



## Article 130

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# Toward a Low Input Lawn

**W**hile many homeowners are concerned with stream quality, many also have a fundamental self-interest in retaining an attractive, dense and green lawn—regardless of the inputs of time, money, fertilizer, pesticides and water needed to sustain it. After all, a well-manicured lawn has undeniable aesthetic appeal to many residents. Therefore, one of the key challenges of any public outreach program is to convince roughly half of our homeowners that it is possible to grow a sharp looking lawn with low inputs (and not greatly increase the amount of labor expended to maintain it). This article sets forth some broad principles to guide homeowners toward a low input lawn and provides a starting point for designing a more effective outreach program to achieve this goal.

The most important input to the low input lawn is knowledge. Efficient management is based on a rudimentary understanding of soil properties, local climate, and the growing requirements of selected grass species. With this understanding of regional conditions, it is relatively simple to select appropriate grass species and to give the lawn what it needs at the proper time. Without this understanding, large amounts of grass seed, fertilizer, pesticides, water, and time may be wasted. This article presents the management techniques needed for a low input lawn in eight key steps:

- Step 1. Lawn conversion
- Step 2. Soil building
- Step 3. Grass selection
- Step 4. Mowing and thatch management
- Step 5. Minimal fertilization
- Step 6. Weed control and tolerance
- Step 7. Integrated pest management
- Step 8. Sensible irrigation

These steps, summarized in Table 1, are intended to provide a framework for the homeowner interested in reducing lawn inputs. A continuum of management options is presented within each step, allowing the homeowner to make the transition to a low-input lawn by gradual stages. This article can also be used as a starting point for designing a better community outreach program to promote the low input lawn.

### Community Benefits of the Low-Input Lawn

Apart from their presumed benefit in reducing nutrient and pesticide runoff, low input lawns provide other economic benefits to a community:

- Reduced summer water demand
- Preservation of landfill capacity
- Reduced cost for management of public lands

Some of these benefits have been quantified; others are a matter of common sense.

#### *Reduced Summer Water Demand*

Low input lawns that use water conservation techniques can sharply reduce demands on water resources during periods of drought. During a recent California water shortage, it was estimated that 30 to 50% of all residential water use went to landscaping (Foster 1994). Lawn watering was estimated to account for 60% of summer water use in Dallas, Texas (Jenkins, 1994). As a result, many Western municipalities now offer rate rebates to homeowners implementing water efficient landscaping (xeriscaping).

Changing watering techniques and replacing water-demanding plants with water-efficient and locally adapted ones can reduce water use by 20 to 43% (Foster, 1994). Even in humid Atlanta, Georgia, calculations showed that maintenance and water savings would pay for the cost of such retrofitting in only three years (Foster, 1994). Full conversion to xeriscaping (i.e., growing turf solely with the available rainfall supply) can easily cut water use by 50 to 60% (Foster, 1994 and Ellesfon, 1992).

One of the first principles of xeriscaping is to reduce turf coverage on the lawn. As a general rule, grass consumes eight units of water, trees consume five units of water, and shrubs and ground covers consume four units of water (Foster, 1994). A one acre lawn consumes up to a half million gallons of water a summer in some regions of the country (Jenkins, 1994). A well-shaded lawn, however, uses up much less surface water on a hot, sunny day than an unshaded lawn (Foster, 1994).

#### *Preservation of Landfill Capacity*

Yard wastes (clippings, fallen leaves, trimmings, and uprooted weeds) can make up 20 to 25% of house-