

## CULTURAL PRACTICES FOR LOW MAINTENANCE

### RECREATIONAL AREAS IN MICHIGAN

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The cultural practices to be discussed in this paper will cover only those essential for low maintenance recreational areas. Depending on the available budget, these cultural practices can be intensified or decreased. Where a better quality turf is desired, there would be additional maintenance practices which should be considered.

The cultural practices will be discussed on a month-by-month basis throughout the growing season. Depending on the location, the soil type and the amount of use which the area receives, these cultural practices will have to be adjusted to the individual situation. During the winter months the maintenance of old equipment should be completed so that costly delays do not occur during the season. Also, the assessment of new equipment needs should be made and new equipment purchased accordingly. Seed, fertilizer, pesticides, etc., should be purchased and stored for later use. It is also very important to have an adequate record keeping system. The records from the previous year should be summarized so that new purchases can be made accordingly. This is an important practice in saving funds on low maintenance areas. A record keeping system can be initiated for the up-coming season which improves upon the previous years where deficiencies exist.

### MARCH

#### Soil Test

In order to make the best use of funds for fertilizer needs a soil test is essential. A uniform sample should be obtained from the turf area by taking small cores at random throughout the area. This soil should be mixed and then air dried. A sample from the dried soil should be placed in a container and sent to the County Extension Agricultural Agent, the MSU Soil Testing Laboratory or a reputable commercial laboratory. The desirability of a soil test cannot be overemphasized in view of the results obtained and for economical purchase of fertilizers.

#### Roll

Rolling needs to be performed on turf areas to smooth the uneven surface caused by winter freezing and thawing and especially on athletic fields where traffic may have created an uneven surface. This practice must be done at the proper soil moisture. If the soil is too wet additional compaction can occur, if the soil is too dry little benefit will be obtained from rolling. Rolling, therefore, needs to be done at the proper soil moisture in late March or early April.

## APRIL

### Mow

Mowing should be initiated in the spring of the year after growth of the turfgrass has begun. For Kentucky bluegrasses and red fescues the normal mowing height is 1½ to 2 inches. The frequency of mowing is equally important. It is a good general practice to remove no more than 1/3 of the total leaf length at any one mowing. For areas being mowed at 2 inches, the grass should not be allowed to exceed 3 inches before 1/3 of the leaf length is again removed.

### Soil Cultivation

Slicing and coring are turfgrass cultivation practices which should be done frequently on recreational areas. These cultivation practices provide soil openings and loosening of the soil for improved air and water movement. This is particularly important on thatched areas or bare areas prior to overseeding. Best results are obtained when the soil is slightly moist but should never be performed on wet soils.

### Overseed

Overseeding needs to be practiced both spring and fall on heavily used athletic areas. Bare areas resulting from heavy traffic will recover more quickly with frequent overseeding. Similar varieties to the turf already present should be used which in most cases will be Kentucky bluegrass or red fescue, or perhaps a mixture.

### Fertilizer

Fertilization of turfgrasses is essential for both improved growth and recovery. This is one of the most essential maintenance practices in terms of the results that can be achieved. For low maintenance areas this is particularly true for maintaining a vigorous healthy turf. Phosphorus and potassium should be applied as directed by the results from the soil test taken previously. The nitrogen can be applied when regrowth starts in April so that the maximum potential for regrowth and maximum density can be achieved. Nitrogen application is determined by previous fertilization dates, color, density, growth rate and general health of the turf. Generally, no more than 2 lbs. of actual nitrogen per 1,000 sq.ft. should be applied at any one application.

### Preemergent Weed Control

Weedy annual grasses are a serious problem on many athletic fields in Michigan. Some of these include crabgrass, foxtail, barnyardgrass, etc. These weeds do not provide a good turf and are excessive competition for the desirable species already present. There are many herbicides available which can be used to keep this serious problem in check.

## MAY

### Broadleaf Weeds

Broadleaf weeds are also a serious problem when they reach more than a limited number. This category of weeds includes dandelion, plantains, ground ivy,

chickweed, white clover, etc. Herbicides are also available which can be used for these weeds. However, it is extremely important that these herbicides be used sparingly and proper precautions taken. It is possible that pesticide applications will not be needed each year but only when the weeds become a serious problem.

## JUNE

### Fertilize

A late spring fertilizer application will probably not be necessary or possible on low maintenance recreational areas. Where the intensity of culture is a bit higher, a second lighter application of nitrogen may be desirable. However, this should not be done during hot, dry weather.

## JULY

### Irrigate

During the hot months of July and August irrigation will be necessary on heavy use areas or areas where a better quality turf is desirable. It is important to delay the irrigation as long as possible. This will improve the rooting and hardiness of the turf and less frequent applications of supplemental water will be necessary. A second important principal is to irrigate deep and infrequently. This is more desirable than light, frequent applications. When a turf area has particularly heavy play, for a period of time, a heavy irrigation would be desirable immediately afterwards and future events withheld from that area until the soil moisture has returned to a point where additional play would not cause severe compaction. Frequent shallow irrigation should not be included in a maintenance program.

## AUGUST

### Rotate Play

During the hot dry months of July and August it is very desirable to rotate play areas if at all possible. Turf will be injured much more quickly under environmental stress and heavy play, particularly with vigorous team sports. Rotating play areas should be considered if at all possible. It is important to continue irrigation and also to note that no nitrogen fertilizer should be applied during hot weather in July and August. The turf may be readily burned by nitrogen applications at this time.

## SEPTEMBER

### Soil Cultivation

The recommended soil cultivation practices should be practiced at this time of the year. The cool fall months will again be the time for maximum

turfgrass growth and the plants should be given the most favorable environment for recovery.

### Fertilize

A complete fertilizer including nitrogen, phosphorus, and potassium should be applied in early September to insure adequate nutrient levels for the fall growth period. Approximately 1½ lbs. of actual nitrogen per 1,000 sq. ft. should be adequate. The phosphorus and potassium levels can be adjusted according to the soil test results. The spring and fall applications should be applied just prior to the peak growth periods when the turf has maximum potential for recovery.

### Overseed

Overseeding is necessary prior to the fall growth period to fill in the bare areas created by summer play and to insure a high quality turf for the next season.

### Remove Leaves

In recreational and wooded areas the leaves should be removed regularly. This allows maximum light penetration to the turf so that recovery can occur and so that it is in good health going into the winter months.

## NOVEMBER

### Snow Fence

Snow fences should be erected on certain turfgrass areas in the fall to control drifting snow and also to control traffic from winter sports. The latter is becoming very important in recent years because of the increase in mechanized winter sports' activities. Severe damage from these machines is a problem near wooded areas, on the crest of slopes where snow is blown off, and any high quality turf area. Snow fences around these areas will help to prevent serious damage and also make the best possible use of the remaining area for winter sports' activities.

These are some of the major maintenance practices which should be considered on low maintenance recreational areas. The intensity and frequency of these activities will have to be adjusted depending on the budget and manpower available for a particular area. A few additional practices should be considered where a higher quality turf is desired.