

In the germination results as given for the wheats it will be noted that all except two are above 14.5 per cent. In the case of Chirka it is only 84.5 per cent. Just why this should be cannot be imagined, as the Chirka wheat was seeded at the same time as the majority of the wheats, and was cut when fully matured on September 6th. The Gaigalos shows a germination of 88.5. This in itself is not by any means exceptionally low, but may be accounted for by the fact that the Gaigalos was received from Montana very late and was only seeded on May 12th. This, no doubt, partially accounts for the comparatively low germination test. If it had been seeded at the same time as the rest of the wheats, it is anticipated that the Gaigalos would have had a vitality that would be just as high as the other varieties. This same variety has given very superior results in the dry-farm tests in Northern Montana. With the exception of these two varieties, the germination of the wheats is very creditable indeed.

All of the oats are over 17 per cent. germination, which is very exceptional. Three of the four barleys are over 17 per cent. in vitality. The Snymra, which is only 86, was received from Montana late in the spring, and consequently has not had an equal chance with the rest of the barleys. The two varieties of peas have respectively a 181 and 14.5 per cent. germination, which is good; while the Premost flax with 100 per cent. and the fall rye with 15.5 per cent. are very excellent germination records.

TAME GRASSES AND LEGUMES.

It will be remembered that $\frac{1}{4}$ -acre plots were seeded to a variety of tame grasses and legumes, so that we might compare same in the matter of hay production. The following table will give the results obtained from the various plots;—

Table 27.—Results of Tame Grass and Legume Tests.

Variety.	Date seeded.	Date cut.	Size of Plot.	Yield per Plot.	Yield per Acre.
Timothy	April 18, 1914	July 16, 1915	Acre.	lb.	o.b.
Brome	" 21, "	" 7, "	$\frac{1}{4}$	2,325	9,300
Red-top	" 21, "	" 10, "	$\frac{1}{4}$	2,150	8,600
Mammoth red clover	" 18, "	" 10, "	$\frac{1}{4}$	1,534	6,136
Common red clover	" 18, "	" 10, "	$\frac{1}{4}$	1,237	4,950
Alsike	" 18, "	" 7, "	$\frac{1}{4}$	801	3,204
Alfalfa	" 18, "	" 10, "	$\frac{1}{4}$	1,071	4,284
			$\frac{1}{4}$	631	2,524

Most of the results for the various grasses and legumes are really remarkable, and are in fact much larger than anticipated. The above results are somewhat abnormal because of the fact that they are the first crop produced on land that was broken in 1913. This land was broken and thoroughly cultivated in 1913 and the grass-plots sown in the spring of 1914. On account of the grasshopper plague in 1914 the most of these plots were eaten down to the ground. They did not therefore grow very well, and consequently very little of the available plant-food in the soil was called for. Thus the crop of 1915, aided by opportune showers during the summer, found very congenial conditions for growth, and with the large amount of available plant-food ready to be taken up produced the large crops noted above. There was nothing abnormal in the method that was followed, either to cultivate for or to seed the grass and legume crops, but the grasshoppers prevented some of them growing in 1914, which saved both plant-food and moisture for the 1915 crop. We feel it necessary to make the above explanation to account for the very large yields recorded in the above table; and while we confidently expect to have good yields from our grass and legume plots next year, yet it would be beyond reason to expect yields comparable with the above. The yield from the timothy-plot is very exceptional for dry-land work, and it is rather surprising to see it larger than the brome-grass yield, which is also large. The red-top occupies its relative place in this list as a producer, as compared with timothy and brome-grass. Of the legumes, the mammoth red clover produced almost $2\frac{1}{2}$ tons per acre, which is very good indeed; the common red clover $1\frac{1}{2}$ tons, while the alsike and alfalfa produced slightly over $1\frac{1}{4}$ tons. The legume results are regarded as somewhat normal yields because of the fact that,