Dual® 25G

Granular Herbicide

For weed control in corn, peanuts, potatoes, soybeans, and ornamentals

50 Pounds
Net Weight

Active Ingredient:
Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide ........................................... 25.0%
Inert Ingredients: .......................................................... 75.0%
Total: ........................................................................ 100.0%

Control No. 52600

Dual 25G is a granular herbicide

Keep Out of Reach of Children.

Caution
See additional precautionary statements on back of bag.

EPA Reg. No. 100-638
See directions for use on back of bag.

CIBA-GEIGY
DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.
DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

No user shall permit the application of this product in such a manner as to directly or indirectly expose workers or other persons except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

Do not enter treated areas without protective clothing until dusts have settled.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be entered without specific protective clothing until dusts have settled, and appropriate actions to take as described under Precautionary Statements at the end of this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "CAUTION. Area treated with Dual 25G on (date of application). Do not enter without appropriate protective clothing until dusts have settled. In case of accidental exposure, flush eyes or skin with plenty of water. Call a physician if irritation persists. Remove and wash contaminated clothing before reuse."

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

General Information

Dual 25G will control many annual grasses and certain broadleaf weeds in corn, peanut, potato, soybean, and ornamentals. It shall be applied prior to the emergence of weeds. It may be preplant surface-applied (corn and soybeans only), or incorporated into the surface 1-2 inches of soil prior to planting or left on the soil surface during or after planting. Dry weather following application of Dual 25G may reduce its effectiveness. Shallow cultivation of weeds develop or if tillage is necessary to improve the physical condition of the soil.
Precaution: Injury may occur following the use of Dual 25G under abnormally high moisture conditions during early development of the crop.

Weeds Controlled

<table>
<thead>
<tr>
<th>barnyardgrass (watergrass)</th>
<th>green foxtail</th>
<th>yellow foxtail</th>
</tr>
</thead>
<tbody>
<tr>
<td>crabgrass</td>
<td>red rice</td>
<td>yellow nutsedge</td>
</tr>
<tr>
<td>crowfootgrass</td>
<td>signalgrass</td>
<td>black nightshade</td>
</tr>
<tr>
<td>fall panicum</td>
<td>signalgrass</td>
<td>carpetweed</td>
</tr>
<tr>
<td>foxtail millet</td>
<td>southwestern cupgrass</td>
<td>Florida pusley</td>
</tr>
<tr>
<td>giant foxtail</td>
<td>witchgrass</td>
<td>galinsoga</td>
</tr>
<tr>
<td>goosegrass</td>
<td></td>
<td>pigweed</td>
</tr>
</tbody>
</table>

Weeds Partially Controlled*: common purslane, hairy nightshade, sandbur, seedling johnsongrass, shattercane and volunteer sorghum.

*Control of these weeds can be erratic due partially to variable weather conditions. Control may be improved by following these suggested procedures:

1) **Thoroughly till moist soil to destroy germinating and emerged weeds.** If Dual 25G is to be applied preplant incorporated, this tillage may be used to incorporate Dual 25G if uniform 2 inch incorporation is achieved as recommended under Application Procedures.

2) **Plant crop into moist soil immediately after tillage.** If Dual 25G is to be used preemergence, apply at planting or immediately after planting.

3) **If available, sprinkler irrigate within 2 days after application.** Apply 1/2-1 inch of water. Use lower water volume (1/2 inch) on coarse-textured soils and higher volume (1 inch) on finer textured soils.

4) **If irrigation is not possible and rain does not occur within 2 days after planting and application, weed control may be decreased.** Under these conditions, a uniform, shallow cultivation is recommended as soon as weeds emerge.
Application Procedures

Dual 25G may be applied either broadcast or banded.

Broadcast Treatment - Dual 25G may be applied with a broadcast type granular applicator or with a cyclone type spreader. Use applicators and techniques that will apply the granules uniformly to the soil.

Band Treatment - Dual 25G may be applied with any standard granular applicator capable of uniformly distributing a predetermined amount of granules to a desired area. Band treatment made at seeding should only be applied behind the press wheel.

Note: Caution should be taken with seeding equipment so that any track (soil depression) made by the planter press wheel is minimal. This will reduce concentration of granules in the press wheel track by heavy rain which can result in crop injury.

Soil tillage should not follow the use of band applications unless it is adapted to not to displace the band and hence reduce weed control in the band.

Applicator settings are given for band applications in Chart 1. These settings were determined under laboratory conditions to ±5% accuracy. Note that the settings may differ depending on speed of application, as well as rate per acre. It is important that the user calibrate each individual granular applicator prior to its use. Since the actual setting for each individual granular applicator may vary, the settings shown should serve only as guidelines for calibration.

Calculate the amount of Dual 25G needed for band treatment as follows:

\[
\text{Band width in inches} \times \text{Broadcast rate} = \text{Band rate per acre}
\]

Example: If 15 lbs. per acre is recommended for broadcast application and you wish to treat 4 rows 11 inches wide in crop rows spaced 16 inches apart:

\[
\left(\frac{11}{12}\right) \times 15 = 7.5 \text{ lbs.} \text{ of granules needed for each acre that is to be treated.}
\]

Do not apply Dual 25G during periods of high winds. Wind may displace placement of the granules and reduce weed control.
Locate granular applicators close to the ground to reduce granular displacement. Windshield wipers are advisable.
<table>
<thead>
<tr>
<th>Applicator Brand</th>
<th>Speed</th>
<th>6 Lbs.</th>
<th>8 Lbs.</th>
<th>10 Lbs.</th>
<th>12 Lbs.</th>
<th>16 Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gandy Two-opening</td>
<td>4</td>
<td>8.5</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>9.5</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>15.5</td>
</tr>
<tr>
<td>Model No. S-902</td>
<td>6</td>
<td>10.5</td>
<td>12</td>
<td>13</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>International Harvester 1980 &amp; Before</td>
<td>4</td>
<td>1.80</td>
<td>1.1</td>
<td>1.0</td>
<td>1.2</td>
<td>1.35</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.92</td>
<td>1.1</td>
<td>1.15</td>
<td>1.38</td>
<td>1.6</td>
</tr>
<tr>
<td>Allis Chalmers 1979 &amp; After</td>
<td>6</td>
<td>1.0</td>
<td>1.13</td>
<td>1.25</td>
<td>1.45</td>
<td>1.9</td>
</tr>
<tr>
<td>International Harvester 1981 &amp; After</td>
<td>4</td>
<td>1.65</td>
<td>1.75</td>
<td>1.85</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.75</td>
<td>1.85</td>
<td>1.95</td>
<td>2.0</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1.85</td>
<td>1.95</td>
<td>2.0</td>
<td>2.1</td>
<td>2.45</td>
</tr>
<tr>
<td>John Deere 1978 &amp; Before (Metal Box)</td>
<td>4</td>
<td>1/19</td>
<td>1/21</td>
<td>1/23</td>
<td>1/25</td>
<td>1/29</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1/21</td>
<td>1/23</td>
<td>1/25</td>
<td>1/28</td>
<td>2/1</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1/22</td>
<td>1/24</td>
<td>1/27</td>
<td>1/30</td>
<td>2/5</td>
</tr>
<tr>
<td>John Deere Meter Scale 0.50.20. etc.</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>11</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>John Deere 1979 &amp; Later Meter Scale 0.5.15. etc.</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
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<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Noble 1972 &amp; Before</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>8</td>
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<td>12</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Noble 1973 &amp; Later</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

*Settings are for application of the equivalent broadcast rates per acre obtained in a 14 inch band at speed (miles per hour) shown. If other than a 14 inch band is to be used, these settings do not apply and additional calibration will be necessary.
Calibration of Band Applicators

To calibrate a granular applicator for a standard 14 inch band, a sample has to be collected while the applicator is either running or simulating a run over a distance of 500 ft.

Procedure:

1. Fill applicator box with Dual 25G.

2. Refer to Chart 1 and adjust the setting on your applicator to correspond to the desired rate per acre.

3. Attach a plastic bag or similar container to the applicator spout after detaching the delivery tube.

4. Make the 500 ft. run at planting speed.

   Speed/Time required to cover 500 feet:
   
   4 mph = 1 min. 25 sec.
   5 mph = 1 min. 8 sec.
   6 mph = 57 sec.

5. Weigh granules collected (or measure volume), and if necessary, adjust and make successive runs until the setting delivers the correct number of ounces per 500 ft. of row, as shown in Chart 2.

6. Repeat this procedure for each granular applicator box.

Chart 2: The Equivalent Broadcast Rate Per Acre in Volume and Weight for 500 Feet on the Basis of a 14 Inch Band

<table>
<thead>
<tr>
<th>Broadcast Rate Per Acre</th>
<th>Volume Collected in 14-Inch Band 500 Linear Feet</th>
<th>Weight Collected in 14-Inch Band 500 Linear Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 lb.</td>
<td>1.6 fl. oz.</td>
<td>1.3 oz.</td>
</tr>
<tr>
<td>8 lb.</td>
<td>2.2 fl. oz.</td>
<td>1.7 oz.</td>
</tr>
<tr>
<td>10 lb.</td>
<td>2.6 fl. oz.</td>
<td>2.2 oz.</td>
</tr>
<tr>
<td>12 lb.</td>
<td>3.2 fl. oz.</td>
<td>2.6 oz.</td>
</tr>
<tr>
<td>16 lb.</td>
<td>4.5 fl. oz.</td>
<td>3.5 oz.</td>
</tr>
</tbody>
</table>
For band widths other than 14 inches, the calibration distance will differ from 500 ft.

For other band widths, calculate the relative calibration distance in which to collect the corresponding weight or volume of Dual 2SG in Chart 2 as follows:

\[
\frac{14 \text{ (Inches)}}{\text{Desired band width (Inches)}} \times 500 = \text{Calibration distance in feet}
\]

Example: A band width of 10 inches is to be used, instead of 14 inches, to apply Dual 2SG at an equivalent rate of 10 lbs./broadcast acre.

A. 14 Inches x 500 Ft. = 700 Ft.

B. Collect 2.8 fl. oz. by volume or 2.15 oz. by weight for the newly calculated calibration distance of 700 ft. for a 10-inch band.

Corn

For control of annual grasses and broadleaf weeds listed under the General Information section, apply Dual 2SG either preplant surface, preplant incorporated, or preemergence to corn before weeds emerge.

**Conventional Tillage**

Preplant Incorporated: Broadcast Dual 2SG to the soil and incorporate in the top 1-2 inches of soil within 14 days before planting using appropriate surface incorporating equipment at the rate from Table 1.

Preemergence: Band or broadcast Dual 2SG to the soil surface during or after planting and before weeds emerge using the appropriate rate from Table 1. For band treatment, apply granules behind the press wheel.
Table 1: Dual 25G - Corn**

<table>
<thead>
<tr>
<th>Soil texture</th>
<th>Broadcast rate per acre</th>
<th>Less than 3% organic matter</th>
<th>3-6%* organic matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand, loamy sand, sandy loam</td>
<td>6-8 lbs.</td>
<td>8 lbs.</td>
<td></td>
</tr>
<tr>
<td>MEDIUM:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loam, silt loam, silt</td>
<td>8-10 lbs.</td>
<td>8-10 lbs.</td>
<td></td>
</tr>
<tr>
<td>FINE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silty clay loam, sandy clay loam</td>
<td>8-10 lbs.</td>
<td>10-12 lbs.</td>
<td></td>
</tr>
<tr>
<td>Silty clay, sandy clay, clay,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>clay, clay loam, clay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muck or peat soils</td>
<td></td>
<td></td>
<td>DO NOT USE</td>
</tr>
</tbody>
</table>

*Dual 25G may be used up to 16 lbs. per acre, broadcast basis, on soils having an organic matter content greater than 6%.

**Dual 25G may be used sequentially in place of Dual 8E with Atrex®, Princep, Bladex®, Bindal®, paraquat, or Roundup applied at the tank mix rate specified on the Dual 8E label or the respective product labels.
Reduced-Tillage and No-Tillage

Preplant Surface Applied: Broadcast Dual 25G up to 45 days before planting corn on medium- and fine-textured soils in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and NY. Apply 2/3 the recommended broadcast rate of Dual 25G as a split treatment 10-45 days before planting and the remainder immediately before planting, or at planting. Applications less than 30 days before planting may be made either as a split or as a single treatment. Apply 8 lbs./A on coarse soils not more than 2 weeks before planting. If weeds are present at the time of treatment, apply a labeled contact herbicide (for example, carbofuran or RounLup®). Observe the directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished. To avoid reduced weed control, do not apply to frozen soil or rainfall may change the pattern of the Dual granules. Injury may occur from movement of Dual 25G into the planter slit if the slit is not properly closed during planting.

Preemergence: Broadcast Dual 25G at the appropriate rate from Table 1 prior or after planting, before weeds emerge, or after weeds present have been killed with a labeled contact. Injury may occur from treatment of Dual 25G in the planter slit if the slit is not properly closed during planting.
Peanuts

Dual 25G Single Applications - All Peanut Growing Areas:

Apply Dual 25G either preplant incorporated, postplant incorporated or preemergence, using the appropriate rate specified below. Preplant Incorporated: Broadcast Dual 25G to the soil surface and incorporate into the top 1-2 inches of soil before planting using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 1-2 inch incorporation. Use a preplant incorporated application if furrow irrigation is to be used, or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate Dual 25G after bed formation. Postplant Incorporated: Broadcast or band Dual 25G to the soil surface and shallowly incorporate into the soil after planting, but before peanut germination. Incorporation depth and incorporating implements must be kept above the seed or seed will be damaged.

Preemergence: Broadcast or band Dual 25G to the soil surface during planting (behind the planter) or after planting, but before weeds or crop emerge.

Apply Dual 25G at a broadcast rate of 6-12 lbs. per acre. Within the rate range, use the lower rate on soils relatively course-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Note: Dual 25G may be applied as directed after any of the following preplant incorporated herbicides when used according to their label recommendations: Balan® at 3-4 pts. per acre; Treflan® at 1 pt. per acre; or Poster® at 2.3-3 pts. per acre. Dual 25G may be applied as directed prior to a sequential treatment of Poster® applied preemergence to cracking time using 6 pts. Poster per acre as specified for use on this label.

Soybeans

For control of broadleaf weeds and broadleaf weedy spp. in the General Integrated Strategy, apply Dual 25G either preplant incorporated or preemergence. For control of weeds before emergence:

Conventional Tillage

Preplant incorporated: Preplant broadcast or band Dual 25G to the soil surface and incorporate into the top 1-2 inches of soil within 14 days before planting using a finishing disk, harrow, or other appropriate tillage equipment at the appropriate rate from Table 2.
Preemergence: Band or broadcast Dual 25G to the soil surface during or after planting and before weeds emerge using the appropriate rate from Table 2. For band treatment, apply granules behind the press wheel.

Table 2: Dual 25G - Soybeans*

<table>
<thead>
<tr>
<th>Soil texture</th>
<th>Broadcast rate per acre</th>
<th>Less than 3% organic matter</th>
<th>3-6% organic matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand, loamy sand,</td>
<td>6-8 lbs./A</td>
<td>8 lbs./A</td>
<td></td>
</tr>
<tr>
<td>sandy loam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEDIUM:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loam, silt loam,</td>
<td>8-10 lbs./A</td>
<td>8-10 lbs./A</td>
<td></td>
</tr>
<tr>
<td>silt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silty clay loam,</td>
<td>8-10 lbs./A</td>
<td>10-12 lbs./A</td>
<td></td>
</tr>
<tr>
<td>sandy clay loam,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>silty clay,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sandy clay,</td>
<td></td>
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<tr>
<td>clay loam,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>clay</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mark on per soil: DO NOT USE

*Dual 25G may be used sequentially in place of Dual 80 with 2,4-D, Bensil™, Extra II™, Action™, Prowl™, or Premus™ applied at the tank mix rate specified on the Dual 80 label or the respective product label.
Reduced-Tillage and No Tillage

Preplant Surface Applied: Broadcast Dual 25G up to 45 days before planting soybeans on medium- and fine-textured soils in CO, IL, IN, IA, KS, KY, MN, MO, MT, NE, ND, SD, WI, and WY. Apply 2/3 the recommended broadcast rate of Dual 25G as a split treatment 30-45 days before planting and the remainder immediately before planting or at planting. Applications less than 30 days before planting may be made either as a split or as a single treatment. Apply 8 lbs./A on coarse soils not more than 2 weeks before planting. If weeds are present at the time of treatment, apply a labeled contact herbicide (for example, paraquat or Roundup). Observe the directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting; weed control will be diminished. To avoid reduced weed control, do not apply to frozen soil as rainfall may change the pattern of the Dual granules. Injury may occur from movement of Dual 25G into the planter slit if the slit is not properly closed during planting.

Preemergence: Broadcast Dual 25G at the appropriate rate from Table 2 during or after planting, before weeds emerge, or after weeds present have been killed with a labeled contact. Injury may occur from movement of Dual 25G into the planter slit if the slit is not properly closed during planting.
Potatoes

Apply Dual 25G either incorporated, preemergence, or after hilling/lay-by according to the directions specified below for control of weeds listed under the General Information section. Within a rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil.

Incorporated: Apply Dual 25G before planting at 6-12 lbs. per acre to the soil and incorporate into the surface of the soil 1-2 inches using appropriate tillage equipment. Planting and later cultural practices should not bring untreated soil to the surface. Postplant application may be made any time after planting to dry-off, but before potato emergence. Incorporate using an implement that distributes Dual within the top 1-2 inches of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Preemergence: Apply Dual 25G at 6-12 lbs. per acre either after planting or a preemergence, delayed preemergence, after dry-off or hillling treatment, but before weeds emerge. Up to 16 lbs. per acre of Dual 25G alone may be used where soil organic matter is greater than 6%.

After Hilling/Laying. Apply 11 lbs. per acre of Dual 25G after hilling or laying to control Dual-sensitive weeds for remainder of the growing season. This application will not control emerged weeds. Do not apply over a previous Dual 25G application, but do not apply more than 22 lbs. of Dual 25G per acre in a single crop season.

Rates: Do not exceed rates for your soil. If soil is very coarse-textured or low in organic matter and/or subject to drought or wind, use lower rates. Do not exceed rates for potatoes. Do not apply rates greater than 6% organic matter. Do not apply both preemergence and incorporated treatments.

To avoid illegal residues, potatoes treated with Dual should not be harvested within 60 days after a planting or dry-off application, or within 45 days after a lay-by application. Do not use in Kern County, California.
Ornamentals (Container, field and liner grown)

Apply Dual 25G using a cyclone or similar type applicator at rates indicated for control of annual grasses and yellow nutsedge.

Broadcast Dual 25G at the rate of 8-16 lbs. per acre on established ornamentals, or to ornamentals at least 5 days after transplanting, but before grass weeds or yellow nutsedge emerge, or after existing weeds or nutsedge plants have been removed. A second application may be needed to provide grass and yellow nutsedge control for an extended period. Do not make more than 2 applications per year.

Use the higher rate of Dual 25G on fine-textured soils, on high organic matter soils, in potting mixes, and where yellow nutsedge and heavy infestations of grass weeds are expected. Use the lower rate on coarse-textured soils with low organic matter content, and where light infestations of grass weeds are expected.

If hand applications are to be used, apply an amount proportional to the fraction of an acre treated.

To control annual broadleaf weeds, a broadcast application of Princep 4G at 20–25 ppm can be made immediately before or after applying Dual 25G. See the Princep 4G label for application instructions.

Precautions: Do not use Dual 25G alone or in conjunction with Princep 4G on seedbeds or on unrooted cuttings or prior to transplanting. Do not apply Dual 25G to ornamentals whose foliage is wet for the granules may adhere to the foliage and cause injury. Should granules adhere to the foliage, irrigate soon after application to remove the granules and reduce potential damage.

Do not use in greenhouse or other enclosed structures.

BEST DOCUMENT AVAILABLE
Container Grown Ornamentals

Use in aucuba (Aucuba spp.), holly (Ilex spp.), juniper (Juniperus spp.), and liriope (Liriope spp.) var. Silver Sunproof.

Princep 4G may be used in conjunction with Dual 25G in aucuba, holly, juniper, and liriope.

Field and Liner Grown Ornamentals

Use Dual 25G in the following:

Arborvitae (Thuja spp.)*
Aucuba (Aucuba spp.)*
Azalea (Rhododendron spp.)
Hershey Red, Herbert, Purple Splendor
Barberry (Berberis spp.), Mentor, Warty, Wintergreen
Box Tree (Buxus spp.)
Cotoneaster (Cotoneaster spp.)*
Crabapple (Malus spp.)*
Dogwood (Cornus spp.), Red Stem
Euonymus (Euonymus spp.), including Purpleleaf Winter Creeper
Firethorn (Pyracantha spp.)
Forsythia (Forsythia spp.), including Spring Glory and Golden Bells
Holly (Ilex spp.), American, Boxleaf Japanese*, Japanese*, Green Lister Japanese
Honeysuckle (Lonicera spp.)
Hybrid Tea Rose (Rosa spp.)
Japanese Andromeda (Pieris spp.)*
Japanese Red Maple (Acer spp.)*
Juniper (Juniperus spp.)*, Andorra, Creeping, Shore, Bar Harbor, Blue Rug
Lilac (Syringa spp.) James McFarland
Liriope (Liriope spp.)* Silver Sunproof
Maple whips (Acer spp.)*
Miniature Rose (Rosa spp.)
Mountain Laurel (Kalmia spp.)
Osmanthus (Osmanthus spp.)*
Pachysandra (Pachysandra spp.)
Privet (Ligustrum spp.)
Red Oak (Quercus spp.)*
Rhododendron (Rhododendron spp.)*
Rosebay (Rhododendron spp.)
Spiraea (Spiraea spp.)
Viburnum (Viburnum spp.)
Weigela (Weigela spp.)*
Yew (Taxus spp.), Dwarf Japanese*, Hick

*Dual 25G may be applied in conjunction with Princep 4G on these field and liner grown ornamentals.

Rotational Crop:

1) If crop treated with a preplant or pre-emergence application of Dual 25G is clover, corn, cotton, soybean, sunflower, peanut, potato, grain sorghum, or potato*, may be replaced immediately. Do not make a second broad-spectrum application of Dual 25G. If the original application was halved and the second crop is planted in the untreated row only, a second halved treatment may be applied. 2) Barley, oats, rye, or wheat may be planted 4 1/2 weeks following a preplant or pre-emergence treatment.
Corn, cotton, soybeans, peanuts, potatoes, sorghum, pod crops, root crops, barley, buckwheat, milo, oats, rice, rye, or wheat may be planted in the spring following treatment. Do not graze or feed forage or fodder from treated cotton or pod crops to livestock. All other rotational crops may be planted 18 months after application.

3) Corn, cotton, soybeans, peanuts, potatoes, safflower, sorghum or pod crops may be planted in the spring following a lay-by treatment. All other rotational crops may be planted 18 months after a lay-by application.

*Provided the seed has been properly treated with Concep* seed protectant.

**Pod crops including:** garbanzo, great northern beans, guar, kidney beans, lima beans, mung beans, navy beans, okra, English peas, southern peas (such as blackeye, pinkeye, crowder, etc.), pinto beans, and snap beans (green, wax, string).

Storage and Disposal

Pesticide Storage and Disposal

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Improper disposal of unused pesticide, spray mixture, or residue is a violation of federal law. If these wastes cannot be used according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Container Disposal

Completely empty into application equipment. Dispose of empty but in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. Stay out of smoke from burning.

For minor spills, follow all precautions indicated on this label and clean immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of waste. In the event of a major spill, fire or other emergency, call 911. (222-2222) Your number.

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<table>
<thead>
<tr>
<th>Precautionary Statements</th>
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<tr>
<td><strong>Hazards to Humans and Domestic Animals</strong></td>
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<tr>
<td><strong>CAUTION</strong></td>
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The active ingredient, metolachlor, may cause skin sensitization reactions in certain individuals. Wear protective clothing (coveralls and gloves) while handling or using this product. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust. Causes eye irritation. Avoid contact with eyes, skin or clothing. Do not contaminate food or feed.

**Practical Treatment:** In case of contact with eyes or skin, wash immediately with plenty of water. Get medical attention if irritation persists. If inhaled, move to clean air. If swallowed, give one or two glasses of water and induce vomiting by placing fingers in back of throat, and contact a local poison control center, hospital or physician immediately. Never give anything by mouth to an unconscious person.

**Environmental Hazards**

Do not apply directly to any body of water. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes.

Dial® trademark of CIBA-GEIGY for metolachlor
U.S. Patent No. 3,937,710

Amiben® trademark of Union Carbide Agricultural Products, Inc.

ATrazine® trademark of CIBA-GEIGY for atrazine

Bulan® trademark of Elanco Products for benfedin
Banvel® trademark of Velsicol Chemical Corp. for dicamba
Bladeox® trademark of Shell Chemical Company for cyanazine
Coneep® trademark of CIBA-GEIGY
U.S. Patent No. 4,070,389
Dyanap® trademark of Uniroyal Chemical for Alanap®-Dinitro
Lexone® trademark of E. I. duPont de Nemours and Co. for metribuzin
Lorox® trademark of E. I. duPont de Nemours and Co. for linuron
Premerge® trademark of the Dow Chemical Company for dinoseb
Princeep® trademark of CIBA-GEIGY for simazine
Roundup® trademark of Monsanto Company for glyphosate herbicide
Sencor® trademark of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen, for metribuzin
Treflan® trademark of Elanco Products for trifluralin
Vernam® trademark of Stauffer Chemical Company for vernolate
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Agricultural Division
CIBA-GEIGY Corporation
Greensboro, North Carolina 27419
CGA 49L23D

Apr. 19, 1983
Revised July 27, 1983
Revised December 1, 1983
Revised January 23, 1984
Revised May 31, 1984
Mr. Richard Conn
Ciba-Geigy Corporation
Agricultural Division
P.O. Box 18306
Greensboro, NC 27416

Dear Mr. Conn:

Subject: Minimum and Soil-Tillage Corn, Soybeans
          Dual 25G Granular Herbicide
          EPA Registration No. 160-638
          Your Submission Dated May 31, 1994

The amendment referred to above, submitted in connection with registration
under FIFRA sec. 3(c)(7)(A) is acceptable provided that you:

1. Submit and/or cite all data required for registration/re-registration
   of your product under FIFRA sec. 3(c)(7) when the Agency requires all
   registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product
   for shipment bearing the amended labeling:

   a. Under the Section rate tables for corn and soybeans, delete the
      asterisked paragraphs referring to use of Dual 25G sequentially in place of
      tank mixes of Dual 25. These paragraphs are confusing. Under soybeans, we
      would accept a reference to substituting Dual 25G for Dual ME used sequentially
      with Prometryl, provided adequate directions for the sequential use appear
      on the dual 25G label.

   b. Under Potatoes, Incorporated, the additional phrase xxx before
      planting xxx is inconsistent with the remaining text. Previously accepted
      text suggests incorporation is appropriate for pre- and postplant applications.
      Clarify the direction.

   c. Under rotational crops, do not add the qualifier "treated" to the
      crop protection statement for cotton and soybeans. Dual 25G is not used
      on these crops and your proposed text would be inconsistent with the language
      used on Dual 25G. If you propose to delete the language restriction for the
      rotational crops, you should prepare amendments for both labels adequately
      supported with residue data citations.
1. Submit two (2) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the shipment will be subject to cancellation in accordance with CPMA regulations. You release for shipment of the product only on the condition labeling constitutes acceptance of these conditions.

A stamped copy of the label is essential for your records.

Sincerely yours,

[Signature]

Richard C. Mengert
Product Manager (21)
Kingman, Arizona Branch
Registration Division (78-767)

Enclosure


[Signature]

[Company Name]