

## Trimming

**Chemical studies** conducted at Wye College, London University, are leading researchers to discover many of nature's own defensive chemicals. The tests were conducted by scientists who felt that many plant disease micro-organisms are developing resistance to commercial fungicides. Resistance, scientists say, can be caused by genetic change in the fungal cell which originate as mutations. At the Agricultural Research Council's unit at Wye, researchers are working on the premise that although growing plants are always exposed to a wide range of fungi, they are completely resistant to most of them. Many times resistance can be related to morphological characteristics. There is, however, evidence that natural disease resistance may be associated with protective chemicals within the plant cells.

One development came from scientists asking a simple question: 'Why should roots growing in the soil always remain healthy?' After all, a living root is surrounded by millions of bacteria and fungi that inhabit the soil yet it is not attacked by them. If, however, the root were killed by dipping it into boiling water and then put back into the soil, the micro-organisms would soon destroy it. This led to a simple experiment in which pea and bean seedlings were grown with their roots in water. When the roots were extracted and examined, the antibiotics with antifungal properties were isolated and identified, indicating that the living root is able to survive in the hostile environment of the soil because it produces antibiotics to protect itself.

**Philadelphia Association** of Golf Course Superintendents celebrated their 50th anniversary recently. The event took place at the site of the original meeting; Whitmarsh Country Club. Honored guest for the evening was the only surviving member of the five founding fathers, Herbert F. Jewson and his wife Mary. The Greenskeepers Association of the Philadelphia Section held their first meeting on September 14, 1925.

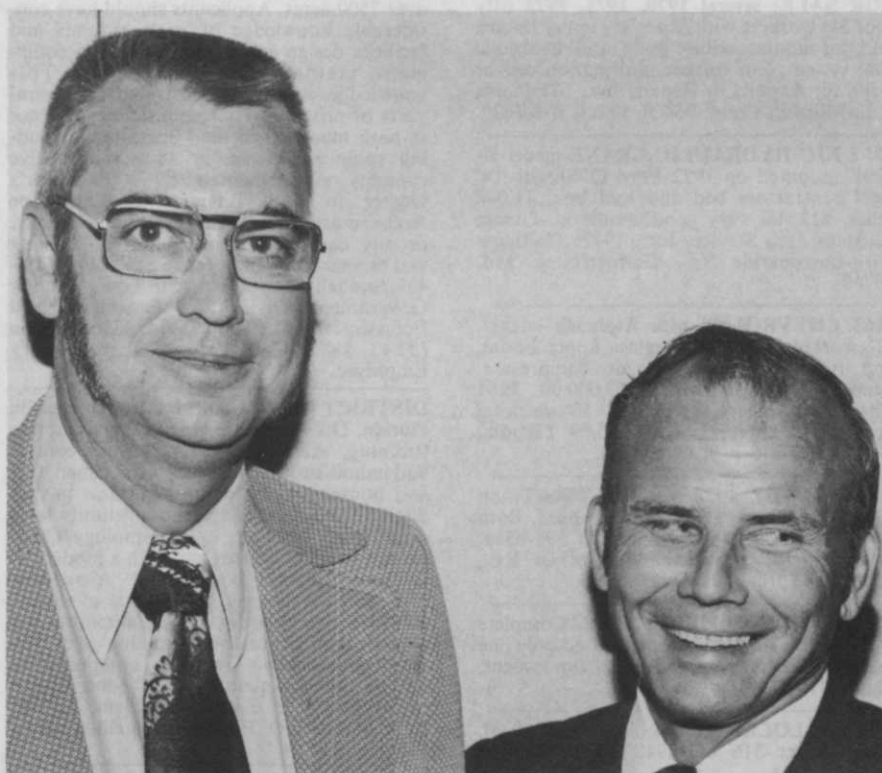
**University of Delaware's** Dr. William H. Mitchell, turf specialist, has one of the largest test plots we heard of — a nine hole three par playback course. The campus course looks like any conventional course, but beneath the neatly-trimmed turf, the ground is a maze of wires, pipes, tubes, drains, and soil types. Each green consists of eight separate soil mixtures, varying from sand and peat moss to the light sandy soils of lower Delaware and black soils high in organic matter.

Some of Mitchell's objectives are to test out materials which could lower the cost of golf course construction, study subsurface irrigation methods which require less water and are less disruptive to play, identify superior kinds of grasses which tolerate divot removal and resist compaction, and develop ways to reduce maintenance costs. His underground system of drains on this course makes it possible to find out which chemical materials are leach-

ing and which soil types hold the herbicides and fungicides the best.

**What will** the golf course of the future look like? The American Society of Golf Course Architects predict generally shorter courses designed for versatile maintenance equipment and created for the average golfer. The long, monster courses which have been so prevalent will give way to shorter courses measuring anywhere from 5,000 to 6,600 yards. With less length to challenge brute strength, golfers will need to devote more concentration to accuracy and strategy.

Land availability is an obvious factor in the anticipated reduction of course acreage. Yet, in an architects survey, the most frequently cited reason for shorter courses was the average golfers' ability. The soaring costs of building and maintaining a golf course further contribute to the shorter course outlook. Maintenance economy was cited by numerous architects.



*Hubert E. Buckley, (left), Irrigation Consultant from Gainesville, Florida and Doyle C. Jones, Landscape Construction Supervisor, Walt Disney World, Orlando, were elected president and vice president respectively of the Florida Turfgrass Association. Lou F. Oxnevad, Riviera Country Club, not pictured, was elected secretary-treasurer. Also elected to the Board of Directors were: H. Anthony Kimball, The Deerwood Club; Lewis C. Dolan, Cypress Creek Golf Club; Clifford L. Woodliff, Lehigh Acres Development; Robert H. Enoch, International Minerals and Chemical Corp.; and Stanley F. Cruse, Pursley Grass Co.*