



## Sustainable Maintenance Tips - Weed Control - *Managing Weed Succession*

It is a common observation that after ground is cleared, the soil is quickly covered by fast growing weeds such as thistles, tansy ragwort and annual grasses. Over time, as these plants die and enrich the soil, they are replaced by perennial grasses and other plants, then woody shrubs. In many areas, these would eventually be overgrown by native trees and become a forest. Plant ecologists call this natural pattern 'vegetation succession'. Generally, it means that plant growth after a disturbance, such as clearing or construction, tends to follow a natural progression from fast growing annuals, to perennials, and later to woody shrubs and trees.

In gardens and landscapes, gardeners struggle against this natural pattern of succession to keep lawns and flower beds from being overrun with weeds. People maintaining drainage ditches, driveways, roadsides or other naturalized areas continually work to prevent vegetation from overgrowing these sites. If ditches and roadsides fill in with brush, they don't work the way they are supposed to: water doesn't drain from ditches; and blocked sight lines along roads become a safety hazard. Using herbicides does not provide long-term control because this bares the soil, leaving openings for the fastest growing weeds to spring up. This starts the weed succession cycle over again and ensures treatments will be needed year after year.

It can take a lot of effort to keep vegetation from taking over sites. But, if you learn to think like a plant ecologist, the job can be easier. This means looking for ways to 'freeze' plantings at the right stage of succession--so that lawns remain in perennial grasses and low growing plants dominate along road banks. Rather than waiting until the weeds invade to take action, it is more effective (and less work in the long run) to manage the site so that invading plants do not find a place to take hold and grow.

### **Grow Competitive Plantings**

When the desirable plants on the site are good competitors, there is little opportunity for weeds to invade. Ways to accomplish this include:

- Choose plant species that are well adapted to the site. Many native plants make good choices for naturalized, low maintenance plantings.
- Maintain the correct soil conditions of moisture, pH and fertility to give the desirable plants the advantage. This does not necessarily mean the soil must be high in nutrients—in rich soils, some weed species and grasses can choke out other plants.
- Plant densely so that the soil surface is quickly covered with vegetation. For example, consider planting shade-loving ground covers to cover the soil under ornamental shrubs.
- Prevent seeds already in the soil from germinating by disturbing the soil as little as possible (for more information see the fact sheet: *Weed Control--Managing Seed Banks*).
- Avoid disturbing roots of desirable plants when removing weeds. Problem plants with a single taproot, such as tree seedlings, can often be pulled straight out when the soil is moist, without causing much soil disturbance. Some woody shrubs need only be cut off flush at ground level to stop further growth.
- Replant disturbed soil immediately to attract desirable, competitive plants.

## **Mow To Encourage Competition**

In areas where low-growing plants are desired, such as along roadsides and driveways, or in drainage ditches and swales, the species of plants present is usually not important as long as they stay below the height limits. If done correctly, mowing is an ideal method for encouraging low-growing plants to take over a site. Unfortunately, equipment to mow or cut back woody vegetation is often set as low as possible in the hope that it will take longer for the weeds to grow back. Just as when herbicides are used to clear a site, however, scalping the plants close to the ground bares soil to sunlight and stimulates the early succession plants (those fast growing weeds) to spring up. Since they are adapted to grow tall, quickly, mowing is soon needed again.

To manage unwanted vegetation, mowing should be done at a height that cuts off only the tall, undesirable species, but does not affect the low growing species that would be beneficial on the site. For example, setting a mower to cut at a height of 20 cm favours the establishment of perennial grasses and other plants with low, spreading growth because they will be less harmed by the cutting. By giving these plants a competitive advantage, they close in the gaps and smother taller growing plants. The same principle applies to mowing lawns, because mowing higher (e.g., 7-9 cm high) gives the turfgrasses more leaf area so that they are more vigorous and able to out compete weeds. Over time, as naturalized areas become filled in with low growing plants, less and less mowing is needed to maintain the sites.

With a bit of planning and proper lawn management, the need for chemical pesticides can be greatly reduced, if not eliminated. Easing our dependency on chemical lawn additives is better for both human and environmental health and is a necessary step towards the attainable goal of sustainable gardening and landscape maintenance.

### **For more information...**

On the Pesticide ByLaw (P-800) including signage requirements, which products can still be used, alternatives to pesticides, sustainable maintenance practises, or to access details on our public awareness sessions, visit one of the HRM Customer Service Centres or log on to our website at [www.region.halifax.ns.ca](http://www.region.halifax.ns.ca). You can also call our representatives at 490-4000 or email us at [Pestbylaw@region.halifax.ns.ca](mailto:Pestbylaw@region.halifax.ns.ca).