

Getting Your House in Order — An Equipment List Update

by LARRY W. GILHULY
Western Director, USGA Green Section

HAVE YOU ever entered your maintenance facility and wished for a certain piece of equipment that would make a major difference in your club's maintenance program? It may be as large as a fairway mower or as small as an edger for the bunkers, but it isn't on the equipment list, and the whole golf course suffers. More often than one might think, Green Section agronomists find equipment inventories one or two pieces short of enabling clubs to make dramatic improvements in their course conditioning.

It is not the intent here to claim that every piece of equipment listed is absolutely essential for every golf course. Rather, the following list should provide a broad overview of the backbone of every golf course maintenance operation; *i.e.*, the equipment inventory. If you lack one or more of these keys to turf manage-

ment success, it may be time to take (or attempt to take) corrective action.

Putting Green Mowing Equipment

Five triplex putting green mowers, or five putting green walking mowers, plus three triplex riding mowers. (For a nine-hole course, three triplex green mowers, or three walking putting green mowers, plus two triplex putting green mowers.)

If walking mowers are used on greens, the triplex machines should be used for mowing tees, green aprons, and collars, greens on weekends, green vertical mowing, and following topdressing.

Vertical Mowing Units

Both verticutting and grooming units are needed. For thatch removal and verticutting, individual, replaceable units are needed for green maintenance.

Smaller units are needed for dethatching of bermudagrass. Other types of grooming attachments are available for lighter grooming purposes.

Putting Green Aerifiers

Two putting green aerifiers are needed for the least popular and most disruptive job on the golf course. It is important to complete this operation as fast as possible on greens and teeing surfaces. Because of the abuse aerifiers receive, two putting green aerifiers are needed for greens and tees, and for areas around greens and fairways that require special attention. This also provides insurance against breakdown during an important putting green aerification operation.

Heavy-Duty Topdressers

Two heavy-duty topdressers (one for a nine-hole course) to use after aerifying. This machine can also be used to topdress fairways, if necessary.

Light Topdressers

One light topdressing machine if your program calls for light and frequent topdressing for greens.

Spiker

One spiking machine to promote oxygen diffusion, or establish a seedbed for overseeding, etc. A spiking attachment used with other equipment may serve this purpose.

Dragmats, Brooms or Brushes

For use in filling the aerification holes, and following light putting green topdressing.

Plug Pushers

To remove aerification plugs.

Spray Rigs

One small sprayer (100 gallons) for putting green applications, and one large sprayer (250 to 300 gallons) for

Which direction is your equipment heading?





Is your equipment inventory up to date?

Use the right equipment for the job.

fairway, rough, and pesticide applications.

Utility Vehicles

The number of utility vehicles will vary, depending on operations. Four to five utility vehicles are generally needed for an 18-hole course, while two or three are needed for a nine-hole course. These vehicles are used for heavier work, such as moving sand into or out of bunkers, installing drain lines, and carrying loads ranging from 200 to 1,500 pounds.

“People Movers”

Depending on the size of the maintenance crew, there is the need to provide transportation for them at all times. Generally four to five people movers are needed on an 18-hole course, while two or three are required for a nine-hole operation. Many jobs do not require a heavy-duty utility vehicle, and lighter-weight units are ideal for changing cups, hand watering greens, repairing minor irrigation problems, and hand raking bunkers.

A Bunker Rake

If bunker contours permit, one motorized bunker rake should be in the inventory.

Fairway Mowing Units

Two fairway mowing units are recommended (one for a nine-hole course). If pull-gang units are used, a utility tractor will also be necessary. If the fairway units are self-driven, they should be purchased with the type of grass, terrain,

and soil found on the golf course taken into account. In recent years, the trend has been toward triplex-type mowing units for fairways. However, this is more labor intensive than the larger mowing units.

Rough Mowing Equipment

One five-gang rough mower (or one three-gang unit for a nine-hole course) is usually adequate. As with fairway mowing, this unit can be self-contained or pulled behind a tractor.

Rotary Mowers

Rotary mowers should be used on banks and around trees and tight areas that cannot be reached with regular rough mowing equipment.

Triplex Trim Mowers

Two triplex trim mowers (one for a nine-hole course) for cutting areas adjacent to tees, bunkers, greens, and other inaccessible areas.

Utility PTO Tractors

Two or three utility PTO tractors are recommended for an 18-hole course and at least two for a nine-hole course. These units are used for mowing fairways, roughs, spraying herbicides, fertilization, sweeping, and other tasks. If fairway mowing units are self-contained, or triplex units are used on fairways, two tractors may be adequate for an 18-hole course.

Large Area Sweepers or Vacuums

One or two sweepers (one for a nine-hole course) for general course cleanup after mowing, dethatching, aerification, tree debris, leaves, etc.

PTO Tractor — Blower

When a PTO tractor-mounted blower is combined with a sweeping operation, it provides an efficient means of course cleanup. This may not be needed if trees don't cause litter problems.

Front-end Loader/Backhoe

A front-end loader/backhoe is an essential piece of equipment for the modern 18-hole or nine-hole golf course.

Large-Volume Fertilizer Spreader

One large-volume fertilizer spreader is needed for fairways, roughs, tees, and greens.

Lightweight Fertilizer Spreaders (Small Volume)

At least two or three such spreaders are needed for putting green and tee applications.

Fairway Aerifier

One fairway aerifier will be needed on most golf courses. Buy one that does not tear the turf excessively.

Dump Truck (2½-Ton Minimum)

A dump truck is almost indispensable for drainage, topdressing, and construction projects.

Pickup Truck

One pickup truck is needed on almost every golf course for transportation and moving purposes.

Power Sod Cutter

At least one power sod cutter is recommended.

Heavy-Duty Wood Chipper

A heavy-duty wood chipper will prove exceptionally helpful at every golf course that has a reasonable number of trees.

Trencher

One trencher is needed for drainage and other installations.

Small Equipment

Three or four hand rotary mowers, three or four weedeaters, two power bunker edgers, one clubhouse reel mower, etc., are minimum requirements.

Slicer/Seeder

For use on heavy wear areas.

Fairway Vertical Mower

Depending on area and grass type, a self-propelled vertical mower or interchangeable attachment is needed for overseeding purposes, especially on those golf courses with fairway thatch problems.

Tree-Pruning Equipment

This to include one or two chain saws, extendable pole saws, and regular pruning equipment.

Shop Equipment

To include bedknife and reel grinders, table saws, a steam cleaner, air compressors, a small hydraulic hoist, a welder, paint sprayers, drill press, and many other pieces of equipment vital to golf course operations.

Irrigation Equipment

Equipment needed for irrigation and pumping stations will vary according to the type of system in operation. If any tools are needed to operate the irrigation system, include them in this list.

Miscellaneous Hand Equipment

This area covers shovels, picks, cup cutters, rakes, and all other small items needed for regular golf course maintenance.

Because of regional variations, this list may not include all the equipment your club might require, or it may exceed the necessities of your area, but it is suggested as a basic list of equipment required for maintaining a nine-hole or 18-hole golf course.

If you wish to streamline your maintenance operation and derive maximum benefit from your maintenance staff, equip them with the necessary tools to provide the maintenance results expected by the membership.

Answering the Most-Asked Questions About the Golf Course Pump Station

by **KEITH McLAIN INC.**
Houston, Texas

THE SPRINKLER heads pop up and water rushes forth. The water is projected across the greens, tees, and fairways, sustaining the life of the turf. The value of water to golf course maintenance cannot be overstated. Without functioning irrigation systems, most courses would cease to exist. Water is the life's blood of a golf course. The irrigation lines to the sprinkler heads act as the circulatory veins and the pump station as the heart of the system.

What comprises a typical pump station?

The irrigation needs of each golf course are as individual as the courses themselves, but the average station consists of a jockey pump, two booster

or main pumps, a hydropneumatic tank, a control valve, and a controller. The jockey and booster pumps can be vertical turbine or centrifugal pumps. The simplest explanation describing the two types of pumps would be: A vertical turbine pump sits below water level with the motor above water level. The bell-shaped pump is at the end of a standard six-foot column. It has multi-stage impellers creating pressure that forces the water up the pump column. With a centrifugal pump, both the pump and motor sit above water level and have a suction pipe with a foot valve and intake screen going into the water.

The different components are situated on a steel base or concrete slab near a lake or pond. Each part contributes to the overall purpose of bringing a con-

trolled water supply to the irrigation system.

A jockey pump is a small pump, usually with a 10- to 25-horsepower motor, that maintains irrigation line pressure. It allows for minimum power use without the expense of a booster pump. The jockey pump is the first pump to come on. It begins the job of supplying water while maintaining pressure. When more water is needed, the booster pumps come on.

What does a booster or main pump do?

A booster pump is a pump with a 50- to 125-horsepower motor. Most pump stations generally have two, but it varies according to the demands of the golf course. Booster pumps force water from