

Maroon Creek Club in Aspen, Colo. (above) ablaze with color in early fall...

## Potassium: The winter set-up

By PETER BLAIS

One of the best ways to protect golf course turf against the cold months ahead and help it green up earlier in the spring may be a fall application of potassium, according to manufacturers and researchers.

"The ability to apply coated potassium in the fall to winterize and still have nutrient available to feed once the soil warms up again in the spring could be the biggest asset to courses," said Tim Lacy, product manager of Pursell Technologies Inc., manufacturers of a slow-release potassium fertilizer using a temperature-activated POLYON polymer coating.

"Potassium's ability to strengthen turfgrass and act as an antifreeze has been well researched and documented. Likewise, its role in the transition process is considerable — this provides a welcome jump start to the spring feeding schedule."

An adequate supply of potassium can help grass plants produce carbohydrates longer into the fall, which in turn allow the turf to tolerate lower temperatures without freezing, according to Michigan State University turfgrass researcher Dr. Paul Rieke. Even with the shorter daylight hours and cooler nights, the photo-

synthetic process that creates carbohydrates continues into the late fall.

"How far north or south a course is located plays a role in how long the potassium is needed," the MSU professor said.

In his book, *Management of Turfgrass Diseases*, MSU researcher Joe Vargas writes: "After nitrogen, the two most important elements for growing plants are phosphorus and potassium. The role of these elements in controlling diseases has not been determined, although [J.H.] Madison explains how the interaction of nitrogen, phosphorus and potassium affects specific diseases."

Indeed, researchers aren't certain exactly how potassium increases a plant's cold tolerance or fights disease, said University of Nebraska researcher Terry Riordan. Potassium is also known to improve a plant's traffic, heat and disease resistance.

"It seems to increase root development, which makes the plant more tolerant of many stresses," Riordan said. "The feeling in the research community seems to be that potassium is important."

One of the things researchers do know, however, is that potassium leaches quickly out of sandy soils, such as putting greens.

Using slow-release fertilizers has been shown to help reduce potassium leaching. Potassium-containing fertilizers can last anywhere from six weeks up to a year, according to Pursell's Lacy.

Mike Peterson, Northeast regional manager with The Scotts Co., which manufactures a slow-release potassium called Super K Turf Fertilizer, said a fall application should be made at least a month before the turf goes dormant.

"Potassium should be available to the plant all year since there is no time of year when it isn't under some type of stress," he said.

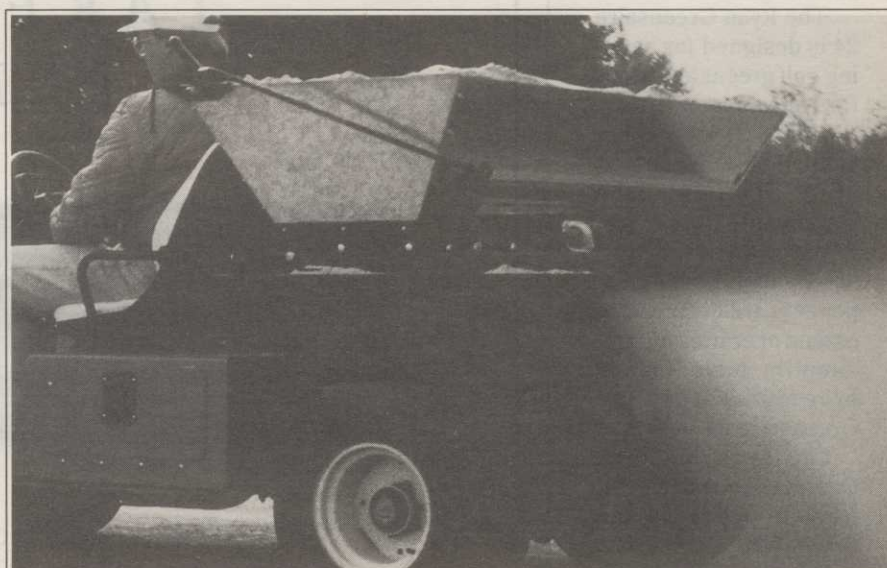
Superintendents seem to be getting the potassium message.

"Many superintendents will put down three times as much potassium as nitrogen," said agronomic consultant Terry Buchen. "It works very well, especially on cool-season grasses."



...and resting under a winter blanket of snow.

Dick Durrance II photographs.



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