

Chemical Factsheet

Glyphosate

General Information

- Fact Sheet: [bp-fact-glyosphate.082017.pdf](#)
- Product Names:
 - Ranger Pro** (Bayer CropScience)
 - Roundup** (Monsanto)
 - Polado** (Monsanto)
 - Accord** (Monsanto)
 - Clearout** (Albaugh)
 - Departure** (Syngenta)
 - Extreme** (BASF) formulated with [Imazethapyr](#)
 - Backdraft** (BASF) formulated with Imazaquin
 - Rage** (FMC) formulated with Carentrazone-ethyl
 - Ortho Season-Long Grass & Weed Killer** (Scotts)
 - Knockout** (Libertas)
 - Cornerstone** (Winfield)
 - Rodeo** (Monsanto)
- Chemical Class: Phosphanoglycine herbicide
- Uses: Non selective herbicide, or at low rates a plant growth regulator
- Alternatives: [Organic agriculture](#), [Organic land management](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

- Cancer: Yes (1, 2, 3)
- Endocrine Disruption: Yes (4)
- Reproductive Effects: Yes (5, 6)
- Neurotoxicity: Yes (7)
- Kidney/Liver Damage: Yes (4)
- Sensitizer/Irritant: Yes (6)
- Birth/Developmental: Yes (8)
- Detected in Groundwater: Yes (9)
- Potential Leacher: Possible (10)
- Toxic to Birds: Yes (11)
- Toxic to Fish/Aquatic Organisms: Yes (12)
- Toxic to Bees: Yes (13, 14)

Residential Uses as Found in the ManageSafe™ Database

- [Dandelions](#)
- [Annual Bluegrass](#)
- [Clover](#)
- [Ground Ivy](#)

- [Japanese Knotweed](#)
- [Chickweed](#)

Additional Information

- Regulatory Status:
 - [EPA's Glyphosate Background and Updates](#)
 - [Draft Human Health and Ecological Risk Assessments for Glyphosate](#)
 - [Code of Federal Regulations: Glyphosate Tolerances](#)
 - [EPA Withdraws Glyphosate Interim Decision](#) (September 2022)
 - [Interim Registration Review Decision and Responses to Public Comments for Glyphosate](#) (2020)
 - [Beyond Pesticides' Draft Human Health and Ecological Risk Assessments for Glyphosate comments](#) (04/2018)
 - [Draft Human Health and Ecological Risk Assessments for Glyphosate](#) (2017)
 - [Revised Glyphosate Issue Paper: Evaluation of Carcinogenic Potential](#) (2017)
 - [Beyond Pesticides' Evaluation of the Carcinogenic Potential comments](#) (10/2016)
 - [Glyphosate Listed Effective July 7, 2017, as Known to the State of California to Cause Cancer](#) (OEHHA, 2017)
 - [Beyond Pesticides' Notice of Intent to List \(California\) comments](#) (10/2015)
 - [Beyond Pesticides' Enlist Duo registration comments](#) (12/2016)
 - [EPA Meeting Materials for the December 13-16, 2016 Scientific Advisory Panel on the Carcinogenic Potential of Glyphosate](#)
 - [Registration of Enlist Duo](#) (EPA, 2014)
 - [Final work plan for Glyphosate Registration review](#) (2009)
 - [EPA Reregistration Eligibility Decision \(RED\) signed](#) (9/1993)
- Supporting information:
 - [Daily News Blog](#)
 - Report- [Glyphosate: Unsafe on Any Plate](#)
 - Beyond Pesticides' [letter to EPA calling for residue testing](#) (12/2015)
 - [Agricultural Uses of Antibiotics Escalate Bacterial Resistance](#) (Pesticides and You, Winter 2016-2017)
 - [Asthma, Children and Pesticides](#) (Beyond Pesticides)
 - [Children & Lawn Chemicals Don't Mix](#) (Beyond Pesticides)
 - [GMO Factsheet](#) (Beyond Pesticides)
 - [NCAP Glyphosate Factsheet](#) (Northwest Coalition for Alternatives to Pesticides)
 - [PAN Pesticides Database: Glyphosate](#) (Pesticide Action Network)
 - [EPA Technical Factsheet](#)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Exposure to Glyphosate-Based Herbicides and Risk for Non-Hodgkin Lymphoma: A Meta-Analysis and Supporting Evidence](#). Zhang, L., Rana, I., Taioli, E., Shaffer, R.M. and Sheppard, L., 2019. Mutation Research/Reviews in Mutation Research.
 - [Multiomics reveal non-alcoholic fatty liver disease in rats following chronic exposure to an ultra-low dose of Roundup herbicide](#). Mesnage, R, Renney, G, Seralini, GE, et al. 2017. Scientific Reports 7, Article number: 39328
 - [Glyphosate pathways to modern diseases V: Amino acid analogue of glycine in diverse proteins](#). Samsel, A, Seneff, S. 2016. J Biological Physics and Chemistry.16:9-46
 - [IARC Classification of Glyphosate as a "probable" carcinogen](#) (2015).
Read the [Daily News Blog](#)
 - [Transcriptome profile analysis reflects rat liver and kidney damage following chronic ultra-low dose Roundup exposure](#). Mesnage, R, Arno, M, Contanzo, M et al., 2015.

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- [Do Pesticides Affect Learning Behavior? The neuro-endocrine-immune connection](#). Porter, Warren. 2004. Pesticides and You (Beyond Pesticides)
- [A Case-Control Study of Non-Hodgkin Lymphoma and Exposure to Pesticides](#) Journal of the American Cancer Society, 1999.
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- [Top 15 Farmworker Poison](#)
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