Editorial
For Further Improvement in Range Plants

A short time ago someone asked me whether much time, effort, or money could justifiably be spent in developing forage plants for western ranges. He was considering the question from a national point of view and was undoubtedly making comparisons between range and agricultural land and between the West and other parts of the country.

This question concerns every member of the Society, whether he be in research or other professional work, a student, a rancher, or engaged in commercial enterprises related to range management. Much progress in developing new range plants has been made in the past two decades. It was pioneering work and only a small beginning has been made. Progress in such work is necessarily slow, but members of the Society can carry it forward to great achievement. Most of the new plants have been used to reseed range land that was plowed, used to raise some grain and abandoned, and to reseed depleted and eroded areas.

Range reseeding is recognized as one of the supplemental practices in range management. Yet, a large number of recorded successful range management plans on private and public lands show that the reseeded acreage was the key used to put the plan into effect.

Exotic plants from foreign lands have, to date, been used most extensively for range reseeding. Most of them came from one large collection made in the early thirties. The explorers in this expedition were the first to have as their aim the gathering of material specifically for western range and farm lands. The collection was rich in germ plasm developed in another part of the world, where conditions of eroded soil, severe climate, and heavy grazing make stringent demands on range plants. Explorers can no longer visit these areas to obtain materials.

This collection of foreign plants was screened and studied by men who fortunately had as a primary objective the use of plants on range lands. A system was devised to distribute the most promising to all range technicians. The plants were then studied in the field for several years by groups of trained plant men and range management specialists. As a result, several introduced plants are in use and are making a real contribution to range management. This system of correlated work introduced more new plants in recent years than had been adapted to range use in the previous 50 years.

Explorations to other foreign countries have been made during the past few years and materials have regularly been obtained from English-speaking countries.

A forage plant from foreign lands has a mystic appeal, and this made many people overlook a wealth of valuable materials in our own native grasslands. The native plants have survived despite drought, low fertility, fire and grazing pressure. A few men, with a need for better range plants and conscious of the possibility of improving native materials, did discover and put superior varieties into use. These plants are now on the commercial markets. Surprising to some, but entirely reasonable, is the generally superior performance of improved native grass over introduced material when a series of drought years or other adverse conditions occur in the range area. This was repeatedly observed by the groups of men who examined range seedings.

A great advance in reseeding work is the recognition that has come to the need for using the best possible cultural practices when preparing land for reseeding. The quick and easy methods for getting seed on the land have been discarded. Many dollars were expended for such methods with little return. Today, the rancher or land manager "farms the land" as intensively as possible to get a good seeded. More important still was the systematic method devised for developing machinery to do the reseeding job. In the thirties and early forties, everyone was creating devices that could be used on range land where ordinary farm machinery failed.
But real progress was made when a centralized shop, manned by competent engineers, was set up to test machines and develop improvements. Everyone benefited from this cooperation that had the treatment of range lands as its objective.

Range managers have learned during the past decade that the best sites on the ranch or range should be reseeded. Here the new plants with special uses have the best chance for good and consistent production. On such sites, new and better varieties can be afforded. Here, too, a better job of land preparation can be done.

Reseeding was looked upon as a possible panacea for improving poor ranges until the need for good land preparation and site selection was recognized. The most significant advance came with the realization that the seeded area must fit into the overall management plan for the ranch unit. Many early seedlings failed in this requirement. With this need firmly established, ranchers and range managers can select grasses with seasons of use or other special qualities that supplement the native ranges and thus shorten the time for improving the forage in the entire unit.

By carefully selecting the site and using good cultural techniques we are today able to fit the new range plants we have into a planned range improvement system. We must continue to have an organized system for bringing the plant science specialist, the equipment engineer, the range manager and the ranch operator into constant understanding cooperation. This will help us to hold the advances we have made. But this is not enough.

The science of range management requires the efforts of plant breeders to further improve forage production. But the men who do such work must also be trained in the science of range management. Their job will not yield quick returns. The objectives will be different from those of the breeder of crop plants. The plants they develop must give good production for many years, be able to withstand extreme climatic fluctuations, be adapted to variations in the soil found in one range unit, and be able to survive without the benefit of the culture that is given on farm lands. When men undertake this job they will need understanding support from ranchers and range managers. The work of a few men with the improvement of range plants in mind made noteworthy progress. One group of highly trained plant breeders recently said: “Without the understanding guidance of men with experience in the range field and with the means for getting the material we develop into the field, we could not progress in this work.”

There are many otherwise excellent forage plants that might be used in range work except for some characteristic that makes them hard to handle in the field. Some are slow to germinate, some lack seedling vigor, others are poor seed producers, etc. The faults of several of these could undoubtedly be corrected. Many of them are native plants with recognized forage value. When they are improved, it is not impossible that reseeding for greater and more consistent yields could be extended beyond the rather limited good sites as we recognize them today.

The answer to the query “Can we afford to spend time, effort and money to develop range plants for the Western States?” can be found in the progress made in the brief span of 20 years. This has been accomplished with only a few things to begin with, but with an objective, with cooperation among the workers in this field and with encouragement from Society members. Only a beginning has been made. The extensive areas of the western ranges warrant attention to methods that may yield small but important per-acre increases in production. The total gain would be large. As the land improves under modern range management, it will be ready to support better forages than we have today.—A. L. Hafenrichter, Soil Conservation Service, Portland, Oregon.