Twelve Month Play Only One of Sunkist District's Problems

By ARTHUR LANGTON

THE Southern California coastal plain is that section of the state bordered on the north by the Sierra Madre mountains, on the south by the Mexican border, on the west by the Pacific ocean, and on the east by a range of mountains and a desert. Los Angeles is located at the northern end of the coast line and San Diego is at the southern extremity. Peculiarly enough this strip of land, which includes about 11,000 square miles, is the only plain of any significance in the whole of California not separated from the Pacific by one or more ranges of mountains. This physiographical fact makes for climatic and growing conditions such as are found nowhere else in California or the United States, and also creates some unique greenkeeping problems.

The scanty moisture blown in from the ocean during the winter and spring months is stopped from being deposited anywhere but on the plain by the mountains which guard it. Standing on any of the mile-high peaks in these ranges one can look toward the ocean and see fertile orchard lands dotted with prosperous communities. The ocean breezes bring moisture and make the climate comfortable at all times of the year.

Turning around one can see something entirely different, a vast area of dry, hot waste, barren of vegetation except such desert growths as cactus, sage, and greasewood. Snakes and lizards make their home there, but all else are kept away by the heat and the lack of moisture.

Thus it may be demonstrated forcefully that these mountains are connected vitally with conditions in Southern California. But also in another sense are they responsible for the phenomenal development of the territory: the soils, which will support almost every kind of plant life, are basically a decomposition of the granite which once made the mountains greater than they are today. This granite has been decomposed by atmospheric conditions and then washed down into the valleys below by the seasonal rains.

Course Betterment Is Theme

Because of the balmy climate, the fertile soil, and the people who came to the district to live, it was only natural that many fine golf courses should be built, which they were to an inordinate degree characteristic of the state. This was until a few years ago when the saturation point for the prevailing conditions was suddenly reached and passed, with the result that several clubs met financial disaster. Within the last few years the growth of courses has been along the line of improving or enlarging those already established rather than in the construction of new ones.

After the orgy of construction, Southern California golf officials set about the very serious work of improving their courses with the admirable aim in view of making them the finest in America. The ground was examined where turf growth was not satisfactory and faults were corrected. In many cases deep-well and pump systems were substituted for rather unreliable community water supplies, a highly necessary procedure because water officials were apt to cut the amount of water allowed to golf courses toward the end of the six-month dry season. The introduction of bents and high powered fertilizers made for better greens, but also caused a lot of grief until local greenkeepers began to learn how to obtain better results. The period of probation for bent grasses was one of wild experimentation which has not died away entirely, although investigation is following more uniform lines than it did formerly.

Gradually some truly magnificent courses in this district began to evolve which were at least on the same plane of perfection as their eastern counterparts. More and more visitors were attracted by them and all efforts were bent successfully upon improving them. Players of note from all

parts were attracted by the famous mid-winter tournaments with their offer of glittering prizes.

A close approach to golfing perfection was achieved in spite of the fact that California philanthropy was involved. Here an explanation is required: the richer people of California, the golfing class, are unusually loath to part with their money for any reason whatsoever. It is a phenomenon inexplicable but recognized by solicitors for charity organizations and community projects of any kind, and by treasurers of golf courses. It is not my purpose to attempt an explanation; suffice it to say that wages of greenkeepers in the West were, and are, less than those of Eastern greenkeepers, and they most certainly deserve an increase. Furthermore, California golfers are in the habit of demanding more. On the coastal plain area they expect 355 days of perfect playing conditions. On the other ten days they grudgingly allow rain to fall. Players in the state have become so used to their daily round of golf that on many courses greens are not taken out of play while being topdressed or repaired in any way.

Rely on Mechanical Methods

From reports it would seem also that Eastern courses employ more men than do those of the West; that is, on a basis of men per job. Eastern courses do not have four, five, or six men devoting their time exclusively to irrigating fairways. It may be because of the paucity of employes that local clubs rely upon machinery to do much of the work. A Southern California greenkeeper visiting a large Eastern course was surprised to find that six men were employed in the topdressing of a green. He was astounded to learn that this gang was satisfied to complete two and one-half greens a day. It was the Easterners' turn to be astonished when they learned that the Westerner was accustomed to topdressing all of his 18 greens in not more than three and sometimes in two days with a gang of three men.

But this is a digression. Getting back to the courses of the Southern California coastal plain, from the players' standpoint they are of three varieties or classes. In the first class are the courses of private clubs with money enough to build and maintain them as championship layouts On them perfection of fairway, tee, and green is taken for granted; bunkers are kept flawless; rough is carefully cultivated and trimmed; hedges have a mili-

tary appearance; and no detail is overlooked. Riviera, Wilshire, Los Angeles, Flintridge, Bel-Air are some of the clubs which come in this category.

In the second class are a large number of courses which present excellent playing conditions, but which lack the polish of the uppermost class.

Just golf courses constitute the third class, and its number is comprised of clubs gone to seed financially, some public and municipal layouts, and courses supported by small communities. While the quality of these courses is not of the finest, there is a tremendous amount of golf played upon them, and the greenkeeper of each, restricted in expenditure, has a year-long struggle to keep the balls rolling.

As has been indicated, this territory's greatest problem is to keep its more than 80 courses fit to play upon every month in the year. This necessitates the application of large amounts of water which in itself is the greatest concern of the greenkeeper. There are no natural rivers or lakes in this area from which water may be obtained; clubs must buy it from communities or get it from their own wells and pumping equipment. It is not unusual for a club to buy more than $7,000 worth of water each year. One club received a bill for $1,400 for water supplied in the month of July of this year. On the other hand, those clubs which want their own plant must pay for pumps, tanks, a deep well, and a monthly power bill which may amount to about $200.

When and how much to irrigate are two knotty questions that must be solved by the Southern California greenkeeper. Courses near the mountains usually are built upon granitic soil which, though fertile, is very rocky and gravelly and will not retain surface moisture. Water can be poured on these layouts all night and half an hour after it is turned off not a sign of it will be found anywhere. Nearer the coast and in the valleys and lowlands the opposite condition is experienced. Here courses have very finely grained soil, sometimes adobe, which will not allow water to penetrate, thus necessitating the use of tiles and drains. One course has had to resort to digging open ditches through the fairways as the only means of removing surplus water. Yet if a large quantity were not applied the ground would set like concrete and the grass would wither. Some of these courses have found that lime is very beneficial because it gives the soil a more granular texture, thus allowing the water to penetrate.

When to water has caused much loss of sleep on the part of Southern California greenkeepers. Fairways, of course, are watered during the night, but greens present a different proposition. It has not yet been demonstrated to the complete satisfaction of Western greenkeepers that there is or is not a connection between the time of watering and the growth of brown-patch. Some greenkeepers water their greens only in the early morning when the ground is cool; others water during the night and the early evening. So far there has not been a comparison of methods and results to arrive at any definite conclusion, and all greens seem to be subject to the scourge in a greater or lesser degree.

A grass which constitutes a universal problem in this territory is Bermuda, popularly known as "devil grass." It is harsh and stringy and only constant surveillance will keep it out of greens. Most fairways are of this grass exclusively because it cannot be eliminated and because it provides a good mat for the ball. Its worst points are its coarseness and winter looks.

Fall Fairway Fertilization for Full Season Results

By B. R. LEACH

"Is this train ever on time?" growled the grouchy passenger.

"Oh," replied the conductor, "we never worry about it being on time. We're satisfied if it's on the track."—Wall Street Journal.

ASK the average greenkeeper what he would like to have in the shape of an increase from his club and the reply would in all probability be as follows:

1. An increase in salary (a substantial one, say $10 per week).

2. An increase in the amount of fertilizer for the fairways.

Oddly enough increases in both of the above items are equally as scarce if we consider golf clubs as a whole.

"Increase in pay!" said one of my greenkeeper friends in the Philadelphia district recently. 'Great guns, I haven't had a boost in my pay since the second battle of the Marne, and I only got it then because I had a fat job all lined up in the shipyards."

"And when it comes to fertilizer for the fairways of this tinpot cow-pasture that the members insist on calling a sporty course, why when I even think about it my neck gets so hot that I can hear my celluloid collar fairly sizzle." The fairways of this crab grass paradise have had virtually no fertilizer since the Spanish-American war."

"In January a year ago they promised me $2,000 for fertilizer and work on the fairways. Did I get it? I did not. The chairman spent the jack for an asphalt parking place."

"Again this spring," continued my irate friend, "they gave me the same line of bull, but along in April they got in a gang of fast talkers, and then what was left of my fertilizer money went into the building of a blankety-blank rock garden. There it is over on that slope. All you need is a six inch rattlesnake on one of those stones and you could imagine yourself in the wilds."

That the above instance of a greenkeeper's resentment at the starving of his fairways is far from being unique is evidenced by my experience as a consultant when a golf club would pay me a fat fee for advising them on the subject of grub control, and every other little thing they could think of on the spur of the moment.

On my arrival at the club the greenkeeper and myself would take a walk around the course, and the conversation would go something like this:

Greenkeeper—"What do you think of the fairways?"

Me—"Lousy."

Greenkeeper—"Ain't it so. Tell the chairman about it when he comes this afternoon."

Me—"O. K."

Greenkeeper—"O. K."

Me—"What kind of fertilizer do you prefer for fairways?"

Greenkeeper—"Right over here is a small patch I treated with Spivins Non Plus Ultra brand last fall. It sure does put pep in the grass."

Me—"Spivins is good stuff and the price is right. How many tons do you need?"

Greenkeeper—"I ought to have 20 tons. Tell the chairman to buy 40 tons. He is tight and will cut your estimate in half on general principles."

Me—"O. K."

Greenkeeper—"O. K."

Whereupon we adjourn and have a drink of ginger ale. That afternoon I meet the chairman, who proves to be a retired corset manufacturer. He reads my stuff in GOLFDOM and considers me two or three cuts above the common herd. I tell him that he has a wonderful course, whereupon he swells up like a poisoned pup. I casually intimate that the fairways are about ripe for a good shot of fertilizer in order that there may be no let down in the fine course condition. He affirms that he has been thinking the same thing himself (which is, politely, romancing). I suggest that 40 tons of

Spivins would be about right. He thinks that 40 tons would be more than they can stand right now, but they will certainly buy 20 tons. All of which is simply added proof of the old adage that greenkeepers, in common with all other poor mortals, are rarely prophets in their own bailiwicks.

Fairways Need Help

At any rate the fact still remains that golf clubs in general are still spending too much money for grass seeds and not enough for fertilizer in respect to fairway management, although the trend is slowly changing in this regard, due mainly to the steady hammering of the turf journals and fertilizer companies, whose efforts are bent on educating the clubs to appreciate the futility of sowing grass seed on fairways so poor that they are unable to maintain the thin stand of grass already present.

Since the annual application of fertilizer to the fairways is steadily increasing in this country there are certain pertinent facts which may well be considered at this time.

1. The experiment stations and turf research organizations have a pronounced tendency to consider fertilizer purchasing from the price angle. They will tell you, for instance, that in fertilizer A, a pound of nitrogen costs 19 cents while in fertilizer B it costs only 17 cents. Consequently they will tell you that fertilizer B is the best buy. Maybe yes, maybe no. Price does not always tell *all* the story of a fertilizer, especially when it is to be used for a specialized purpose such as fairway treatments. Maybe the nitrogen in fertilizer B is quick-acting and won't stay with you over a growing season, while the nitrogen in fertilizer A is slower acting and *will* stay with you throughout the season. Common sense dictates the answer that fertilizer A at 19 cents per pound of nitrogen is a cheaper buy than fertilizer B at 17 cents per pound of nitrogen when you consider the labor cost of repeated applications throughout the season of small quantities of quick acting fertilizer B.

2. When I apply fertilizer to fairways I want to apply something which will keep the grass up on its toes for the entire season, thereby doing away with the necessity of additional costly applications of fertilizer at intervals of 30 or 60 days. Applications of fertilizer at short intervals is o. k. for greens because the area is small and the labor cost relatively unimportant, but such is not the case with fairways where we are dealing with acres rather than square yards. For this reason I want to get the fertilizer on the fairways and be done with them for another year.

A Long Pull for Fairways

3. In order to confine fairway fertilizer treatments to one each year it is essential that the fertilizer mixture be a sort of long pull mixture rather than of a flash-in-the-pan makeup. Such a long pull mixture should contain some quickly available nitrogen, usually of an inorganic form such as ammonium sulfate, but the great bulk of the nitrogen in the mixture should be in an organic form since this form of nitrogen is slower in its action, is gradually made available to the plant and thereby carries the grass along until the end of the growing season.

With this sort of a balanced mixture the quick-acting, inorganic nitrogen gives the grass a kick in the ribs and makes it push up a heavy green growth early in the spring when the ground is cold, at which period the organic forms of nitrogen are inclined to be very sluggish. By the time the ground has warmed up the inorganic nitrogen has shot its wad; the warm soil then begins to act on the organic nitrogen and the grass gets the additional food as needed throughout the remainder of the growing season.

The long pull fertilizer mixture should also be adequately supplied with phosphates and potash in order that the nitrogen of the mixture may be adequately supplemented and reinforced by these two necessary ingredients.

4. I do not propose to discuss any specific mixture formulated along the above lines or the amount that should be applied per acre. These are questions which had best be carefully discussed with your local dealer and the service departments of the various sound fertilizer companies catering to golf courses. Conditions differ so greatly in the various sections of the country that blanket recommendations are absurd, to say nothing of being dangerous.

5. If you plan to buy the various ingredients of this fertilizer mixture and mix them yourself, o. k. I mixed five tons of fertilizer on one occasion and the Madam made me sleep in the barn for three nights, until the odor dissipated somewhat. It is my personal opinion that the place to mix fertilizer is in a fertilizer

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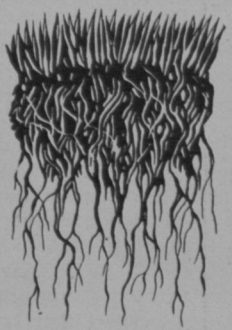

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factory where they have the proper machinery to insure a perfect mix, a condition very difficult to secure when a shovel is employed as the mixing agent. For this reason I prefer the mixed fertilizer every time, mixed all ready to dump into the spreader. Furthermore, I prefer high grade stuff. One ton of 10-8-6 is preferable to two tons of 5-4-3, first because one ton of the former costs less than two tons of the latter since it costs just as much to manufacture, handle and bag a ton of cheap stuff as a ton of good stuff, second because there is a saving of 50 per cent in freight and lastly because there is only half as much bulk of material to handle in the actual spreading operation on the course.

Fall versus Spring Fertilization

There seems to be a decidedly firm conviction in golf circles that early spring is the time to apply fertilization to fairways. As a matter of fact early spring *is* a good time to carry out this operation but it most certainly is not the only time in the year when fertilizer can be applied to the fairways with success, in fact there are many sound reasons for doing this job in the late fall rather than early spring, the actual application of the fertilizer being time for that period between the cessation of grass growth and the freezing of the soil. This period varies in the different sections of the country, but in the vicinity of Philadelphia it usually runs from November 5th to 20th.

At this time of the year the greenkeeping staff has more available time in which to carry out a major fertilizer spreading job than it ever has in the spring when there are a thousand and one things to do and half enough time to do them in.

Furthermore, unless there has been an unusual amount of rain, the fairways in the late fall are firm and it is much easier to get around with the spreader without mussing up the turf. This is especially true in heavy clay soil areas which dry up slowly in the spring, but are firm in the average fall season.

However, the most telling argument in favor of fall fertilizer treatments of the fairways consists in the fact that by doing so you get a quicker *kick* out of the fertilizer during the early spring months.

This fact can be readily proved by treating a patch of fairway with fertilizer in the late fall and treating a patch alongside it with the same quantity of the same fertilizer in the spring. The fall treated