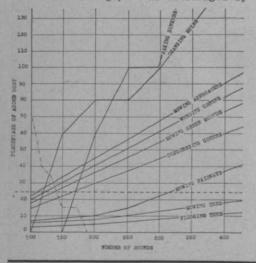
HOW COURSE TRAFFIC AFFECTS MAINTENANCE COSTS

The Maximum maintenance capacity of a golf course may be defined as the maximum turf condition at minimum cost, which is somewhat controlled by the standard of maintenance at which you wish to hold your course, which in turn is governed by club finances, demand of the governing body or competition from outside courses. The maximum playing capacity of a golf course is the maximum number of rounds possible to play. The relationship between the two is the effect the number of rounds have on upkeep cost and turf condition.

Every greenkeeper knows, when he designates a man to a certain job, that it requires more time to complete that particular work when there are many players on the course then when there are few. But does he know how much longer; does he realize that some operations have a greater percentage of lost time than others?

I have kept records for some time on the effect the number of rounds have on the cost of maintenance of my own course, and while attending the advanced Greenkeeper's Class of 1934, at the Massachusetts State College, I was encouraged by



Professor Dickinson to compile my records, and put them in chart form.

The Banff Springs course is strictly a hotel summer resort course, in the Canadian Rockies, owned and operated by the Canadian Pacific railway and catering to travellers from all parts of the globe. They demand a certain turf condition regardless of the amount of play. In my own mind I have been compelled to work out a relationship between play and maintenance which gives me a measuring stick of the actual increase in cost a tournament, a heavy week or a season's play will create. The results I obtained regarding the unproductive time or added cost of different operations has been surprising and significant. I did not realize the time lost mowing approaches was almost five times as great as mowing tees; I have eliminated mowing approaches during play.

This data which was compiled on my own course from actual timing and averaging of the different major operations are represented on the chart. Horizontally are number of rounds per day, vertically the added cost the number of rounds create.

Note the line of plugging tees is somewhat lower than mowing tees, due to the fact that in plugging tees the entire time charged to that operation is not spent on the tee, a considerable part of the time is spent on obtaining the plugs and hauling to the various tees; whereas, in mowing tees the entire time is spent actually on the tee; therefore the unproductive time created by play is greater.

In mowing fairways the added cost gradually increases as play increases until we reach the point of 250 players when the added cost goes up more rapidly. Play at this point becomes congested and quite frequently the operator is held up doubly. At times he waits for one group and before he can proceed another group is playing. Consequently the unproductive time is greater, although this added cost would be still greater if we did not route the mowers properly. This chart gives the

added cost with no interference from play three hours each morning.

In topdressing greens the entire time is not spent actually on the green, as a considerable percentage of the time is spent mixing and hauling material, although the added cost is considerable, plus the inconvenience to the players.

In mowing green mounds, the type of course has an important bearing on the increase in cost. On the Banff course a considerable portion of the work has no lost time, as the workman is out of the line of play and has very little interference from the players.

Mowing approaches give a greater percentage of lost time than most major operations, since the workman has to stand aside during some fairway shots, all approach shots and all putts, plus part of the time players are walking from their approach shots to the green.

In raking bunkers the actual unproductive time is very little, but the increase in cost that play creates is very high, although fortunately for the greenkeeper there is a fluctuation in the standard of condition. As indicated on the chart, there are times when the condition of the traps will be a great deal lower than others.

The added cost in changing holes due to volume traffic is also very high.

The benefit of working out such operations as indicated on this chart is shown by the heavy line running diagonally from 70 vertically to 187 horizontally, which is worked out on the principle that I operate my course with an expenditure equal to



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the actual cost of maintaining the course without players plus a 25 per cent margin of safety, (dotted line) which takes care of the added cost created by play. With 100 players per day I have the difference between 25 and 67 or 42 per cent of my budget for that day which I can save or play around with as I see fit. When play increases to 117 I only have 17 per cent with which to make improvements. With 137 players I have 9 per cent not required to actually operate with. When the play reaches 140 I am operating to the full capacity of my budget. With 150 players I am operating 8 per cent above my expenditure allowance in order to hold the course at the present standard. With 167 players I am still only operating 9 per cent beyond my budget. When play reaches 184 I am operating 25 per cent above my allowance, or there is 25 per cent of the work not being done.

This data should interest every greenkeeper, pro-greenkeeper, green-chairman, or anyone interested in club finances or course condition, and when worked out will prove very beneficial on any course regardless of its location, condition or class.

ARMOUR TO DESIGN CLUBS FOR MacGREGOR

Dayton, Ohio—It takes two people to produce a contract and usually they both agree to do certain things. In this recent



Tom Armour signs with Crawford-McGregor & Canby, while Ed Canby II, v-p and adv. mgr., and H. B. Canby, pres. look on.

merger of ideas and craftsmanship just this sort of a contract was drawn up and signed.

It appears that Tommy Armour, the undisputed maestro of iron play, agreed as party of the first part, to actually design a new line of golf clubs which would embody all the secrets which brought him fame. The other signer, H. B. Canby,