Summary and Prospects

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The western range is a vast area characterized by low precipitation and a wide diversity of species, rainfall patterns, soils, climates, seasons of use, and management practices. It is 20 times the size of Iowa; if intensive range improvement practices were applied to 14.6 million ha/year (36 million acres) it would take 20 years to cover the area once. We know of no improvement practices now, which if applied once, will assure maximum production for 20 years. Productivity varies from essentially nothing to more than 1,300 kg (3,000 lb) air-dry forage per acre per year. Some of the species present are very valuable as forage. Quite a number are not grazed, and some are poisonous.

Range forage has good nutritional properties when young and growing, declining when mature to serious nutritional deficiencies that dictate use of supplements. The grazing animal has preferences and may refuse to eat or fail to gain if forced to eat some all-too-prevalent components of the forage crop.

Poisonous plants are distributed throughout the western range and you have learned that they are important not only because of animal deaths, but for the less-obvious losses inflicted on animals that do poorly, but do not die. I think you were impressed by Dr. Binns’ report of some of the specific effects of poisoning and by the research involved.

Weeds and brush infest half our rangelands and cost the range livestock industry a quarter billion dollars a year.

Most of the western range is producing substantially below its potential and many millions of hectares have lost the desirable forage species they once had. This has resulted primarily from (i) improper grazing and also from (ii) brush encroachment and (iii) devastating drought. Plant succession on arid rangelands can sometimes proceed so slowly that change cannot readily be determined. Piemeisel (1945)