

turf in the fall results in noticeable benefits. In treating old turf on stiff clay soils, an application of coarse sand in addition to this cutting will benefit the turf by improving the soil structure.

SELECTION OF GRASSES

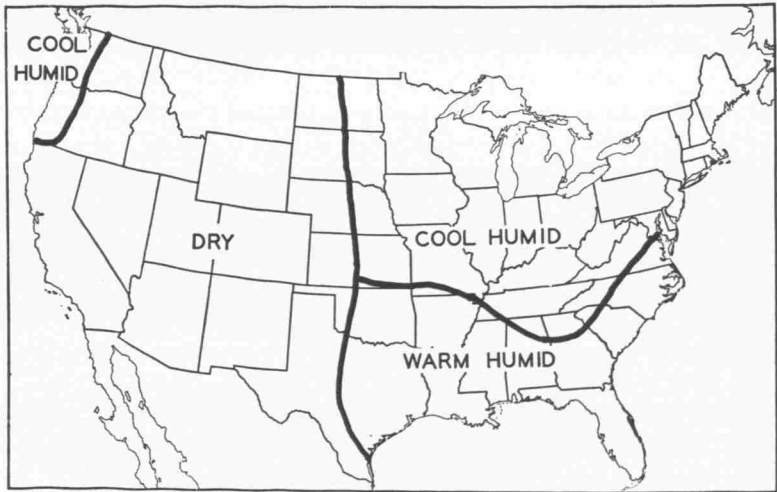
Grasses, to be useful for lawns, pastures, golf courses, etc., must meet certain specific requirements adapting them to the purpose for which they are selected. Likewise, if turf on an airport, roadside, or cantonment area is to be successful it must be composed of plants capable of meeting the requirements of such turfed areas. Among some 1,100 known species of grasses occurring in the United States only approximately 30 have been used for turf purposes. This does not mean that others may not be used. It merely indicates that in the past their use for turf has not been investigated.

A grass selected for use on airfields, roadsides, drill fields, and recreation areas should be tough and resistant to the rough usage to which such areas are subject. Far more important than the fine texture sought in lawn grasses is the ability to withstand wear and tear of heavy traffic. Since turf on many areas is often required on relatively short notice, rapid growth and the ability to "cover up" quickly are also of major importance in the selection of the grasses. In many cases, dust, so detrimental to the motors of planes and other mechanized equipment, can best be checked by the rapid establishment of a grass cover. Any turf subject to wear by planes, trucks, etc., is likely to suffer badly from scars unless it is composed of rapidly growing species which heal quickly.

The selection of grasses that require minimum maintenance costs is of considerable importance. Other factors being equal,

low-growing species should be used in preference to the tall, upright ones, since mowing costs often involve large sums of money.

Finally, planting material, either seed or stolons of the grasses to be used, should be readily available commercially. Seeds of some turf grasses are imported and as a result are not



Map depicting three general climatic regions of the United States. The grasses to be used in each region are determined by the climatic factors of that region.

available at this time. Also seed of some recently developed strains of turf grasses must be increased before they are available in large quantities.

Even for airfields or other specific requirements, no one or several grasses can be recommended for general use in turf throughout the country. Rather, the types of grass to use will depend primarily on the geographical location of the particular areas in question. Grasses, like most plants, are pecu-

liarily adapted to growth in certain specific geographical and climatic areas. Attempts to use species outside of their range of adaptability almost invariably meet with failure. The final selection of grasses within each geographical area will depend on the soil and moisture conditions of the locality and a consideration of the naturally occurring grasses within that specific area.

For the present treatment the United States has been divided into three climatic regions (see accompanying map), and in the table on page 224 a number of grasses are suggested for use in each region.

The correct time of planting various grasses is determined primarily by the location of the region in which the grasses are used. Most seeding in the cool, humid regions should be done in late summer or fall. In the southern portion of the region this is an absolute necessity if a good stand is to be expected. In the northern part of the cool, humid region satisfactory turf may sometimes result from early spring seeding. Turf grasses of this region are not ordinarily used singly, but in mixtures.

Grasses of the warm, humid region should be planted either during the spring or summer months—not in the fall. One may find rare exceptions to this in the extreme South where Bermuda grass stolons have been planted in February. If stolons are planted at this time they merely remain dormant in the soil until conditions become favorable for growth.

In contrast to the northern grasses, those of the warm, humid region are usually used singly rather than in mixtures. There are a few exceptions to this rule. For example, carpet grass is often used in combination with Bermuda grass and other species.