

Proper Equipment for An 18-Hole Golf Course

“What equipment is needed for the proper maintenance of an 18-hole golf course?” This is a question submitted by a gentleman who is just completing such a course. Manifestly the best answers are those of clubs or of men who have had long experience, but even so there are considerable differences in their lists of necessary equipment. The question was passed along by the editors to several men of experience, five of whom kindly submitted lists which in their opinions represented the necessary equipment for an 18-hole course. The information gathered from these lists is as follows:

Tractor.—A good tractor is considered necessary by all five men reporting, especially for mowing the fairways.

Vehicles.—Two advise 1 dump-cart with attachments; one advises a two-horse wagon; another, 1 broad-wheeled dump-cart, 1 wagon for hay and miscellaneous hauling, and 1 or 2 auto trucks; another, a one-horse cart with 6-inch tires, 1 auto truck with dump body, and 1 small touring car for use of the course manager.

Horses or mules.—Two advise 1 or 2 horses or mules; one advises 1.

Wheelbarrows.—Two advise 4 iron; two, 6 with $\frac{3}{4}$ -inch tires; and one advises 8.

Plow.—Four advise 1 plow.

Harrow.—Two advise 1 disk, 1 chain, and 1 Meeker harrow, and one of these men advises in addition 1 drag-brush for pulling over top-dressing; another, 1 small hand harrow; another, 1 horse-drawn harrow; another, 1 drag harrow.

Scraper.—Advised by one.

Shovels, picks, etc.—One advises 12 pointed shovels, 6 square shovels, 6 mattocks, and 3 picks; another, 18 pointed shovels, 12 mattocks, and 6 picks; another, 6 shovels, 6 spades, 4 mattocks, 3 digging forks, 2 axes, 1 crow bar; another, spading forks, potato hooks, trowels, and shovels.

Hay forks.—Three advise 4, and one advises 6.

Pails.—Two advise 12 galvanized iron pails, 10 to 12 quarts each.

Rakes.—One advises 12 assorted iron rakes and 12 24-toothed wooden rakes; another, 6 iron rakes, 10 wooden rakes, 2 rakes for bunkers, and 1 “Early Bird” rake; another 12 iron rakes and 24 wooden rakes. The other two mention rakes but without going into details.

Putting green mowers, etc.—All advise at least 6 putting green mowers with grass catchers. In addition, one advises 2 terrace mowers; another, 3 teeing-ground mowers and 2 high-cut hand mowers; another, 2 mowers for tees, 2 for approaches, and 2 for edges of creeks, bunkers, etc.; another, 3 high-wheel mowers and 3 ordinary hand mowers; and three advise 3 to 6 hand sickles.

Fairway mowers. Two advise the use of 5 cutting units for tractor; two advise 3 to 5 units; and one advises 3 units. Two to 3 extra units should also be on hand for emergencies. Three advise, in addition to the tractor units, 1 horse-drawn triplex mower.

Rough mowers.—Three advise 1 hay mower (1- or 2-horse) and 1 hay

rake (1-horse); another, 1 reaping machine and 1 hay cutter. In addition, four would include 4 to 6 scythes, and one would include 5 lawn mower units.

Rollers.—One advises 15 light rollers for frequent rolling of greens, 1 motor roller for tees and greens if needed, 2 300-pound iron rollers, and 1 good fairway roller; another, 9 steel putting green rollers 150-pound and 4 feet wide, 2 hand rollers 500 to 600 pounds, 1 hand roller 900 pounds, and 1 2,000-pound horse or tractor roller; another, 6 wooden rollers, 1 spiked roller, and 3 iron rollers respectively 250, 500 and 1,500-pound; another, 6 wooden rollers and 1 water-ballast iron roller; another, 1 spiked roller for greens.

Sprinklers.—For greens, one advises 18 sprinklers, two advise 12, and one advises 8. In addition, one advises 6 sprinkling cans, 2,000 feet of hose, 1 hose reel, 12 hose nozzles, and 1 pound of rubber washers; another, 2,000 feet of hose; another, 3,000 feet of hose and 12 spray nozzles. For fairways, one advises a sprinkling system, if piped for water; another advises 1 rotary sprinkler.

Seeders.—Four advise 1 wheelbarrow or similar seeder; one advises 1 horse-drawn seeder and 2 hand seeders.

Spraying apparatus.—Two advise 1 dry-powder distributor. One of these advises, in addition, 2 spray pump outfits complete, 50 gallon capacity, with truck, or one complete 200 or 300-gallon motorized spraying outfit complete with truck. A third advises 2 spraying pumps with barrels, or possibly a power sprayer.

Fertilizer distributors.—One advises 2 fertilizer spreaders; another, 1 fertilizer sower; another, 6 manure forks; another, 1 horse fertilizer spreader and 4 manure forks.

Lawn sweeper.—One advises 1 triplex sweeper for controlling crab grass on fairways.

Screens.—Two advise 1 compost sifter; another, 1 rotary screen; another, 1 $\frac{1}{2}$ -inch and 3 $\frac{1}{4}$ -inch screens; another, 1 fine screen that can be used by hand and 1 screen that can be operated by tractor or special motor.

Hole cutters.—One advises an assortment of 2 cutters each of sizes 4, 5, 6, 7 and 8 inches for removing chickweed, also 2 4-inch cutters complete for moving holes; another, 2 $4\frac{1}{4}$ -inch standard, 2 6-inch, and 2 8-inch cutters; two advise 2 hole cutters; and another advises 1 hole cutter and 1 hole trimmer.

Cups and flags.—One advises 24 cups and 24 two-color flags; another, 1 set of cups for regular greens and 1 set for temporary greens and 2 sets of flags.

Sodding equipment.—One advises sod cutters, sod lifters, sod shavers, and sod shaving knives; another, 2 sod cutters and 2 sod tampers; another, 3 sod lifters; another, 1 horse sod cutter and 6 sod lifters.

Turf knives.—Two advise 3 knives.

Lawn mower grinder.—Advised by three, one specifying a lathe with emery wheel.

Grindstone.—Advised by three.

Scythe stones.—Two advise 12 stones.

Bamboo poles.—Two advise 100 20-foot poles for cleaning tees, greens, etc.

Work shop and equipment.—Advised by four. Two advise 1 lathe, 1 drill press, pipe and other wrenches, hatchets, hammers, and axes. In addition, the following are advised singly: 1 or 2 vises, 1 breast drill, 1 brace, 1 sledge hammer, shears, 1 plane, 1 hack-saw, 1 sphere level and square, 1 tape measure, chisels, punches, files, nuts, bolts, screws, nails, hose couplings, hose menders, pipe cutter and dies, 12 oil cans, 1 blow torch and soldering material.

Sundry equipment.—The following are advised singly: 1 good-sized shed for storing compost, 1 underground gasoline tank with pump, 6 mole traps, 1 scale, brush hooks, pruning shears, 1 good level on a tripod for green building and leveling greens, hand weeders, 1 set of tee boxes, 1 set of tee benches, and 2 sets of tee markers.

Oils, etc.—Two call attention to the season's supply being necessary, one detailing it as follows: 4,000 gallons of gasoline, 50 gallons of motor oil, 50 gallons of harvester oil, 50 gallons of special oil, and 50 pounds of grease.

Measurement of Golf Holes and Placing of Tees

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There seems to be a lack of uniformity in the methods of measuring the length of holes, but apparently the most generally accepted plan and the one which is based on the soundest theory is to measure from the middle of the tee to the middle of the green. If the figures on the score card represent this measurement, it is very easy for the player to judge the playing length accurately when the disks are moved forward or back from the center. Unfortunately, on a good many courses holes have been measured inaccurately, and often from the back of the tees in order to give a fictitious idea of length, for we in this country seem to have a mania at the moment for long golf courses. Sometimes, in addition to this, a number of yards are added on just for good measure, and the result of this practice is not only to give the stranger a totally wrong idea of the hole but to teach the club members themselves a false standard of distance. Would it not be a good plan for clubs throughout the country to standardize this matter by measuring from the middle of tees to the middle of the greens and put absolutely accurate figures on their score cards?

Many very fine holes need several tees in order to preserve the value under varying wind and turf conditions, and this even for the same class of player. Long two-shot holes which under normal conditions are a fine test of the first-class player become levellers against a heavy wind and on soggy turf, when no one can get home in two strokes, but the second or third-class player can reach them in three and the first-class player can make a bad shot and often be as well off as the men who have played them perfectly. If a hole of this sort could be shortened say 20 or 30 yards, under such conditions, its value would be retained, as a first-class player could get home in two properly played shots, while the second and third-class man would require three or more.