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Rebuilding Wheat Lands

With Grasses and Legumes



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Rebuilding Wheat Lands with Grasses and Legumes

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Land use problems in the wheat area of eastern Washington are complex and, in some cases, difficult to solve. Intimate knowledge of crops and methods of procedure are necessary to effect important changes. Farmers must approach these problems carefully and with all the information that is at hand.

First Land to Go Out of Wheat

Farms or fields that show the greatest "wear" from continuous wheat and summer fallow cropping should be considered first in a land improvement plan. Such lands are especially in line for permanent seedings of grasses and legumes.

There is a great variety of conditions with which to deal and some are difficult. Moisture and soil affect the problem tremendously. Careful selection of crops and exact methods of procedure are necessary to be successful.

There are hill tops and steep slopes that need first attention. There are fields that have been in wheat so long that they must have a change. There are lands that no longer pay the cost of growing wheat and they must be brought back to profitable production. These are some of the lands that need to be considered first in a rebuilding program.

The Purpose of Grass and Legumes

The purpose of grass and legume seedings is to return to the soil organic material in order to restore the humus that has been destroyed by too much wheat and fallow. Erosion must be checked. More permanent crops, with less fallowing, will accomplish these results. Wherever conditions permit, a legume crop should be used in connection with grass to increase soil nitrogen.

Preparing the Land for Seeding

Preparation of a seed bed for both legumes and grasses is different than for wheat. The surface soil must be made very fine and then well-packed. If the top soil is at all loose a roller is needed in getting the seed bed in condition.

Grasses and Legumes Best Suited

Several grasses may be considered such as: crested wheat, slender wheat, smooth brome, mountain brome, orchard grass; and to a lesser extent grasses suited to situations where there is more than average moisture. For such, timothy, meadow fescue, red top and the blue grasses might be suited.

As to the legumes, sweet clover and alfalfa are outstanding. In general where both are suited, it is advisable to use grasses and legumes in mixtures. In low rainfall areas, legumes are not suited and dry land grasses will have to be seeded alone.

When And How To Sow

In the area of lower rainfall grasses should be sown in the fall. Spring sowing is unsafe.

In sections where there is good moisture, grasses can be sown safely in the spring, as well as in the fall.

Where legumes can be grown, they should be sown in the spring. Legumes, in the early stages of growth, cannot endure as much hardship as the grasses and for that reason fall seeding is not advisable.

Since all of these crops have small seeds they must not be covered deeply. An inch or less of covering in firm soil should be best.

It is customary to sow, both broadcast and in drills. Drilling should be given the preference. Drilled seed is usually assured a uniform covering which is not the case in broadcast seeding. Drilling requires less seed for a full stand than is needed for broadcast sowing.

Amount of Seed to Use

It is not possible to give absolute rates of seeding. The purpose of the crop, soil type and moisture conditions have much to do with the amount of seed that is required. Wherever possible a mixture of legumes and grasses should be used. This further influences seeding rates.

There are some general recommendations that should prove helpful. The following acre rates will, on the average, prove satisfactory.

Crested Wheat Grass	10-12 Pounds
Slender Wheat Grass	12-15 Pounds
Smooth and Mountain Brome Grasses	12-15 Pounds
Alfalfa	10 Pounds
Sweet Clover	10 Pounds
Combination of Alfalfa and Grasses ($\frac{1}{3}$ alfalfa, $\frac{2}{3}$ grasses)	15 Pounds

When drilled in rows proportionate amounts of seed will be determined by the distance between rows.

Where seedings are made for erosion control, and sometimes for permanent pastures, heavier amounts of seed may be required. Two mixtures are here included which are recommended by workers in charge of erosion control:

I Smooth Brome Grass	6 pounds
Crested Wheat Grass	4 pounds
Alfalfa	5 pounds
Total	15 pounds

II Smooth Brome Grass	6 pounds
Orchard Grass	7 pounds
Alfalfa	5 pounds
Total	18 pounds

In either case the amount is required to sow one acre.

Crops Grown for Seed

Where any of these crops are grown for seed, it is best to sow at a somewhat reduced rate. Seed drilled in rows some distance apart has advantage over full seeding. In seed production it is necessary to use clean land and control weeds. All weeds should be removed before harvest to insure absolutely clean seed.