

willow. It does not attack hard maple. Gloomy scale multiplies very rapidly. A dormant application of miscible oil one to 15 parts of water, applied thoroughly, prevents damage.

Maple Leaf Woolly Scale. White cottony patches in midsummer on the under side of maple leaves affords protection for the females of this pest. The males migrate to the trunks and when abundant give it a chalk appearance, over-wintering young in the crevices of the rough bark of the trunk and larger limbs. In addition to infesting maples it is sometimes found on hornbeam, Linden and horse chestnut. A dormant application of miscible oil one to 15 is efficient.

The species of scale insects discussed above are the more common ones which are likely to be found infesting shade and ornamental trees in this country. However, in the far west and in the extreme southern portion of the country several additional species may be encountered, but as a rule they are all amenable to the same type of control.

What Percentages in Your Maintenance Costs?

By GUY C. WEST
Supt., Fall River (Mass.) Country Club

HOW many times we hear it said that greens are the most important part of golf course maintenance, that good greens make a good course, and similar statements! To hear some golfers talk one could very easily get the impression that at least half of the money spent on golf courses was spent on greens. This may be true on some courses, but I have yet to hear where they are!

How many of us do know how much we do spend on the maintenance of greens as compared with the expenditures for other portions of the course? What *percentage* of our money expended for maintenance actually is expended on greens, and what percentage on the fairways, the tees, the rough, and the traps? How do these percentages compare from year to year?

To the greenkeeper who has a cost analysis of his course expenditures, percentages of expenditures for the various divisions of the course can be very easily figured.

The following figures, gathered by me at the Fall River Country club over the past six years may be of especial interest to the large number who have never seen such percentages. To all those who have cost figures for their own courses, these figures may be of interest as to how they compare. It must be remembered, however, that percentages, like unit costs, can only be compared rightly when all factors which enter in to the costs of maintenance are also examined. For example, two courses with the same total expenditures, and one with average size greens, and the other with very large greens, show a marked difference in the percentages for the item of greens.

Cost Percentages

As taken from my cost analysis figures for the past six years, the largest percentage, as might be expected, was for greens, and the percentages for greens were 33.1% in 1923; 35.8% in 1924, 33.1% in 1925, 30.3% in 1926, 26.7% in 1927, and 30.8% in 1928. It may thus be seen that the average would run a little under a third of the total cost.

Fairways ran 29.9% in 1923; 18.3% in 1924; 11.6% in 1925; 14.9% in 1926; 11.8% in 1927, and 11.6% in 1928. Tees showed for the same years, 9.4%, 12.4%, 12.5%, 8.5%, 9.3%, and 11.4%. Rough varied but little; 9.7%, 9.6%, 8.6%, 7.8%, 9.3%, 11.4%. Traps (including water hazards) showed a marked increase due to the building of new traps yearly; 5.5%, 6.7%, 14.3%, 17.8%, 17.6%, 16.9%.

Of the smaller items, the cost of preparing compost is perhaps of interest; for the same years, 3.0%, 5.5%, 2.4%, 4.3%, 5.9%, 3.8%. Turf nursery percentages, showing more use of nursery the past three years, were 1.1%, 0.5%, 1.8%, 2.6%, 5.2%, 3.6%.

Percentages can be studied for any course over a period of years in the same manner as unit costs. It must be remembered that if the standard of maintenance for any part of the course is raised, the cost per unit will be increased, and also the percentage cost will be greater, if the total expenditure is to remain the same.

Figure the percentage costs for your course, study them, compare them for your own amusement with others if you will, but compare and contrast them from year to year, item by item, and you will find much of interest.