

PRE-EMERGENT PRODUCT



Please see labels for complete crop listings, weed listings (including weed size specifications), and rates.

| FMC | KEY MESSAGE | CROPS | KEY WEEDS | RESIDUAL CONTROL |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| AIM® EC Group 14 | A flexible tank-mix partner for enhanced burnoff | Barley, buckwheat, canola, chickpea, corn (field & sweet), dry bean, faba bean, field pea, flax, lentil, millet (pearl & proso), mustard, oats, potato, rye, safflower, soybean, sunflower, triticale, wheat (spring, durum & winter) | Black nightshade, eastern black nightshade, lamb's quarters, morning glory, red root pigweed, tall waterhemp, velvetleaf, flixweed, hairy nightshade, Pennsylvania smartweed, pigweed (prostrate, smooth, tumble), purslane, round-leaved mallow, stinkweed, tansy mustard, waterhemp (tall, common), carpetweed, cleavers, cocklebur, jimsonweed, kochia, Russian thistle, shepherd's purse, volunteer canola, burclover, corn spurry, prickly lettuce, venice mallow | No |
| Authority® 480 Group 14 | Extended control of tough broadleaf weeds | Chickpeas, field peas, flax, sunflower, soybeans, tame mustard, faba beans. New 2021 - spring wheat, durum wheat (low rate only) | Kochia, cleavers ^S , common groundsel, common purslane, common waterhemp, eastern black nightshade, lamb's quarters, large crabgrass, powell pigweed, red root pigweed, smooth crabgrass, wild buckwheat, yellow woodsorrel | Yes  |
| Authority® Supreme Groups 14 & 15 | Get 2-in-1 pre-emergent protection against grassy and broadleaf weeds | Field peas, chickpeas, soybeans | Barnyard grass, brome (downy, Japanese), crabgrass (large, smooth), foxtail (green, yellow, giant), witchgrass, wild oats ^S , cleavers, common groundsel, common purslane, common ragweed ^S , cow cockle, eastern black nightshade, kochia, lamb's quarters, pigweed (green, red root and Powell), stinkweed, waterhemp (common), wild buckwheat, wild mustard ^S , yellow woodsorrel | Yes  |
| Command® 360ME Group 13 | Your first line of defense against cleavers in canola | Canola | Cleavers ^E | Yes  |
| Command® Charge Groups 13 & 14 | A stronger, more complete burnoff before canola, plus weeks of extended cleaver control | All herbicide tolerant canola | Command® charge A – cleavers ^E Command® charge B – lamb's quarters (common), morning glory, nightshade (black), nightshade (eastern black), red root pigweed, velvetleaf, tall waterhemp, flixweed, round-leaved mallow, morning glory, tansy mustard, hairy nightshade, field pennycress (stinkweed), pigweed (prostrate, smooth, tumble), common purslane, Pennsylvania smartweed, tall waterhemp, common waterhemp, volunteer canola, carpetweed, cocklebur, jimsonweed, kochia, shepherd's purse, Russian thistle | Yes - for cleavers  |
| Express® FX Groups 2, 4 & 9 when mixed with glyphosate | Proactive resistance management with uncompromising burnoff performance | Wheat (spring, durum, winter) Barley, Oats | **Canada fleabane, common ragweed, kochia (including Group 2 & 9 resistant biotypes), narrow-leaved hawk's beard, scentless chamomile ^S , dandelion, downy brome, flixweed, giant foxtail, green foxtail, hemp-nettle, lady's thumb, lamb's quarters, Persian dandelion, red root pigweed, Russian thistle, stinkweed, volunteer barley, volunteer canola (including glyphosate tolerant), volunteer flax, volunteer wheat, wild mustard, wild oats, cow cockle, wild buckwheat, Canada thistle ^S , white cockle ^S | No |

 - Requires moisture for activation **E** - Extended control **S** - Suppression only

**When tank mixed with 0.5 L/ac glyphosate equivalent

† Injury to crops and forages may occur on coarse-textured soils, low in organic matter (less than 3%), or in fields with variable soils, gravelly areas, sandy areas, or eroded knolls. Avoid planting in soils containing more than 50% sand.

This table is for reference only. Please see labels for complete crop listings, weed listings (including weed size specifications), and rates.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS. 76598-04/20

PRE-EMERGENT PRODUCT



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| FMC | KEY MESSAGE | CROPS | KEY WEEDS | RESIDUAL CONTROL |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Express® PRO Groups 2 & 9 when mixed with glyphosate | Professional strength burnoff with extended control | Wheat (spring, durum, winter), barley | **Canada fleabane, cleavers [‡] , common ragweed, kochia, narrow-leaved hawk's beard, scentless chamomile, night flowering catchfly [‡] , dandelion, downy brome, flixweed, giant foxtail, green foxtail, hemp-nettle, kochia (except Group 2 & 9 resistant biotypes), lady's thumb, lamb's quarters, Persian darnel, red root pigweed, Russian thistle, stinkweed, volunteer barley, volunteer canola (including glyphosate tolerant), volunteer flax, volunteer wheat, wild mustard, wild oats, cow cockle, wild buckwheat, Canada thistle [‡] , white cockle | Yes |
| Express® SG Groups 2 & 9 when mixed with glyphosate | Excellent burnoff weed control with maximum cropping flexibility | Wheat (spring, durum, winter), oats, lentils [‡] , chickpeas [‡] , alfalfa [‡] , red clover [‡] , alsike clover [‡] (seed or forage production), smooth brome [‡] , meadow brome [‡] , timothy [‡] , creeping red fescue [‡] , canary seed, dry bean, faba bean, field peas, lupin, soybean | **Canada fleabane, common ragweed, narrow-leaved hawk's beard, scentless chamomile, dandelion, downy brome, flixweed, giant foxtail, green foxtail, hemp-nettle, kochia (except Group 2 & 9 resistant biotypes), lady's thumb, lamb's quarters, Persian darnel, red root pigweed, Russian thistle, stinkweed, volunteer barley, volunteer canola (including glyphosate tolerant), volunteer flax, volunteer wheat, wild mustard, wild oats, cow cockle, wild buckwheat, Canada thistle [‡] , white cockle [‡] | No |
| Focus® Groups 14 & 15 | Extended control of toughest grassy and broadleaf weeds with a unique mode of action | Spring wheat, winter wheat, lentils, field corn, soybean | Barnyard grass, cleavers, common waterhemp, downy brome, green foxtail, yellow foxtail, giant foxtail [‡] , foxtail barley [‡] , green pigweed, Italian ryegrass, Japanese brome, kochia [‡] , lamb's quarters [‡] , large crabgrass, red root pigweed, stinkweed [‡] , velvetleaf, wild buckwheat [‡] , wild mustard [‡] , wild oats [‡] , wormseed mustard | Yes  |
| Intruvix® Groups 2, 4, 14 & 9 when mixed with glyphosate | Intruvix® herbicide plus glyphosate provides farmers with the only 4 modes of action certain burnoff to battle resistant weeds  | Wheat (spring, durum, winter), barley, oats | Canada fleabane, Canada thistle [‡] , cleavers, common ragweed, cow cockle, dandelion, downy brome, flixweed, giant foxtail, green foxtail, hemp-nettle, kochia (including Group 2 & 9 resistant biotypes), lady's thumb, lamb's quarters, morning glory, narrow-leaved hawk's beard, eastern black nightshade, black nightshade, Persian darnel, red root pigweed, Russian thistle, scentless chamomile [‡] , stinkweed, velvetleaf, volunteer canola (including glyphosate tolerant), volunteer flax, volunteer barley, volunteer wheat, tall waterhemp, white cockle [‡] , wild oats, wild buckwheat, wild mustard | No |

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[‡] Injury to crops and forages may occur on coarse-textured soils, low in organic matter (less than 3%), or in fields with variable soils, gravelly areas, sandy areas, or eroded knolls. Avoid planting in soils containing more than 50% sand.

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| GOWAN | KEY MESSAGE | CROPS | KEY WEEDS | RESIDUAL CONTROL |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Avadex® MicroActiv® Group 15 | Avadex® is a Group 15 mode of action, a powerful tool to help combat Group 1 and 2 resistant wild oats. Avadex also has residual activity helping to control flushing wild oats. This granular herbicide can be applied spring or fall and is ideal for zero and minimum tillage fields. | Spring wheat, durum wheat, barley, canary seed, flax, canola, mustard, dry peas, sugar beets. | Wild oats | 6 to 8 weeks |
| Avadex® Liquid EC Group 15 | Avadex® is a Group 15 mode of action, a powerful tool to help combat Group 1 and 2 resistant Wild Oats. Avadex also has residual activity helping to control flushing wild oats. This liquid herbicide is suited for conventional tillage fields, as contact with black soil at time of application will directly impact how effective weed control is. | Spring wheat, durum wheat, barley, flax, canola, mustard, dry peas, sugar beets, red root. | Wild oats | 6 to 8 weeks |
| Fortress® MicroActiv® Groups 3 & 15 | Fortress® brings 2 modes of action, Group 3 and Group 15, to help the battle against resistant wild oats. As well as control of flushing wild oats, Fortress has activity on other grasses and broadleaf weeds. This granular herbicide can be used spring or fall and can be applied in any tillage system including zero and minimum tillage systems. | Spring wheat, field corn | Control of wild oats, green and yellow foxtail. Suppression of kochia, wild buckwheat, lamb's quarters, red root pigweed, and Russian thistle | No |
| Insight® 339 SC Group 14 | Insight® 339 SC is a new non-selective contact herbicide used in a pre-emergent burndown application in spring wheat and field corn. Insight is also registered for use in non-crop and fallow. Powered by Tergeo®, Insight® delivers ultra-fast burndown of emerged weeds when and where it's needed. | Wild oats, kochia, red root pigweed, lamb's quarters, wild buckwheat, volunteer canola | Wild oats, kochia, red root pigweed, lamb's quarters, wild buckwheat, volunteer canola | |
| Edge® MicroActiv® Group 3 | This new formulation of Edge® is a powerful Group 3 mode of action to help combat Group 2, 4, and 9 resistant weeds that are becoming more prevalent across the prairies, as well as offering residual control. Edge® MicroActiv® can be applied spring or fall in any tillage system to help keep pulse and canola fields clean. | Canola, lentils, peas, dry beans, faba beans, yellow mustard, hemp, chickpeas, soybeans, sunflowers, alfalfa (establishment) | Green and yellow foxtail, barnyard grass, wild oats ^S , kochia, wild buckwheat, red root pigweed, lamb's quarters, cleavers ^S , and more | 6 to 8 weeks |
| Treflan® Liquid EC Group 3 | Treflan Liquid EC® is a lower cost Group 3 that is strong on some weeds but does not have the broad spectrum Control of Edge. This liquid herbicide is suited for conventional tillage fields, as contact with soil at application timing will directly impact how effective weed control is. | Canola, dry beans, faba beans, field peas, flax, lentils, mustard, sunflowers, alfalfa (establishment) | Green foxtail, yellow foxtail, barnyard grass, wild oats ^S , wild buckwheat, chickweed, lamb's quarters, pigweed, and more | 6 to 8 weeks |

Light incorporation moves products into soil moisture, no additional precipitation required for activation.

● - Requires moisture for activation E - Extended control S - Suppression only

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| NUFARM | KEY MESSAGE | CROPS | KEY WEEDS | RESIDUAL CONTROL |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Valtera™ EZ Group 14 | Valtera™ EZ is a pre-emergent soil active herbicide for early season broadleaf weed control in pulses, wheat, and soybeans. Now available in a convenient liquid formulation. | Chickpeas, field peas, lentils, soybeans, wheat | Annual sow thistle, chickweed, dandelion (seedling), green foxtail ^S , kochia (including Group 2- and glyphosate-resistant biotypes), lamb's quarters (Group 2-, 5- and glyphosate resistant biotypes), pigweeds, Russian thistle ^S , volunteer canola ^S , and wild buckwheat ^S | Up to 8 weeks  |
| Fierce® EZ Groups 14 & 15 | Fierce® EZ pre-emergent herbicide delivers broad-spectrum, extended soil active weed control on emerging spring broadleaf and grass weeds for up to 8 weeks after activation in pulses, wheat, and soybeans. | Chickpeas, field peas, lentils (fall application only), soybeans, spring wheat | Chickweed, green foxtail (including Group 1- and 2-resistant biotypes), kochia (Group 2-, 4-, and glyphosate-resistant biotypes), lamb's quarters, red root pigweed, volunteer canola ^S , wild buckwheat, wild mustard, and many more. | Up to 8 weeks  |
| Conquer® II Groups 14 & 6 | CONQUER® II pre-seed herbicide adds more power to your glyphosate for burndown ahead of seeding canola. | Canola, barley, canary seed, corn, fall rye, triticale, oats, summerfallow, wheat (spring, durum, winter) | Weeds controlled when tank-mixed with glyphosate - Annual sow thistle ^S , chickweed, cleavers (including Group 2- and glyphosate-resistant biotypes), cow cockle ^S , dandelion (spring germinated), flixweed, kochia (including Group 2-, 4-, and glyphosate-resistant biotypes), lamb's quarters (including Group 2-, 5- and glyphosate-resistant biotypes), narrow-leaved hawk's beard ^S , night-flowering catchfly, pineapple weed ^S , red root pigweed (including Group 2- and 5-resistant biotypes), shepherd's purse, stinkweed, volunteer canola (all herbicide-tolerant biotypes), wild buckwheat, and wild mustard | No |
| GoldWing® Groups 14 & 4 | GoldWing® herbicide is an effective pre-seed burndown option with multiple modes of action, for use before seeding pulses, cereals, flax corn and canary seed. | Barley, canary seed, chickpeas, corn, faba beans, field peas, flax, lentils, oats, rye, triticale, wheat (spring, durum, winter) | Weeds controlled when tank-mixed with glyphosate - Annual sow thistle ^S , Canada thistle, cleavers (including Group 2- and glyphosate-resistant biotypes), cow cockle, dandelion (suppression), kochia (including Group 2-, 4- and glyphosate-resistant biotypes), lamb's quarters (including Group 2- and 5-resistant biotypes), mustards (except dog and tansy), narrow-leaved hawk's beard (spring germinated), night-flowering catchfly, red root pigweed (including Group 2- and 5-resistant biotypes), round-leaved mallow, stinkweed, shepherd's purse, smartweed, volunteer canola (all herbicide tolerant biotypes), and wild buckwheat | No |

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| BlackHawk® EVO Groups 14 & 4 | BlackHawk® EVO pre-seed herbicide enters the heat of the battle with fast, flexible, and complete broadleaf weed control ahead of cereals, soybeans, and corn. | Barley, canary seed, field corn, oats, rye (spring, fall), soybeans, summerfallow, triticale, wheat (spring, winter, durum) | Weeds controlled when tank-mixed with glyphosate - Canada thistle, cleavers (including Group 2- and glyphosate-resistant biotypes), cocklebur, cow cockle ^S , dandelion (spring seedling and season long suppression), flixweed, kochia (including Group 2-, 4-, and glyphosate-resistant biotypes), lamb's quarters (including Group 2- and 5-resistant biotypes), mustards (except dog and tansy), narrow-leaved hawk's beard (including Group 2-resistant biotypes), night-flowering catchfly, pigweeds (red root and Russian), prickly lettuce, Russian thistle, shepherd's purse, sow thistle, stinkweed, sweet clover, volunteer canola (including all herbicide-tolerant biotypes), wild buckwheat (suppression), and wild radish | No |
| Thunderhawk™ Group 14, 4 & 2 | Thunderhawk™ herbicide energizes pre-seed burndown with glyphosate ahead of cereals in the black soil zone. With three modes of action, it delivers fast-acting control on a wide spectrum of broadleaf weeds and provides longer residual activity on volunteer canola. | Barley, oats, wheat (spring and winter) | Annual sow thistle, Canada thistle, cleavers (including Group 2- and glyphosate-resistant biotypes), chickweed, cow cockle, dandelion, flixweed, hemp-nettle, kochia (including Group 2-, 4-, and glyphosate-resistant biotypes), lamb's quarters (including Group 2- and 5-resistant biotypes), mallow, mustards (except dog and tansy), narrow-leaved hawk's beard, night-flowering catchfly, red root pigweed (including Group 2- and 5-resistant biotypes), stinkweed, shepherd's purse, smartweed, volunteer canola (all herbicide-tolerant biotypes), wild buckwheat, wild mustard (including Group 2-resistant biotypes) | No |

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| BASF | KEY MESSAGE | CROPS | KEY WEEDS | RESIDUAL CONTROL |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Voraxor Complete Groups 14 & 15 | The most consistent pre-seed burndown on the market, with outstanding residual activity for an effective one-two punch to start the season. Three actives in a high-performance herbicide: new Tirexor, trusted Kixor for burndown control and Zidua® SC for residual activity. Broad-spectrum control including activity on grassy weeds. Enhanced residual activity on key broadleaf weeds. | Field corn, field pea, lentil, soybean | Wild buckwheat, volunteer canola, dandelion, flixweed, green foxtail, kochia, lamb's quarters, wild mustard, narrow-leaved hawk's beard, red root pigweed, wild oat | Yes |
| Voraxor Group 14 | Next level pre-seed burndown and residual control of weeds in pulses. Voraxor herbicide delivers enhanced pre-seed burndown with residual suppression of broadleaf weeds at higher labeled rates in peas, lentils, corn, soybeans, wheat, and barley and includes the innovative new active Tirexor. | Barley, chickpea, field corn, sweet corn, field pea, lentil, soybean, wheat | Volunteer canola, wild buckwheat, dandelion, flixweed, kochia, lamb's quarters, wild mustard, narrow-leaved hawk's beard, stinkweed | Suppression at the high rate |
| Smoulder Group 14 & 2 | New, superior control of broadleaf weeds in a pre-seed application to start the season with cleaner fields. Post-emergence burndown of emerged weeds and residual pre-emergent control of secondary flushes of volunteer canola prior to seeding wheat and barley. Provides control of tough winter annual and perennial weeds when applied as a tank mix with glyphosate. Burndown control of resistant broadleaf weeds including Group 2-, 4-, and 9-resistant biotypes of kochia. | Barley, durum wheat, spring wheat, winter wheat | Volunteer canola, wild buckwheat, dandelion, kochia, lamb's quarters, wild mustard, narrow-leaved hawk's beard, stinkweed, cleavers, Canada thistle | in new products |

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| Certitude Group 6 & 27 | <p>To help maximize canola yield, you need to put the smackdown on weeds early. Certitude® herbicide is the pre-seed solution that provides exceptional control of challenging weeds like kochia and volunteer canola. And as the first Group 27 chemistry that's registered for pre-seed use in canola production, it also helps to mitigate herbicide resistance, sharpening your glyphosate application.</p> <p>Delivers exceptional pre-seed weed control of herbicide-resistant kochia and volunteer canola. And as the first Group 27 herbicide for pre-seed use in canola, it helps manage herbicide resistance.</p> | Canola (all HT systems) | Chickweed, cleavers, cow cockle, flixweed, hemp-nettle, kochia, lady's thumb, lamb's quarters, narrow-leaved hawk's beard, red root pigweed, Russian thistle, stinkweed, volunteer canola, volunteer flax, wild buckwheat, wild mustard | No |

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