



School Herbicides Trial

Weed scientists Andy Senesac and Jenny Kao-Kniffin evaluated minimal and reduced risk herbicides using turf plots at a research station in Riverhead, NY in 2011-2013.

Of the compliant herbicides, Burnout II, GreenMatchEx and WeedZap all provide a certain level of weed reduction, but regrowth will generally occur after a single application of any of these. The propane-based weed torch showed greater total vegetation control, but the act of intentionally burning weeds requires great attention by the applicator to prevent 'drift' of the flames.

The iron-chelated herbicides (Fiesta and Ortho Elementals Weed Killer) showed acceptable weed control in some instances, while not harming the turfgrass. However, it appears that high spray gallonage may be an important factor for optimal efficacy. Both of these iron-based herbicides require emergency use approval.

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Turfgrass Association and Cornell U.



Useful links:

Cornell Turfgrass (www.hort.cornell.edu/turf)

NYS Turfgrass Association (www.nysta.org)

NYSDEC (www.dec.ny.gov/chemical/41822.html)

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How to be compliant under the
2010 NYS Child Safe Playing Fields Act



Weed Management
on School Grounds
in New York State

CORNELL
Turfgrass

2010 NYS Child Safe Playing Fields Act

Under the State Education Law and Social Services Law, no school or day care center in NYS may apply pesticides on playing fields or playgrounds, except when a non-routine emergency application is granted by the school district board, NYS Dept. of Health (DOH), or NYS Dept. of Environmental Conservation (DEC).



Playground with weed suppressive mulch barrier

The law applies to all public and private schools and day care centers across NYS. These include public school districts, non-public schools, boards of cooperative education (BOCES), child and Head Start day care centers, and school or day care centers located at a college or university.

Minimal risk herbicides do not need prior approval for use. Nearly all herbicides listed below are non-selective, meaning they will injure both weeds and the turfgrass. Herbicides containing active or inert ingredients not covered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) 25(b) minimal risk ingredients or 4a inerts list require emergency application approval.



Burnout II applied on fence line near school soccer fields

Minimal risk herbicides that are EPA 25(b) FIFRA exempt **do not** require "emergency application" approval

Product Name	Active Ingredient(s)	Parent company
Ecosmart Weed & Grass Killer	2-Phenethyl Propionate, eugenol	EcoSMART
Burnout II	Citric acid & clove oil	St. Gabriel Organics
Weed Zap	Cinnamon & clove oil	JH Biotech Inc.
C-cide	Citric acid	Biological Solutions
Brush, Weeds, & Grass Herbicide	Citric acid	Greenenergy
Matratec	Clove oil	Brandt
Matran EC	Clove oil	EcoSmart Tech.
Phydura	Citric & malic acid, clove oil	Soil Tech. Corp.
Several brands available	Corn gluten meal	Several vendors
Adios	Sodium chloride	Herbanatur

Chemical-free weed control strategies

- **Repetitive seeding:** Add 4 lbs grass seeds per 1,000 ft² every two weeks in late summer to early fall (perennial ryegrass germinates the fastest).
- **Mulch:** Adding a weed barrier on the ground in playgrounds and fence lines using cardboard, fabric, or rubber covered with 4-6" of *untreated* mulch will prevent plants from growing. Add another 4" layer of mulch every year.
- **Thermal weeding:** Intense heat delivered using a propane weed torch or a steam weeding device will injure or kill young plants. It is best used in the spring and early summer when weeds are small and are most effective on annual plants.
- **Turfgrass species:** Low traffic areas can be seeded with fine fescues (Intrigue and Columbra II produce compounds that suppress weeds). Tall fescues have deeper roots, are more drought-resistant, and are less prone to grub damage.
- **Fertilizers:** Fertilizing the grass twice a year using 0.5 lbs nitrogen per 1,000 ft² near Memorial Day (spring) and Labor Day (fall) will increase turfgrass density.