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Chemical Pesticides and a Green Lawn

With the beginning signs of spring neighbors and home owners come out in full force to prepare and maintain a healthy lawn. Plush green grass is a desirable effect of proper lawn care. It adds to a home's "curb appeal" and beckons to be played upon by children. Beautiful lawns are often achieved as a result of chemical treatments.

Steps to Have a Beautiful "Green" Lawn

Use the right grass seed

- Select the proper grass for your site
- Overseed

Mow the correct way

- Mow high (no shorter than 3 inches)
- Leave clippings on the lawn
- Sharpen mower blades at least once per year

Develop healthy soil

- Test soil before you buy fertilizer or lime
- Read labels to avoid purchasing a product that you don't want
- Feed roots in the fall
- Soil pH should be around 5.5 to 7.0
- Aerate the lawn
- Lawn test should show >5% organic matter
- Water properly (~1 inch/week)

Manage weeds

- Identify weed species
- Pull weeds by hand
- Reseed bare spots
- Be patient and tolerant
- Treat weeds with lemon juice and vinegar

Address insect problems

- Identify pests
- Use "natural" alternatives like citric acid

Applications that fertilize as well as destroy weeds and pests are routinely employed to create a terrific lawn. Although lawn treatments have improved over the years chemical lawn applications are not entirely benign. While pesticide applications in agriculture, industry, commercial and government sectors have decreased over the past twenty years, pesticide use on residential lawns has seen a dramatic rise. On average, the amount of pesticide that is applied to a typical residential lawn is ten times more per acre than the amount applied on agricultural land. Over 50% of the most commonly used pesticides contain suspected carcinogens and over 40% include ingredients that are either banned or restricted in other countries. Health effects associated with ingredients found in pesticide applications can include endocrine disruption and reproductive toxicity—in adults. Often it is not an adult that comes in to close contact with a home's lawn. Children and pets are unwittingly exposed to an arsenal of chemicals particularly on a lawn that has recently been treated.



A pristine lawn can be achieved without the use of chemicals.

Efficacy of Hand Sanitizers

Recently, KSL, the NBC affiliate in Salt Lake City, conducted an investigation into the efficacy of hand sanitizers. The results were unsettling.

Hand sanitizers are a mainstay in many settings from law enforcement, to schools and hospitals. They are convenient in that they provide on the spot germ removal when soap and water are out of reach. Most brands claim to remove between 95% and 99% of germs. KSL purchased ten random brands, gathered up a gaggle of sixth graders and brought both to DataChem Laboratories. The experiment was simple—each sixth grader would rub their hands in their hair to gather germs and press three fingers in to a Petri dish. Then each of the ten children were given a specific brand of hand sanitizer followed by a new Petri dish. Two days later the before and after Petri dishes were compared. Findings suggested a significant amount of variability between brands. Sanitizer efficacy ranged from 8% to 99%. It's possible that variability between brands could be a result of the active ingredients. The foam based sanitizers did not perform as well as the gel based sanitizers. The Centers for Disease Control does recommend routine hand-washing in addition to sanitizers.

Test Results:

Walgreens	99%	germ-X	90-98%
Delta	99%	American Red Cross	90-98%
Family Dollar	90-98%	Purell	79%
Crystal Water	90-98%	Breck for Kids	16%
Swan	90-98%	Bath and Body Works (Foam)	8%

One Test. Quantitative Results for 30 Target Compounds. Call your Project Manager to inquire about DataChem's Solvent Panel Analysis.

Compounds Include:

Benzene	Cyclohexene	Methyl isobutyl ketone	Tetrachloroethene
n-butyl alcohol	1,3-dichlorobenzene	Naphthalene	Tetrahydrofuran
n-butyl acetate	1,2-dichlorobenzene	n-octane	Toluene
2-ethoxyethanol acetate	1,4-dichlorobenzene	2-pentanone	Trichloroethene
Chlorobenzene	1,2-dichloroethane	n-propyl acetate	Total methyl styrenes
Chloroform	Ethylbenzene	Styrene	Total xylenes
Cumene (isopropyl benzene)	n-hexane	1,1,1-trichloroethane	
Cyclohexane	Methyl ethyl ketone (MEK)	1,1,2-trichloroethane	

For additional information on lawn care visit <http://www.epa.gov/pesticides/controlling/garden.htm>

Analysis of the Month

Pesticides

For the month of June DataChem is offering **Pesticide Analysis for 25% off of our normal rate.**

For further details contact us at info@datachem.com

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