and other lands of this nature. Fourwing saltbush has been broadcast seeded on oil pads in West Texas, and over a one-year period, the value of the land in these test sites increased for grazing immensely.

Fourwing saltbush can be planted in a variety of fashions, but planting it by broadcast or in furrows has proven to be the most effective. The shrub, does not, however, grow well when seeded in a grass mixture. The young seedlings are not competitive until firmly established.

In conclusion, it can be said that fourwing saltbush has many assets. A few are adaptability, high nutritional quality, high carrying capacity, being an evergreen, and palatability for livestock species. The plant also reduces supplemental feeding and can be used to reclaim disturbed sites to a useful level of productivity. As one can see from these many attributes, fourwing saltbush can be extremely valuable as an emerging hero for West Texas ranching.

**New Rangeland Research Areas in Oregon**

Sarah E. Greene

The Bureau of Land Management, U.S. Department of the Interior, recently established 13 Research Natural Areas (RNA's) east of the Cascade Range in Oregon. These areas provide outstanding opportunities for rangeland research and education. They will give land managers and researchers baseline knowledge of environmental and biological features of the various rangeland communities represented, an important prerequisite to basic and applied research. The Research Natural Areas are generally larger than 200 acres—big enough to reduce the effects of outside influences such as roads, grazing, and herbicide spraying, and to provide an adequate area for research sampling.

Jointly supported by the Forest Service; Bureau of Land Management, Fish and Wildlife Service, and National Park Service; U.S. Department of Energy; and U.S. Department of Defense. The above agencies, along with the two states' natural area programs and privately funded Nature Conservation, are cooperating in establishing a comprehensive system of natural areas representative of the diverse ecological environment in the Pacific Northwest. This ecological diversity is described as cell or element needs—specific plant communities or aquatic systems.

As of January 1984 there are 96 Federal Research Natural Areas in Oregon and Washington.¹ Research Natural Areas, as the name suggests, are areas set aside and maintained in their natural condition (ecological condition that has developed).

¹A partial list and a location map of established RNA's in Oregon, Washington, and Idaho can be found in "Atlas of the Pacific Northwest," by Richard M. Highsmith, Jr., and A. Jon Kimering, 1979, Oregon State University Press, Corvallis, Oregon. "Federal Research Natural Areas in Oregon and Washington."² by Jerry F. Franklin et al., 1972, USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon, describes vegetation, soils geology, and animals on 47 RNA's; supplements to this guidebook describing 15 more RNA's are available from Sarah Greene, Research Natural Area Scientist, 3200 Jefferson Way, Corvallis, Oregon.

The USDA Forest Service established the first RNA in 1927, the Santa Catalina Research Natural Area, near Tucson, Ariz. In Oregon and Washington, the RNA program is jointly supported by the Forest Service; Bureau of Land Management, Fish and Wildlife Service, and National Park Service; U.S. Department of Energy; and U.S. Department of Defense. The above agencies, along with the two states' natural area programs and privately funded Nature Conservation, are cooperating in establishing a comprehensive system of natural areas representative of the diverse ecological environment in the Pacific Northwest. This ecological diversity is described as cell or element needs—specific plant communities or aquatic systems.

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VieWPOINT: Winter Grazing

Hugh Barrett

This is with reference to the article "Historical Aspects of Winter Grazing" by James Young and Raymond Evans, Rangelands 6:206-209 1984. The authors did a good job of warning us of the hazards of winter grazing. Unfortunately, the perspective they offer on the subject was very limited and not what I would call illuminating.

Winter grazing on native or seeded ranges, where weather and resources permit, can have considerable economic and environmental benefits. Nowadays the herd loss in Ruby Valley could have been predicted, snow depths and its tendency to crust being what they are in that area. The decision to graze open range in winter must take into account snow depths, snowfall frequency and the duration of the snowpack. These factors, as we all know, vary considerably by area.

There is great potential for winter range use if we look at specific areas in the northwest. Take for example the Lovelock, Fallon and Yerington areas of western Nevada. Here the duration of snow pack may be relatively long but snow depth is normally small. A haystack, however, is certainly recommended. Hay can be purchased well in advance of need during the time of year when prices are down. Emergency or panic buying is unnecessary. The Boardman area of north central Oregon and the Columbia Basin of Washington are ideally suited to winter grazing. Elevations range from about 800 to 2,000 feet, winters are open and relatively mild and site productivity is high. Once again, an emergency hay supply is good business.

The authors very wisely reminded us to consider the need to reserve forage for winter use in spring and summer grazing plans. But let's not overlook opportunities for bringing irrigated pasture or high elevation ranges into the picture.

The article's emphasis seemed, with exception of basin wildrye, to be seeded wheatgrass. Don't underestimate the ability of bluebunch wheatgrass or needle-and-thread to provide ample, high energy feed. The opportunities to improve range condition and increase productivity, the positive effects on animal health and production and economic benefits to the operator are substantial when conditions are right.

Please don't slam the door on winter grazing because of past mistakes. Learn and go on.