

**EXPERIENCES WITH LATE FALL HERBICIDE  
AND FERTILIZER APPLICATIONS**  
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## **HERBICIDES**

The campus consists of 2,000 developed acres. It has a very diverse population of students, faculty and staff as well as public visitors. The Ground Maintenance Department has the responsibility of maintaining the campus for an aesthetically pleasing and health environment. This includes the control of broadleaf weeds.

It takes a 2 to 3-year cycle to cover most of the area. The window for spraying is from about August 15 through November 1 or before the ground freezes. Weather conditions, leaf removal traffic, and available personnel are some of the considerations in the time it takes to complete the spraying cycle.

Tractor mounted boom sprayers are used for large turf areas. Hand held pump sprayers and small, pickup mounted, hand controlled sprayers are used for small, hard to reach areas. All spraying operations are performed by licensed commercial pesticide applicators.

The main product used is 2,4-D and the non-volatile lithium salt of 2,4-D. The results have been very good; late fall applications produced 80-90% control of the broadleaf weeds. Spraying in the spring also is incorporated in our program to get areas that may have been missed or skipped.

With regard to the health of our applicators along with published information of the effects of 2,4-D on health and environment, we have begun to look at other products that are non-phenoxy herbicides. Some are available which appear to have the ability to replace the phenoxy herbicides.

## FERTILIZATION

Our mission is to present a safe, attractive, and usable environment for the student, staff and visitors to the university campus. We fertilize to improve the growing environment for turf or ground cover and to provide an acceptable natural ground cover.

1. High priority lawns and buildings - irrigate as needed and fertilize three times per year.
2. Routine maintenance lawns and buildings - fertilize one time per year.
3. Timing - late fall application - 1-1.5 lbs N/1,000 sq. ft.
  - a. October before freeze up
  - b. After leaf removal
  - c. Before plant protection and snow fencing operations
    - Late spring application - .5 lb N/1,000 sq. ft.
    - Late summer application - .5 lb N/1,000 sq. ft.
4. Equipment - tractor mounted 3-point hitch spreaders for large areas. Hand push cyclone-type spreader for small areas.
5. Concerns - one area of major effort is to prevent runoff and leaching of nitrogen. This is especially important since the Red Cedar River runs through campus as well as a lot of hard surface pavement with storm drains, etc.

Future directions will place a greater use of organic and slow release fertilizer and "spoon feeding" where appropriate.