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# Grain Feeding Opportunities and Problems in Oregon

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## SUMMARY

1. Oregon's grain-feeding industries generated about 100 million dollars of economic activity in 1961. It is possible for these industries utilizing grain resources and nearby markets to generate 346 million dollars of income--a gain of 246 million dollars.
2. Oregon's resources for producing meat can expand some in the next decade or so. An expansion of feeding will depend upon prices of livestock and poultry and upon the availability of feed grains, including wheat, at prices competitive with prices in other grain feeding areas. Grain prices, in turn, are likely to continue to depend considerably upon Federal grain programs.
3. The physical market opportunity for Oregon livestock production is very large based primarily upon the livestock product requirements of the California market. The extent to which Oregon takes advantage of this opportunity depends upon its economic ability to compete, especially cost-price relationships.
4. Feed grain usage in Oregon is calculated at about 700,000 tons in 1961. It could be at least twice this large if the state's meat production potential were achieved.
5. Feed and freight costs are important forces which affect Oregon's ability to expand profitable grain-feeding industries. Oregon grain feeders have not been able to supply pork to the Portland market as profitably as Midwest producers. This has been true primarily because differences in grain prices have not been offset by sufficiently higher pork prices or by costs of transporting pork to Oregon.
6. Oregon's entire economy would benefit from the development of a large, successful grain-feeding industry. Such a development would utilize resources more intensively and would provide additional jobs and investment opportunities. Hence, larger income would be created from this expanded activity.

## GRAIN-FEEDING OPPORTUNITIES AND PROBLEMS IN OREGON <sup>1/</sup>

Oregon and the Pacific Northwest have the resources, natural and human, to produce grains, livestock, and poultry efficiently.

Few parts of the United States have the advantages for wheat production possessed by some areas in the Pacific Northwest. In several areas there really is no alternative crop, although barley produces relatively well in some of them. The Region produces several times as much wheat each year as can be used for food within the Region, and more grains than can be fed profitably at current market prices. For fifty years grain prices, freight rate structure and distance to eastern markets have made volume sales to the Midwest and East virtually impossible. Likewise, shipment by water to eastern markets is economically impossible. With government assistance, large amounts of the Region's barley and wheat have been moved overseas, reducing regional market supplies and thereby strengthening prices.

Grain is a cash crop for some ranchers who want to sell large volumes of grain at "favorable" prices. Feed grains are a cost of doing business for livestock and poultry feeders who want to buy feed grains at prices "favorable" to them. These circumstances lead to an apparent conflict of interest--at least until the full situation is understood by all concerned.

Let us look at three methods of dealing with grain-feed-livestock problems.

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<sup>1/</sup> This report was prepared by staff in Animal Science, Poultry Science, Farm Crops and Agricultural Economics, Oregon State University.

1. Continue to support prices of wheat and feed grains at public expense through government programs, including P.L. 480.
2. Sell all grains on the free market essentially at feed prices, with no government support or export programs.
3. Break the wheat market into parts and sell some wheat for food at favorable prices, export at as favorable prices as possible, and feed the balance to livestock and poultry at feed grain prices.

The first two alternatives are not presently attractive to both grain producers and grain feeders in the Pacific Northwest.

The third method may or may not become operative depending upon the results of the referendum of wheat farmers to be held in 1963. This method attempts to reconcile the conflicting interests of grain growers and grain feeders. For the multiple price plan to operate effectively in Oregon, wheat for feed must be priced competitively with feed grains in other grain-feeding areas of the nation.

The first method is largely dependent on government subsidies. The export subsidy merits special attention because of its high public cost and its long-term effects upon United States agriculture, the agriculture of importing countries and exports from exporting countries. Wheat producers have been fortunate even though they have had to divert good wheat land to other uses. Without government subsidies during the last thirty years, grain prices would have been much lower than they have been. Grain land prices would not have increased to the extent they have.

Grain-feeding industries which help supply the growing population of the three Pacific Coast states with livestock and poultry products could provide a market for Pacific Northwest wheat, barley, and corn. Profitable grain production would not need to depend so heavily on government subsidies as in the past. Net returns to grain growers might be about the same as at present, and even larger in the long run, if more acres of grain were planted.

In the foreseeable future, grain-producing and grain-feeding industries in the Pacific Northwest will be considerably affected by government action. The interests of both grain producers and grain feeders in the Pacific Northwest warrant close cooperation of these two important segments of the Region's agriculture. These two groups have real, long-run, common interests of greater consequence than their apparent short-term, conflicting interest. Together they can help each other build a stable, sound industry--the kind each desires.

A number of questions have been raised about the present status and future of Oregon's grain-feeding industries. Unless one knows what government action is to be, forecasting is only a guess at best. But judgments must be made, so the balance of this report will be devoted to these questions using the best information and estimates presently available.

How much economic activity is presently generated in Oregon by the livestock and poultry feeding industries? 2/

1. The cattle-feeding industry in Oregon generated about 53 million dollars of economic activity in 1961. Of this amount, about 31 million dollars was paid to producers by Oregon packers for

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2/ These estimates represent economic activity generated through the retail level. Details are available from the Department of Agricultural Economics.

slaughter animals. Wages and salaries in packing plants were estimated at about 3.5 million dollars.

2. In 1961 Oregon producers received about 9.2 million dollars from hog sales. It is estimated that Oregon-grown hogs generated about 17 million dollars in economic activity at retail in Oregon during 1961.
3. Oregon farmers sold about 34.5 million pounds of turkeys in 1961 for approximately 6.6 million dollars. The value added by processing, wholesaling and retailing is estimated at 6.6 million dollars. The total economic activity generated by this industry was 13.2 million dollars in 1961.
4. About 49 million pounds of broilers (including a small amount of farm chicken) were sold from Oregon farms in 1961. Sales of these products generated an estimated 14.6 million dollars of income at retail in 1961.
5. It is estimated that the sale of fed lambs generated 2.7 million dollars of income at retail in Oregon in 1961.

How much economic activity could be generated by the livestock and poultry industries in Oregon?

1. In 1961 Oregon produced about 500,000 calves and 166,000 cull cows which could have been fed. Together they could have yielded 367 million pounds of grain-fed, dressed beef. This supply would have been twice as large as the amount of dressed beef consumed in Oregon that year. <sup>3/</sup> Had this occurred it would have been necessary to sell half of this dressed beef in other states.

3/ This estimate assumes that the cattle available as feeders are fed to 1,000-pound slaughter weights. The consumption estimate uses 100 pounds of beef consumed per capita for Oregon as compared to a national average of 88 pounds per capita.

2. Oregon's cattle feeding industry in 1961, if operated at its full potential production, would have generated approximately 251 million dollars at retail. This would be nearly five times as large as the actual income generated by the cattle-feeding industry in that year. The estimated value added from the feed lot through the retail level would have been 100 million dollars. Of this amount the meat packing industry would have contributed about one-third. Roughly 16.5 million dollars would have been paid in wages and salaries in Oregon packing plants--if full production potential had been achieved.
3. If Oregon's pork industry had produced enough meat to satisfy the state's 1961 market requirements of nearly 1 million 200-pound hogs, the pork industry would have generated about 62 million dollars at retail. Of this amount about 33 million dollars would have been paid producers for hogs--an amount about  $3\frac{1}{2}$  times actual receipts from hog marketings that year.
4. If Oregon produced enough broilers to satisfy the state's consumption in 1961, an additional 8 million dollars of income could have been generated through the retail level. This would mean a broiler industry of nearly 23 million dollars.

How large is the present market for Oregon livestock and poultry meat products? <sup>4/</sup>

1. In 1961 the Pacific Coast market (largely California) was short an estimated 1.5 million head of cattle. However, it is estimated

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<sup>4/</sup> Estimates of meat consumption are based on national per capita rates of consumption and population data for areas specified.



that Oregon in 1961 produced 128,000 more cattle and calves than were consumed in the state. The Pacific Northwest, in that year, produced an estimated 331,000 more cattle than were needed to meet its consumption requirements. These were sold mostly as feeders and stockers to beef producers in other states.

2. In pork production, Oregon had an estimated market deficit of about 632,000 head of 200-pound hogs in 1961. The Pacific Coast deficit in pork production for the same year was calculated at nearly 10 million head.
3. Probably about 350,000 more sheep and lambs were produced in Oregon in 1961 than were consumed in the state. However, the Pacific Coast states at that time had a market deficit of about 414,000 sheep and lambs, largely because of California's market needs.
4. Turkey production probably exceeded consumption in Oregon by about 767,000 birds in 1961. However, for the four states of Oregon, Washington, Idaho and Montana, the per capita production of turkeys is below the U.S. per capita rate of consumption. The Pacific Coast turkey market was in a surplus position in 1961 chiefly because of California, where production exceeded consumption by nearly 9 million birds.
5. Chicken and broiler production shows a deficit in Oregon as well as in all states in the western region.

How large could the market be by 1975?

1. Because of the deficit position of the beef and veal production-consumption ratio in California, the Pacific Coast market--largely California--shows a deficit, or market opportunity, for 2.2 million head of cattle and calves in 1965; and a 4.3 million deficit by 1975. <sup>5/</sup> This suggests a very large opportunity for Oregon producers.
2. The pork deficit will increase steadily to an estimated 15 million head in the Pacific Coast area by 1975. If Oregon is able to compete with other producing areas, this presents a substantial market opportunity for pork production in Oregon and the Pacific Northwest states.
3. The Pacific Coast deficit of sheep and lambs is estimated at about a million head by 1975. This would be an important market opportunity for sheep and lamb producers who can compete for this market.
4. Because of the heavy excess production of turkeys over consumption in California, the Pacific states are expected to continue in a surplus position through 1975.
5. The chicken and broiler deficit will continue to grow from 8.2 million birds in 1961 to 14.3 million birds in 1975 for Oregon alone. The Pacific Coast deficit is estimated at 350 million birds by 1975.

The above estimates suggest that there is a market opportunity in the Pacific States Region for most livestock products produced on Oregon

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<sup>5/</sup> This is based upon estimates of population growth and per capita consumption trends into the 1970's.

farms. The extent to which the area takes advantage of this opportunity depends upon how this opportunity compares with other alternatives and the area's economic ability to compete. Competition for this substantial market potential will be keen, particularly in California.

What land resources does Oregon have with which to produce meat?

1. During the period of 1949-59 there were approximately 1,700,000 acres devoted annually to grain production in Oregon. It is doubtful that there will be substantial growth in this grain base during the next decade. Recent trends have been toward fewer rather than more acres in grain (1.25 million acres in 1962).
2. Oregon's grain production per acre during the period of 1949-59 averaged .82 tons per acre. New technology, shifts in use and improving management could increase production to an average of .95 tons of grain per acre during the next ten years.
3. There is ample experimental evidence to indicate that oil crops such as soybeans, safflower and flax may become more important in the next ten years. If processing of these crops does develop, it will provide a valuable and less costly source of protein concentrate for the feeding industry. However, such oil crops will be competitive for grain acres.
4. Corn is the principal grain now used in Oregon poultry rations. Significant increases in Oregon's corn production during the 1960's seem unlikely. However, wheat can be substituted for corn as a poultry feed if competitively priced.

5. The total acres of range land available for grazing will continue to decline as recreation demands grow. Remaining range land used for grazing purposes will have greater future productive capacity as a result of improved technology. There are some 2 million acres available for potential improvement with high-producing, grass-legume mixtures.
6. It is doubtful that there will be much change in the total production of hay. Oregon harvested more than 1 million tons of alfalfa hay from 360,000 acres in 1961. Both acreage and tonnage were at an all-time high.

How much grain do these various types of animals use?

1. Approximately 167,000 tons of grain are presently used in Oregon beef production. In 1961 about 130,000 cattle were finished for beef in Oregon. Each of these represents approximately 2,500 pounds of grain, or a total of about 163,000 tons. There were also produced and slaughtered in the state some 44,000 cows which received very small amounts of grain (about 200 pounds per head) during their lifetime. This figure, although small on an individual basis, represents about 4,000 tons of grain.
2. If the 290,000 head of cattle slaughtered in Oregon in 1961 had all been produced in Oregon, the total grain consumed here would have been increased by 209,000 tons. This assumes the ratio of fed cattle to other cattle (largely cull cows) remained the same.

3. There are some 500,000 potential feeder (beef and dairy) calves produced in Oregon each year. If all of these were finished for market in this state, they would consume some 625,000 tons of grain.
4. Feed grain usage in 1961 for other livestock and poultry was estimated at 524,000 tons, consisting of poultry 204,000 tons; dairy cattle 180,000 tons; swine 103,000 tons; and sheep and lambs 37,000 tons.
5. Oregon's feed grain production, if wheat is excluded, is not currently large enough to support a greatly expanded grain-feeding industry. For example, it would take about 80 per cent of Oregon's recent annual production of barley, oats and corn to produce enough pork to equal our present consumption. This would leave little grain for other livestock and poultry feeding unless wheat were available at competitive feed grain prices.
6. Elimination of wheat as a feed grain severely restricts use of resources to produce livestock and poultry products in Oregon.

Are livestock and poultry feeding enterprises profitable?

It is not possible to answer this question adequately with available data and in view of economic and political uncertainties. However, the profitability of a feeding industry must consider the following:

(1) the cost of production in Oregon compared with production costs in competing areas in relation to livestock prices; (2) the demand for this livestock; and (3) factors that may affect the supply situation.

A study in progress by the Department of Agricultural Economics, Oregon State University, considers all three of these questions with special emphasis upon the pork industry since 1946. This study indicates that:

1. When large, efficient hog producers in Oregon were compared with hog producers of above average efficiency in the Midwest, it was apparent that physical input requirements (capital, labor and feed) were almost identical. Efficient Oregon hog producers were able to compete with midwestern hog farmers in the physical use of capital, labor and feed.
2. The major cost of production differential between the Midwest and Oregon stems from grain prices in the two areas. These price differentials vary considerably from year to year and may be greatly affected by government programs. Thus the basic problem confronting Oregon hog producers is one of wide and unstable differences between prices of grains here and in Midwest hog producing areas.
3. The disadvantage in Oregon arising from higher feed costs was not offset by higher prices or by costs of transporting hogs or pork from the Midwest. Using average feed cost differentials which prevailed during 1954-61 (which are lower than the 1946-61 averages) Oregon has not been able to compete satisfactorily with the major midwestern points if these areas ship dressed pork to this region. Generally, Oregon has been unable to compete with Nebraska if Nebraska shipped either live hogs or dressed meat. Considering the

feed cost differentials that existed during each year and the present freight rate structure, Nebraska farmers could have placed pork in Portland cheaper than Oregon farmers in 15 of the last 17 years.

4. The rapidly increasing Pacific Coast population promises a growth in the demand for pork and other red meats in this region that is encouraging to Oregon producers. A word of caution should be noted, however, in that pork consumption per person is likely to decline in the years ahead. Studies show that as incomes rise consumers actually buy less pork per person. In view of rising incomes, particularly in the Pacific Coast states, this significant characteristic of pork consumption should not be overlooked.
5. Close observation and first-hand knowledge of Oregon's existing grain-feeding enterprises suggest that their ability to survive has been contingent upon use of by-product feeds, complementary enterprises, superior management, efficient marketing and perhaps by accepting lower returns than were received by Midwest producers.