THE late Ralph Barton, architect and
supervisor of maintenance for a number
of New England courses, supplied superin-
tendents at courses he advised with note-
book sheets giving recommended practice
and much handy reference data.

These sheets were much worn by the
end of each season and were highly re-
garded by men who were not associated
with Barton as well as considered by
Barton's own team-mates invaluable
guides and time-savers.

Herewith are some excerpts from Bar-
ton bulletins:

Soil Topdressing

It is extremely difficult to place soil
so that it will lie evenly distributed. When
throwing with the shovel a very good
job can be done if the material is so
thrown that it leaves the shovel parallel
to the ground. That is, be sure to turn
the shovel so that its short edge in front
makes a right angle with the ground.
Do not load the shovel to full capacity—
about one-half.

There are two essentials in placing
soil topdressing: that it be evenly dis-
tributed; and that it all be worked through
the grass to the soil underneath. It is
fatal to leave soil or other covering on
grass to cause it to sweat.

The following figures are well to keep
in mind:

When evenly distributed, 1 cubic yard
of soil topdressing covers:

<table>
<thead>
<tr>
<th>Sq. Ft.</th>
<th>In. Deep</th>
</tr>
</thead>
<tbody>
<tr>
<td>2700</td>
<td>0.12</td>
</tr>
<tr>
<td>4500</td>
<td>0.072</td>
</tr>
<tr>
<td>5400</td>
<td>0.060</td>
</tr>
<tr>
<td>5994</td>
<td>0.054</td>
</tr>
<tr>
<td>6300</td>
<td>0.051</td>
</tr>
</tbody>
</table>

One acre is 43,560 square feet. Hence a
putting green of:

5000 square feet equals 0.1149 acres
6000 square feet equals 0.1375 acres

Seed

Never place seed and fertilizer at the
same time. Allow fertilizer to get in-
corporated in the soil before placing seed.
Five days is, in most cases, a sufficient
time to allow between fertilizer and seed.

If excessive watering, either natural or
artificial, follows fertilizing, seed may be
placed in two days; if the fertilizer is
not too strong, in one day.

It is interesting to note the compara-
tive size of seeds used on the golf course
as indicating the comparative number re-
quired to fill a given space, and an indi-
cator of what happens when placed from
a seed mixture with seeds of considerable
variation of size. This points directly to
the worth of placing each variety
separately.

<table>
<thead>
<tr>
<th>Seed Varieties</th>
<th>No. of Seeds per Lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bents</td>
<td>6,000,000</td>
</tr>
<tr>
<td>Red Top</td>
<td>2,150,000</td>
</tr>
<tr>
<td>Kentucky Blue</td>
<td>2,150,000</td>
</tr>
<tr>
<td>White Clover</td>
<td>680,000</td>
</tr>
<tr>
<td>Chewings Fescue</td>
<td>545,000</td>
</tr>
<tr>
<td>English Rye</td>
<td>226,000</td>
</tr>
</tbody>
</table>

Watering

In general, long period watering at
intervals is much better than light water-
ing daily. Of course, the greenkeeper
must be guided at all times by weather
conditions of rainfall, heat, dryness, and
the apparent condition of the soil. But
as a general procedure for normal July
and August weather, watering for one to
two hours per green two or three times
a week is much to be preferred to water-
ing daily for a quarter to a half hour.

Nobody has yet determined the best
time of day to water greens. Of course,
watering when the sun is up and at its
hottest is no time for water to be running
on a green, but if it is cloudy, watering
may be effective any time of the day.
This pretty generally reduces us to morn-
ing and evening watering. From my ex-
perience early morning watering seems
to give better results.

We should always keep in mind that
wind dries the soil quite as rapidly as the
sun's heat.

There are times in drought and very
hot weather when it seems impossible to
place enough water artificially to meet
the need. Such a condition may often
be avoided and always minimized by fol-
lowing a good rainstorm with artificial

Oct-Nov-Dec, 1943
NOW is the TIME!

Yes, now is the time to plan a "Washer Fund" to provide Lewis Washers at every tee after the war. Loss of players (let's not kid ourselves) has been a big problem . . . and getting them back to the game is going to be a still bigger one. So let's plan now to make them want to play . . . a clean ball from every tee helps increase player enjoyment by providing the means to FASTER PLAY, FEWER LOST BALLS, LONGER DRIVES, MORE ACCURATE APPROACHES and PUTTS.

Of course, there are no new ones available . . . so in the meantime, do everything you can to keep up the Lewis Washers now on your course. There is a limited supply of Lewis repair parts available. Contact your golf supply dealer as soon as possible to keep those Lewis Washers on the job next year.

G. B. LEWIS COMPANY
Watertown, Wisconsin

LEWIS Golf Ball WASHERS

watering in about 24 hours, and then following the regular watering schedule. It takes much longer to fill an empty pail than one which has water almost up to the brim. When the green is filled with water the top soil carries a supply for 4 or 5 days. To wait that 4 or 5 days and try to fill the green artificially is attempting the well nigh impossible.

When it happens that a green has gone empty and artificial watering is inadequate we may greatly aid by:

1. Applying 5 lbs. to 10 lbs. of sulphate to the green.

2. Give light soil top dressings at intervals of three or four days.

Both these processes appear to bring moisture from below when sufficient is not available from above.

All night watering is to be avoided except in emergencies, for it coarsens the grass and packs the soil.

Miscellaneous Notes

Farm yard manure stored in the open should be covered with 2 in. to 3 in. of soil.

Soluble manures placed when the plant is dormant will be lost and do no good.

Lime liberates potash.

Potash creates starch.

Lime loosens clays.

Lime binds sandy soils.

Never mix: Dung with lime, guano with lime, guano with slag, nitrate with superphosphate, sulphate with slag, superphosphate with slag, lime with sulphate of ammonia.

Sprague's Liming Table

<table>
<thead>
<tr>
<th>pH</th>
<th>Light Sandy</th>
<th>Medium Sandy</th>
<th>Medium Silt loam</th>
<th>Medium Loam and Clay loam</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>60</td>
<td>80</td>
<td>115</td>
<td>145</td>
</tr>
<tr>
<td>4.5</td>
<td>55</td>
<td>75</td>
<td>105</td>
<td>135</td>
</tr>
<tr>
<td>5.0</td>
<td>45</td>
<td>60</td>
<td>85</td>
<td>100</td>
</tr>
<tr>
<td>5.5</td>
<td>35</td>
<td>45</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>6.0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

One acre equals 43,560 square feet. Therefore, to obtain amount per acre, multiply by 44.

Successful turf building involves not only a yield of grass and turf fruition such that it serves pleasingly the purpose for which it was builded, thereby paying for its keep, but as well the future and permanent productivity of the soil upon which the turf depends.