

Herbicide Efficacy and Phytotoxicity Requirement

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Efficacy data is required for herbicide registration to support label claims and uses. Data must demonstrate consistent product efficacy whether the product is used according to label directions. The user of the product must be assured that there is significant benefit from the use of product.

Efficacy data development generally follows USEPA Guidelines Subdivision G, Product Performance, series 94. Herbicide registrants develop data, which they submit, or data from the public literature.

Field trials shall be designed to allow for appropriate statistical analysis such as randomized complete block design. P retreatment and post treatment of trials shall be documented. Treatments shall include untreated controls, standard products, and several rates to demonstrate that selected label rates are appropriate. Statistical analysis of data is required to demonstrate significance at 95 percent confidence.

Efficacy trials shall be conducted in California or under California like conditions. Trials shall be conducted over two growing seasons and at several locations based on where crops are grown in California.

Phytotoxicity data are required to demonstrate safety of formulated products to crops/plants being treated and crops located off-site or adjacent. Usually use injury ratings or other parameters such as yield, vigor, necrosis, chlorosis is documented. At a minimum, documentation or lack of phytotoxicity as part of efficacy trials and residue studies are acceptable. Margins of safety may be established by using twice label rate or higher rates.

Data presentation is very important part of reports for efficacy and phytotoxicity studies. Reports should include product overview, summary of results of field trials with the use of tables, charts, and graphs. Individual trial results should include trial summary, raw data, statistical analysis, terms definitions, and any abbreviations.