Applying winter topdressing at Hillcrest C. C. (Los Angeles) in preparation for heavy winter play.

"PITY THE POOR" cold-weather greenkeeper, runs a Pacific Coast belief. "He has little more to do from now until the thaw than throw out-of-bounds posts on the fire and tell lies about the hard times." Whether or not there is any truth in this conception is a matter of considerable debate, but certainly such a situation does not obtain on the sun-kissed shores where the greenkeeper is kept just as busy now as during the summer months. Neither may it be true that the Pacific or southern greenkeeper is a better technician than his snow-embattled colleague, but it is undeniable that where-in the eastern and northern turf experts are confronted by one set of conditions, the year-round greensman must combat two.

In California, for instance, brown-patch no longer is a very serious threat. The arrival of rains has driven most of the sprinklers into cold storage for a few months, and the heat has abated. But the threat of floods is an ever-present cloud in many districts; tournaments are scheduled; play has increased; the old reliable Bermuda grass has hibernated and all other grasses, not having read the chamber of commerce literature, are reluctant to come up and enjoy the bracing winter climate. This means that for the greenkeeper a new set of values has been established, and if he is wise he studies them in the light of future developments before following any maintenance schedule.

Now is the time when "warm" fertilizer can be given to the greens without the probability of disastrous results, and now is the time when many greenkeepers make a terrible mistake whose dire effect will rear its ugly head next summer. Yielding to temptation to make greens snap out of their soporific state, these greenkeepers apply literally tons of fertilizers of all kinds. Such a procedure is faulty for two reasons: first, winter root action being weak, easily soluble inorganics will be leached away before they are assimilated; second, slower acting organics will be held in the soil unused until the weather gets warmer when they will provide a prolific base for grass pathology.

Going Contrary to Nature

Turf, after all, bears considerable resemblance to the human organism. If its youth is spent in mistreating its bodily structures with irregular habits, its later days are spent in reaping the harvest of physical ills. Simply because grasses in winter will not burn up when subjected to high-powered fertilizer cocktails is no indication that they are being benefited by the treatment. However, in one respect grasses are treated worse than their human counterparts because golfers in sunny climes have decreed that these plants shall not be allowed to obey their natural tendency to stop growing during the winter months.

Accordingly the Pacific greensman must exercise extraordinary care at this time of the year when seemingly his vigilance might safely be relaxed. Whereas in the summer time he administers cooling rather than energy giving food, he now finds it necessary to prescribe stimulants in the shape of small concentrated doses of nitrates, such as those contained in ammonium sulphate, sodium nitrate, blood, and the like. As has been indicated organic matter in large and heavy doses is taboo. The grass naturally is dormant and has not the necessary root action to assimilate much in the way of food which is not immediately available. It is a fairly conservative guess to say that 30 per cent of summer grass complaints arise as a direct result of incorrect feeding dur-

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"AND HOW" SAY COAST GREENMEN

ing the previous season in which soil is crammed with unassimilated and disease breeding organic matter.

Each Course Is Separate Problem

It is impossible to prescribe a universal dosage for winter greens for the old reason that no standardized conditions of soil, climate, or playing conditions prevail. Feeding 150 pounds of dried blood and cottonseed meal for every 5,000 feet of greens area, such as some greenkeepers have used recently, is excellent—if experimentation has shown that a particular set of greens requires this sort of treatment. The writer frequently has been criticized for being too indefinite when it comes to enlarging on grass diets, but it has been his observation that any other course is suicide because of contradictory conditions which prevail.

A number of greenkeepers were asked how to treat greens in winter. No two agreed, yet each was a successful greenkeeper on his own course. One man with warm dry soil found that his turf responded immediately to short, sharp doses of ammonium sulphate. This same chemical had no effect upon the grass grown in the colder soil of another course twenty miles away. On the latter course ammonium nitrate was found to be an excellent stimulant. Other examples could be quoted, any one of which would be sufficient to prove that any man who becomes dogmatic upon this subject merely is paving the way to a betrayal of his own ignorance.

Raise Mower Blades

As far as concrete suggestions are concerned in regard to winter greens, a few may be given with safety. The arrival of cold weather is the signal for raising mower blades about \( \frac{1}{2} \) inch, because the thinner winter grass makes for terrifically fast greens. During one mid-winter tournament a contender had reached the eighteenth green with a splendid score and needed only an easy par-4 to be well up in the running. His second shot stopped within 6 feet of the hole when, alas! the afternoon breeze, which arose on schedule to temper the sun's rays in the well known California manner, swept that ball off the green into a nearby gully, wherein the player stroked himself out of the money. Since that time summer short grass in winter has not been in much favor. However, Washington bent greens must not be allowed too much growth, else the blades curl over and form a mat which grows with the blades uphill, so that it is difficult to putt down against it.

Until the actual arrival of the rainy season extreme care must be exercised in watering else the greens will get filled with ball pits which are almost impossible to patch correctly during the season of little growth. Rather than try to fill them up, it is best to attempt to lift the dented sod so that no grass will be lost in the patching process.

Preventing Frost Damage

On frosty mornings when the grass is white—yes, this phenomenon is recognized in the Golden State—it is imperative that no one tread on the grass until the frost is removed, which may be accomplished by a light sprinkling. Failure to observe this simple rule will mean that every passerby will leave his footprints etched on the grass for days to come.

The big weed pests during the winter months are the clovers, particularly the bur variety. Nothing remains but hand picking as a remedy if this weed gets firmly established throughout the greens. However, some greenkeepers who find bur clover of the fairways impinging on the greens surface burn a protective border about two feet wide around the edge of each green with ammonium sulphate or other strong fertilizer. A treatment such as this presents a messy appearance for a week or two but the turf will recover its weed-free beauty if the dose has been applied carefully.

After looking forward all summer to the arrival of winter the warm weather greenkeeper already is wishing for the return of the season when grasses will grow and cover any mistakes that he has made. This proves practically nothing except that every course superintendent always can find something to complain about no matter what the season.