

## Vegetation Management Section

### Maintenance Programs

#### Wildflower Weed Control

The most widely-used initial weed control treatment for wildflower sites is soil fumigation. This procedure involves complete rototilling of the top 4"-6" of the soil surface to provide optimum soil tilth. The site is then sub-soil injected with approved herbicides to control weed seeds, as well as soil-borne diseases and parasites. Some soil fumigants require a plastic covering of the soil upon injection of the fumigant, as well as complete burial and sealing of the edges of the plastic covers. Other types of soil fumigants are also available which do not require a plastic covering, but instead utilize the rotovate-and-roll technology.

An alternative to fumigating the soil in wildflower beds is to use pre-plant soil incorporation herbicides to remove weeds and unwanted grasses from the plant bed areas. There are three steps in an effective pre-plant soil incorporation weed control program.

**Step 1:** Apply a post-emergence herbicide to control mature weeds and grasses to the site;

**Step 2:** Allow approximately seven days for the herbicide to effectively control weeds. After seven days, the soil should be thoroughly tilled to a depth of 4"-6", as previously mentioned;

**Step 3:** After the site is leveled to the proper elevation, a pre-emergent herbicide is applied to the site and incorporated into the soil with appropriate tillage equipment. For sites with relatively low populations of existing vegetation, it may be practical to delete Step 1) above, as well as require less tillage than described in 2) above. Care should be taken to make sure that the wildflower species to be planted in these sites are tolerant of the herbicides incorporated. Technical scientific data should be consulted for this information.

#### Pre-emergence Control

One of the most challenging aspects of establishing perennial roadside wildflowers is satisfactory control of weeds within the sites. In recent years, much research has been conducted to determine what herbicide materials can be used in a Wildflower Pre-emergence Weed/Grass Control Program. The objective of this program is to adequately control competing weed/grass growth, while not damaging the desired wildflower species in an "over-the-top" broadcast application. A few herbicide materials have been determined to be successful in this program, and research is continuing.

#### Post-emergence Control

Another important aspect of established roadside wildflower site maintenance is an effective Wildflower Post-emergence Weed/Grass Control Program. Even with the best management practices previously mentioned, there will usually be "escapes" of some types of weeds and/or grasses that would present competition problems in wildflower sites along the roadside. In these cases, the last "line of defense" may be a post-emergence treatment. This type of herbicide treatment is also applied "over-the-top" of established wildflowers, without damaging the wildflowers. They may be used only if technical data and research supports their use without damaging the wildflowers. Another method of post-emergence control is ropewicking. These materials only come in contact with undesired vegetation growing at a height above the existing wildflower species.