Pin placements on greens and tee markers should be moved frequently, keep the wear and tear down on localized areas.

Winter injury plays a big role in the compaction of turf for summer's play. Temporary winter greens . . . or stress periods of the year should be looked at, as one way in reducing the compaction on greens. In extreme cases of stress, greens should not be played on, but are in most cases. Many factors should be looked into in more detail to see which area of your turf management program you may emphasize or de-emphasize to meet more desirable requirements from the standpoint of play and traffic.

Secondly . . . often many times the instructions for a good caddy are overlooked with the caddies doing entirely too much gathering on the greens and tees. It might be most advisable to have a good relationship between the caddy master with his instructions to the caddies, as to what a caddy should and shouldn't do. I have seen in many cases that the caddies stand off to one side of the tee as the player tees off, might not the caddy be 200 yards down the fairway looking after the ball in the landing area or what have you . . . thus we would have less compaction in this particular area. Secondly, on a approach shot to the green and after landing on the green it might be more advisable in this area for the caddy to give a putter and a wood or iron desirable for the next hole to the player and then the caddy would be able to be waiting at the landing area for the next shot from the tee . . . this would mean a lot less wear around the green, and from green to tee. This might not always be practical, I'm sure in many instances this would work quite satisfactorily, maybe not on the entire course, but on several holes. This is just another area to look at as a way in helping to reduce unnecessary traffic.

Today's traffic leads us to tomorrow's problems . . . today's turf management program will lead us in the direction of helping to solve these problems . . . we can add to them or can help correct them. Plan ahead in long range programming . . . try and keep one step in front at all times . . . traffic is here to stay and so is the game of golf.

WHAT IS A WEED?

Just exactly what is a weed? Many people have their own opinion and own definition of what a weed is. I like this one. Weeds are non-useful plants growing where they are not wanted. Most families in the plant kingdom contain undesirable species of plants. Weeds vary in form and growth habits. Many weeds are herbaceous independent plants, like the dodders;

others are vines, shrubs or trees, such as poison ivy and mesquite.

Basically there are three types of weeds:

ANNUALS live only one year; produce a crop of seed and die. They spread primarily by seeds and should be destroyed before seeds form. Control is easiest when weeds are small.

BIENNIALS live for two years, producing seed the second year. They spread chiefly by seeds. Biennials, like annuals, are controlled during the first year of growth to avoid seed formation.

PERENNIALS live for three years or more. They spread by seeds, rootstocks, bulbs and other vegetative growth. Perennials are the most difficult to kill. Many noxious weeds are perennials.

Different types of chemical weed killers are available for various uses — each with its advantages and limitations: NON-SELECTIVE weed killers destroy or damage all vegetation and should not be applied on or near desirable plants. Under some conditions non-selective weed killers can be used for selective weeding by adjusting the dosage and the manner of application to prevent injury to desirable plants. SELECTIVE weed killers control only certain weeds and may be used in crops resistant to their killing action.

CALIBRATION OF SPRAY EQUIPMENT

Proper calibration of spray equipment for field spraying is necessary for successful application of weed killer chemical. The following factors should be considered — all of which can be varied within the limitations of the equipment available.

1. Nozzle spacing 2. Nozzle orfice size 3. Pump pressure 4. Forward speed of sprayer.

For determining forward speed where certain gallonage per acre is desired and forward speed can be varied, this formula may be used:

$$\text{MILES PER HOUR} = \frac{495 \times \text{gals per min. per nozzle}}{\text{Nozzel spacing in ft.} \times \text{gals. per acre}}$$

Example: How fast should sprayer travel if each nozzle delivers 0.067 gallons per minute; the nozzle spacing is 1:67 feet, and 5 gallons of spray is desired?

$$\frac{495 \times 0.067}{1.67 \times 5} = \frac{33.17}{8.35} = 3.98 \text{ (or 4) Mile Per Hour}$$

For determining *gallons per acre* where the forward speed of sprayer is constant, and gallons per acre can be varied, this formula may be used:

$$\text{GALS. PER ACRE} = \frac{495 \times \text{gals. per min. per nozzle}}{\text{Nozzle spacing in ft.} \times \text{miles per hour}}$$

Example: How many gallons per acre will be sprayed if each nozzle delivers 0.067 gallons per minute, the nozzle spacing is 1.67 feet, and the desired speed of travel is 4 miles per hour?

$$\frac{495 \times 0.067}{1.67 \times 4} = \frac{33.17}{6.68} = 4.98 \text{ (or 5) gals. per acre.}$$