

Measuring Your Impact 5

The True Cost of a Green Lawn

People often do not realize how much biodiversity could exist in their lawns. Mowing a lawn and applying herbicides and fertilizer typically reduces plant diversity to only a few species of grasses. In contrast, unmowed fields can contain dozens of plant species, including many species of wildflowers that are not only aesthetically pleasing but also promote a high diversity of animal species.

- (a) Given that approximately 85 million Americans have a lawn, and that the average lawn size is 0.08 ha (0.2 acres), how much total land area is composed of lawns in the United States?
- (b) If every lawn owner set aside 10 percent of his or her lawn and let it grow into an area of natural wildflowers, how many hectares of this higher-biodiversity land would be added?
- (c) Given that lawn owners spend a total of \$40 billion on professional lawn care services each year, what would be the annual savings on lawn care services if 10 percent of all lawns were set aside to grow natural wildflowers?
- (d) Approximately 2.2 billion liters (0.6 billion gallons) of gasoline are used annually for lawn mowers. If gas costs \$0.80 per liter (\$3.00 per gallon), how many total dollars could be saved in the United States each year if lawn owners stopped mowing 10 percent of their lawns?
- (e) What do these data suggest about the economics of preserving biodiversity?