Kikuyu Grass

By E. S. Garner, La Cumbre Golf and Country Club, Santa Barbara, Calif.

Kikuyu grass (*Pennisetum clandestinum*)\(^1\) is a strong, creeping perennial grass, a native of Uganda, Africa. It was first introduced by the United States Department of Agriculture in 1915, and tested in California in 1916 at several places. In January, 1920, however, Dr. P. B. Kennedy, of the University of California, secured a small quantity of the grass direct from the University of Pretoria, shipped in a small tin tube. When this was received by Dr. Kennedy, six weeks after it had been shipped, he found, to quote from his report, that "New roots had formed a matted growth, and leafy shoots several inches long were present. These were planted in the greenhouse and grew readily." From that time on kikuyu grass has never ceased to "grow readily"; and though it has never been known to produce seed, relying for its increase entirely on vegetative propagation, it is no exaggeration to say that there is now sufficient material available to supply every community in the state with at least a little. Already reports from various sections of California indicate that kikuyu grass finds itself in a congenial atmosphere. That it is far from exacting in its requirements is evident, since it has been found to do well under both dry, semi-desert condition, and in flooded, swampy places, as well as in light, sandy loam, and in stiff adobe. It is also remarkably tolerant of alkali. In one respect, however, kikuyu grass must be satisfied, namely, in that it needs abundant warmth and sunshine. While it must therefore be regarded as essentially a summer grass, it will nevertheless weather a severe winter after it is once established. Under winter conditions the leafage may wither while the underground part of the plant survives. In such places, however, as experience only a few nights of frost, there will be little effect beyond a temporary browning and, unlike Bermuda grass, it will not remain dormant during the entire winter. In other respects kikuyu grass may be advantageously compared with Bermuda grass. Producing no seed, it can be kept within bounds, and if it is desired to eradicate kikuyu grass this can easily be done by plowing and exposing the underground parts of the plants to the sun or to frost. As a forage grass it is infinitely more luscious, palatable, and nutritious than is Bermuda. Analyses made by the University of California and also by the Department of Agriculture of the Union of South Africa agree in showing kikuyu grass to have an even higher protein-content than has alfalfa. As kikuyu is eminently adapted also to withstand trampling and grazing by stock it seems that it has very great possibilities as a pasture grass on all types of soil. It will attain its greatest luxuriance, however, only where warmth and water go hand in hand. Its full range of adaptability is yet to be determined, but it appears likely that it will flourish throughout the warmer parts of California wherever occasional summer irrigation is possible.

Experiments have recently been made to determine whether kikuyu grass may be of value on golf courses in the regions to which it is adapted. It seems that as a fairway grass it probably will not

\(^1\) Kikuyu grass, on the basis of numerous tests, will survive the winter only in Florida, along the Gulf coast, in southern Texas, and in the warmer parts of Arizona and California. It is moreover distinctly a rich-land grass, and is unsatisfactory for poor sandy soils.—Editors.
be as great a success as was hoped, for though it will produce a very
dense and brilliant carpet of turf it has a tendency gradually to
thicken and "push up" until, in the case of kikuyu, the mat of grass
may become quite four inches thick. While a perfect "lie" for the
ball may be provided, the turf is too soft for a firm stance. Another
disadvantage is, that on alighting the ball is so effectively cushioned
that practically no roll is obtained. It would seem that even with
the most assiduous mowing it would be impossible to counteract this
tendency to form a thick mat; but however undesirable this may be
for fairways, no such consideration can be advanced regarding kikuyu
as a grass for the rough, for which purpose it is most excellent. For
bunkers, unsightly banks, ditches, and all such places as are liable to
erosion, kikuyu grass is likewise most excellent. The luxuriance
which it attains on unweathered subsoil, whether sand or clay, is
most remarkable, though ample water will be required until it has
become established.

In short, kikuyu is a great grass if grown in the right place.
Since it bears no seed, there is really no reason why it should be
grown in any other than the right place; there need be no fear of its
ever "getting into the greens"—no more fear, that is, than cabbages
"getting in."

A Three-Year Record of Unit Costs in Course Maintenance

By Guy C. West, Superintendent, Fall River Country Club

By "unit costs" I mean separate records of costs involved in the
various elements in course maintenance, such as greens, fairways,
rrough, tools and equipment, turf nursery, and others, as listed in
detail in the following table. A record of unit costs is the best record
for comparative purposes. In my article beginning on page 286 of
the BULLETIN, Vol. II (1922), October, I outlined a system of unit-
cost analysis, and after adhering to that system for the past three
years I am able to present its results to the readers of the BULLETIN.

In the following table is shown, for the three years, the cost per-
centage for the various units:

<table>
<thead>
<tr>
<th>Unit</th>
<th>1922-23</th>
<th>1923-24</th>
<th>1924-25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost piles</td>
<td>3.0</td>
<td>5.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Fairways</td>
<td>29.9</td>
<td>18.3</td>
<td>11.6</td>
</tr>
<tr>
<td>Greens</td>
<td>33.1</td>
<td>35.8</td>
<td>33.1</td>
</tr>
<tr>
<td>Rough</td>
<td>9.7</td>
<td>9.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Stable</td>
<td>3.4</td>
<td>4.9</td>
<td>5.8</td>
</tr>
<tr>
<td>Tees</td>
<td>9.4</td>
<td>12.4</td>
<td>12.5</td>
</tr>
<tr>
<td>Tools and equipment</td>
<td>4.2</td>
<td>5.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Traps and bunkers</td>
<td>5.5</td>
<td>6.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Turf nursery</td>
<td>1.1</td>
<td>.5</td>
<td>1.8</td>
</tr>
<tr>
<td>All others</td>
<td>.7</td>
<td>.5</td>
<td>2.7</td>
</tr>
</tbody>
</table>

100.0 100.0 100.0

The cause of unit costs differing materially from year to year
under any one item should be readily explainable. Unless there is
some known cause to explain an increase in the unit cost of any item,
investigation should be begun with a view to determining the cause
and taking steps to lower the cost the following year. For example,