Grau

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tissues. Speed of vehicles is reduced to lessen wear and tear.

These are only a few of the points covered by the speakers on the subject.

Q.—*At what height should Penncross bent be cut? Please consider viewpoint of a) players, b) superintendent, c) normal conditions. Also, what feeding program is considered sufficient?*

(Pennsylvania)

A.—Penncross bent was developed for putting green use. The player's best interests come first. Therefore, Penncross bent on greens should be cut at heights between 3/16 inch (48mm.) and 1/4 inch (65mm.) Daily mowing is recommended. "Normal" conditions for Penncross should be considered as "tournament condition." When Penncross is cut too high or too infrequently it tends to develop thatch which may become "scalped."

Briefly (and roughly) a "sufficient" feeding program will consist of 6 to 8 lbs. of N to 1,000 sq. ft. for the season in your area, 2 to 3 lbs. of P, and 4 to 5 lbs. of K. The pH values should be maintained in the 6.5 to 6.8 range. Using ureaform you may apply 8 lbs. of N in three applications. With solubles and natural organics it will require eight or more applications. Specific recommendations can be secured through your county agent and Extension Specialist from Penn State.

Q.—*On July 21 we were watching the televised play in the PGA tournament at Pecan Valley near San Antonio. On more than one occasion the commentators (Byron Nelson, Chris Shenkel, et. al.) mentioned "the green is very grainy next to the hole," "he is putting across the grain," and more. Several questions arise. 1) Is bermudagrass inclined to be more grainy than bent? 2) How does grain develop? 3) How can grain be minimized?*

(New Mexico)

A.—I, too, watched The PGA tournament and heard the comments. All of us saw putts die just inches from the cup or suddenly roll sideways and miss the cup. The exasperation of players accustomed to a predictable roll can well be imagined.

1) In general, bermudagrass tends to develop grain more so than bents. The newer bermudas, under careful management, should be virtually free from grain and should perform like bent. I do not know which strain of bermuda is on the greens at Pecan Valley. It has been several years since I visited there.

2) Grain develops sometimes as an inherent characteristic of the grass itself. An example is the old Virginia bent and Tifton 127 bermuda on which grain was uncontrollable. Grain at Pecan Valley was said to develop "with the sun and the prevailing wind." In Florida it used to be said that grain always "ran toward the ocean." Injudicious management can have a great deal to do with allowing grain to develop; i.e. lack of brushing, mowing too high, forcing growth with fast-acting fertilizers, infrequent mowing.

3) Grain can be minimized by severe brushing in several directions, mowing closely and often, developing slow uniform growth with a sound feeding program and topdressing to cover surface runners.

Q.—*We have bent greens and common bermudagrass fairways, approaches and collars. There is quite a bit of encroachment of bermuda into the greens. Is there a chemical that will kill the bermuda and not harm the bent?*

(North Carolina)

A.—Bermudagrass is much more tolerant of chemicals than bent. I regret to say that chemical control is *not* the answer. You must pick it out by hand and be extra diligent about edging the greens to prevent invasion from the collars. □