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"You've Come A Long Way Bob"

By JOHN A. CALHOUN

It is not often that a man dedicates 42 years of service without leaving a long lasting impression on the people he has worked with and the industry he has served so faithfully. Such is the case with Mr. Robert T. Willis, Superintendent of golf course and grounds at the Pointe Vedra Inn and Club.

Bob's history in the industry began in 1942. As a part-time postal worker in Winchester, Virginia, Bob became familiar with the Greens Chairman at the Winchester Country Club. As a result, Bob was offered a full-time position on the 9 hole course as a laborer. Fifty-five cents per hour was an enticing figure back in those troubled days, so Bob plunged into a career that would soon take him to the top of his profession. It wasn't an easy task though, his first job on the course was edging sandtraps that had grown completely in. Keep in mind that these were the days when sophisticated power edgers and power rakes were far from invention. As a matter of fact, the revolutionary invention of the wooden tee forced Bob to remove all the little sand boxes and water pails from the teeing areas.

Bob must have been in exceptional shape back in 1942, he cut greens with an 18" Toro push mower. After 3 months of toil and labor and frustration he had the whole operation "dumped in his lap". His education really began at this point. After he mastered the operation of the Worthington tractor with the Model "A" engine; equipped with a



sickle bar on the side and a 3-gang fairway rig, he hot footed it over to Beltsville, Maryland to the experimental station to learn the technical side of the business. He had extra time for the trip because of the low maintenance required on his 2 pieces of equipment. Besides that, Bob promised his only employee a penny an hour raise if he covered his job while he was gone.

While in Beltsville, Bob learned that he had Common Bent grass on his greens and Bluegrass on his fairways and tees. This was perplexing to Bob because he always

(Continued on page 44)



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(Continued from page 42)

thought the Bluegrass was a type of music that he really liked, not something that had to be mowed all the time. He also found out that the only material he could get to control fungus on his greens was BiChloride of Mercury, and the only place he could get it was at the Doctors office. This seemed sensible to him at the time because a fungus sounded like something a doctor needed to treat anyway. Of course, the only control for weeds was mechanical, which was fine because he had to have something to do in his spare time now that he was a Superintendent. When he wasn't pulling weeds, which, by the way, is still a favorite pastime of his today, he was working with his irrigation system. Bob's innovation really shined in this area. He had the capacity to water 2 (two) greens at one time with the portable sprinklers they owned, but increased that capacity to 4 (four) greens with the purchase of a portable pump that he used to pump water out of the local creeks. Of course, he was restricted somewhat to that capacity and volume because of the 1" main lines, reduced to 3/4" at the hose bibs.

Bob's innovation did not end there, modernization and progress was in demand. Ballwashers were the latest craze at the swankiest golf courses in the area, and Bob's limited budget was not going to keep him from giving his members the best of quality. So, he constructed a ball washer made of a two by four, with a hole drilled near the top, and stuck this in the ground. He inserted a rod of three eighths inch pipe tubing, (With a notch towards the



end), into the two by four. Then he took the water pail and hung it from the rod. (These were the same water pails from the tees, he never throws anything away). The final touch was a G.I. brush attached to the two by four so the ball could be scrubbed. This eliminated the necessity of having to lick the ball to get it clean, which the members really appreciated. Their appreciation was so great that by 1950 they allowed Bob to buy his first POWER greensmower. He still had to mow his tees with a regular push lawnmower though. So in 1952, much to the disappointment of the Winchester Country Club, Bob made his move to Sanford, Florida to work at the Mayfair Country

(Continued on page 45)

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(Continued from page 44)

Club. By comparison, Mayfair was super modern, there were 5-gang pull mowers, Ford tractors, Jacobsen power walk mowers, and many other modern conveniences. The Cow Barn, however, (which served as his headquarters), was something of a disappointment. The PGA would not hold a major tournament there with such a facility on the grounds. So Bob was fortunate enough to construct a new golf course maintenance complex. (This one even had a bathroom!!!). A new dimension in modern day golf course management was born. The PGA came back and held four tournaments at Mayfair during his stay there.

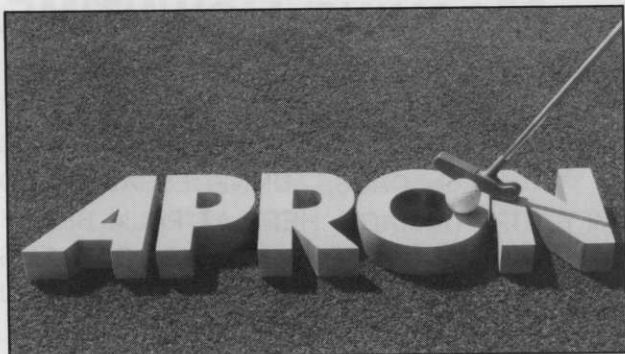
He was also one of the very first to do research on nematodes in the State of Florida. Doctor Vernon Perry, of the Sanford Station of the University of Florida, and Bob did extensive research in the field. Another giant step was hurdled in the progression of the turf industry.

Bob became familiar with different hybrids of Bermuda-grass. The Common Bermuda on the greens was not satisfactory, so he tried Tifton 127. This was too thatchy, thus 328 was planted. (He still likes Bluegrass though, as long as he doesn't have to mow it. It takes a certain breed of man to step forward in an ever changing field and consistently come up with a high degree of success.)

When Bob left Mayfair in 1965 he came to Jacksonville Beach Golf Club. He worked there for nine months and

did such a good job that Dr. Gene Nutter approached him for the position of Superintendent at the Ponte Vedra club. Bob accepted and thus began an eighteen year marriage that will last forever. Bob's touch can be seen in all areas of the golf course and grounds. He was involved in the construction of 9 new holes, and the re-construction of eighteen. His innovations and knowledge of golf course and grounds maintenance and construction have touched the lives of many students and colleagues. It is little wonder why in 1968, he was selected as the recipient of the coveted Wreath of Grass Award. Over the years Bob has developed a style and technique that has been educational, successful and, above all, innovative. (Just a small note here directed to Mr. Robbie Robbins, Superintendent at the Gainesville Golf and Country Club. Robbie, after extensive research I have concluded that, contrary to your belief, Bob was not the first to use four mules instead of two to pull the gang mowers. His budget would not allow the purchase, besides, the extra speed would cause marcelling).

Now, at the time of his retirement, June 30, 1984, after 42 years of service to the golf industry, while he hunts with his new shot-gun, and fishes the shores of Lake Marion, he can reflect on how many things he has accomplished and achieved, and at how many lives he has touched and how many good things he has done with his knowledge and always, ALWAYS, come up with a smile. Thanks Bob, from all of us.■



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Photography 101

(2ND OF A 3 PART SERIES)

By MICHAEL BAILEY

How often have you heard someone say "it's so easy to maintain a golf course, because all you have to do is just mow the grass." All too often, the laymen also misconceives the art of photography. "Afterall, the only thing you have to do is just point the camera, push the bottom, and voila - there's the picture." To the contrary! The art of photography is just as technical as agronomy or horticulture, and to be honest, I wonder if there are not times when growing turf is not easier than capturing the classic photograph.

This is the second of a three part series dealing with the principles of good photography. Now that you have bought a good camera, or at least we all realize it requires a relatively good camera to capture a good photograph and anything short would be like fertilizing with just 6-6-6. Let us now indulge upon the specifics of 101 in photography.

The most basic of photographic principles is the science of light rays being perceived on photosensitive film to form an image via a mechanical item, being either a simple box camera or an ultra sophisticated 35mm SLR camera.

Light enters into a camera via two means: the shutter speed (the length of time the hole opens and closes to allow light to penetrate) and the aperture as denoted by f stops (the diameter of hole size) as a low f stop number of 1.8 is a wide open setting and is proportionally twice as large as the next f stop of 2.8. The f stops typically correlates as follows 1.8, 2.8, 3.5, 4.5, 5.6, 8, 11, 16 and 32 respectively. Remember, the lower the number, the larger the hole size and the higher the number, the smaller the hole size. A common question is "what difference does the f stop matter and why not just leave the aperture ring set in the middle?" Generally, this would hold true, but here is the principle. Under low light conditions, a low aperture of 1.8 should be advisable — however, a draw back is the lack of depth of field (the ability of all perspective images to be in focus). Under brightly lit conditions, a high aperture of f 16 would be better as the depth of field would be greatly increased.

The other means of regulating the amount of light to enter is via the shutter. The slower the shutter speed, the greater amount of light while the faster the shutter speed, the less amount of light may enter. There are some general guides to follow. Shutter speeds slower than 1/60 of second may produce a blur while 1/500 of second will capture most all action scenes.

To put all of this into perspective both the f stop and shutter speed must be synchronized to produce the correct light exposure. If one or both items are set wrong,

(Continued on page 47)

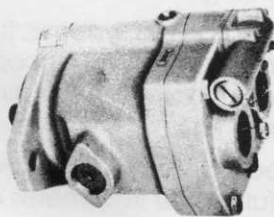
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(Continued from page 46)

your picture will either be too dark (under exposed) or too light (over exposed).

Now that we understand the principles of perceiving light on film, let us now evaluate the different types of film. Film is either based as slow, medium or fast recording as noted by the ASA number. A slowed based ASA 25 film would be ideal for non-moving nature scenes because the grain is minimal and the resolution is fine. ASA 64 film is slightly faster and better adapted to action, however, a high speed 1000 film is perfectly suited for low light and fast action but grain is offensive and trueness of color is lacking. This is not necessarily a plug for Kodak but I personally prefer Kodak film over most all manufacturers because of more realistic true to life colors. When one looks at all those film boxes and numbers behind the counter, one can easily become bewildered.

First of all, color slides are less expensive than color prints and since prints can always be produced from slides, you should seriously consider the commitment to slides. A slide projector could actually pay for itself within a few years if you are one to take a lot of pictures.

Now that we have evaluated the best type of camera, operative settings, shutter speeds and the various types of film, let us look through the eye of the camera: the lens. The focal length of a lens is measured in millimeters, with 55mm being a true perspective to the human eye a wide angle 28mm would produce a panoramic view and items will look very far away. A telephoto lens, anything over 100mm, compacts the view and makes items seem closer than they really are. A zoom lens is the best of all worlds, although there are a few drawbacks. A 28mm to 90mm zoom lens encompasses most all focal lengths the average photographer will ever need, but the resolution quality is inferior to a standard lens. If you do not plan to make enlargements in excess of an 11 x 14, a zoom is best suited for you.



The camera can be a valuable tool for recording pertinent occurrences on the golf course.

A lens is an investment that you may keep for years, if proper care is taken. Keep the lens cap on (except when in use), never touch or breath on the glass of the lens and use only lens cloth tissue for cleaning. A UV (ultraviolet light) filter should be purchased to screw on the front of the barrel to protect the glass from the elements while this will have no effect on meter settings. Treat your lens as it if were a piece of fine crystal glass - because it is.

After all of this explaining, lets now get to the heart of the subject: the concept of actually taking a picture. To snap a good photograph requires the review of a relatively long mental punch list. First, make sure you have taken off the lens cap (otherwise all will be totally dark through the viewfinder). Keep your fingers (or anything else as a matter of fact) away from the front of the lens. Focus on the subject and refocus again until all is perfectly clear. Try to set a high f stop with a shutter speed preferable 1/125 or greater. Keep the horizon level (trees do not normally grow at 45 degree angles). Try to locate the subject relatively close to the middle of the frame (do not cut off desirable parts - however feet would be advised rather than a head). Shoot away from the sun and try to hold the camera as steady as possible. Now, your almost ready to push the button. Tell your subject you are ready (so they're awake) and gently depress the shutter button. If properly taken, the camera should remain still. All too often amateurs push the button too hard thereby jolting the camera.

Just as there is a proper way to carry a golf bag over your shoulder, strap your camera over your shoulder not over your neck, as this commonly looks like a hacker. Buy a 2 inch wide camera strap at your local K-Mart for less than 5 bucks. This extra wide strap is stronger and will aid in padding your shoulder. Balance the camera over your shoulder and let the camera hang down to your hand. Cradle the lens and camera body while walking; as you want to minimize the jolting action while walking. When you are ready to go into action, you want to have the camera quickly accessible. An important item is to become very familiar with your camera and feel at ease taking photographs. Film is the least expensive item in this profession, so take extra shots by bracketing an f-stop above and below thereby assuring one of the exposures should be ideal.

Just like all good superintendents - keep good records. Carry a little notebook for recording your valuable information of light conditions (low, medium, bright) f-stop, shutter speed, distance of subject, type of film (ASA number) and the time of day. A review later will reveal pertinent information to digest, if a picture does not come out quite the way you invisioned the shot.

Do not become disappointed if your first few rolls turn out poor in the beginning. After all, how long did it take you to score your first par? There are many amateur photo clubs that are anxious to gain new members. Join a club, take lots of pictures and who knows, you just might take a few pictures of the golf course. The last of the three part series will next time, deal with the specifics of advanced photography.■

Comparison of Tifdwarf & Tifgreen-328

County Extension and other advisory personnel are often asked for recommendations regarding grass selection for various uses. One of the most perplexing situations can be whether to use Tifdwarf or Tifgreen-328 bermudagrass for putting surfaces on golf greens. Following is a comparison of the two varieties, which are the best bermudagrass hybrids available for putting surfaces in Florida.

Tifdwarf bermudagrass is darker green during the normal growing season, finer textured and tolerates a lower mowing height than Tifgreen-328. Tifdwarf, thus, is capable of producing better appearance and putting quality than Tifgreen-328. Tifdwarf, however, has inferior cool weather color, is more difficult to overseed, is less vigorous (competitive), less tolerant of herbicides and more prone to thatch buildup.

Tifgreen-328 turns a pale green color during cooler winter months in South Florida, e.g. Palm Beach, Broward and Dade counties, when bermudagrass growing conditions are marginal. Excellent color can usually be maintained, except for a few weeks during the coldest part of winter, by adjusting fertilization and mowing height. Cool weather tolerance of Tifgreen-328 gives a golf course in South Florida the option of eliminating overseeding to maintain winter color where a brief period of poor color is not objectionable to the membership.

Cool weather tolerance of Tifdwarf in South Florida is inferior to Tifgreen-328. Instead of becoming pale green, Tifdwarf turns a flat, dark purple color, when viewed closeup, and is dark, dirty and withered appearing at a distance. Overseeding is necessary under such circumstances, however, Tifdwarf forms a close knit, dense sod which requires more extensive preplant preparation than Tifgreen-328 to insure successful overseeding. Both grasses must be overseeded to maintain winter color north of Orlando since they turn brown during winter months.

The University of Florida recommends that the putting surfaces, fringes and slopes of greens be planted with the same grass variety to minimize contamination and/or encroachment on putting surfaces by the fairway grass. Tifgreen-328 performs well with the previous recommendation because of its adaptability to various mowing heights, however, Tifdwarf is shorter, not as upright nor its leaf blades as large as those of Tifgreen-328. These features permit Tifdwarf to be mowed more closely than Tifgreen-328 on putting surfaces, but they are a disadvantage at higher mowing heights on fringes and slopes.

Tifdwarf's vertical growth habit is short and non uniform, which is noticeable during establishment at higher mowing heights on fringes and slopes. Growth at these heights is clumpy and interspersed with areas of depressed or flattened growth. Clumps are usually scalped and light green following mowing, whereas, depressed areas are dark green. A uniform mowing height is usually not achieved on fringes and slopes until Tifdwarf has completely established and developed a moderate thatch. Sponginess accompanying thatch buildup permits mowing equipment to sink sufficiently into the sod to produce a uniform clipped surface following mowing. This situation makes use of Tifdwarf undesirable on fringes and slopes since it does not readily 'hold' golf balls and is susceptible to scalping once it develops the sod depth necessary to achieve uniform mowing height.

Commercial planters hesitate to plant Tifdwarf on slopes of greens for aforementioned reasons but in doing so increase the susceptibility of Tifdwarf putting surfaces to encroachment and contamination by whatever grass is planted on such slopes. Ormond bermudagrass planted on slopes can completely crowd out Tifdwarf greens in which the primary putting surface eventually becomes Ormond bermudagrass with small patches of Tifdwarf contamination. Closeness of the fairway grass on slopes to putting surfaces makes it

(Continued on page 49)

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(Continued from page 48)

easy for small pieces of that grass to be scattered or blown onto putting surfaces during mowing or carried there afterward by other maintenance operations. Cleats on golfer's shoes are an excellent method for mechanically planting clipping material into putting surfaces. Eventual contamination is almost a certainty since much of the clipping material is capable of producing roots under favorable environmental conditions.

A final disadvantage of Tifdwarf is the occurrence of apparent natural mutations within otherwise pure stands of Tifdwarf. There is no way a pure stand of Tifdwarf can be guaranteed under the circumstances since there is no way of predicting the occurrence of mutations.

In summary, Tifdwarf is capable of providing a superior putting surface, however, the disadvantages of this grass make it inferior to Tifgreen-328 bermudagrass with time. ■



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A Comparison Of Overseeding Management Techniques

Putting greens in Florida are overseeded during the winter months to provide a contrast in color, to improve the playing surface, and to provide a medium for wear and minimize damage to dormant turf. Ward et al. (4) documented that topdressing the overseeding improved the speed of emergence, stand density, uniformity, and putting quality as determined by visual observation, especially where thatch was present. Schmidt (3) concluded that topdressing after seeding was an important step in the overseeding procedures. Recent trends have been away from topdressing and in many instances no vertical mowing. Many golf course superintendents are reluctant to disrupt the playing surface since they feel this affects playing quality of the putting green. Powell (1) noted that many people believe topdressing is necessary while others see no significant affect from this practice. Without adequate seedbed preparation it is difficult to establish the cool-season overseeding and ensure a uniform stand of cool-season grass when the warm-season grass goes dormant.

A study was conducted at the University of Florida Turfgrass Field Laboratory, Gainesville, FL from 10 November 1982 to 24 March 1983 to evaluate overseeding techniques on turf establishment and quality and the influence of overseeding techniques on golf ball roll.

Methods and Materials

The study was performed on a 'Tifgreen' bermudagrass putting green. Plots 2 x 5 m were overseeded with 'Delray' perennial ryegrass at the rate of 150 g of seed/m² in 4 replications. Preparation of the bermudagrass seedbed was divided into 6 establishment treatments as follows:

- 1.) No preparation = Seeding + brushing. (A stiff broom was used to brush the seed and/or topdressing material down into the turf instead of dragging with a steel mat due to small plot size.)
- 2.) Scalping = Low mowing a 3 mm + seeding + brushing.
- 3.) Verticut = vertical mowing with a 2.5 cm blade spacing twice over, the second moving at 90° to the first + seeding + brushing.

- 4.) Scalp and verticut = Scalping + vertical mowing + seeding + brushing.
- 5.) Verticut and topdress = Scalping + vertical mowing + seeding + brushing + topdressing (Topdressing with 1.5-3 mm of fertilized native topsoil) + brushing.
- 6.) Sandwich = Scalping + vertical mowing + topdressing + brushing + seeding + brushing + topdressing + brushing.

Mowing was withheld for 3 days following seeding then begun on a 3 times per week basis at a 6 mm mowing height. Irrigation was 3 times per day with approximately 2 mm of water for the first 5 days, daily applications at 6 mm through the second week, and every other day thereafter to match seasonal evapotranspiration rates. A 16-1.6-6.7 (N-P-K) fertilizer was applied 2 wk after overseeding and monthly thereafter at the rate of 5 g N/m². Data collection included visual estimates of percent cover and turf quality weekly during November and monthly through March.

In order to evaluate the effect of each establishment treatment on golf ball roll during the transition period, data were taken with a United States Golf Association (USGA) stimpmeter. Based on USGA Green Section recommendations, 3 golf ball rolls in each direction were performed on the flat portion of the plots in a north-south orientation and distances were measured (2).

Results and Discussion

Ratings on percent cover during the entire study period are presented in Table 1. The best treatments at the first cover rating on 17 November were those which had been topdressed. These plots had 4 to 5 times more turf cover than any other treatments. How rapid the cool-season grass becomes established is especially important in making a smooth transition from warm-season to cool-season turf. Topdressed treatments still had almost twice as much cover as any other treatment at the second week evaluation. On 29 November the best treatments were those topdressed, although statistically they were not dif-

(Continued on page 51)