



# IMPROVE TURF CARE

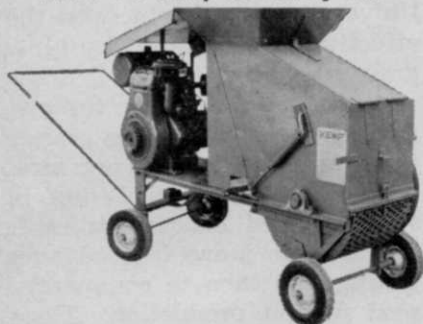
with a

## KEMP SHREDDER

Every day, something new is being shredded, aerated or mixed by turf specialists using versatile KEMP Shredders. Above, Kemp No. 7-0 with new, high-speed leaf handling vacuum-blower attachment. Shreds 20-30 cu. yds. of soil an hour.

Park and golf superintendents, turf and topsoil producers look to KEMP for top performance and low maintenance cost in shredding sod, soil, phosphate rock, peat, brush, leaves and other matter.

**There's a Kemp for Every Use**



Kemp shredding capacities range from 4 cu. yds. up to 101 cu. yds. an hour. Kemp model 8-0X above, shreds 12 cu. yds. an hour.

**SOD PRODUCERS • TOP SOIL SUPPLIERS  
GREENS SUPERINTENDENTS • NURSERYMEN  
AGRONOMISTS • LANDSCAPE ARCHITECTS  
GROUNDSKEEPERS**

Let us help you with your shredding problems. Write for complete information, prices today.

**Rugged Dependability Keeps Kemp  
First in Soil and Compost Shredders.**



Since 1890

**KEMP MFG. CO.**  
362 Kemp Bldg., Erie, Pa. 16512

**CUT OUT AND MAIL TODAY**

Kemp Mfg. Co., 362 Kemp Bldg., Erie, Pa. 16512  
Send me folders showing and describing Shredder models and outlining many uses for soil and compost shredders.

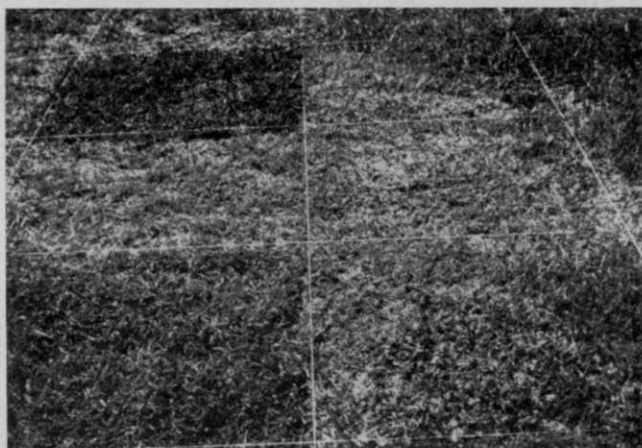
Name .....

R.D. or St. ....

P.O. & Zip .....

State ..... Code.....

Plots (right) show experimental selections of St. Augustine installed in turf areas heavily infested with chinch bugs to check susceptibilities to this damaging insect.



improved turfgrass is in the range of 10 to 15 years.

### Looking Ahead to Grass Improvements

Based on current progress of breeding programs in the U. S. and Europe, improvements in some of the following grass characteristics can be anticipated:

1. Lower profile grasses with improved turf forming qualities that should perform better under lower heights of cut.
2. Grasses that are better adapted to specific regional conditions.
3. Increased resistance to leaf spot, smut, and some insects.
4. Improved performance in shade.

Experimental grasses showing some of the above characteristics may have certain limitations, however. Dwarf or low-growing grasses seem to establish a mature turf more slowly than some present varieties. Variation in maximum growth has also been observed. In this respect, certain dwarf types appear to produce more clippings at lower heights ( $\frac{3}{4}$  and 1 in.) than present taller growing varieties. When the height of cut is increased, the dwarf characteristic is shown by a drop in clippings removed compared to today's commercial grasses. This suggests that more attention to mowing height may be required to benefit from improved growth habit.

In the future, new varieties of such warm season grasses as Bermuda and St. Augustine no doubt will be vegetatively propagated as at present. This takes advantage of the greater vigor of F1 hybrids and makes it possible to release improved grasses where it would not be possible

by seed propagation because of high sterility levels.

Increased interest and research activity is being devoted to turfgrass breeding programs. Consumer demands as a result of population shifts from rural to urban areas, plus the rapid increase of industrial and recreational turf applications, provides the basis for this increased activity.

Introduction of improved grasses to consumers will initially be slow due to a lack of technological background on important plant species. A shortage of trained specialists in this field until recently will no doubt influence the number and quality of new grasses developed in the near future.

Progress in developing breeding methods and test systems for sorting out potentially desirable turfgrasses is being made by public and private workers. Based on current progress in the field, some degree of improvement in many important turf qualities can be expected in the next decade.

### N. Calif. Turf Day Set

Latest equipment and materials for turf maintenance and landscaping will be exhibited at the 3rd Annual Northern California Turfgrass Exposition, Mar. 22-23 at Strybing Arboretum, San Francisco, Calif.

Turf managers, contractors, and others interested can contact C. R. Staib, co-chairman, for more details. Address: Hercules Incorporated, 120 Montgomery St., San Francisco, Calif.