

4. On occasion we may have to legislate. The chance to do this directly doesn't come very often. Most frequently we can try to influence legislation that affects us through a lobbyist (such as FROWT), by attending committee hearings and giving testimony when possible and, finally, by *voting* for those individuals most likely to represent our interests.

5. There are times we have to litigate. This option makes me nervous, simply because I'm like the majority of people who'd rather not ever be involved in court proceedings, but in Wisconsin we faced a situation that offered no other options. The FROWT Coalition and a Christmas tree grower in the town of Casey, in Washburn County, are suing the town board of supervisors over an ordinance adopted in June 1983 that

prohibits the use of herbicides on public lands and roadways and on private lands subject to public use (such as golf courses) without town board approval. It also prohibited aerial application of herbicides on any land without approval. The key point of our lawsuit against the town of Casey is "whether or not local units of government have jurisdiction in regulating pesticides." It is clear that pesticide use has been the subject of extensive federal and state legislation. There are nearly 2,000 municipalities in Wisconsin; and if each one is allowed to enact its own set of regulations, it would essentially be impossible to conduct business in our state. We had to sue to try to prohibit a patchwork of conflicting regulations. We need to confirm the preemptive nature of federal and state pesticide laws and regulations.

6. Finally, there is good logic in trying to establish a dialogue with environmental extremists. If litigation is frightening, then this is frustrating. Too often I am guilty of arguing with them when a confrontation occurs. However, it is a wise person who establishes channels of communications; his position can only benefit.

Involvement may best express what I am trying to say. Logic is on our side. Science is on our side. The welfare of America and Americans is on our side. If we fail to serve these interests by not defending our right to use pesticides and agricultural chemicals, we will have failed our profession. We will deserve the consequences.

I am one environmentalist who believes golf courses are a vital part of our environment.

The Forgotten Magic of Lime

by WILLIAM H. BENGUEYFIELD
National Director, USGA Green Section

THIS IS an editorial, and editorials are meant to stimulate thought; to introduce opinion relating to the facts. "The Forgotten Magic of Lime" is both the subject and the fact.

The fact is that many experienced men, men who have been studying and observing fine turf for over 70 years, have been convinced and can prove the value of lime — either calcium carbonate (ground limestone) or calcium hydroxide (hydrated lime) in managing fine golfing turf. There is no question of this.

Lime was one of the first chemicals used on turfgrasses in this country. Can you believe that lime, under certain soil conditions, can actually *cause* grass to grow? Ask any dairy farmer why he limes his pastures? He'll tell you lime grows more grass and that means more milk in the pail and that means more profit in the farmer's pocket. It is a basic fact.

When the U.S. Amateur was played at The Country Club, in Brookline, Massachusetts, in 1934 (just as the Open will be played there in 1988), lime was used for lines around every green to control the gallery of that day. Now we use



O. J. Noer, 1958. One of the earliest and best turfgrass consultants.

yellow ropes for the purpose. Twenty years later, in 1954, a very dry spring occurred in New England. Strikingly noticeable narrow, dark green grass growth lines appeared around every green, caused, naturally enough, by the lime application 20 years earlier. Pictures prove this phenomenal fact.

Last summer a young golf course superintendent asked what he could do to substantially reduce the deep accumulation of thatch on his greens. His membership was upset. Footprinting was very much in evidence on the greens, and this young fellow was under a lot of pressure.

I recalled a lesson taught many years ago by O. J. Noer, one of the pioneers of turfgrass management for golf. I was making a golf course visit with O. J. in Victorville, California, in 1954. The greens had a lot of thatch on them, and O. J. said, "You'd be smart to apply some hydrated lime to these greens two or three times a year for the next couple of years. Put on about two pounds per 1,000 square feet in the early spring, early summer, and again in the fall. In a year or two, you'll have a lot less thatch."

It worked. Two years later these greens were in great shape, and excess thatch no longer was a problem. I later learned this simple trick was widely used many years ago by the same men who founded the GCSAA, in 1927.

Hydrated lime immediately furnishes free calcium, slightly raises the pH level within the naturally acid thatch layer, and causes soil micro-organisms to work overtime, feed on the thatch and, in nature's own way, substantially reduce excess organic matter.

I told my young friend this story last summer. He showed considerable doubt, furrowed his brow but nodded in agreement and left.

About two weeks later he was back with another question. "You know," he said, "I've checked your story out about using hydrated lime with several other superintendents and university people. They've never heard of it. Who can you name in authority to substantiate what you have said?" I'd rather not say how I answered.

You see, we have forgotten the magic of lime. Even under alkaline conditions, as was the case at Victorville, California, thatch layers are just naturally acidic, and hydrated lime will work wonders. Oh yes, an 80-pound bag of lime costs about \$4.00.

Incidentally, back in the 1930s the University of Rhode Island proved one could control thatch accumulation in bentgrass turf just by manipulating lime applications. How short our memory.

Let me tell you another story about lime. It also works. When I first came to the Green Section in 1953, Tate Taylor was recognized as one of the outstanding golf course superintendents (greenkeepers) of his day; particularly in the Northeast. Tate was about 60 years old then, one of the first college graduates in our business, and had years of experience in Maryland, New Jersey, New York, and New England. He was the superintendent at Westchester Country Club for many years before the Second World War, and later became a member of the Green Section staff. He was not only college smart, but field smart as well.

During one of our many bull sessions Tate said, "You know, whenever you visit a golf course and the superintendent is having trouble with a couple



Poa annua will make thatch, even in pots. The magic of lime will help control it.

of his greens, and he has tried everything he knows, and nothing works, tell him to make an application of lime (either hydrated lime at two or three pounds per 1,000 square feet; or ground limestone at five or ten pounds per 1,000 square feet). Then, stand back. Nine times out of ten, within a day or two, the situation will improve or be totally solved."

I've told this story to at least a dozen superintendents who were in trouble and had tried everything. And in every case, the lime worked. When all else fails, try a little lime and remember Tate Taylor. *Lime applications can actually control some diseases.* And for a lot less money. It won't work with all diseases, and when there is an epidemic, fungicides are the answer. But give it a try on your nursery someday and see for yourself.

There's another use for lime. Frequently in the fall or even in the summer when putting green turf may become a little thin and open, algae will often form on some areas of the putting surface and even crust over. It may become black and start to flake. If this condition is allowed to go unchecked, it will smother the grass and inhibit recovery. Now it's true you can spend money on algicides and wetting agents and what have you, and they'll probably work. You can also dust a little hydrated lime, again about two pounds per 1,000, over the algae and it will disappear, and the grass will green up and recover. You can

repeat the treatment again and again, about every week or so, at this light rate without fear.

Now there is a word of caution. An application of hydrated lime should always be separated by a week or so from the application of any soluble nitrogen fertilizer. If the two materials are applied too close together, they could cause leaf burn.

We seem to live in an age of excesses. We tend to go overboard in one way or another. We like to follow trends. We are into fads. This isn't good turf management, and it isn't good for the turf manager or his future.

Low nitrogen levels have been in for several years and moss has become a problem. High nitrogen levels were all the rage ten years ago, and disease problems were rampant.

Very high potassium levels are in today, but even in the 1930s, we knew potassium was important to cell wall thickness, winter hardiness, and wear resistance.

Because of the Stimpmeter, golfers thought a green speed of 12 feet was the ultimate in golf just five years ago. Today, most golfers are happy with eight and one-half feet, and they enjoy their grass greens all summer long.

Slow-release fertilizers were all the rage 10 to 15 years ago. Now we know they have their place, but light and frequent soluble fertilizer applications cer-

tainly have their advantages too, particularly when concerned with nitrogen availability on summer greens.

USGA Specification greens are built with 80 percent or more of sand. They were supposed to drain no matter how much water applied. Right? Wrong. The Specifications as developed by Dr. Marvin Ferguson were designed and planned to reduce the effects of soil compaction, not excess irrigation. There seems a modern misunderstanding that water may be applied indiscriminately to greens, especially sandy

greens, at any time without concern. It simply isn't true.

And so we have come full circle. Moderation is the answer. We should use the knowledge we have properly. Lime in excess can certainly cause problems. But that doesn't mean we should forget the basic uses, techniques, and value of lime.

I plead with all of you not to overlook the wisdom and experiences of the past. They are rich and valuable. Let us guard against a headlong rush to invent something new when we already have an

answer, an effective and inexpensive answer from the past.

Oliver Wendell Holmes once said:

Science is a first rate piece of furniture for a man's upper story if he has common sense on the ground floor. But if a man hasn't got plenty of good common sense, the more science he has, the worse for his decisions and those he serves.

The Noers, the Taylors, and the Fergusons have already left us a treasure of knowledge. There's magic in lime. Let's use it.

Let's See — My Rules of Golf Must Be Here, Somewhere ... It's in the Bag

by **GEORGE EBERL**
Managing Editor, GOLF JOURNAL

THE TYPICAL golf bag may take on the character of a sophisticated Dempster Dumpster, a collecting point for things quaint and occasionally vile. Inside the zippered compartments you might find dried grass blades, wads of lint, and other lumps and pieces not so easy to identify, like a six-months-old half pack of crumpled cigarettes, a spike cleaner, a spike wrench, some ancient golf gloves that have attained the approximate texture of the Dead Sea Scrolls, ball-markers that were gifts from one business convention or another, and a fistful of broken or dull golf pencils (have you ever noticed that golf pencils rarely have an eraser end?). Less intense players may carry a medicinal flask, protection against inclement weather, bad scores, and/or the loneliness of life in the rough.

Of course, an assortment of wood and plastic tees are sprinkled among the



M. T. Johnson, USGA Executive Committee.

debris, including some that are broken (useful for par-3s, although one usually finds them only when preparing to hit off on a par-5, with driver in hand). For some mysterious reason, the best tees descend into the more remote crevices, just out of reach of blindly probing fingers.

The same is often true of golf balls; range balls, conspicuous by their red stripes, invariably rise to the top, leaving the player who is to tee off immediately fumbling futilely for a white, dimpled, sparkling lovely somewhere in the depths of his leather bin of unmentionables.

Old golf balls have a value, however; they are popular for teeing off where water hazards menace. It is ironic that often these same players, some of whom will pick up a sizable bill in the clubhouse without blinking an eye, carry a ball retriever in their overstuffed bag, and they will fish in a pond for a quarter