

KNO 3

Potassium nitrate is gaining favor, especially for intensively managed bentgrass greens

BY CATHEY L. BATEMAN

Researchers in many areas of the country agree on the importance of supplying potassium to maintain healthy greens and fairways on golf courses. Superintendents and fertilizer suppliers are placing more emphasis on potassium nitrate, especially for intensively managed bentgrass greens and tees.

Potassium nitrate is a unique source of two major plant nutrients, and since it is applied as a foliar spray, it is safer to use in those areas particularly sensitive to groundwater contamination. Many believe it is also safer for the plant, since it is less likely to cause burn and is free from chlorine and sodium.

In several areas of the country, potassium nitrate is the preferred source of potassium, particularly in intense greens programs. J.B. Sartain, professor of soil fertility, turf and ornamentals at the University of Florida, said that in Florida, potassium is used more in the fall and winter, when least amounts of nitrogen and higher levels of potassium are necessary.

Sartain said potassium nitrate minimizes growth while enhancing greener color, even in cooler weather. During the summer months, when higher rates of nitrogen are desired, potassium nitrate is often used in solution with added nitrogen sources.

"It is one of the more soluble forms of potassium," he said.

He added that the importance of potassium in turfgrasses was thought to be less than that of nitrogen for many years.

"Many felt a ratio of 3:1 (nitrogen to potassium)

was the most effective," he said. He said potassium helps develop a stronger root system during summer on bermudagrasses, Florida's primary golf course turfgrasses.

Dr. John Street, associate professor at Ohio State University, agreed. He said early indications from research at the University of Nebraska by Dr. Robert Sherman suggest that relatively high levels of potassium are necessary in a fertilizer blend even when soil potassium levels are high.

He said Sherman's research suggests a 2:1 ratio — or even 1:1 — of nitrogen to potassium is more beneficial for enhancing the summer stress tolerance of cool season grasses. Street said the results of Sherman's work may lead to a change in thinking about potassium's role in turfgrass production.

In most areas where cool season grasses are more prevalent, higher potassium-to-nitrogen ratios are now being applied in September, with another application in October or November to help winterize the turf. Street said Kentucky blue, creeping bent, perennial ryegrass and tall fescue are the predominant golf course grasses in the northern areas of the country. These experience more heat stress than the South's warm season varieties, which receive more nitrogen during the summer months.

In warm areas, cool season grasses are also making their way onto the greens in a big way, according to Tim Orton of Sta-Green Plant Food Co. of Sylacauga, Ala.

"With the technology and superintendents com-

ing out of the universities, the industry is getting so many guys with degrees in growing grass that bent(grass) is becoming more prevalent further south," he said.

"A lot of people are using potassium nitrate on bentgrass in the South. It's basic, it has a favorable effect on soil pH. It also has a small amount of nitrogen, along with the potash which is very important to the turf."

Potassium nitrate doesn't widen the leaf blade. A wide leaf blade slows the putting speed and affects the roll.

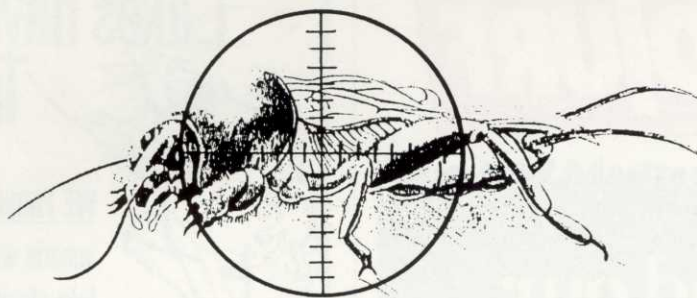
"That's why so many clubs went to it in the first place," said Orton, "to get a superior putting surface in the South. You see very little, if any, muriate of potash used on putting greens in the South, be they bent or bermuda."

Dave Lowe, golf course superintendent at The Plantation at Ponte Vedra near Jacksonville, said potassium nitrate is especially important in his intensive greens program.



Potassium nitrate is available in wet and dry formulations. The dry form spreads evenly and is non-hygroscopic.

An Un-Welcome Sight!

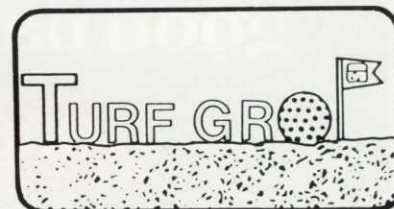


Take Aim With Sunniland Molecricket Bait



Sunniland

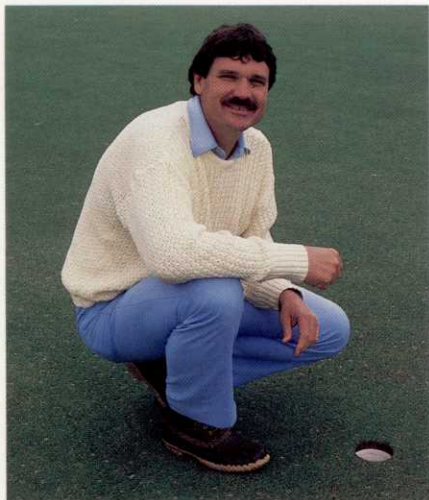
Regional Managers



Dennis Varady (407) 332-9078
Steve Goedereis (407) 964-9478

Wayne Carmichael (904) 272-4891
Joe Kempeneer (813) 743-2643

Post Office Box 1697, Sanford, Florida 32772-1697 Telephone (407) 322-2421 • 1-800-432-1130



David Lowe, superintendent of The Plantation at Ponte Vedra, uses potassium nitrate on his bentgrass greens.

"We have bentgrass greens, which are still a little unusual in Florida," he said. "Potassium nitrate offers an excellent ratio, especially for use in the fall, winter and spring applications we make here in Florida."

"We use potassium nitrate in many of our formulations to supply the superinten-

dent with the highest quality fertilizer for production of the highest quality turf," added Irv Stacy, vice president of the Par-Ex Woodace specialty division of Vigoro Industries, Inc.

"We use potassium nitrate because it's a high-grade, chlorine-free fertilizer, composed entirely of potassium and nitrogen in the nitrate form. It offers a microprill, a very finely-sized material and it fits in well with our formulas for greens fertilization."

Par-Ex is one of the few turf fertilizer product lines using potassium nitrate in its turfgrass products.

"It fills a very good niche and we've taken advantage of it," Stacy said.

Superintendent Lowe added that the potassium nitrate prill's uniformity makes it easy to apply, even at low rates. He also noted that it is not picked up by mowers. "It's also highly soluble, and moves into the soil quickly and easily."

Potassium nitrate is an excellent source of nitrate nitrogen in Par-Ex formulations, according to Stacy. His company blends potassium nitrate with its slow-release ni-

trogen. He said the blend offers an immediate green-up and long residual effect.

"Potassium nitrate is an excellent source of nitrogen on cool season turf, because of the nitrate form," he said. "It's an excellent source of potassium because of its low salt index."

Street agreed.

"From a salt-tolerance standpoint, potassium nitrate has an advantage over other forms of potassium," he said. "Other forms have a higher salt index (which can cause burn damage), than potassium nitrate."

"Bentgrass requires a more intensive program for its growth and maintenance anywhere in the country," he continued. "Whether you are dealing with heat stress or wintering over, your potassium source must be such that it can move into the soil profile quickly, made soluble, and taken into the plant to prepare it for stress."

Cathey L. Bateman is a freelance writer based in Orlando. The article was submitted by Patterson, Bach & Brooks, advertising agency for a supplier of a potassium and nitrate plant nutrient.



Behind our own good name are a lot more good names.



- | | | |
|------------------------------|------------------------|-----------------------|
| Distributors for: | | |
| Toro Mowers & Turf Equipment | Rayside Trailers | Vicon Spreaders |
| Toro Turf Irrigation | Power Trim Edgers | Byho Spreaders |
| Toro String Trimmers | Club Car Carryall II | Billy Goat Vacuums |
| HMC Green Machine | Standard Golf Supplies | Foley Grinders |
| Hahn Sprayers | Olathe Turf Equipment | Bernhard Spin Grinder |

Wesco Turf. Backs You With The Best.

2101 Cantu Court, Sarasota, FL 33582 Ph. (813) 377-6777

Lakes have feelings too. Treat 'em right.

WE PROVIDE:

- aquatic weed and algae control
- lake clarification
- fountains, parts and installation
- fish stocking
- aquascaping
- free estimates

Serving Florida Statewide
1-800-666-5253

The Lake Doctors, Inc.
Aquatic Management Services