Annual Cool-Season Grasses

W. A. PHILLIPS AND S. C. RAO
USDA-ARS Grazinglands Research Laboratory
El Reno, Oklahoma

R. L. DALRYMPLE
Samuel Roberts Noble Foundation
Ardmore, Oklahoma

E. L. KLEPPER
USDA-ARS Columbia Plateau Conservation Research Center
Pendleton, Oregon

SPECIES

Annual cool-season grasses (ACSG) were first used as forage for wild and domesticated grazing livestock, but eventually they were used to provide grain for human use. As a result, humankind was afforded the option of settling in one place and establishing a stable society (Hodgson, 1976; Leonard & Martin, 1963). Although a forage produced by conventional ACSG species such as wheat, rye, barley, oat and triticale is still used as a high-quality feedstuff for cattle (Bos taurus), sheep (Ovis aries) and goats (Capra hircus), usefulness of these species as a source of grain for human consumption has overshadowed their utility as forage. The ability of ACSG to be used as forage for grazing livestock and grain for human consumption makes them unique.

Several species of nonconventional ACSG (NACSG) are good sources of forage, including cheat, downy bromegrass or cheatgrass, Japanese bromegrass, rescuegrass, prairiegrass, and little barley. These species germinate in the fall, but the majority of forage production occurs in the spring (Baskin & Baskin, 1981; Fischer et al., 1982). These grasses have received little attention as forages from researchers because they are often considered to be weeds. They are recognized by livestock producers as a natural resource to be incorporated into an efficient livestock grazing system and some NACSG are available as domesti-

1 Common names for plants have been used throughout the chapter. Refer to the appendix for the scientific name.