

Preemergence (grassy, broadleaf weeds)

Preemergence herbicides labeled for control of grassy (crabgrass, goosegrass, annual bluegrass, etc.) and small-seeded broadleaf weeds (such as purslane, spurge, chickweed)

| Common name           | Trade name (Product/A)                           | Turfgrasses labeled for application                  | Weeds controlled                                    | Comments   | HRAC, WSSA group |
|-----------------------|--|--|---|--|------------------|
| atrazine              | Aatrex 4L (1–4 qt)                               | BE, CE, SA, Z  | Annual grassy weeds, many broadleaf weeds           | Can provide early postemergence control of some weeds  | C1, 5            |
|                       | Aatrex Nine-O (1-4.4 lb)                         |  |   | Use caution under tree driplines, especially in high pH (> 7.5) soils. See label for more information.   |                  |
|                       | Others   |  |   | Application at > 2 pt/A permitted only for sod production.<br><br>Do not use on alkaline or muck soils.<br><br>Do not apply 4 months before or 6 months after seeding; or until newly seeded grasses have overwintered.<br><br>Do not use west of the high-rainfall areas of East Texas. |                  |
| benefin               | Balan 2.5G (60–120 lb)                           | BA, BE, CE, KB, PR, SA, TF, Z                        | Annual grassy weeds, some small-seeded broadleaves  | Is more volatile than other preemergence herbicides, so irrigation or rainfall shortly after application improves efficacy   | K1, 3            |
|                       | Others   |  |   |  |                  |
| benefin + trifluralin | Team 2G (75–150 lb)                              | Most cool- and warm-season turfgrasses; see label    | Annual grassy weeds, some small-seeded broadleaves  | In bermudagrass areas overseeded with winter grasses, this product may thin overseeded grasses.  | K1, 3            |
|                       | Team Pro (see label)<br>Many fertilizer carriers |  |   | Because benefin and trifluralin are more volatile than are other preemergence herbicides, irrigation, or rainfall shortly after application improves efficacy.<br><br>Do not apply to newly sprigged areas.  |                  |
| bensulide             | Bensumec 4LF (1.88–3.13 gal)                     | BA, BE, CBG, CE, FF, KB, PR, SA, TF, Z               | Annual grassy weeds, some small-seeded broadleaves  | Can be applied to putting greens up to twice/year; for use on golf courses, lawns only   | N, 8             |
|                       | Pre-San 7G (107–180 lb)                          |  |   | Has less residual than preemergence herbicides such as dithiopyr, prodiamine, pendimethalin, or indaziflam   |                  |
|                       | Pre-San 12.5G (80–100 lb)                        |  |   |  |                  |
| DCPA                  | Dacthal W-75 (6–14 pt)                           | Most established and newly seeded grasses. See label | Some annual grassy and small-seeded broadleaf weeds | Can be applied to newly seeded grasses that are at least 1–2 in. tall and a uniform green color.   | Z, 17            |
|                       | Dacthal Flowable (6–14 pt)                       |  |   | Should be activated by 0.25 in. of rain or irrigation within 5 days of application.<br><br>If soil moisture is below 10%, irrigate immediately.  |                  |

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| dithiopyr      | Dimension 2EW (1–2 pt)               | BA, BE, BU, CA, CBG, CE, FF, KB, PR, SA, TF, Z | Annual grassy weeds, some small-seeded broadleaves  | Can provide early postemergent crabgrass control. See label for more information.  | K1, 3            |
|                | Dithiopyr 2L (1–2 pt)                |  |   | Do not apply to Tifgreen (328) hybrid bermudagrass.  |                  |
|                | Dimension Ultra 40WP (0.625–1.25 lb) |  |   | Some formulations such as those from Anderson’s Golf Products can be used on creeping bentgrass and bermudagrass putting greens with well-developed root systems.  |                  |
|                | Dithiopyr 40WSB (0.625–1.25 lb)      |  |   |  |                  |
|                | Others and many fertilizer carriers  |  |   |  |                  |
| dimethenamid-P | Tower (21–32 fl oz)                  | BA, BE, BU, CE, FF, KB, PR, SA, SS, TF, Z      | Annual grasses, small-seeded broadleaf weeds, some sedges<br><br>Can help remove overseeded cool-season grasses in warm-season turf | Should be activated by 0.25–0.5 in. of rain or irrigation within 24 hours of application<br><br>On grassy and broadleaf weeds, it is best used in a sequential application program after applying pendimethalin.<br><br>Applying to cool-season turfgrass may cause unacceptable injury or thinning. | K3, 15           |
| flumioxazin    | SureGuard (8–12 oz wt)               | BE   | Several broadleaf and grassy weeds; provides postemergence control of many weeds  | Apply to dormant bermudagrass only.<br><br>Can provide early postemergence annual bluegrass control<br><br>When applying upslope of sensitive cool-season grasses, follow label to prevent off-target movement.<br><br>See supplemental label for use in turfgrass.                                  | E, 14            |
| indaziflam     | Specticle FLO (6–10 fl oz)           | BA, BE, BU, CE, SA, Z                          | Annual grassy weeds, some small-seeded broadleaf weeds, sedges emerging from seed   | Provides early postemergent control of annual bluegrass and crabgrass; should be activated by 0.25 in. of rain or irrigation within 2 days of application  | L, 21            |
|                | Specticle 20WSP (2.5–5 oz wt)        |  |   | Do not apply to cool-season grasses. When applying upslope of sensitive cool-season grasses, follow label to prevent off-target movement.  |                  |
| isoxaben       | Gallery 75DF (0.66–1.33 lb)          | BA, BE, BU, CBG, CE, FF, KB, PR, SA, TF, Z     | Broadleaf weeds   | Tank mixtures with preemergence herbicides that control grasses will broaden the spectrum of weed control. Can be applied after sprigging many warm-season turfgrasses   | L, 21            |
|                | Gallery SC (16–31 fl oz/A)           |  |   |  |                  |
|                | Isoxaben 75WG (0.66–1.33 lb)         |  |   |  |                  |
| S-metolachlor  | Pennant MAGNUM (1.3–2.6 pt)          | BA, BE, CE, SA, Z                              | Annual grassy weeds, some small-seeded broadleaves yellow nutsedge  | Activate with at least 0.5 in. of rain or irrigation before weeds germinate and within 14 days of application.<br><br>Spring greenup may be delayed after application.   | K3, 15           |

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| oryzalin                       | Surflan AS (1.5–2 qt)                              | BA, BE, BU, CE, SA, TF, Z           | Annual grassy weeds, some small-seeded broadleaf weeds, sedges   | Do not apply in the spring to tall fescue planted the previous fall.  | K1, 3            |
|                                | Other formulations                                 |                                     |  | This herbicide thins overseeded grasses.  |                  |
| oxadiazon                      | Ronstar Flo (5–7.5 pt)                             | BE, BU, CBG, KB, PR, SA, SS, Z      | Annual grassy weeds, some small-seeded broadleaf weeds, sedges   | Not for home lawns  | E, 14            |
|                                | Ronstar 50WSP (4–8 lb)                             |                                     |  | For use only by professional applicators.   |                  |
|                                | Ronstar G (100–200 lb)                             |                                     |  | Sprayable formulations may be applied only to dormant warm-season turf.   |                  |
|                                |  |                                     |  | Granular formulation may be applied to non-dormant warm- and cool-season turf.<br>Apply so that granules reach the soil surface. Do not apply to wet turf.<br>Can be applied before or after sprigging; see label for more details  |                  |
| oxadiazon + bensulide          | Anderson's Crabgrass/Goosegrass Control (115.5 lb) | BE, CBG, KB, PR, TF, Z              | Crabgrass, goosegrass  | For use by professional applicators only<br><br>Can be applied to bentgrass and bermudagrass putting greens if goosegrass infestation is heavy and injury is tolerable  | E, 14 + N, 8     |
| pendimethalin                  | Pendulum AquaCap (3.1–6.3 pt)                      | Most warm and cool-season species   | Annual grassy weeds, some small-seeded broadleaves   | Maximum single application rates are lower for residential turfgrass.   | K1, 3            |
|                                | Pendulum 3.3EC (3.6–7.2 pt)                        |                                     |  | Should be activated by at least 0.5 in. of rainfall or irrigation before weeds germinate and within 30 days of application  |                  |
|                                | Pendulum 2G (75–150 lb)                            |                                     |  |   |                  |
|                                | Many others  |                                     |  |   |                  |
| pendimethalin + dimethenamid-P | Freehand 1.75G (100–200 lb)                        | BE, CE, SA, SS, Z                   | Annual grassy weeds, several small-seeded broadleaf weeds, some sedges<br><br>Can help remove overseeded cool-season grasses in warm-season turf | Application rate maximums are lower for residential use.<br><br>Do not apply to turf or ornamentals when soil temperature is less than 55 °F.<br><br>Do not apply to plants under stress.<br><br>Should be activated by irrigation or rainfall before weeds germinate and within 30 days of application | K1, 3 + K3, 15   |

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| prodiamine                 | Barricade 65WG (0.5–2.3 lb)<br>Barricade 4FL (10–48 fl oz)<br>ProClipse 65WDG (0.5–2.3 lb)<br>Cavalcade 65 WDG (0.5–2.3 lb)<br>Several others and many fertilizer carriers | BA, BE, CBG, CE, FF, KB, PR, SA, TF, Z             | Annual grassy weeds, some small-seeded broadleaf weeds | Should be activated by at least 0.5 in. of irrigation before weeds germinate and within 14 days of application   | K1, 3                                   |
| prodiamine + quinclorac    | Cavalcade PQ (1–2.3 lb)  | BE, BU, CBG, FF, KB, PR, SS, Z                     | Annual grassy weeds, some small-seeded broadleaf weeds | Provides postemergence control of some broadleaf and grassy weeds including crabgrass.<br>Apply with methylated seed oil. If rainfall does not occur within 7 days after application irrigate to 0.5 in.   | K1, 3 + L, 21 (monocot)<br>O, 4 (dicot) |
| prodiamine + sulfentrazone | Echelon 4SC (8–36 fl oz)   | BA, BE, BU, CA, CBG, CE, FF, KB, PR, SA, SS, TF, Z | Annual grassy weeds, some broadleaf weeds, sedges      | Provides postemergence control of some broadleaf weeds and yellow nutsedge<br>May temporarily injure or discolor St. Augustinegrass. Mowing will remove discoloration.<br>Do not apply with the plant growth regulator trinexapac-ethyl.   | K1, 3 + E, 14                           |
| pronamide                  | Kerb SC (1.25–5 pt)<br>Kerb 50WP (2–4 lb)  | BE, CE, SA, Z                                      | Annual grassy weeds                                    | Restricted-use pesticide. Not for residential sites.<br>Provides early postemergence control of several grassy weeds<br>Should be activated by light rainfall or irrigation within 24 hours of application<br>When applying upslope of sensitive cool-season grasses, follow label to prevent off-target movement.<br>Removes overseeded perennial ryegrass from bermudagrass slowly (4–6 wk); apply after 50% bermudagrass greenup to prevent bermudagrass injury | K1, 3                                   |
| siduron                    | Tupersan (4–24 lb)   | CBG, FF, PR, TF, Z                                 | Crabgrass, foxtail, bermudagrass suppression           | Can be applied to CBG putting greens to suppress bermudagrass encroachment; can be used during the establishment of zoysiagrass from sprigs  | C2, 7                                   |

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|-------------|-------------------------|-------------------------------------|--|---|------------------|
| simazine    | Princep Liquid (1–2 qt) | BE, CE, SA, Z                       | Winter annual grassy and broadleaf weeds; some summer annual grasses | Use caution under tree driplines, especially in high pH (> 7.5) soils. See label for more information.<br><br>Provides both pre and early post emergence control of many weeds. See label for muck or alkaline soils.<br><br>Do not exceed 1 qt/A per treatment on hybrid bermudagrass or newly sprigged bermudagrass.<br><br>Non-dormant bermuda or zoysiagrass may yellow or slow growth temporarily. | C1, 5            |

Turfgrass application codes for labeled herbicide tolerance of various grass species

| Warm-season            | Cool-season                          |
|------------------------|--------------------------------------|
| BA: Bahiagrass         | B: Bluegrass (species not specified) |
| BE: Bermudagrass       | CBG: Creeping bentgrass              |
| BU: Buffalograss       | F: Fescue (species not specified)    |
| CA: Carpetgrass        | FF: Fine fescue                      |
| CE: Centipedegrass     | KB: Kentucky bluegrass               |
| SA: St. Augustinegrass | PR: Perennial ryegrass               |
| SS: Seashore paspalum  | R: Ryegrass (species not specified)  |
| Z: Zoysiagrass         | TF: Tall fescue                      |

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