

Transplanting Big Trees

A Job for EXPERTS

By
MARTIN A.
DAVEY

INASMUCH as it is "good business" to give golf players the things they want, a constantly increasing number of clubs are making appropriations each year for tree planting programs. Such programs can cost comparatively little or a great deal. Many small trees can be planted for a trifling cost whereas it costs a substantially larger amount to transplant trees as large as 15 or more inches in diameter.

If a club needs to plant a great number of trees, it sometimes is forced by financial reasons to anticipate the future and plant mostly small trees which will be beautiful 15 or 20 years in the future.

Large trees, of course, are infinitely more desirable than their smaller brothers. They provide beauty and shade immediately—not in distant years to come. Planted near the clubhouse or at strategic points around the course, they add an atmosphere of charm obtainable in no other way. In such cases, the cost of the trees is a secondary consideration.

Greenkeepers and their crews often plant small trees themselves. But when the big fellows have to be transplanted, the work has to be turned over to the professional tree mover who has the special equipment needed to handle the trees and a force of especially trained men.

For a score of years or more, large trees have been moved in some localities with varying degrees of success. Different methods have been tried, and experiments have been made with various kinds of machin-



To transplant a large tree successfully, a huge ball of earth and roots must be taken. Specially designed machinery is required to handle this immense load and transport it safely to its destination.

ery and under all sorts of conditions. Out of this wealth of experience there has been evolved a practice in the moving of big trees that has become a real art. It may be interesting to discuss some of the methods employed and the rules that are followed in order to achieve success.

In referring to big tree moving, the thing that one generally has in mind is the large specimen deciduous tree. Evergreens of considerable size are moved successfully, but generally at a different time of year, and to some extent, under different methods of procedure. Therefore, I shall discuss at this time only that branch of the art relating to deciduous trees.

Tap-Rooted Trees Big Problem

Experience has shown that those trees with large tap roots like some of the oaks, the hickory, walnut and sour gum cannot be moved with any assurance of success because their large tap roots go straight down into the soil and it is almost impos-

sible to get any reasonable proportion of the feeding rootlets. Real success can be secured with those trees having the spreading type of root system, covered by a mass of feeding rootlets reasonably close to the surface of the ground. This group includes the elms, maples, lindens, pin oaks, plane trees and many others.

Inasmuch as it costs just as much to move a poor tree as it does a good one, it is obvious that great care should be taken in selecting a strong, healthy tree of the species desired. The selection always should be left to the tree expert whose technical knowledge and years of training enable him to choose a tree which is constitutionally able to stand the moving ordeal and which should thrive after being transplanted. It is not enough that the tree be shapely; it must be healthy also. It must be devoid of serious injury and imperfection. And last but not least, it must be in vigorous health because the less vitality it has, the less chance it has to live.

In preparation for the moving of a large tree, it is necessary to secure a large ball of earth, sometimes 10, 15 or 20 feet in diameter and thick enough to include a substantial portion of the vitally important feeding rootlets. The workman must dig carefully and preserve all the rootlets possible within the ball of earth that is to be moved. Every effort must be made to protect the body of the tree from injury, so that it may grow in its new location with a minimum handicap. Haphazard methods must be avoided at all cost. So must the various "short-cuts" which can be taken.

Take a Big Ball

There are many such "short-cuts." One of the worst is that of jarring or picking the soil away from the roots to decrease the size of the load. Another is that of taking too small a ball of earth and roots. The probable result of either of these practices is that the tree will wither and die. If the tree is to be given a chance to live, the small tendril feeder roots must be protected and this can be done only by keeping firmly around them the earth in which they grow.

In every tree there is a fixed relationship between the roots and the top which must be maintained. Enough roots must be taken to provide nourishment for the top and to do this special tree moving machines and supplementary equipment are indispensable. With such equipment, stately monarchs of 30 or more inches in diameter can

be handled safely. The work not only requires fine equipment but also great skill and knowledge of trees because it would be a very easy thing for the tremendous body of the tree to slip out of control and cause irreparable damage to its structure and beauty.

In moving the tree to its new home, care must be taken that the branches will not be dragged for if the bark is rubbed away or bruised, bacteria and fungi soon will attack the wounds and start their work of destruction. Tree experts lace the branches in such a way that they are kept off the ground and are not injured in transit.

The success of the transplanting operation depends to a large degree upon the care and skill exercised in placing the tree in its new home. The hole where the tree is to be set must be large enough to accommodate easily the great ball of earth. In the bottom of this hole there should be placed a quantity of good topsoil and a certain amount of mulching material that is intended to hold the moisture.

When all is in readiness the tree moving machine is backed up to the edge of the hole so that the ball of earth rests over one edge. By the use of powerful machinery the tree is lowered carefully into its new resting place with a precision that is remarkable. Good topsoil is worked in along the edges, and the whole ball of earth, together with the adjacent new topsoil, is properly and carefully mulched. When the operation is completed, it is difficult for a stranger to tell that the great tree has not always lived in that spot, except for the very necessary guy wires that must be kept in place until the tree has established itself.

Convalescing Care

The transplanting of any tree, large or small, does not complete the work of the operation. All transplanted trees are weakened to a greater or lesser degree, depending upon the skill with which the operation is performed, and they must be given special care and attention just like a convalescing human patient.

The ground above the roots should be cultivated to a depth of about two inches at regular intervals for at least two or three years. This prevents a growth of weeds which rob the tree of needed food and moisture; it prevents rapid evaporation of moisture from the soil; it allows the roots to get an adequate supply of air,



This giant elm is about to be placed in its new home on the grounds of a mid-Western golf course. Note the myriad of rootlets which have been taken with the ball of earth. They will enable the tree to become quickly established.

and it assists in the formation of plant food.

It is particularly essential that the trees should be fertilized with a good tree food once every year for several years. When this is done, the rapid growth of the trees and their healthy condition will more than pay for the expense involved. This expense, incidentally, is only a small fraction of the amount spent to transplant the tree originally.

Right Watering Is Essential

It is often difficult to water trees if they are planted on a golf course far from a water supply. However, during periods of drought, it is essential that the trees be watered or they will die. Moistening the surface of the earth above the roots will not help the trees. In fact, it may cause them harm as such watering draws the roots to the surface where they may be killed by sun or frost. In order to benefit the trees, the ground should be thoroughly soaked and if necessary it should be perforated with a fork so that the water can reach the roots. Except in cases of unusually severe drought, a thorough watering

once every two weeks during the dry season will be amply sufficient.

Newly planted trees are greatly benefited if they are mulched during the winter months for four or five years. Excellent results are obtained by using manure for this purpose. It should be applied over the entire root area to the depth of four to six inches. If the trees are small, care should be taken to keep the mulch at least one-half foot away from the trunk. This is necessary to prevent the possibility of mice getting into it and possibly gnawing the bark off the tree. Each spring the greater part of the manure should be removed but a small amount may be worked into the ground.

Peat moss is often used by tree experts as a mulch for large trees that have been transplanted. The moss is spread over the root area to a depth of about three inches early in the spring following the operation. This mulch is allowed to remain and it eliminates the need of cultivation.

Thin barked trees such as oaks and maples should have their trunks protected in some manner from the rays of the sun.

This is particularly true if they were taken from places where they had received considerable shade and had not become accustomed to direct sunlight. When such trees are transplanted on the golf course and exposed on all sides, the trunks may likely be injured—the bark often cracks and exposes the living tissues beneath to disease and insect attack. Burlap, hay or building paper are commonly used to protect the bark.

Small trees are usually transplanted most satisfactorily in the fall after the leaves drop and before the ground freezes, and in the spring after the ground thaws and before the buds burst open. As a general rule, the work of moving large trees is done during the dormant period any time from the early part of October until some time in May. The fact that the ground may be frozen does not retard the operation. It is possible to transplant trees at any time during the year but in most cases, the extra care which is necessary during the "off season" makes the cost excessive.

Golf Club Organizer's Manual New Help to Game's Growth

COPIES of the first edition of the *Golf Club Organizers' Manual* now are available through headquarters of the leading golf club and golf ball manufacturing companies. The book is a practical primer of organizing, constructing and operating nine-hole golf clubs and was financed for free distribution by the members of the Golf Ball Manufacturers' association and of the National Association of Golf Club Manufacturers.

The book was edited by Herb Graffis, editor of GOLFDOM, from material specifically supplied for the publication by almost a third of the nation's existing nine-hole clubs. Its purpose is to give the organizers of new clubs definite help in getting going on the right basis, and with wasteless development of the many excellent inducements for golf clubs that are present in the smaller towns.

It is the manufacturers' hope that the book will be a substantial factor in promoting the growth of the game in the smaller towns and each manufacturer, as well as GOLFDOM's editor, will welcome from club officials, information that will aid in obtaining wide distribution for this book in places where it will assist in the formation of new clubs.

Revision of Women's Par Calls for New Scorecards

SCORECARD printers are not complaining about any business depression; the recent revision of women's par by the U. S. G. A. and the Women's Western G. A., means new scorecards for every golf club in the country.

The Women's committee of the U. S. G. A. has adopted the following yardage for determining women's par:

Up to 200 yards	Par 3
201 to 375 yards	Par 4
376 yards and over	Par 5

As the handicap eligibility for the Women's National championship will, in the future, be based on these figures, the U. S. G. A. Women's committee recommends that all state, sectional and district women's golf associations throughout the U. S. adopt this yardage as the standard from which to compute their handicaps.

With the longer pars and the new par, the sisters are gonna have to sock 'em!

Put 'em Back or Pay, Ends Divot Evil

TACONIC G. C., Williamstown, Mass., placed on its first tee a sign reading: *Players neglecting to replace divots will be liable to an extra charge of \$3.00 a day.*

Prior to display of the sign the club had difficulty in getting certain players to replace divots. Although no fees have been collected from this \$3.00 a day fine, the sign has had a marked effect in getting the players to be more careful.

EVERY club should maintain an experimental garden, where new greenkeeping theories and practices can be tried out before inaugurating them on the course proper. Local soil characteristics and climatic factors may differ enough at your course to make the new method impractical.

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THE weight of a roller best suited for a particular putting green necessarily depends on the character of the soil. On clays and clay loams, a roller no heavier than sufficient to smooth the green properly should be used. On sandy soils, very heavy rollers can be used without ill effects. Generally speaking, use the lightest roller that will give the desired effect. Water-filled rollers are popular because their weight can be regulated at will.