

Blasting Stumps

There is little danger in blasting stumps as long as the blaster does not become careless or fail to observe certain precautions. In Circular 191 of the United States Department of Agriculture, entitled "Use of Explosives in Blasting Stumps," the most important precautions to observe are listed as follows:

When you buy an explosive find out from the dealer at what temperature it will freeze and secure directions for thawing it out if it must be used in cold weather. It is dangerous to handle frozen explosives. Some explosives freeze at comparatively high temperatures while others do not freeze at all. Safety fuse cracks and breaks easily in cold weather.

Store explosives and caps in dry places. Do not store them together. Keep both under lock and key.

Handle blasting caps carefully and keep them away from children. These caps are very sensitive and have more "kick" than a high-power rifle bullet.

Do not carry blasting caps in your pockets.

Do not attempt to take blasting caps from the box by prying them out with a nail, wire, or anything sharp or hard.

Do not try to withdraw the wires from an electric blasting cap.

Use nothing but a pair of crimpers to crimp a cap to the fuse.

Do not cut safety fuse short to save time in its operation.

Use blasting caps or electric caps of the size recommended for the particular explosive being employed. Weak caps result in misfires and incomplete explosions.

Do not smoke or carry matches while handling explosives.

Do not shoot into explosives with either pistol or rifle.

Do not leave explosives where livestock can get at them. Some explosives contain ingredients of which cattle are very fond but which will poison them.

Open boxes containing explosives with a wooden wedge, never with a nail puller, ax, or pick.

Wait five minutes before loading a "sprung" hole. If the gas in the chamber has not had time to cool, it may cause a premature explosion when the charge is put into the chamber.

Use no iron or steel tamping bars, only wooden bars.

Be sure that everyone is in a safe place, that the extra explosives and caps are protected, and that all persons in the vicinity are warned before firing a charge.

Do not connect the lead wires to the electric blasting machine until you are ready to fire. Immediately after firing disconnect the lead wires.

Allow no one but the blaster to approach the electric blasting machine while charges are being wired up.

Do not investigate a misfire until the next day if you are using a safety fuse and cap.

Do not attempt to dig up or pick out a charge which has failed to explode. Put down another charge at least 2 feet from the one that failed.

This 15-page circular also contains directions for placing the blasting charge, for loading, priming, and tamping the charge, and for the use of explosives in splitting stumps that have been pulled or blasted out. It is illustrated with 11 figures showing approved steps

in the use of explosives. A copy may be obtained from the Department of Agriculture.

QUESTIONS AND ANSWERS

All questions sent to the Green Section will be answered in a letter to the writer as promptly as possible. The more interesting of these questions, with concise answers, will appear in this column. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Section.

While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

Average cost of maintaining an 18-hole golf course.—We have just finished the reconstruction of our golf course and should like to get some idea as to the approximate cost of maintaining an 18-hole course, including all labor and supplies outside of the greenkeeper's salary. We are figuring on operating during the coming year on a budget of \$10,000 to \$12,000. (Indiana.)

ANSWER.—From an estimated average maintenance cost of \$18,000 a year, exclusive of greenkeeper's salary, for 18-hole courses throughout the Northeastern States, it would seem that your figures are hardly adequate. It is difficult to quote figures regarding maintenance costs which will be helpful in a general way. Moreover a comparison of maintenance costs on various golf courses is often unfair to one or more of the courses being compared. Soil conditions, the contour of the land, variety of grasses, method of construction, size of the property under the greenkeeper's care, and similar factors, and most important of all the demands of the club membership, influence the maintenance costs to a very great extent. Some clubs demand that the course be in excellent condition the year round. Other clubs prefer to get along at less expense and hence cut down on the number of men employed. Consequently at various times the rough on the course is neglected, the sand traps are not raked daily, greens are not weeded regularly, and perhaps the putting surface becomes irregular at times due to lack of top-dressing. The yearly fertilizing of fairways is a well-warranted expense. Some clubs, however, neglect this item for a number of years, which means that on certain soils the fairways will in time become very poor and the clubs will have to go to special expense to recover their turf. It is thus apparent that a large number of widely varying factors must be taken into consideration in preparing an annual budget to cover the cost of course maintenance.

Value of a chemical analysis of soil.—The condition of our greens and fairways has not been satisfactory to us. We are wondering whether the difficulties we are encountering in producing satisfactory turf are due to an inherent defect in the soil. So that we may ascertain whether or not the composition of the soil is responsible for our troubles, we should appreciate your suggestions as to the value of a