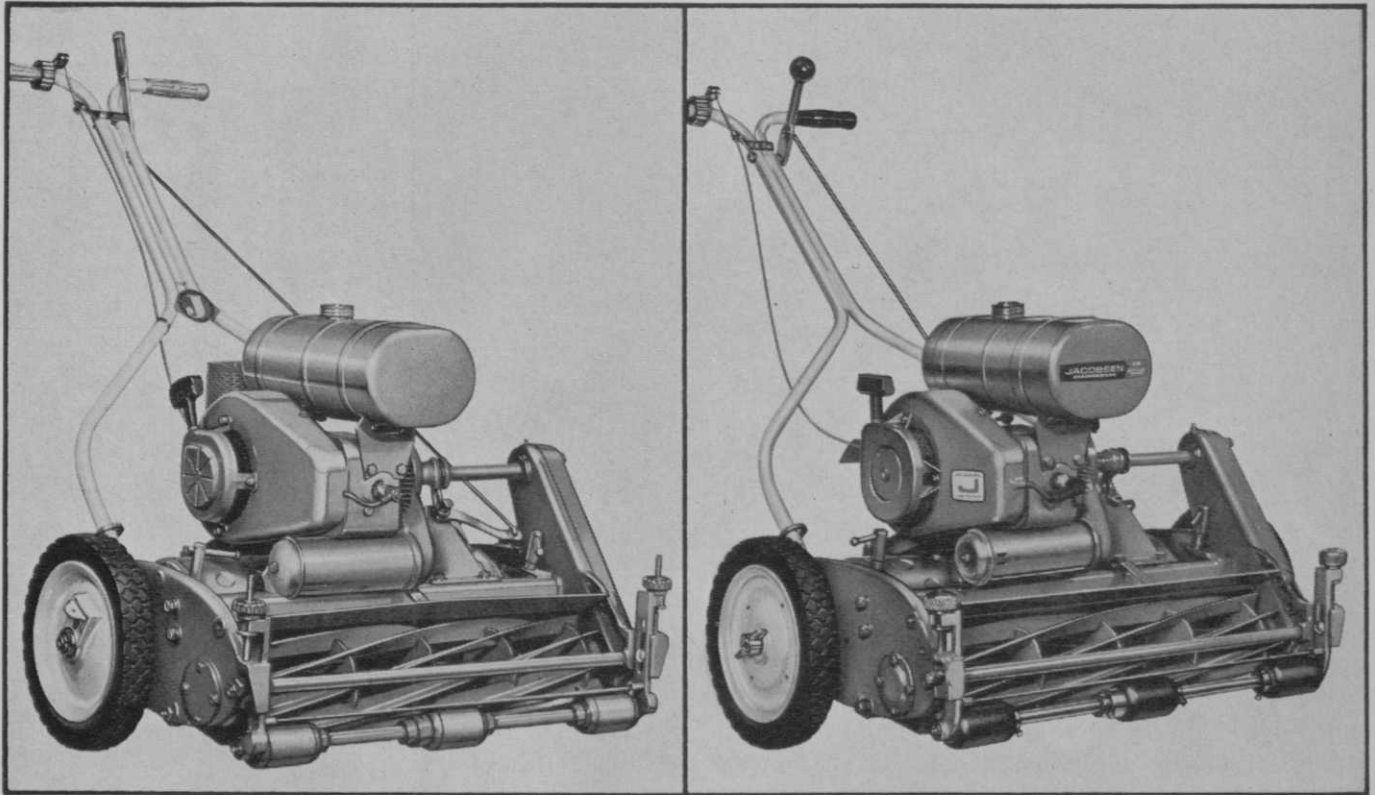


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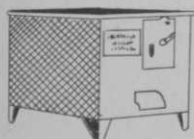
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Space-age *Continued from page 70*

improves so too must the receiver improve. Necessity for detail can bring the receiver costs from \$150 to \$500 using the same examples as the previous paragraph.

With cameras it is much the same story. Simple camera, taping and receiving are done on a 350 lines per inch principle. Here we are talking about \$600 video taper, \$150 receiver and \$600 camera. As you progress, you go to a video taper of 650 lines capability, and a camera of 650 lines also. We then find we have a \$4,450 video taper, a \$500 receiver and a \$1,000 camera.

Other costs enter the picture too as the quality improves. Lenses, tapes, microphones and even tripods increase in cost as you utilize the better equipment.

Finally, not all equipment is compatible to each other.

Sound complicated? Well it really isn't if you will think of it in this manner. 1) Decide what you want to use your video tape for? 2) Then, call in the reps of the various com-

panies and let them hear your needs. 3) Let each of them demonstrate or tell you what they have to serve your purpose. 4) Then you make the decision of what is best for you, or your club. 5) The final step, is to then rent a complete unit, with right to apply rentals to purchase, and try it to see if it serves your needs.

I am not setting myself up as an "expert" on video taping, and I may not even be recording the things which were told to us, but I am giving you one man's opinion.

Video taping is here, color is coming day after tomorrow, and it is the training material of next week. Do investigate it, now.

A final thought: Though video tape can prove very expensive—especially if you would need the better equipment—your budget could be effectively stretched if such equipment were shared by the golf professional, course superintendent and manager.

Cooperation between these three could make a communications center at every club a reality. □

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EMERSON *Continued from page 63*

ming, horseback riding, historical, archaeological, scenic or scientific sites; . . ."

The Maryland law which added Section 19 (e) to Article 81 of the Annotated Code of Maryland is similar in intent, but has one or two important differences.

"19 (e) (5) . . . The period covered by the agreement shall be at the option of the country club but shall be not less than ten (10) consecutive years and may be extended from time to time.

"(6) Lands covered by such agreement for purposes of assessment for state, county, special tax district and municipal taxes shall be reassessed by the state department of assessments and taxation on the basis of such use as a country club which said reassessment shall be made, and shall be effective as of the date . . ."

The California law, again is similar in intent, but somewhat different in content. Article 13, Sec. 2.6, reads:

"In assessing real property con-

sisting of one parcel of 10 acres or more and used exclusively for non-profit golf course purposes for at least two successive years prior to the assessment, the assessor shall consider no factors other than those relative to such use. He may, however, take into consideration the existence of any mines, minerals and quarries in the property . . ."

Article 28, Sec. 1, reads, in part:

" . . . The people further declare that assessment practices must be so designed as to permit the continued availability of open space lands for these purposes, and it is the intent of this article to so provide . . ."

And in Sec. 2 of the same Article 28:

" . . . All assessors shall assess such open space lands on the basis only of such restriction and use . . ."

It is clear from the foregoing that, in exchange for tax consideration, the states involved want assurance that the golf course will continue to maintain their facilities for the purpose for which they are intended. This expectation is a fair and justifiable one. □

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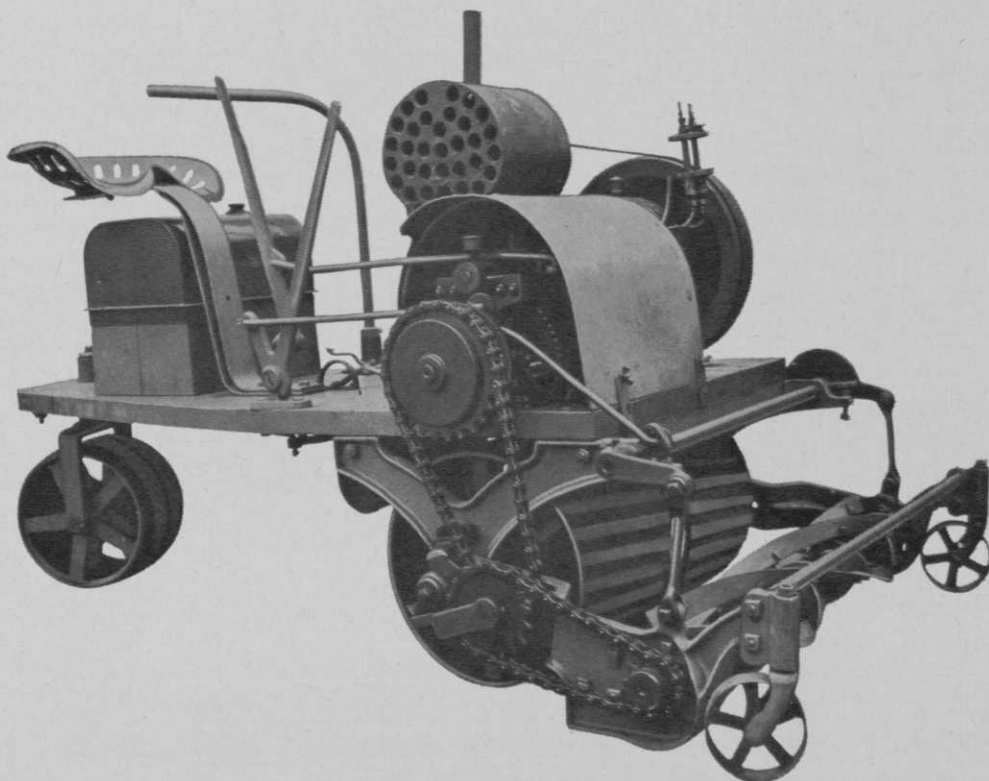
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BEARD *Continued from page 18*

a means of providing frost free turf throughout the year. Also, spring green up will be earlier.

An evaluation of high temperature effects on annual bluegrass. (*Poa annua* L.)

J. A. Fischer, Master of Science Thesis. Michigan State University. pp. 1-42, (from the Department of Crop Science, Michigan State University, East Lansing, Michigan 48823.)

The effects of high temperature on *Poa annua* were studied in a specially designed wind tunnel chamber. Wind speed in the chamber was 11.4 mph and the relative humidity approximately 100 per cent. The temperature treatments ranged from 98 to 112° F. with exposure times varying from ten minutes to twelve hours. Injury was evaluated by grass observations and a histological technique.

High temperature resulted in a

systematic injury to the *Poa annua* plant tissue. Injury occurred first at the junction of the leaf sheath and the leaf blade of all affected leaves. The root crown tissue, the youngest leaf and the apical meristem, in that order, were the least susceptible to lethal high temperatures. Exposure to high temperature hastened aging of leaves. The order of cellular changes observed was protoplasmic granulation, protoplasmic coagulation, cell wall breakdown, and total cell collapse.

At any one temperature treatment the degree of kill increased proportionally with exposure time. Kill of *Poa annua* at 100 per cent relative humidity occurred after only one hour exposure to a temperature of 106° F.

Comments—Direct high temperature kill of *Poa annua* was observed to occur at surprisingly low temperatures. Temperatures of turfs in the 104 to 108° F. range occur under field conditions. Turf-

Continued on page 78

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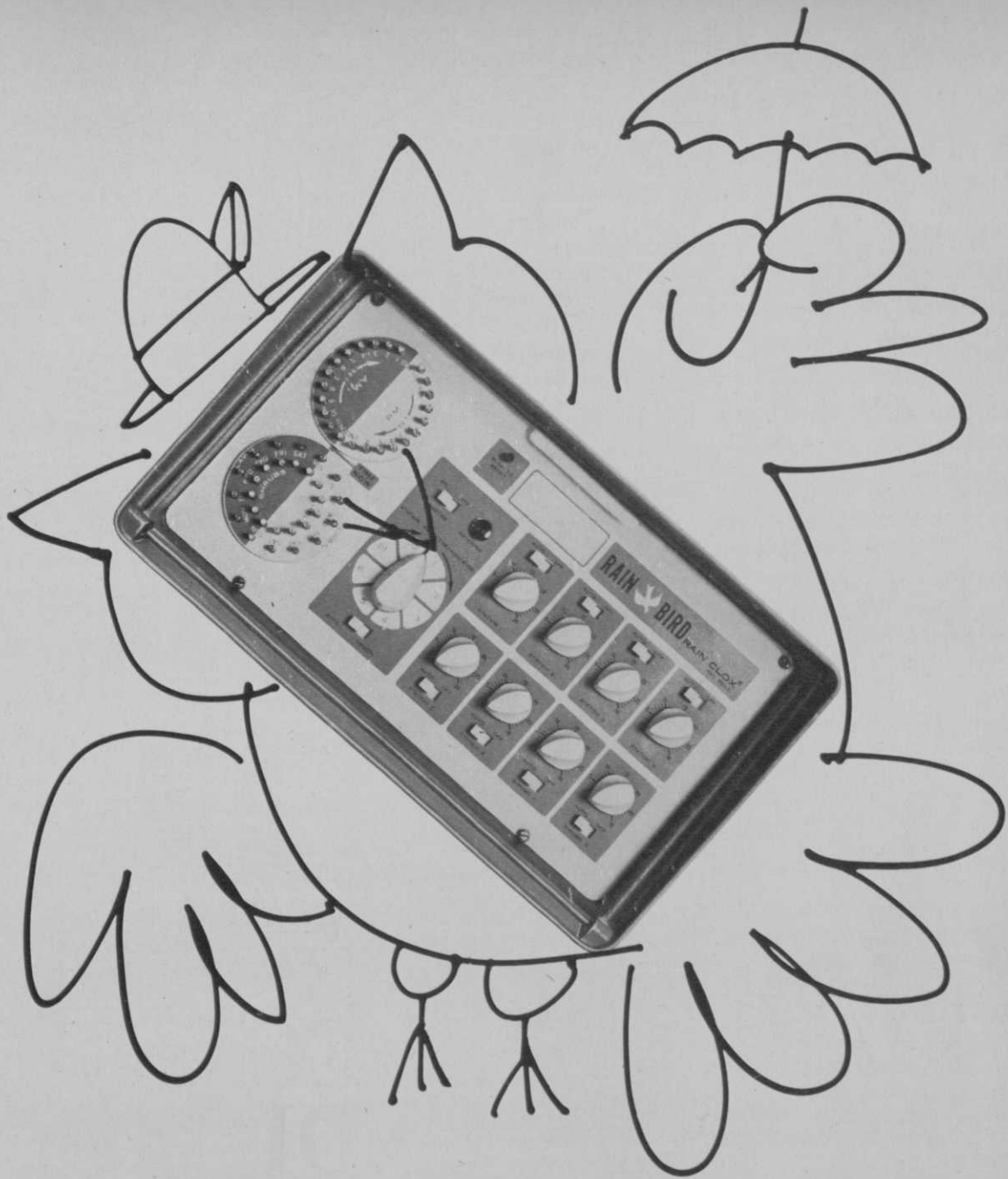
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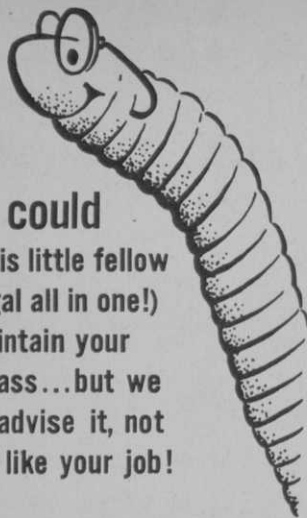
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BEARD Continued from page 76

men should recognize that it is the plant tissue temperature and not the air temperature that is critical. Actually, a high soil temperature is a more valid indicator of potential high temperature injury than high air temperatures.

These data suggest that high temperatures may cause a greater portion of the mid-summer death of *Poa annua* than has been thought in the past. Plants under a water deficit are more susceptible to low temperature kill. Proper water management, good air movement and a healthy turf are important factors that will increase the tolerance of turfgrasses to high temperature.

Early growth of annual and perennial ryegrass.

M. Barbour. *Agronomy Journal* 59 (2):204-205. 1967 (from the Department of Botany, Duke University, Durham, North Carolina).

Two stages of early growth were observed for annual ryegrass (*Lolium temulentum*) and perennial ryegrass (*L. perenne*). The first stage encompasses the initial nine days following seeding when the growth rate is extremely rapid. Annual ryegrass had 90 per cent germination in 48 hours while perennial ryegrass had 80 per cent germination after four days at 68° F. The second state, which may be indicative of the rest of the growing season, is one of slower growth. Annual ryegrass had a larger root system and a higher respiration and photosynthetic rate.

Comments—This paper emphasizes the superior establishment vigor of the ryegrasses, with annual being more vigorous than perennial. The rapid establishment is valuable where a quick, temporary cover is desired. This attribute is desirable when planting on steep slopes having a high erosion probability and when conditions for germination are inadequate due to moisture stress.

An undesirable aspect of such rapid establishment is excessive competition to the more desirable, permanent species contained in the mixture. It can be especially det-

Continued on page 82

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