A COMPARISON OF YIELDS AND COMPOSITION OF SOME ILLINOIS PASTURE PLANTS

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AN approach to a solution of some of the problems of pasture yield and management are chemical analyses of forages. Chemical analyses serve the dual purpose of illustrating the nutritive value of pasture crops and species and their actual acre yields of minerals, proteins, and carbohydrates. The protein and minerals contained in forage materials are probably a more rational basis for acre-yield estimations than are dry matter determinations. A number of pasture species have been used for experimental farm pastures at Urbana, Illinois. The Agronomy and Animal Husbandry Departments of the University of Illinois have cooperated in obtaining data from 5- and 10-acre fields of grasses and legumes used for pasturing beef cattle and sheep. In this paper the yields and chemical composition of Reed canary grass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), orchard grass (*Dactylis glomerata*), and smooth brome grass (*Bromus inermis*) are presented and some comparisons made.

Trends in consumption of brome grass, Reed canary grass, Kentucky bluegrass and orchard grass seem to indicate that, while all are eaten readily by most types of livestock, brome grass is apparently somewhat more palatable. This statement should not be made without qualifications. There are times during the grazing season when animals indicate little preference among species, but not for sustained periods. When consumption records covering a number of years were examined, it was found that there was a marked and sustained seasonal increase in consumption of brome grass over that of other grasses. A higher ratio of consumption to production occurred with brome grass than the other species. Undoubtedly the stage and rapidity of growth, chemical composition, seasonal effects, and many other factors are responsible for apparent differences in palatability. The term palatability expresses the relative taste of materials as indicated by animal preference, although that which may be palatable to one animal may not be acceptable to another of the same type.

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