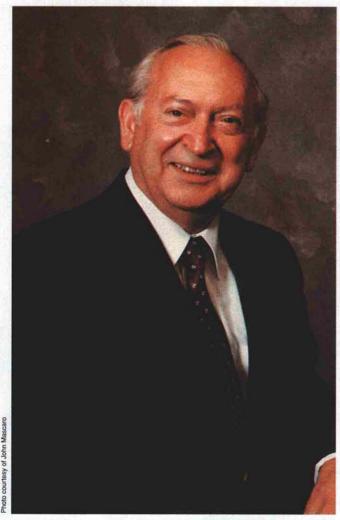
# Tom Mascaro-Entrepreneur extraordinaire

The turfgrass industry pioneer who brought you the aerifier and the verticutter has long been a 'best friend' of superintendents.

#### **Clay Loyd**



Tom Mascaro's innovations for the turfgrass industry have been so important that their names, like aerifier and verticutter, have become generic. his is a story about a mild-mannered, soft-spoken but inventive entrepreneur who overcame adversity to become an extremely successful — and popular — businessman. He's also one of the best friends golf course superintendents have ever had.

You may have seen him chugging along in his wheelchair at GCSAA's International Golf Course Conference and Show. He wasn't there last year because of injuries suffered in a fall, but he has been there most every other year for many, many years.

This is the story of 81-year-old Thomas C. Mascaro of Oakland Park, Fla.

Without a doubt, Mascaro's greatest claims to fame are the 1946 development of the aerifier for cultivating turfgrass and the verticutter in 1952 for removing thatch. (Originally, the Mascaro Aerifier and Verti-cut were copyrighted trade names that no one else could use legally. But both products caught on almost instantly Tom says, and soon were imitated by the competition. Today, both trade names have entered the language and have become generic.)

Both inventions revolutionized golf course management. And there's more. Lots more.

Tom Mascaro is a legend in his own time. He won the prestigious USGA Green Section Award in 1971 and the GCSAA Distinguished Service Award (DSA) in 1976. He's in the Oklahoma Turfgrass Hall of Fame. There's even a museum named in his honor and that of another turfgrass pioneer. It's the Mascaro-Steiniger Turfgrass Museum sponsored by the Pennsylvania Turfgrass Council on the campus of Penn State University at University Park.

Mascaro has lots of friends, like Eberhard R. Steiniger, CGCS, longtime superintendent at New Jersey's famed Pine Valley Golf Club. (Steiniger was featured in the November 1995 issue of GCM.)

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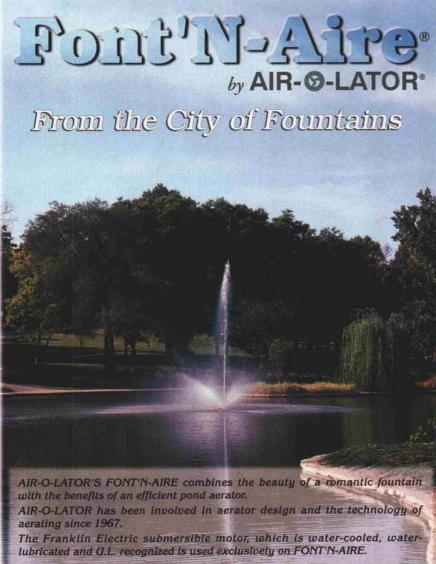
Mascaro is an accomplished photographer, as was his father, who studied the subject and at one time was a motion picture projectionist. Mascaro has donated thousands of archival photos and slides to the GCSAA historical preservation project.

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And he's gotten around a bit. For more than 60 years he's visited golf courses and other sports turf facilities all over the United States. He has consulted on fine turfgrass and taught about it in several foreign countries. For many years, Mascaro flew an average of 100,000 miles annually. United Airlines gave him his first Million Miler Award in 1951.

A member of GCSAA since 1948, Mascaro currently serves on the Heritage Preservation Committee and is donating to the association his collec-



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#### **Present at the creation**

Mascaro has rubbed elbows and has been close friends with many of the world's leading golf course superintendents, turfgrass scientists and agronomists, including most of the immortal figures. He knew every GCSAA charter member, at least to some degree, all of whom have passed away now.

A writer and a speaker at many turfgrass conferences and seminars, Mascaro has published many technical product bulletins, preparing most of the copy himself. He's written articles in various turfgrass publications, including *GCM*. His works have been translated into foreign languages, including Japanese, Italian, French and German.

Several of Tom's articles have focused on other turfgrass pioneers; this may be the first to focus in depth on him.

For 14 years, Mascaro edited, published and distributed a free house organ called West Pointers, and for years he recorded, published and distributed also free — the proceedings of many major regional and national turfgrass conferences, including GCSAA's. Why?

"Because no one else was doing it," he says, "and it needed to be done."

For 21 years, Mascaro also contributed a monthly column called "Photo Quiz" to GCM. Last year he published a textbook, "Diagnostic Turfgrass Management," and he has another book in the works.

#### Roots

Mascaro was born in 1915 on Phillips Street in Philadelphia. He had two brothers, Tony and Charles, and two sisters, Kitty and Mary. Mary died when she was 3.

Tom was only 9 months old when

Tom Mascaro (standing, second from left) looks on as renowned turfgrass researcher and educator Joseph M. Duich, Ph.D., (kneeling at right) learns about the operation of a piece of mowing equipment.

GCM file photo

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### M A S C A R O

#### MASCARO

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he was struck by polio. "It was downhill for quite a while," he says. "For 30 days the family was quarantined. We couldn't go out, and nobody could come in except to bring us food. There was an epidemic in Philadelphia. Many people died."

The disease affected Tom's left side. "Fortunately, there was a nurse (Sister Kenny, Tom recalls) who recognized the value of exercising parts of the body affected by polio, and that helped. Eventually, I regained use of the rest of my body. All that was affected was my left leg."

When Tom was 15, his father learned about a free Temple University program in North Philadelphia that could help Tom. It was 1930 and most people had little money, the Mascaros included. With interns looking on, surgeons cut a tendon in Tom's heel, lengthened the tendon, applied a cast and moved a muscle from the front of Tom's knee to the back so that he wouldn't fall. At one point, there was terrifying hammering and chiseling. Finally, Tom was on his own. Not only did he survive and cope — he thrived.

The best thing to do after the surgery, the doctor said, was exercise the affected limb. So Tom got a job pushing 50 tons of cinders with a wheelbarrow into dog runs at a kennel. Later, he worked in a general store moving heavy merchandise, strengthening his left leg for years to come.

#### Education

In 1936, Mascaro earned a technical degree in business administration and cost accounting from the Landsdale (Pennsylvania) School of Business. (Unfortunately, he couldn't spare the 50 cents for his sheepskin at the time. He finally claimed it six years ago.)

Tom also learned from his father, Thomas L. First, the elder Mascaro studied photography and became a projectionist in a motion picture theater. Next, he worked as an engineer in an ice plant. Finally, he decided he might make money by raising mushrooms. He learned the art, bought a 12-acre farm near Valley Forge, moved his family and went into business. Tom was 5.

"It was profitable," says Tom. "Mushrooms sold for around \$5 a pound. You raised mushrooms in the winter and vegetables in summer. But it's not an easy business. Mushrooms are a delicate crop. Moisture and temperature are critical — and they tell you a lot about turfgrass disease, incidentally."

Then came the Great Depression. Along with many others, Tom's father lost his money. People could no longer afford to buy mushrooms. For several years, life was a financial struggle. Fortunately, however, Tom had a knack for turning lemons into lemonade. Spent mushroom soil, especially when mixed with other ingredients, makes good fertilizer and topdressing. That's how Tom Mascaro entered the world of golf course superintendents. Superintendents in the 1930s were making their own fertilizer and topdressing. Each "greenkeeper," as they were called, had his own formula. Mascaro began calling on them, listening to their needs and customizing his product for them.

During World War II, Mascaro was a machine shop apprentice in West Point, Pa., where he learned mechanical drawing, drafting and the operation of machine tools. He also studied agriculture at Penn State, organic chemistry at Temple and inorganic chemistry at Drexel Institute of Technology in Philadelphia.

#### **Entering the industry**

It was also in 1936 that Mascaro formally started his own company, West Point Products Inc. For several years, brother Tony was his partner.

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A mechanic at Pine Valley (N.J.) Golf Club, under the direction of course superintendent Eberhard R. Steiniger, CGCS, demonstrates Mascaro's verticutter during a GCSAA convention in Atlantic City.

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In 1969, West Point Products merged with Kearney National Corp., which later acquired Hahn Inc. Tom retired in 1973, moved to Florida and started another company, Turfgrass Products Corp., now Turf-Tec International. Son John joined Tom as president of Turf-Tec in 1986.

(Tom Mascaro has five children: Stella [from a previous marriage], John, Bobby, Tammy and Linda. Tom and his wife, Dorothy, were married on Dec. 28, 1957. They also have nine grandchildren.)

West Point Product's principal products for its first 10 years were special soil mixtures for golf course greens, packaged potting soil and packaged organic fertilizer. Mascaro



says he was the first to market potting soil in 2-pound bags for homeowners, selling to F. W. Woolworth, S. S. Kresge, Sears garden stores and nurseries.

Tom also pointed his company toward the manufacture of machinery and other hardware for use on turfgrass. Of the 100 or so turfgrass products Tom's company has designed and built over the years, 20 were awarded U.S. and/or foreign patents. Best known are the aerifier, the verticutter and the vertigroove, which was designed to remove layers of soil on greens and improve drainage.

#### Other key products

Other better-known Mascaro products include:

- The T.T. Truck (an immediate success), a three-wheeled, oneperson machine with an elevated engine over the front wheel, designed originally to carry a patient on a stretcher out of African bush country.
- The power Dragmat, designed to pulverize aerification soil cores.
- The Aerilift Trailer, which lowered flat to the ground for easy loading and unloading.
- Grass-Cel, which is high-impact plastic paving designed to allow grass to grow despite traffic.

Always one to keep up with change, Mascaro started Turf-Tec primarily to provide diagnostic instruments to help golf course superintendents make culture decisions and meet environmental challenges. The company currently has 40 products in various stages of research and development. They are either improvements on existing products or are new concepts designed to minimize labor needs or overcome environmental problems. Prototypes of three of the products have been developed and can be engineered quickly to completion.

Mascaro has also:

 Designed and built five machines and devices for state research experiment stations, including soil compactors, turf-wear machines and penetrometers (for determin-*Continued*

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#### MASCARO

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ing compaction).

- Introduced what he describes as the first acceptable crabgrass control — disodium methyl arsenate, known as CrabErad.
- Developed and patented a liquid nutrient solution that he sold for 10 years, then sold the copyright to a British firm.
- Developed and patented a batterypowered greensmower long before the recently introduced electric mowers in today's marketplace.
- Designed and built sports equipment for Norwegian Cruise Lines.

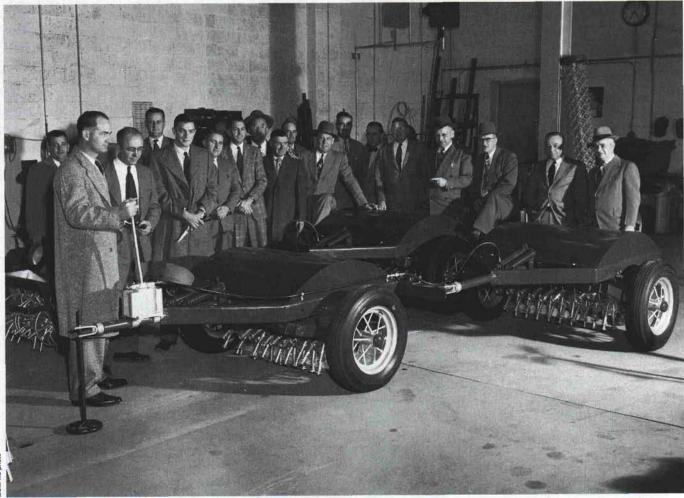
#### Introducing the aerifier

One of the many highlights of Mascaro's career was the trip he took with brother Tony to promote the aerifier in 1946. Their itinerary included Penn State, Purdue University, Chicago, Indianapolis, Cincinnati, Pittsburgh and Columbus, Ohio.

Sizable, excited and enthusiastic crowds greeted the aerifier everywhere it went. Tom and Tony came into contact with such giants of the turfgrass industry as researcher/educators Fred V. Grau, Ph.D.; Herbert Albrecht, Ph.D.; and Gerald Mott, Ph.D.; GCSAA presidents Ray H. Gerber (1950), Norman Johnson (1954), Carl Bretzlaff (1949) and Malcolm McLaren (1952); and superintendents Arthur Snyder, Emil Mashie, Warren Bidwell, Taylor Boyd and Colin Smith.

In Chicago, Mascaro recalls, "Emil directed us to the center of the fairway, where we set the depth of the spoons on the aerifier. People were lined up on both sides of the machine as it moved slowly down the fairway. We thought something was wrong. Set at 3 inches deep, the aerifier left no soil cores on the surface of the grass!

"We stopped the tractor to find out what was wrong. To our surprise and delight, we discovered that as the aerifier passed along, people on each side of the machine were picking up



With Tom Mascaro behind the camera taking this photo, a 1950 gathering of Philadelphia golf course superintendents examines the production model of his revolutionary, three-gang turfgrass aeritier at Mascaro's West Point, Pa., manufacturing plant.

#### the plugs of soil. Some people were putting them in their pockets. Relieved, we got the tractor going again and aerified most of the fairway. After everyone had collected their souvenirs, they proceeded to poke fingers and pencils to check the depth of the holes."

In Columbus, Ohio, "a few people brought their mechanics to see the aerifier because they had refused to believe that the machine, with no engine (it was tractor-drawn), could extract more than a ton of soil from under the turf without stopping play."

(Actually, several devices somewhat similar to the Mascaro Aerifier were invented before Tom's machine, including one 11 years earlier. But John Mascaro says his father's was the only one that "cultivated the soil.")

#### University turfgrass giants

Among the many university giants of turfgrass that Mascaro has known well over the years were H. Burton Musser, Ph.D., and O. J. Noer, as well as Grau. With Mascaro often going along and participating, these revered turfgrass educators and researchers, along with others, went far and wide to early turfgrass field days and conferences to share their knowledge with golf course superintendents. To this day, they and a few others like them are sometimes referred to as the "Traveling Troubadours of Turf."

"As I traveled with Dr. Grau across this great country of ours," Mascaro recalls, "he held the turf world spellbound with his inspiring lectures. He described not just the performance of the present world, he spoke of the future world. He promoted turfgrass research in areas and states that had never even considered such a thing.

"Fred Grau was a champion of the golf course superintendent. He fought for their rights and inspired many young people to enter the profession."

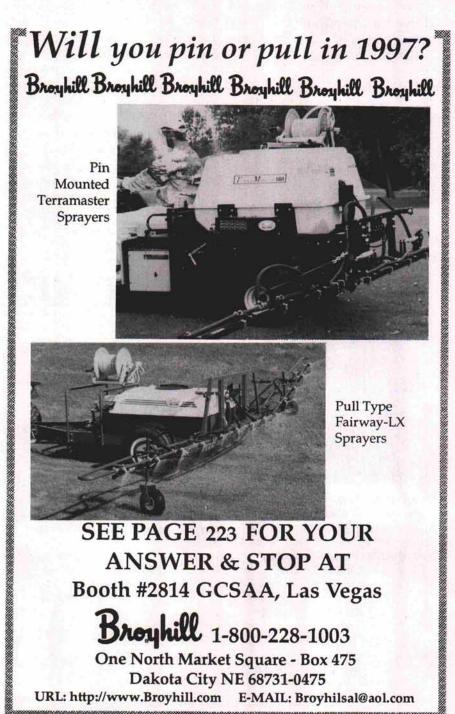
Noer was an agronomist for the city of Milwaukee, whose name became synonymous with Milorganite.

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"O. J. was already a legend when I was introduced to him at a meeting of the Philadelphia Greenkeepers Association," Mascaro remembers. "I was spellbound by his slide presentation of his experiences with golf course management. I told him that I was trying to learn more about turfgrass culture and would like to travel with him to increase my knowledge of the subject. O.J. laughed and said, 'Pack your bags, and I will give you my schedule.' He really meant it! He would call

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or write where he was going to speak — and tell me that I was on the program, too. This friendship lasted from 1947 to 1966 (when Noer died). He taught me so many different things."

Musser thought so highly of Mascaro that he sought Tom's opinion when he was about to establish the turfgrass science education program at Penn State.

#### World War II

To an extent disabled by polio, Mascaro found himself classified "4-F" and therefore unable to serve in the armed forces during World War II. But he found ways to help the war effort while carrying on in business as best he could in view of shortages and controls.

"I managed to get a defense con-

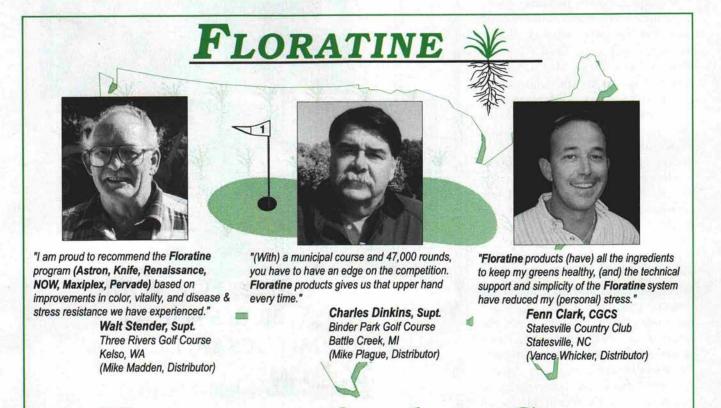
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tract as a subcontractor, purchased some equipment and fabricated stainless steel struts for wooden gliders. After the war, we found that they were used in the invasion of Normandy to fly troops behind enemy lines. George Clouser, a very knowledgeable engineer, allowed us to share his machine shop. He patiently taught us how to operate lathes, milling machines and the rest of the equipment he owned.

"Another contract we managed to acquire involved drilling valve tappets to size for Allison airplane engines. Everyone else who tried to drill these tappets failed. You could drill only one or two pieces and the drill burned out because the chromium in the alloy was too hard. After trying every lubricant we could find and using a dozen drills, we gave up. While washing my hands one day, I used a large cake of 'Kirkman' soap. My mother used it for laundry, and our clothes held the odor for days. I took the cake of soap over to the drill press, pushed the soap into the drill and clamped a tappet in place. The drill went right into the cup and expanded it into its full size.

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Because gasoline was rationed during the war, our visits to golf courses were few and far between. To keep in touch with superintendents, therefore, I wrote letters and then started a free newsletter called West Pointers. It was a single sheet, printed on both sides. It contained interesting facts that I found in my work. West Pointers was launched in 1946 (shortages and some controls lingered for a period after the war) and grew to 1,200 copies a month. At first we sent out 200 copies locally, and gradually we expanded the newsletter into a national publication.



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West Pointers went to some green chairmen, distributors and salesmen as well as superintendents. The publication was popular because it was amusing, as well as informative. It was published for 25 years."

#### **Correspondence** courses

Another of Mascaro's achievements was the development of correspondence courses in turfgrass management.

"While traveling into all areas of the country and visiting golf course equipment distributors," Mascaro says, "I found that many equipment salesmen in those days were the best source of misinformation in turfgrass science. But they were anxious to learn and asked if I knew where to get a book on the subject. I knew that Prof. Musser was writing a book for the USGA Green Section, so I asked him where salesmen could get basic reading matter on turfgrass cultures. He sent me a basic correspondence course on home lawns that had been discontinued for lack of interest. Professor Musser suggested that I rewrite it and bring it up-to-date for salesmen. They could subscribe to the 10-lesson course for \$8. They had to answer all the questions within 10 days. We would correct their papers and return them with the next lesson. We warned them that if there was more than a two-week delay in answering the questions, they would be expelled. Of the 265 students who enrolled, only one was expelled.

"When students completed the course, they received letters of congratulations, their grades and diplomas.

"Golf course superintendents soon heard about the correspondence course and asked for one of their own. I drove to Penn State and discussed it with Dr. Musser. I agreed to pay him \$2 per student for reworking the course that I had developed for salesmen. West Point Products would do all the production work and Dr. Musser would grade the papers. The new course was an immediate success with golf course superintendents."

Because of the added material Musser provided, Mascaro had to increase the price to \$15 per student. More than 15,000 superintendents completed the course.

#### **GCSAA** charter members

Mascaro says he knew all of GCSAA's charter members, and many became personal friends. Tom estimates that 75 percent of his knowledge of turfgrass culture came from them.

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Continued



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Here are his impressions of five:John Morley was GCSAA's first

president, and he was "lionized for spearheading formation of the national greenkeepers association. It was difficult to even get near him to shake his



Mascaro sitting in the Turf-Tec Water Management Diagnostic Instruments booth.

hand. He had a vision for the greenkeeper, the organization and its future. To him, golf was the greatest sport for people of either sex and all ages."

• Joseph Valentine "was unquestionably a leader in greenkeeping. As head greenkeeper at prestigious Merion Golf and Country Club in Ardmore, Pa., he supervised the magnificent layout of the East Course . . . and the adjoining West Course . . . Valentine placed men with latent ability at each facility, and as soon as they were qualified as greenkeepers, he would place them at other courses in the Philadelphia area. The Penn State turfgrass research program was born due largely to the efforts of Joseph Valentine."

• Marshall Farnham. "I spent lots of time with him on his golf course in Philadelphia because he not only was located just a few miles from where I

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lived, he also allowed me to try different machines before production. His opinions were invaluable. As a graduate of Cornell, he knew the basics of turfgrass management. He was a good critic not only on the mechanical aspects of the equipment, but also on the agronomic side."

· Leo Feser "was a gem. Bright, knowledgeable, turfgrass-smart, amusing and an accomplished writer. He held the national association's magazine together during the Great Depression by donating his talents as editor."

· Emil H. Pica "was a grand greenkeeper at Minnekada Country Club in Minneapolis. He had a deep voice and was eloquent when discussing turfgrass problems. At conventions we would all squeeze into one room to hear his philosophies covering the beauty of a golf course and what a privilege it was to supervise one."

Many years have passed since Tom Mascaro came upon the golf course management scene. There aren't many people left who knew him well in those pioneer days. Morley is gone, so are Noer, Grau, Musser, Valentine, Farnham, Feser, Pica and the others. One who survives is Steiniger.

"We have been good friends for many years," Steiniger reminisces. "Tom is a wonderful guy to be with. Professionally, I traveled all over with him to Manhattan, Kan. (Kansas State University): Texas A&M: Oklahoma; Canada; all over. Our wives also have been friends. Along with others, the four of us have taken Caribbean cruises together, once going to Panama. For a cruise ship, Tom and I built two putting greens complete with scorecards. They were very popular on board. Even on pleasure cruises, we were always visiting golf courses whenever we went ashore. Tom's mind is always clicking. He always wants to make things better. But there are two things Tom is not good at: bridge and pinochle."

When Tom received the Green Section Award in 1971, the USGA

Green Section Record summed it up this way: "It is difficult to imagine where golfing turf would be today without the mechanical maintenance principles pioneered by Tom Mascaro. He has contributed much to the turfgrass world."

That was 25 years ago. And as the battery commercial goes -Tom Mascaro keeps going and going and going . . . 2

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Now retired and living in Topeka, Kan., Clay Loyd is a former director of publications for GCSAA.





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