

Grain Raising Plus Stock Growing Offers Success for Dry Farm Region

WASHINGTON, Sept. 20.—The future of the dry lands of central Oregon lies in the combination of grain with stock, say specialists in the U. S. Department of Agriculture. The total area of this section is about 26,000,000 acres, of which probably 1,000,000 can be irrigated eventually. Of the remainder, approximately 4,000,000 acres can be dry farmed, and the rest fitted only for range. Under these circumstances, says a new publication of the U. S. Department of Agriculture, Farmers' Bulletin 800, it is probable that the day of the small stockman-farmer in this section is at hand. The ranges must be brought under control so that they can not be destroyed by overgrazing and in connection with some system of control or rotation grazing, dry farming must be employed to grow grain for the winter feeding, and the finishing of stock, if this is done, central Oregon should produce many times as much wealth as it has in the past.

As the average annual rainfall in this section is about 11 inches, which usually is sufficient to produce crops on good, well-farmed soil, the principal drawback to crop production is not lack of moisture but the frequency of summer frosts. The frost-free period is seldom more than 40 to 50 days. Under these conditions, it has been found that winter wheat is the best yielding grain crop on the soils adapted to its culture. Rye, oats and barley follow in the order named. From the standpoint of yield and value when cut for hay, however, rye must be placed before wheat.

Winter wheat is particularly adapted to the valley silt loams and the plateau fine sandy loams but only in localities where snow lies on the ground throughout the winter and where frosts do not occur too regularly in late June and July. Experience has shown that it is not profitable to grow wheat on the same area two years in succession. Some rotation should be adopted which allows the land a year of fallow between wheat crops. This is true of spring wheat as well as winter. At the Harney Experiment Station, for instance, spring wheat grown for four years continuously yielded on an average 6.5 bushels per acre, which meant it was estimated a net loss of \$1.55 a year. When the same land was summer fallowed every second year the average crop was 16.5 bushels, which meant making all the necessary allowances, a net gain of \$2.57 per acre. On a 326-acre farm this would mean that the yields from continuous cropping would bring the farmer \$24 less than it cost him to produce the crop. On the other hand, if he cropped half his land each year and allowed the other half to lie in fallow, his returns would be \$411

over the cost of production. On this basis, therefore, there is a difference of \$929 a year in favor of summer fallow.

This, it may be said, applies equally to the other important crops—rye, oats and barley. Rye is today the principal crop grown on the dry farming lands of central Oregon, but wheat may yet outrank it. Winter rye is the only type now grown, but it frequently is sown in early spring, and under those circumstances, will succeed on nearly all soils and under nearly all climatic conditions in cultivated crops, and where any grain crop will succeed. Delay of one or two weeks, however in seeding often results in failure. When sown in the fall, winter rye is adapted particularly to the valley silt loams and to the plateau fine sandy loams where there is usually a winter covering of snow. For feeding purposes, the value of rye grain is probably not as great as that of wheat, barley or oats, but, nevertheless, it usually sells on the market for about the same price per pound as wheat. As a hay crop for wintering stock from the range, it is worth to the feeder as much as \$7 or \$8 a ton.

In the production of pounds of grain per acre, oats may be expected to rank second to wheat, under average conditions upon fallowed land. As a market crop or as a feed crop for fattening meat animals, however, oats do not have as high a feed value as wheat. Winter oats will not survive the ordinary winter, and spring oats are best adapted to the valley silt loams. An average yield of about 20 bushels per acre may be expected on summer fallowed land.

Barley, says the bulletin, is probably less adapted to central Oregon dry farming lands than wheat, oats or rye. It does very well where the soil is usually quite moist and in seasons of abnormally heavy summer rainfall. Barley, like oats, should in general be grown only for feeding on the farms where produced.

As has been pointed out, it is not profitable to grow any of these grains consecutively on the same land. Some rotation, therefore, is necessary to profitable returns. The simplest one is that in which a grain crop is followed by a year of fallow. This plan, however, does nothing to maintain the fertility of the soil and, where possible, it is advisable for this reason to include nitrogen gathering crops like peas and sweet clover. Alfalfa can not be included in a short rotation because it should be kept on the land for several years once a stand has been established.

A three-year rotation which has certain advantages consists of summer fallowing one-third of the land

each year, cropping it to grain the following year, and sowing some other crop on the stubble the following spring. As the stubble land may be double diked, this scheme makes plowing necessary only once in three years. On the other hand, few crops will make a profitable yield in average years if they follow a grain crop. Rye, field peas and possibly sweet clover, do best under these circumstances. Peas have the advantage of being not only a leguminous crop which adds nitrogen to the soil, but also a cultivated crop, and cultivation will help in the production of good yields of the grain crop that follows.

In planting any kind of grain it is important good seed should be selected. This must be of a variety which is adapted to the soil and climatic conditions of the region and which possesses earliness and hardi-

ness. A few additional cents per acre for good seed, says the bulletin, usually will be returned many times in the value of the crop. It is also very desirable to adopt the precaution of treating seed grain with a formaldehyde solution in order to make certain that it is free from smut. The usual strength of the solution is 45 gallons of water to 3 pound of 40 per cent formaldehyde. A full discussion of this treatment for grain smut is contained in Farmers' Bulletin 597, a copy of which may be obtained by applying to the Department of Agriculture, Washington, D. C. Care should be taken, it is said, that the formaldehyde be of standard strength such as is supplied in sealed bottles, and that the grain should not be allowed to become infected again after treatment by using sickles or drills which have not been disinfected with the formaldehyde.

Timely Information As to Pay and Requirements of United States Army

Continued from page 14.

There is no provision at present for parcel-post service between our forces in Europe and the United States or its possessions.

Private telegrams to be cabled to members of the American Expeditionary Force in Europe will be addressed "Amex-force, London," with the addressee's name and the official designation of the unit to which he belongs appearing as the first words of the text.

Under no circumstances should the location or station of a unit be designated in the address or body of a telegram.

Examples are given as follows: A telegram to Captain John H. Jones, Medical Corps, United States Army Base Hospital No. 10, American Expeditionary Forces, would be in the following form:

Amexforce, London,
John H. Jones, Base Hospital
Number 10.

Have followed your instructions,
MARY JONES.
Or, for Private H. K. Smith, Company K, Forty-seventh United States Infantry.

Amexforce, London,
John H. Jones, Base Hospital
No. 10, American Expeditionary Forces,
will not change address.

JANE SMITH.
To comply with European censorship regulations all messages must be written in plain language (English or French), or in an international code, and must be intelligible to the censors. The use of two codes or languages or of combinations of code and plain language in the same message is forbidden. Code language may be used only in full-rate messages.

Codes authorized by the British censorship are:

A. B. C. 6th; Scott's 10th; Western Union; Laiber's; Bentley's complete

Phrase Code (not including the oil and mineral supplements); Brownhall's Imperial; Combination Code; rubber edition; Myers' Atlantic Cotton Code, thirty-ninth edition; Riverside Code, fifth edition.

In case of a code message, the name of the code must be designated when the message is filed.

Every telegraph message must be signed. The surname alone may be used, but such a signature as "John," "Mary," "Mother," etc., will not be passed.

Attention is called to the fact that there are three classes of service available—full rate, deferred rate, and week end rate.

It is the intention of the war department to detail an officer specially to care for army mail matters. The Regular Army.

184 Men needed. About 15,000 recruits were needed on July 20 for the regular army in the various

branches, as indicated in paragraph 186. A considerable number of provisional second lieutenants are also required. (See paragraph 187 and following.)

185. Avenues for entering the army. Officers for the regular army are graduates from the West Point military academy or those who have passed examination for provisional second lieutenant (see paragraph 187 and following), or such reserve officers as may be assigned. The enlisted men of the regular army are volunteers or those assigned from the selective draft. (See paragraph 184 and following.)

Enlistments on or after May 15 are for the period of the emergency, and it is the policy of the war department to treat enlistments from April 1, 1917, on the same basis.

186. The regiments added to the regular army to bring it up to war strength are—

Engineers, 4 regiments, organization completed.
Cavalry, 8 regiments, organization completed.

Field Artillery, 12 regiments, organization completed.
Coast artillery, 19,000 men, list full.

Infantry, 27 regiments (1,949 each), organization partly completed. Several thousand recruits were required for the Signal Corps, (including aviation), quartermaster corps, and medical department (sanitary forces). These lists have been filled except for specially qualified men.

In addition to the recruits needed to fill the 27 new infantry regiments about 23,000 men were required to bring the 27 infantry regiments authorized for peace times up to the war footing.

Recruits over the 300,000 regular forces are needed to fill vacancies in order that the war strength may be maintained. Men may consequently enlist in the regular army even after the authorized strength has been reached.

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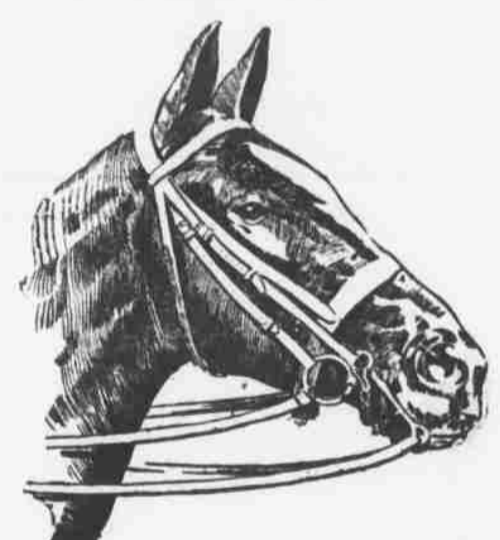
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Phrase Code (not including the oil and mineral supplements); Brownhall's Imperial; Combination Code; rubber edition; Myers' Atlantic Cotton Code, thirty-ninth edition; Riverside Code, fifth edition.


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