



Independence National Park—Massive lawns for massive crowds

In anticipation of massive crowds visiting historic Independence National Historical Park in Philadelphia, during the Bicentennial, National Park Service officials were concerned over being able to maintain the quality and appearance of the approximately 30 acres of lawn in the park.

Pennfine Perennial Ryegrass, in a mixture with Kentucky bluegrass, was selected for use in the park for the Bicentennial. Pennfine was not new to the park. Various areas within the park were first seeded with it in the spring and fall of 1975 with good results. It was used alone in the area behind Carpenter's Hall at the same time another area was

seeded with a Kentucky bluegrass mixture.

According to Howard Jeffries, horticulturist for the National Park Service, watering, fertilization, overseeding and pest control programs are the main concerns of the maintenance program for the lawns at Independence National Historical Park.

Watering of the grounds is done automatically by an irrigation system on a time clock basis. The system operates every third day for a 15-minute interval, and, depending on the amount of natural rainfall, it can be set for more or less frequent watering. The park is currently revising its irrigation system to standardize all the sprinkler heads and to achieve more uniform water distribution.

The fertilization program consists of applying, by mechanical spreader, two pounds of actual nitrogen in granular form per 1,000 square feet of lawn in mid-May, mid-July and again in late September.

Aeration of the ground areas that receive a lot of traffic and are heavily compacted is done in late March. The area is dragged to help

break up the cores and to prepare the soil for overseeding, if necessary. Considerable overseeding was done in the spring and fall of 1976. Independence Hall gardeners broadcast the seed mechanically and also by hand, in certain areas. Both repeated aeration and overseeding are necessary in problem areas receiving heavy foot traffic, such as Independence Square, according to Jeffries.

The pest control program involves putting down a broad spectrum fungicide in mid-March. This is done in those areas that have been susceptible to fungus problems in the past. In mid-April a pre-emergence crabgrass control is put down. A broadleaf killer is applied in mid-May with a follow-up application in mid-July. The fungicide also is applied again in mid-November.

In terms of performance, Jef-

George Lucko, left, park chief of area services, and Joe Duich, professor of turfgrass science at Pennsylvania State University, examine the lawn behind Carpenter's Hall.

fries commented, "Our maintenance program contributes greatly to the lawn's germination process, overall adaptability and in helping us to improve the appearance of the park grounds."

Germination in 4-5 days and developing deep roots quickly are both important considerations when a quick lawn cover is needed, and to help eliminate the problem of weed competition.



Jeffries emphasized the need for a strong turf in anticipation of the Fourth of July crowds. "As it turned out, over 2,000,000 people visited historic Philadelphia over the Bicentennial weekend," he said. "The bulk of them visited Independence National Historical Park, and there were no restrictions on the use of the lawn. Picnickers, tour groups and many active children were among those using the park heavily and consistently. The lawn held up well in terms of density during the heavy traffic. The few areas that did show signs of wear were quickly restored."

There are over 1,900 trees in the park, resulting in some dead shade areas throughout the day, and a lawn was needed that would also establish well in the heavily shaded areas, Jeffries said.

"Our overseeding has solved some other problems," he observed. "In the past, we had problems with diseases such as Fusarium and brown patch. We now have good resistance to these diseases and the park grounds have a pleasing overall appearance."

Similar to the overall traffic problems experienced during the Bicentennial weekend are the problem areas caused by compaction from people taking short cuts through the park. According to Jeffries, "The National Park Service doesn't want to destroy the natural beauty and historic significance of the park by adding a lot of walkways, so trampled areas develop quite easily. If a special event is held in a certain area of the park, the traffic to and from that area alone can cause compaction that did not exist previously. Our lawn is wearing well and has done a good job of reviving these problem areas in a minimum amount of time."

"In addition to a strong, permanent lawn that would come up quickly, be attractive, and withstand heavy use, the Park Service wanted a lawn that would allow a minimum amount of maintenance because of the size of the area, the way it is spread out and the large visitation that certain areas receive. These are the criteria we developed for the lawns at Independence National Historical Park," Jeffries said. □

