

Return of Abandoned Fields To Forage Production Can Be Hastened by Reseeding

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The favorable climate and natural beauty of the ponderosa pine zone throughout Colorado led to intensive settlement of most of the 4 million acres which it occupies. Along with settlement came agriculture and cultivation. The better lands were used for the production of potatoes, lettuce, grain and other crops adapted to the climate or needs of the settlers.

The soils were highly productive when first placed in cultivation, if climatic factors were favorable, but they were also easily eroded and soon lost their fertility. These factors coupled with droughts and poor market conditions in the 1930's caused many to abandon farming as their chief source of income and to rely more on the production of livestock. As a result many thousands of acres of formerly cultivated lands have been abandoned and are now reverting to native cover.

Artificial reseeded, on the other hand, will, if successful, produce a satisfactory stand of forage in from two to three years.

Selection of Species

The selection of species with which to reseed an area is one of the most important items to be considered in any attempt to restore a forage cover. No species should be used for extensive planting that has not been proved adaptable to the locality. In the ponderosa pine zone of Colorado, crested wheatgrass has been a successful species for reseeded. It begins growth early in the spring and furnishes green forage before the native plants are ready for use.

During the summer it becomes dry and coarse and loses some of its palatability, but in the fall if moisture is available it produces abundant regrowth and again furnishes green forage after the native plants have dried. Crested wheatgrass is also suitable for hay, and many ranchers have found it more desirable for this

purpose than the annual crop of cultivated oat hay.

Smooth brome is another grass widely used for artificial reseeding in mountain areas. It does not start growth as early as crested wheatgrass nor does it produce as much regrowth, but it does furnish abundant forage, is suitable for either summer or winter grazing, and makes good hay.

Sweet clover is well adapted to the reseeding of abandoned cultivated lands. It grows well even on the poorest sites. It is a legume and therefore serves the dual purpose of enriching the soil and furnishing additional protein to supplement the grass forage. This species is usually more satisfactory if sown in mixture with grasses. If so used and the growth is cut for hay at the proper time, the presence of the sweet clover greatly improves the quality of the hay.

Time and Methods of Seeding

Abandoned fields should be reseeded as soon as possible after the last crop is harvested. Seeding directly in the stubble is best. The longer the field is left idle the greater will be the competition from weeds and the less chance the reseeded species will have to survive.

If the area has been idle several years, normal cultural operations to kill the germinating weed seeds will prove profitable. Often treatment of weedy fields with a spike tooth harrow is sufficient, but in other cases disking or plowing may be necessary. When this treatment is required, a preparatory crop of small grain, such as oats, should be grown first and the area seeded to grasses the following year.

In the mountain areas early spring sowing, as soon as the soil can be worked, has given best results; but late fall seeding has also been satisfactory. Drilling the seed from $\frac{1}{2}$ to 1 inch deep is preferred, but broadcast sowing followed by dragging with a spike tooth harrow has been used with occasional success.

Requirements for Reseeding

Many of the failures in past reseeding trials can be attributed to carelessness or the failure to realize that the seeding of grasses needs essentially the same care and attention that is given the planting of cultivated grains. Grass seed is not a miracle seed that can be cast care-



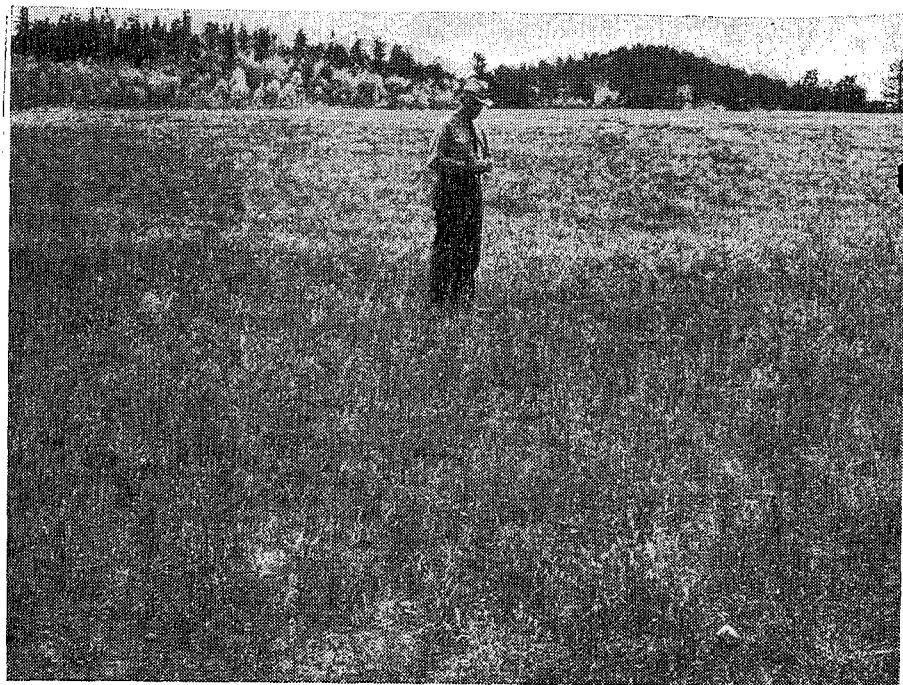
THEY LIKE CRESTED WHEATGRASS. y On the Harvey Harris ranch in Logan county these neighbors are inspecting a new seeding of crested wheatgrass made on sandy soil.

lessly upon the ground with the expectation of bounteous harvests to come.

The following requirements are necessary for successful reseedling:

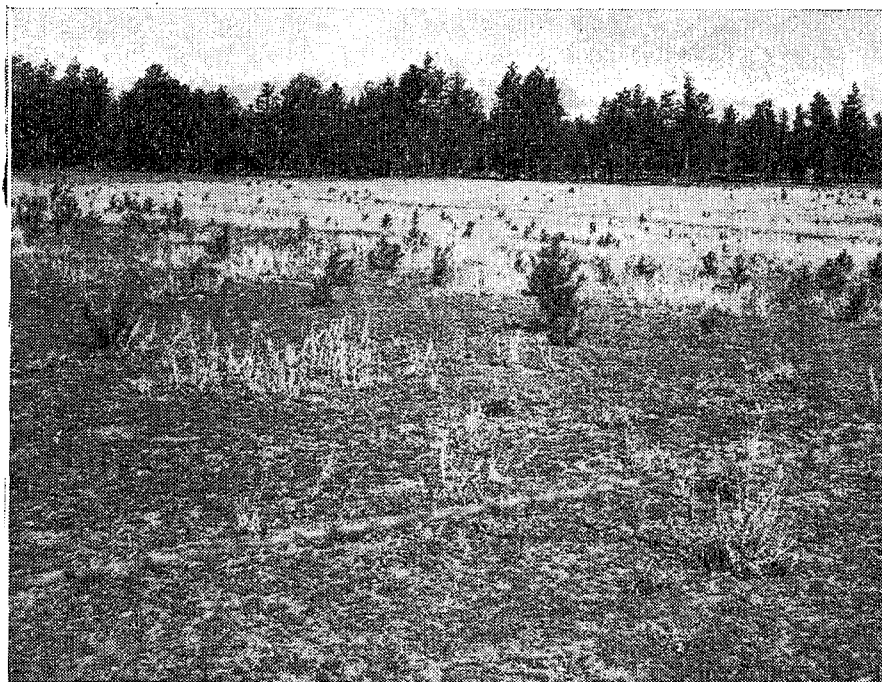
1. The proper amount of good, clean, viable seed of a species adapted to the locality.
2. A good firm seedbed reasonably free of competition from other plants.
3. Careful planting and covering of the seed to desirable depths for proper germination.
4. Sufficient moisture to cause germination.
5. Favorable climatic conditions following germination.

County agricultural agents can give helpful and practical advice in planning for reseedling. After the best species and methods have been determined, the fields reseeded and a stand secured, the area must be managed properly to insure establishment and continuation of the stand. Usually no grazing of reseeded fields should be permitted during the first year, but light use during the second year, preferably in the late fall, will not be injurious in most cases. Thereafter proper management, principally the avoidance of too heavy use, will maintain the stand in a productive condition.



Left: A young stand of crested wheatgrass on a field previously used to produce oat hay. The operator believes the hay yields from the crested wheatgrass will be as great as from the oats and that in addition he may get some fall grazing from the regrowth.

Right: An abandoned field heavily grazed in connection with adjoining



ing native pasture. Fringed sagebrush and trailing fleabane are the principal species present and will remain as such until the grazing management is changed. This is one of the steps abandoned land must go through in long-time natural revegetation if it is not artificially reseeded as suggested in the accompanying report on reseedling.