THATCH

For several hundred years, thatch has been used successfully to offer shelter for man and animals. If thatch can protect life from the elements such as rain or snow, heat or cold, it must be considered an insulator or sealant. Therefore, suggests A. J. Powell, University of Maryland agronomist, is there any doubt that the accumulation of thatch on turf may also protect the soil from these elements?

When used as human shelter, thatch is generally composed of reeds, rushes, or grasses (especially straws) that are combed or oriented so the long blades lie parallel for a very close fit.

Many lawn maintenance operations tend to give the same effect, said Powell, to the tightly intermingled layer of partially decomposed or undecomposed leaves, stems and roots which accumulate beneath the actively growing grass.

What a Maryland Agronomist Recommends

Mowing continuously in the same directional pattern, heavy irrigation and fertilization, use of vigorous species, failure to remove clippings, and delayed mowing are practices that most often causes rapid build-up of the organic layer at the soil surface.

In effect, Powell said, thatch decreases the aggressiveness of turfgrasses by restricting the movement of water, air and fertilizers into the soil. Irrigation water and light or rapid rainfall can be completely repelled by this organic layer.

If thatch prevents water from reaching the soil surface, Powell explained, rooting depths will be shallow and a drought-susceptible condition will exist.

Also sheltered by the thatch are many turfgrass disease organisms and insects. Control is then made very difficult because of the high pest incidence and inability to get the pesticide to the organism causing the problem.

Thatch is much easier to prevent than eradicate. Thatch seldom becomes a problem in less than four years after lawn establishment; and with low or medium maintenance, thatch may never accumulate.

To approach the thatch problem, Powell recommended, decide which type of program is needed: (a) preventive control to avoid excessive build-up or (b) curative control for an existing thatch problem. Generally if the thatch layer is over $\frac{1}{2}$ inch thick, the curative control is necessary.

From the preventive maintenance approach, Powell advised moderate fertilization, periodic mechanical thatching and clipping removal should be considered. Also the soil pH should be maintained between 6.5 and 7.0 to help create an environment that is favorable for microorganisms which help decompose the organic material.

For curative control, remove as much thatch as possible and as often as possible without perma-



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Dates for this column need to reach the editor's desk by the first of the month preceding the date of publication.

- Annual Southern California Turfgrass Institute, main theater at California State Polytechnic College, Pomona, May 19-20.
- Ohio Forestry Association Paul Bunyan Show at the Ohio State Fairgrounds at Columbus, May 22-24.
- Outdoor Living Review, Ohio State University, Don Scott Airport Grounds, June 5 and 6.

nently damaging the desirable grasses. It should be removed only during periods of rapid growth, e.g. for bluegrass and fescues—spring or early fall; for bermudas or zoysias—late spring or summer. When thatching is not too severe, the desirable grasses will immediately cover over the scarred areas and prevent weed invasion.

Although hand-raking is often tried and may help prevent thatch formation, Powell said, it seldom is vigorous enough to remove the 80 bushels or so of thatch that may exist on a lawn. Machines for mechanically removing thatch basically consist of a reel having blades, knives, or tines which revolve in a plane that is vertical to the ground. They vary in size, power, depth of penetration and width between blades on tines. Thus, the amount of thatch removed and the damage to desirable grasses are variable.

- 22nd Annual Nurserymen's Refresher Course, sponsoerd by the California Association of Nurserymen at Cal Poly, San Luis Obispo, June 9-11.
- Purdue-Michigan State Weed Day at Agronomy Farm, Lafayette, Ind., June 18.
- **Penn State Field Day**, formally dedicating the Joseph Valentine Turfgrass Research Center, June 24 and 25.
- Ohio Chapter, International Shade Tree Conference, at the USDA Shade Tree and Ornamental Plants Laboratory at Delaware, Ohio, July 8.
- Hyacinth Control Society at the Sheraton Motor Inn, Huntsville, Ala., July 12-15.
- American Sod Producers Association 4th annual conference and field day, Ramada Dorchester Inn, Dolton, Ill., and the H & E Sod Farm, Momence. Ill., July 28-30.

Toro Expanding Again

Toro Manufacturing Corporation, Bloomington, Minn., is expanding its headquarters office space by twothirds. Groundbreaking began in February and completion is expected by early July. The expansion is the second in less than a year. Work on the Toro plant in Windom, Minn., has just been completed, virtually doubling manufacturing and office facilities there.

