

What Weed Control Professionals Need to Know About Monsanto's New Roundup PROMAX™ Formulation

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Monsanto has recently received label approval from the California Department of Pesticide Regulation for its new Industrial, Turf and Ornamental herbicide formulation. The new product, Roundup PROMAX™, is formulated as a 4.5 lb per gallon glyphosate acid equivalent (a.e.) or 5.5 lbs of the potassium salt of glyphosate as the active ingredient (a.i.) per gallon. As such, this new formulation contains more glyphosate a.e. than any other Monsanto Industrial, Turf and Ornamental Roundup® herbicide yet developed. Monsanto's switch from the use of the isopropylamine (IPA) molecule to the much smaller potassium (K⁺) ion, during formulation with the glyphosate acid, allows for the increased amount of glyphosate acid in the new formulation. Because of the product's increased glyphosate concentration, users will be able to achieve the same level of weed control with lower rates than previously experienced with Roundup® Pro herbicide. Users are advised to consult the new product's label for proper rates to control the various types of weeds encountered. The new formulation will offer easier handling for users because of its lower viscosity. Users may notice easier pumping and pouring in their day-to-day operations.

Roundup PROMAX™ contains a unique surfactant system that allows the solution to penetrate weed leaf surfaces faster, which means Roundup PROMAX™ is rainproof in half the time of Roundup® PRO. To better understand this effect, Monsanto conducted a number of laboratory and greenhouse studies¹ with Roundup PROMAX™. In these studies, plants treated with Roundup PROMAX™ showed significant and severe chlorophyll (photosystem II) disruption which is often the first manifestation of stress in a leaf², rapid cuticle penetration followed by rapid and extensive glyphosate translocation within the treated plants, and rapid phytotoxicity vs. two other surfactant-containing, glyphosate-based herbicides used as comparisons.

A number of efficacy studies were conducted at various but different environmental and climactic sites throughout the state of California with cooperating vegetation management customers. Roundup PROMAX™ controlled the treated annual and perennial weeds as effectively as Roundup® Pro and in some instances provided more rapid broadleaf weed phytotoxicity than Roundup® Pro.

Citations

¹ 2007 Monsanto Research Test

² "Chlorophyll fluorescence—a practical guide," by Kate Maxwell, Environmental and Molecular Plant Physiology Laboratory, Department of Agricultural and Environmental Science, The University, Newcastle upon Tyne NE1 7RU, UK and Giles N. Johnson, University of Manchester, School of Biological Sciences, 3.614 Stopford Building, Oxford Road, Manchester

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