



Tees and greens located in the sides of slopes gave Lockwood plenty of drainage problems at French Lick.

French Lick Courses Rich in Maintenance "Tips"

CLUBS that pride themselves on exclusiveness as well as those where play is exceedingly heavy may profitably take a few pages from the French Lick book as written by Arthur Lockwood, golf director at the famous Indiana resort. A little over seven years ago Lockwood came to French Lick at the request of Thomas D. Taggart, its president. Immediately before him was the herculean task of putting the then recently completed hill course in condition. Greens and fairways were almost devoid of grass. A red clay soil, scarred by torrential rains that come and go quickly provided what looked to be a hopeless ground for seeding. The permanent greens of the valley course, stretching out in front of the hotel, were opened seldom earlier than April 15 and play was frequently interrupted due to flooded fairways and greens.

Now the fairways and greens of both courses are in splendid shape as this was written (the latter part of March) and throngs are attracted to French Lick by the excellent shape of a notably maintained resort golfing plant.

If you ask Lockwood to summarize his method of getting results, he will tell you "drainage." French Lick shows the benefits of proper drainage about as conspicuously as any golf course that can be called

to mind. Savings in seed costs have been tremendous. Increased business for French Lick hotel and its courses due to the ability of the courses to recover from heavy showers and the early spring rains has reached an astounding figure. The money spent by Lockwood for draining during the seven years of his regime the Taggarts consider one of the most productive items of the maintenance and construction investment.

The heavy rains that fall just prior to the opening of the big part of the play at French Lick heavily tax the 24-inch drainage tiling which form the main channels. All greens on the hill course and most of those on the valley course are tiled by herringbone layouts with 15 feet separation between the arteries. Eventually all greens will be tiled, as Lockwood's practice is to shoot his force onto tiling jobs when there's no pressing work.

Drain Four Feet in Two Days

Almost every kind of drainage difficulty was presented at the two courses for the valley course is flat and low and the hill course rugged with deep ravines and many marked elevations. One Sunday a few weeks ago the 16th green of the valley course was four feet under water. By the following Tuesday the green was being played on. The most interesting feature of the drainage of this lower course is a

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system of trapped drainage basins with the inlet drain pipe on a lower level than the outlet drain pipe, which is still below the half-way level of the incoming drain line. When the water in the trap pits reaches the outgoing drain level it discharges on a steep enough grade to prevent backing, into an outlet at the bottom of a creek. Lockwood states that by taking the simple precaution of always keeping this creek outlet clear he never has had any trouble with this drainage.

Many of the tees and greens on the upper course are built into the sides of hills and he had a big job to overcome in getting drainage so the water wouldn't wash down the sides of these hills, ruining the banks as well as the tees and greens. His traps have sections of rubber roofing over every joint of the drainage tile so the sand doesn't seep in.

The drainage system helps greatly to handle the heavy play which has, on the valley course, a foursome leaving the tee every three minutes from 7 a. m., and only a slight lull around noon.

A Greens Laboratory

This Lockwood is a great fellow for records and they have helped him immeasurably in his work. One of the interesting records he keeps is a diary in which the weather and the major details of the day's work are chronicled ever since he came to French Lick from the east. There is recorded a daily record of the work done, amount of sales and such items as appearance of brown patch, grubs and leather jackets, when he wormed greens, etc. He now has a seven year check so he can go back to the history of any certain day and know about what to expect this year.

This is part of the laboratory methods that prevail. He has several nurseries on both courses where he experiments with new ideas and lets them prove themselves before he uses them on his greens and fairways. In one of these nurseries he has an interesting and unidentified bent as one of the 14 strains he has kept under observation. The bent in this nursery was sent to him from Norway six years ago. It is a luxuriant growing grass and has a noticeable freedom from nap. He states that it has exhibited a resistance to brown patch, the dread disease having attacked it only slightly and then in spots where the sprinkler didn't reach.

In taking patches from his nursery he never cuts out a big area. He follows the



Interesting terrain for golf, but to get good turf that will stand heavy play in early spring calls for expert drainage treatment.

practice of cutting narrow strips or plugs in a geometrical manner, top dresses and gets his growth back quickly.

Lockwood is a booster for ammonium sulphate as fertilizer for his conditions, and attributes to it considerable of the credit for the fine growth of grass on his courses. For brown patch he uses three ounces of bichloride of mercury in sand for 1000 square feet of green, mixing a wheelbarrow of sand and the proper amount of the bichloride at a time, on a concrete floor, applying at any time and watering in well. More of this can be used in cold weather than in hot. It also acts as a worm eradicator. Although effective, Lockwood does not recommend its general use unless experienced people are handling it. It is too dangerous to handle and not as fool-proof as the standard products for brown patch. On brown patch origin he is as much up in the air as any one else. Although subscribing cautiously to the humid night theory as the source of brown patch he states that it has made itself known at French Lick as early as March 27. Watering at night, he maintains, is one of the best things to curtail brown patch.

Lavish with Concrete

Substantial construction is everywhere evident as identifying marks of the Lockwood handwork. He has built roads, shelters, bridges, parking spaces and other touches of a well kept course, making lavish use of concrete.

One of his interesting and practical jobs of concrete is a compost pit. This pit has a sump into which the liquid from the compost runs and is piped out by gravity onto covered tanks and kept free from weed seeds. From there it is piped, also

by gravity, into tank wagons that haul it for use to where it can be applied with the dry and seasoned compost, soaking them down well.

His rustic bridges are works of art, many of them having been photographed as examples of the way in which this sort of work with the material on hand should be done.

He is strong for the finishing touches. As an example of this he is completing a nine hole putting course alongside the hotel in a spot that was formerly an unsightly marshy place. Each green is elevated and has interesting contours. It is a job that is unique and beautiful and undoubtedly will be widely copied. It may be played in reverse. It will have some pitch shots from cocoa mats, one of them across a little pool, and a dog leg hole. In addition to being a splendid golfing feature it is a landscaping job of surpassing charm and interest.

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