Why choose Dual Magnum brand herbicides over generic metolachlor?

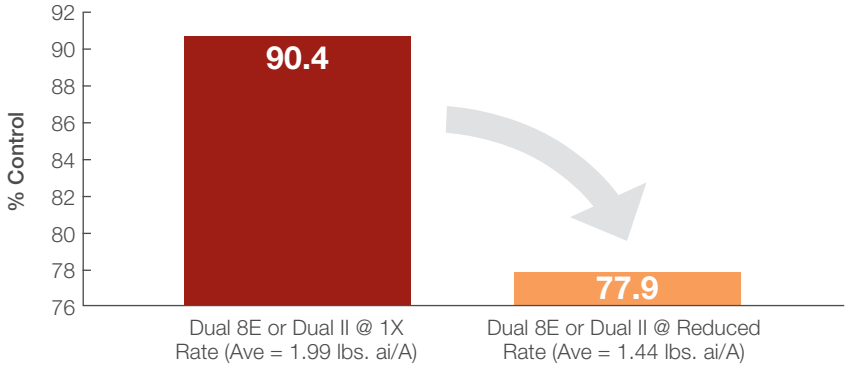
Metolachlor, the active ingredient in the original Dual® herbicide was replaced in 1997 when Syngenta received registration for products containing *S*-metolachlor, a more concentrated active isomer version of metolachlor. *S*-metolachlor has more weed control activity pound-for-pound than metolachlor. Syngenta offers *S*-metolachlor in Dual Magnum®, as well as in various other products.

- Metolachlor is comprised of two isomer pairs, an *S*-isomer pair and an *R*-isomer pair at a 1:1 ratio (50% each). Generic metolachlor herbicide brands contain only the racemic (1:1 ratio) metolachlor.
- **The *S*-isomer pair is 6x more active on weeds than the *R*-isomer pair.**
- ***S*-metolachlor has more of the *S*-isomer pair in each pound due to a selective manufacturing process**, i.e., a 7.3:1 ratio is achieved (88% *S* and 12% *R*), making it more active than racemic metolachlor.

S-metolachlor provides the same level of weed control at a 35 percent lower rate than generic herbicide brands containing the racemic metolachlor. Generic metolachlor herbicides are only labeled for the lower rate to preserve the reduced herbicide load benefits of *S*-metolachlor-containing brands.

- When used at comparable labeled rates, generic brands will not provide the same consistency of commercially acceptable weed control nor the season-long weed control that Dual Magnum brands provide.

The following graph shows the effect on weed control that occurs by reducing the rate of racemic metolachlor below the rate originally labeled (as Dual 8E or Dual II® herbicide) for a given soil type (data from labeled weeds only).



445 field comparisons (42 percent conducted by University Cooperators).

Generic metolachlor-containing products are applied at the same rate as the *S*-metolochlor product in any given situation (i.e., same rate for the same soil type, application timing, target weed and/or cropping system).

- For example, on fine soils, racemic metolachlor rates would need to be at 3 pt/A to equal the Dual Magnum rate of 2 pt/A, but this exceeds the racemic metolachlor legal use rate of 2 pt/A.

Rate Comparisons

Straight Grass Herbicides

Herbicide	Grass Ingredient	Label Rate (pt/A)	Rate needed to achieve *S*-metolachlor level of weed control (pt/A)
Dual Magnum	***S*-metolachlor**	**1.33**	**1.33**
Dual II	Old metolachlor	2.0 (no longer registered)	2.0
Stalwart® C	Old metolachlor	1.33	2.0
Me-Too-Lachlor™ II	Old metolachlor	1.33	2.0
Parallel™	Old metolachlor	1.33	2.0

Advantages and benefits of Dual Magnum

- The weed control performance of Dual Magnum has been proven on tens of millions of acres.
- Dual Magnum allows for application rates that deliver full weed control activity – and therefore deliver on label claims about weed spectrum and application flexibility.
- Syngenta products are backed by excellent field support and bulk service.
- *S*-metolachlor is available in multiple formulations to meet various market needs.

For more information about Syngenta Crop Protection Products,
visit **www.syngentacropprotection.com** or call **866-796-4368.**

Dual Magnum®

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