

Another Wash Day Miracle: Eutrophication

All detergents are no bio-degradable. The vast mounds of non-bio-degradable suds floating on streams were last seen in 1965, when strict regulations were passed to outlaw the manufacturing of non-bio-degradables. But since that time other problems have appeared, and detergents remain a factor in today's pollution. The trouble revolves around phosphates, enzyme additives and a complex process called eutrophication.

Phosphates are added to detergents to increase their cleaning power, and there is evidence that they do get clothes cleaner. But the phosphate in detergents is a nutrient, and when laundry water runs into lakes and streams, nutrients are carried along with it. Algae and other plant life feed on them, and multiply in vast quantities—eventually dying and decaying. This decaying process uses up all of the oxygen in the water, thereby causing the death of other forms of aquatic life. In cases where this happens, scientists call the process eutrophication. Eutrophication speeds the natural aging processes by which lakes develop into swamps and eventually into dry land. It is a growing problem in many of the nation's lakes and rivers, and is caused by the presence of an excessive amount of phosphates in lakes and streams.

Aside from phosphates, enzymes are also often added to detergents. According to the January issue of Science, "a more direct heat to the safety of the consumer than environmental pollution may be posed by the newest detergent innovation—enzymes." Enzymes are catalysts which cause chemical reactions and are added to detergents to attack and "break up" certain organic stains—proteins, chocolate, grapes and other juices, etc. The effects of exposure to enzymes on housewives and clothes-wearers is not yet clear. Investigations of the effects on consumers are currently under way. It is known, however, that workers in manufacturing plants suffer ill-effects from exposure to enzyme additives. The enzymes may or may not be effective as stain removers—their value seems to be dependent on long periods of soaking.

Canada has set up a limit on phosphate levels in detergents, according to McGraw-Hill's Air and Water News. The initial limit of 25 per cent phosphate content by volume goes into effect by August of this year, with a total ban becoming effective by 1972. Sweden, too, has done considerable research on phosphate substitutes and will soon ban phosphates. The U.S. government, however, seems unwilling to take a stand on the problem. A government official recently explained to the Environmental Action Office that his agency was, as yet, unwilling to alienate the detergent industry by taking sides on the question. They also feel that banning phosphates is unwise, because the effects of any available substitute have not been thoroughly researched.

The following is a list of

approximate percentage levels of phosphates in some of the leading detergent products, (recently published in The New York Times).

Detergent	Per Cent
Amway Trizyme	52.5
Axion	43.7
Biz	40.4
Bio-Ad	35.5
Salvo	35.3
Oxydol	30.7
Tide	30.6
Bold	30.2
Ajax	28.2
Punch	25.8
Drive	25.3
Dreft	24.5
Gain	24.4
Duz	23.1
Bonus	22.3
Breeze	22.2
Cheer	22.0
Fab	21.6
Cold Power	19.9
Cold Water All	9.8
Wisk	7.6
Diaper Pure	5.0
Trend	2.4

The University of Toronto laboratories have also shown that Calgon water conditioner and Amway water softener contain approximately 70 per cent phosphates by volume.

Due to the problem of eutrophication, consumers are advised to use soap flakes and washing soda (Arm and Hammer soda is the most common brand). The research in Canada shows that these products have phosphate levels of less than 1 per cent by volume, and if used together, get clothes clean. If using detergents, consumers are advised to buy those products with the lowest phosphate contents by volume.

UH Earth Day Program

The University of Hartford will participate in the National Teach-In on the Environment on Wednesday, April 22, in a full scale program of events.

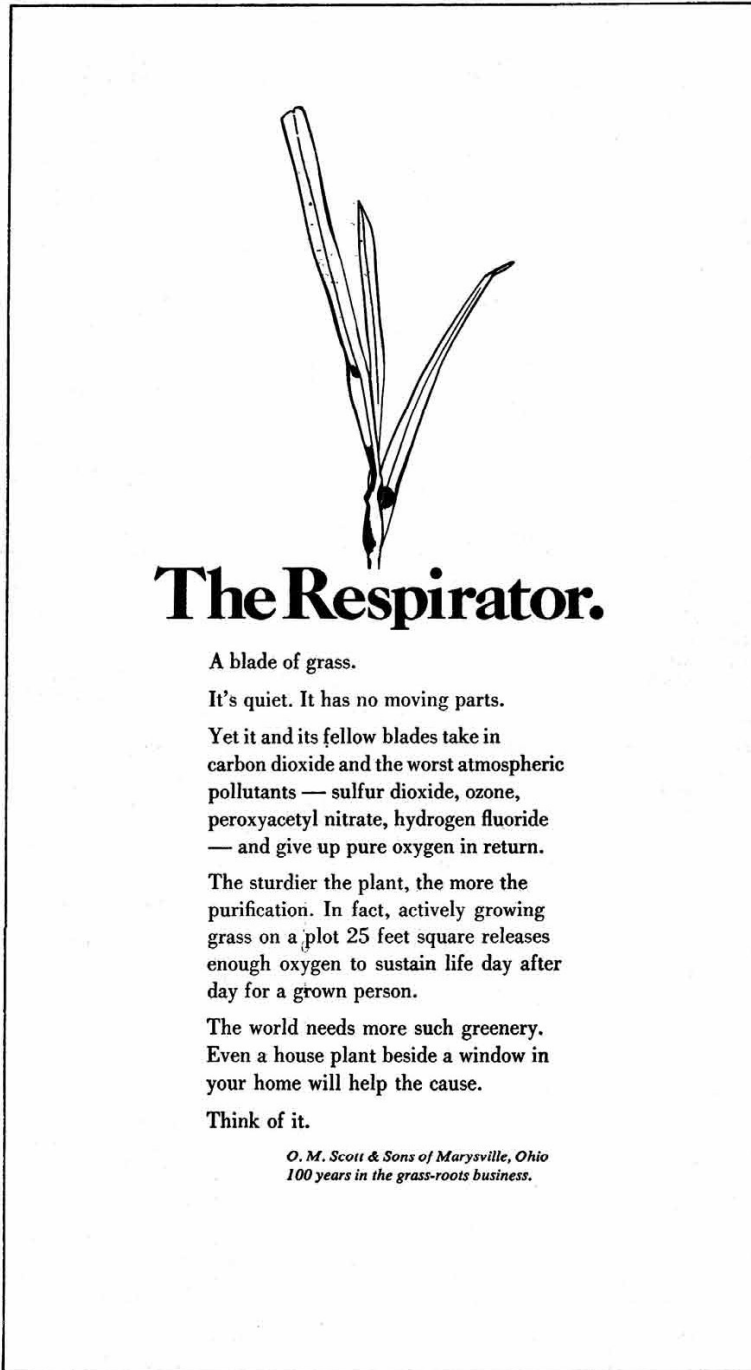
Various types of activity have been planned for the entire day (April 22) by the UofH Earth Day Committee. The public is invited to come to the UofH Bloomfield Avenue campus in West Hartford, to join the program.

Highlight of the day will be an evening panel discussion to be held in the Gengras Campus Center at 8:15 p.m. The topic is "Transportation As It Affects the Environment in Hartford."

Panelists will include State

Senator Wallace Barnes, of Farmington; James Shugrue, chief engineer of the State Department of Transportation; Mrs. Charlotte Kitowski, of the Committee to Save the Reservoir, in West Hartford; Hiram Maxim II, past vice chairman of the Governor's Committee on Environmental Policy, Panel on Transport; Peter Trip, crusader against transport pollution, and James Lloyd, assistant planner with the Capitol Region Planning Agency.

Dr. Joseph Wenograd, UofH associate dean of science, will moderate the discussion. The panelists will be asked if present



The Respirator.

A blade of grass.

It's quiet. It has no moving parts.

Yet it and its fellow blades take in carbon dioxide and the worst atmospheric pollutants — sulfur dioxide, ozone, peroxyacetyl nitrate, hydrogen fluoride — and give up pure oxygen in return.

The sturdier the plant, the more the purification. In fact, actively growing grass on a plot 25 feet square releases enough oxygen to sustain life day after day for a grown person.

The world needs more such greenery. Even a house plant beside a window in your home will help the cause.

Think of it.

*O. M. Scott & Sons of Marysville, Ohio
100 years in the grass-roots business.*

plans for transportation in the Greater Hartford area are consistent with a quality environment.

In addition to the panel talks, a series of lectures on various aspects of pollution will be held from 8:00 a.m. through noon in Auerbach Auditorium, which adjoins University Hall.

UofH faculty members will speak for the first part of the morning on pesticides and cells, waste disposal and noise pollution. Participants will include Dr. Willard Moyle Duff (biology), Dr. Ernest B. Gardow (engineering), Dr. Orlo A. Powell, Jr. (engineering), Dr. Richard H. Groth (chemistry), and Prof. Richard J. Dalphin (engineering).

The second half of the morning, Atty. Peter Cooper and Joseph Masselli, of the WaterResources Laboratories, Hall-Atwater Laboratories, Middletown, will lecture.

At 1:00 p.m., two groups of amateur film makers will screen

their productions in Auerbach Auditorium. Mrs. Judith Friedman, of the Westledge School, West Simsbury, has directed her students in making documentaries on air pollution in Hartford. Jon Arlen McClure of the UofH Department of Speech and Drama, has had his students create a series of four 15 minute documentaries on waste, noise, air and water pollution. These films will be shown from video tapes on a television monitor.

Exhibits on pollution, created by UofH students, will be seen on campus in Dana Hall and University Hall. The exhibits include a large map of Connecticut showing "isogrimes," or areas of dirty air, and a display of the noise pollution at Bradley International Airport.

The UofH Earth Day Committee plans to join the West Hartford Earth Day Committee in a Teach-Out on the West Hartford Green. The Teach-Out is scheduled to begin at 2 p.m. on the Green.

Final event for April 22 will be an all-night ecology camp-out next to the Park River, which flows through the UofH campus. Students and faculty will be encouraged to explore the moral and ethical aspects of environmental pollution.

The UofH Earth Day Committee, according to its chairman, Dr. Thomas W. Sharpless, assistant professor of chemistry, does not intend to dissolve itself or diminish its activities after April 22. Further programs will be developed in cooperation with other state environmental study groups at a convention to be held in the near future at the UofH.

"We hope people will become aware of how dangerous Hartford's air has become," Dr. Sharpless said. "Residents of Hartford's core-city region are breathing air during the winter months so loaded with sulfur dioxide that deaths in excess of normal are expected, according to U.S. Public Health data."