Destruction of established weeds with 2.4-D requires that the plants be in an active state of growth so that the weedkiller will go readily throughout the plant. Dormant weeds are not affected by 2.4-D to any extent because there is little movement within the plant in dormancy. Consequently, the 2.4-D application should be made when the soil temperature is high enough for activity within the plant as a whole so as to get movement all through the roots. It is wise to wait 2 weeks after nitrogen feeding before spraying bluegrass, and 3 weeks before spraying bent.

2.4-D does not appear to leave a residue in the soil under average spring, summer, and fall conditions where there is adequate soil moisture. However, this means that the weeds should be allowed to die (3 to 4 weeks) before re-seeding is done.

## **Questions Seed Killing**

Some publicity has been recently given to 'treating soil with 2.4-D to kill weed seeds. This is a dangerous procedure, and I do not think it should be done except in a very limited experimental basis until more is known about soil treatment. Treatment of the growing weeds is one thing, but treatment of the soil is a totally different proposition.

Poison ivy along the fences is a problem at some golf courses. The leaves are quite waxy and results have been very erratic with the clear solutions of 2.4-D, and the emulsion type of 2.4-D application is more desirable on this weed. The plants should be allowed to leaf out thoroughly before any kind of a kill can be expected, and repeated spot sprays are usually necessary for the tougher plants.

## Clean Out After 2.4-D

It is important to clean out the spray tanks and equipment before fungicides are used in the sprayers. The small amount of 2.4-D that might remain if it were not cleaned out will step up the plant injury level of the fungicide. Soda ash in hot water and soap solution, or TSP solutions will clean out the solution types of 2.4-D, while emulsifiable oil or emulsified kerosene will wash out any of the 2.4-D oil emulsion residue that might be left.

## Penna Plan Calls for Semi-Annual Reconditioning of Clubs

 $\star$  Charley Penna, pro at Beverly CC (Chicago district) has a club cleaning service that's being studied by Chicago district pros as something to adopt when it becomes possible to get equipment and competent shop boys. It's a service that Penna's members have talked about so word of it is getting around the district.

The ordinary service of cleaning clubs after each round and making minor repairs without the member having to request them is expertly done at Beverly because Charley early in his golf shop work was trained by Tommy Armour to pay careful attention to this part of the job. Charley extended his education in this work by employment in golf manufacturing plants during the winter. Consequently Penna has trained his own staff, headed by Wilfred Chase, also an Armour graduate, to do competent and conscientious work in return for the members' payment of club servicing and storage charges.

But where Charley carries the service beyond the customary extent is in two careful overhaulings of clubs and bags each year; one before the season starts and another in mid-season.

The big job is on the woods The first step is to remove the damaged finish with a sanding cone attachment on his buffing motor. Then he restains the club in its original color. Then three coats of lacquer are applied. The new finish is baked in by heat-treating lights. In a golf shop the sort of a baking oven used in a first class golf club manufacturing establishment is out of the question, but the lights do the job.

The face of the club is refinished and touched up.

The shafts are polished and Lexol is applied to the grips to renew the tackiness. If caps on tips of shafts are damaged Penna replaces them. The whipping, or plastic shields, are checked and put in good shape.

This job takes about 4 days.

On the irons the shafts are polished, the grips are given a Lexol treatment and general check-up is made to see that every detail of the club can pass inspection.

Bags are saddle-soaped and if sewing or other minor repairs are needed Charley sees that arrangements are made to have that work handled.

Some might think that such a complete overhauling puts the clubs and bags in such good shape that purchasing interest in new equipment is discouraged. But it works out exactly the other way. Members are reminded to take pride in equipment instead of being content with the old stuff. Consequently the service has been a factor in getting Beverly members eager to buy the latest and best whenever Charley can get it for them.

The best grade of materials are used in Penna's overhauling work. The staining and laquering is done under a ventilated hood in one corner of his shop. Members seeing this work in progress are made aware that they are getting unusual returns on their payments of club cleaning charges.