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VALUE OF RYE IN HOG FEEDING

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The production of rye has increased materially in Western Canada during the past few years. Being a crop which gives a more satisfactory return than other cereals in districts of scant rainfall, the adverse moisture conditions of the past two or three years have turned the attention of many farmers to this crop. The Province of Alberta alone has a yield of approximately 8,000,000 bushels for 1923. On account of the comparatively poor return from the crop when marketed in its natural state, and in view of the fact that in many instances it is the only grain available for feeding purposes, the question in the minds of many farmers is: "Is rye a suitable hog feed, and if so, how does it compare with barley in feeding value?"

In order to obtain some information on these points with reference to Alberta grown grains, the Animal Husbandry Department of the University of Alberta conducted a test during the fall of 1923. Nine groups of seven pigs were finished on rye and barley, and these grains fed in conjunction with oats in varying proportions. This trial would be considered a short term test, running but twenty-nine days on seven of the lots, and forty-three days on two of the lots, but the results in the case of the pigs fed on barley and barley and oats agree so closely with figures obtained in previous trials, and with uniformity of individuals in all lots, the results should form a basis for appraising rye as a hog feed and comparing it with barley.

All of the grains used were of good quality, the oats grading 2 C.W., the barley 3 C.W., and the rye 3 C.W. free from ergot. The pigs in all lots were self-fed. Tankage was added to the grain of all groups at the rate of five pounds to ninety-five pounds of grain. Rye and barley were fed alone and with oats in the proportions of $\frac{2}{3}$, $\frac{1}{2}$ and $\frac{1}{3}$. An additional group was fed on equal parts of oats, barley and rye. The pigs fed on rye alone did not relish their feed, practically refusing to touch it for the first two days. They showed a tendency to root the grain from the self-feeder, necessitating careful

handling to avoid loss. The figures set forth in the attached table show that they consumed less feed per day than any of the other lots with the exception of those on the rye 1, oats 2, ration, made the lowest daily gains of any, and required the most feed for 100 pounds of gain of any of the groups on the test. Their grain requirement of 643.91 pounds is high as compared with the groups receiving oats in proportions of $\frac{1}{2}$ and $\frac{1}{3}$ of the ration. The addition of oats to the rye in these proportions increased the palatability of the ration and brought the grain requirement for 100 pounds of gain in line with that of the pigs on barley and barley and oats in similar proportions. When oats were added in the proportion of $\frac{2}{3}$ of the ration, the beneficial results of mixing were overcome, resulting in low daily gains and a high grain requirement for 100 pounds of gain. These pigs, along with those receiving rye alone, had to be held 14 days longer than the others in order to reach market weight.

The showing made by the pigs fed barley alone again points to the suitability of barley as a finishing feed for hogs. In contrast with rye, barley when fed alone is a palatable feed. The pigs in this group made high daily gains as compared with those on straight rye, and required the least grain for 100 pounds of gain of all the groups. When fed with oats in the proportions of $\frac{2}{3}$ and $\frac{1}{2}$ there was not a great difference as between the barley and the rye. The daily gains and the grain required for gain were very similar. When oats were added in the proportion of $\frac{1}{3}$ of the feed the gains were lowered and the grain requirement was much increased. The similarity of performance in the case of both rye and barley bears out what has been realized, that oats should not constitute more than one-half of the ration in finishing of pigs. The mixture of equal parts of rye, barley and oats proved to be one of the best mixtures used, requiring 460.84 pounds for 100 pounds of gain, as compared with 437.50 pounds in the case of barley alone and 458.57 pounds in the group fed barley 2 parts, oats 1 part.

While the results of this test are by no means conclusive, the following observations might safely be made: