

The Price of Environmental Stewardship

by Don Spier, CIBA-GEIGY
Turf and Ornamentals

The golf course superintendent's management role is changing drastically. Ten years ago, the superintendent's basic responsibilities were: people management; budget management; and, turfgrass management. These aspects of the business are still important; however, the challenge of environmental stewardship is probably the most important concern facing today's golf course superintendent. Due to the public's increasing awareness of pesticide usage, a greater percentage of the superintendent's time and budget is spent addressing environmental issues.

The EPA Price Tag

In the last decade, total research costs for new pesticides have risen nearly five-fold. Listed below are some examples of things which increase the costs of new products; consequently, increasing the costs of maintaining a golf course:

★ Registering a new product with the EPA takes 4-5 years to generate data, and 2-3 years to process the information and results at a total cost of approximately \$28 million.

★ New testing requirements by the EPA measure the impact of developmental compounds on aquatic environments, non-target plants, bird populations and residue levels in groundwater. Each test can take 2 years to conduct at a cost ranging from \$.5 million to \$2 million.

★ The demand for increased quality control in data has increased the price for testing in contract labs. In 1988 cost to test a compound's impact on bees was \$2,000. The cost of the same test in 1989 was \$12,000.

★ Research costs have increased by the following amounts since 1980:

- Dissipation & Groundwater 32*
- Ecological Toxicology 8*
- Metabolism & Fate 7*
- Toxicology 3*
- Residue 1.5*

Reducing Worker and Environmental Exposure

Packaging and formulation application costs have increased 35% since 1988 in the development of product enhancements to reduce worker and environmental exposure to turf products. Packaging innovations include dissolvable bags, biodegradable packages, and closed delivery systems.

Formulation changes that improve worker and environmental safety include lower use rates, capsules, gel-packs, clays, and polymers that reduce leaching.

Plant Facility Investments

At CIBA-Geigy, total costs to make chemical manufacturing facilities safer to workers and to the environment have risen 800% since 1984. Costs are projected to double in 1991.

Our Environmental Commitment to the Turf Industry

CIBA-Geigy Turf and Ornamentals recognizes that we are in partnership with the golf course superintendent to protect and preserve the environment. We hope that the information in this letter will help to explain the increasing costs of maintaining environmentally sound products.

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