/A (32 fl.oz/A)	[glyphosate 0.75 lb ae/A] (1.0 lb ai/A)
Example products: Roundup Original and several other GLYPHOSATE products.		
GLYPHOSATE [3.75 lb ae/gal formulation]*	1.6 pt/A (26 fl.oz/A)	[glyphosate 0.75 lb ae/A]
Example product: Buccaneer 5		
GLYPHOSATE [4 lb ae/gal formulation]* (5.4 lb ai/gal)	1.5 pt/A (24 fl.oz/A)	[glyphosate 0.75 lb ae/A] (1.0 lb ai/A)
Example product: Duramax, Durango DMA, Gly Star 5		
GLYPHOSATE [4.17 lb ae/gal formulation]*	1.5 pt/A (24 fl.oz/A)	[glyphosate 0.75 lb ae/A]
Example product: Touchdown Total / Traxion		
GLYPHOSATE [4.5 lb ae/gal formulation]* (5.5 lb ai/gal)	1.38 pt/A (22 fl.oz/A)	[glyphosate 0.77 lb ae/A] (0.95 lb ai/A)
Example products: Roundup PowerMAX, Roundup WeatherMAX.		
GLYPHOSATE [5 lb ae/gal formulation]*	1.25 pt/A (20 fl.oz/A)	[glyphosate 0.78 lb ae/A]
Example products: Touchdown HiTech		

***Additives:** Recommendations for use of non-ionic surfactants will vary depending on the Glyphosate product. Dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gal) or an equivalent rate of liquid Ammonium Sulfate is recommended to improve weed control.

Weeds Controlled: For control of many annual and perennial grasses and broadleaf weeds, including some vines which may interfere with crop harvest.

General Comments: Higher application rates may be used with certain glyphosate products on non-Roundup Ready corn hybrids (consult label). Apply using either aerial or ground spray equipment. Make application at 35% or less grain moisture. Ensure that maximum kernel fill is complete and the corn is physiologically mature (i.e. black layer formed). Allow 7 days between application and harvest.

2,4-D AMINE or ESTER

2,4-D AMINE 1.5 to 2 pt/A or (2,4-D 0.75 to 1 lb ai/A) or
2,4-D ESTER 1 to 2 pt/A (2,4-D 0.5 to 1 lb ai/A)
[4 lb ai/gal formulations]

Weeds Controlled: Cocklebur, jimsonweed, common ragweed, velvetleaf and vines that may interfere with crop harvest.

Crop Stage: As a preharvest treatment apply after hard dough or denting stage.

PARAQUAT

GRAMOXONE INTEON 2S 1.2 to 2 pt/A (paraquat 0.3 to 0.5 lb ai/A)
FIRESTORM or PARAZONE 3S 0.8 to 1.3 pt/A

Weeds Controlled: For desiccation of broadleaf weeds and grasses.

Crop Stage: Make one application at least 7 days prior to harvest. Apply after the corn is mature and black layer has formed at the base of the kernels.

Additives: Apply with a Non-Ionic Surfactant at 0.25% v/v (1 to 2 pt/100 gal).

General Comments: GRAMOXONE INTEON and FIRESTORM are RESTRICTED-USE pesticides due to acute toxicity. Apply as a spray solution in a minimum of 20 gallons of water per acre.

Environmental Statements: Avoid spray particle drift to nearby crops and other sensitive vegetation.

Rain Delay: 15 to 30 minutes following application.

Rotation Restrictions: Any crop may be planted following normal corn growth and harvest.

Harvest & Forage Restrictions: 7 days.

POSTHARVEST APPLICATIONS

GLYPHOSATE

Glyphosate products labeled for Between Crop or Postharvest use in corn are listed below. SEE PAGE 20 FOR A DETAILED LIST OF GLYPHOSATE PRODUCTS. Always consult the product label for specific directions.

GLYPHOSATE [3 lb ae/gal formulation]* (4 lb ai/gal)	2 to 5 qt/A	[glyphosate 1.5 to 3.75 lb ae/A] (2 to 5 lb ai/A)
Example products: Roundup Original, and several other GLYPHOSATE products.		
GLYPHOSATE [4 lb ae/gal formulation]* (5.4 lb ai/gal)	1.5 to 3.75 qt/A	[glyphosate 1.5 to 3.75 lb ae/A] (2 to 5 lb ai/A)
Example product: Duramax, Durango DMA,		
GLYPHOSATE [4.17 lb ae/gal formulation]*	1.6 to 3.6 qt/A	[glyphosate 1.7 to 3.7 lb ae/A]
Example product: Touchdown Total / Traxion		
GLYPHOSATE [4.5 lb ae/gal formulation]* (5.5 lb ai/gal)	1.5 to 3.3 qt/A	[glyphosate 1.7 to 3.7 lb ae/A] (2 to 4.5 lb ai/A)
Example products: Roundup PowerMAX, Roundup WeatherMAX.		
GLYPHOSATE [5 lb ae/gal formulation]*	1.33 to 3 qt/A	[glyphosate 1.7 to 3.75 lb ae/A]
Example products: Touchdown HiTech		

***Additives:** Recommendations for use of non-ionic surfactants will vary depending on the Glyphosate product. Dry Ammonium Sulfate at 1 to 2% by weight (8.5 to 17 lb/100 gal) or an equivalent rate of liquid Ammonium Sulfate is recommended to improve weed control.

Weeds Controlled: Bindweeds, Canada thistle, honeyvine milkweed, johnsongrass, trumpetcreeper and other problem broadleaf weeds.

REMARKS: Rates depend on weed species present and their density. The higher rate is recommended when GLYPHOSATE is applied alone. GLYPHOSATE can also be tank mixed with DICAMBA at 0.25 lb ai/A (eg. CLARITY 0.5 pt/A) or 2,4-D at 0.5 lb ai/A (1 pt/A). Apply to actively growing weeds; therefore, allow sufficient time for weed regrowth after crop harvest. Do not disturb treated areas for at least 7 days following application. Avoid applications after plants have been exposed to a hard killing frost. Vines are best controlled when in or beyond full bloom stage.

DICAMBA

DICAMBA 4S 4 to 64 oz/A (0.5 to 4 pt/A or
[eg. BANVEL, CLARITY, ORACLE, STERLING, etc.]

(dicamba 0.25 to 2 lb ai/A)

Weeds Controlled: Bindweeds, honeyvine milkweed, trumpetcreeper and other problem broadleaf weeds.

REMARKS: Rates depend on weed species present and their density. Dicamba can be tank mixed with 2,4-D (1 to 4 pt/A) Apply to actively growing weeds after crop harvest and before a killing frost. Vines are best controlled when in or beyond full bloom stage. Do not disturb treated areas for at least 7 days following application. Consult DICAMBA product label for crop rotation guidelines and other specific information.