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applications of soluble N, I would advise using a soluble 20-20-20, 24-24-24 (or similar) at seeding time to assure the seedlings of a good send-off.

**Q**—Recently I heard that "the mark of a good superintendent is a thin, shallow carpet of grass on his greens; it shows that he feeds his grass abundantly."

Our greens (Penncross) are thin and shallow, but why not? We do everything from the top; cultivating underneath is hard and not very productive. Our fescue fairways (unwatered) shows roots 12 inches deep; our greens do well to reach down two inches. Please tell me if you think that grass, which is abundantly fed, should have roots that leave the "well-fed thin shallow carpet" and extend down 4, 6, or 8 inches? I don't believe it! I can't believe that grass roots are neuroticstriving for the impossible. They are not like Hillary, who climbed Mt. Everest "because it is there." They do what comes naturally; they live off the top. Tell me, am I wrong or am I a success at growing "a thin, shallow carpet of grass?"

(Pennsylvania) A—Everything is relative. Compared to prairie sod where roots of native grasses extend to depths of 4, 5 and 6 feet, the turf on any putting green is more like a "shallow carpet." I've measured bentgrass roots on a putting green well below the 12-inch level, but that still is "shallow" compared to the prairie.

The depth of roots of grasses on putting greens are affected by many factors, one of which is water. By maintaining a saturated surface we can keep roots shallow. Conversely, we can help them forage deeper by careful management. Well-drained porous soil helps.

I must confess that I am puzzled at the concept of the "thin, shallow" carpet being the mark of a good superintendent. That doesn't seem to be a very high goal to shoot at. I would feel demeaned were I a superintendent. Perhaps there's more to the story. Your sharing this with us is appreciated. If you can maintain excellent putting surfaces at all times, you are a good superintendent.



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