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Oregon's Agriculture Is Everybody's Business



Oregon's Agriculture Is Everybody's Business

In Oregon in 1963 . . .

* Processed value of
farm commodities
was
\$649,000,000.

* Farmers received
and spent
\$419,000,000

* Direct full-time
job equivalents
amounted to
93,000.

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AUTHOR: Gerald E. Korzan is professor of agricultural economics, Oregon State University.

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Robert Caldwell, graduate research assistant, spent several days gathering data and information related to specific products such as grass seeds, farm forestry products, and potatoes. The work he did so efficiently served as a basis for some of the values found in this report.

Liberal use has been made of United States Department of Agriculture, United States Department of Commerce, and other data, most of which has been made available from current files maintained by Mrs. Elvera C. Horrell, Extension agricultural economist. She has assisted in an important way by locating reference reports and checking the statistical contents of this report. The author developed the estimates of value added in processing to arrive at the totals presented herein.

Oregon's Agriculture Is Everybody's Business

GERALD E. KORZAN

Introduction

The food industry, in all its aspects, is for the most part efficient because businessmen, including farmers, make thousands of sensible decisions every day. Many of the decisions made by these businessmen have their roots in both technical and economic research. Some of this research is done by the industry itself and some by state and federal agencies. In any case, no problem is ever solved completely and for all time. There is, and must be, a ceaseless effort for better production, processing, and merchandising techniques to achieve more efficient distribution of food products.

Below is a summary by categories showing where and how thousands of Oregonians are employed:

	1963 average annual employment, Oregon
	<i>Number</i>
Working on farms and ranches	65,600 ¹
Processing and handling Oregon's agricultural production....	17,997
Providing agricultural equipment, supplies, services.....	5,162
Transporting food products and supplies	3,972
Exporting Oregon-produced farm commodities (waterborne)	475
TOTAL	93,206

The above figures are considered to be conservative estimates. Yet, they account for one-seventh of the gainfully employed people in Oregon. The impact of the food business goes much beyond providing employment to 93,000 people. These people, in turn, spend most of their incomes in Oregon, providing jobs in retailing, commerce, and the professions for many others. Retail and wholesale food distribution involving 15,000 to 16,000 persons is not included because these activities would prevail even though Oregon's farm plant was of little or no consequence in the state. Agriculture and its related industries hope to play an important role in providing new jobs in the years ahead so the economy of Oregon may continue to grow.

¹ Includes the farmer or rancher himself, unpaid family labor, and hired farm labor. This figure ranged from a low of 50,000 to a high of 110,000 during peak harvesting periods of fruits and vegetables. This includes only those persons 14 years of age and over. It is well known that thousands of children under 14 work each year harvesting agricultural products.

In addition to providing 93,000 jobs for our people rather directly, we are all concerned with this industry because food purchases took 19% of our income in 1963. However, food takes a smaller proportion of our income now than a few years ago. For example, in 1951 we spent 23.5% of our income for food. Again, this is true because research and education have provided the know-how for farmers and the technology used by decision-makers throughout the food production, processing, and marketing chain. This investment helps stretch everyone's income. We can help ourselves earn more in the years ahead by continuing to invest in research and education.

The body of this report shows in detail the values generated by producing and processing farm products in Oregon in 1963. Commodity group summaries such as livestock, dairy, vegetables, and fruits are shown, together with brief statements. The commodity groups are summarized into one set of totals.

In addition, this report shows estimates of the number of people employed in manufacturing and handling of farm equipment and supplies. Those in the performance of services are also included.

Finally, attention is given to developing figures showing the number of people employed in the transport of agricultural products and employment generated by export of Oregon-produced food and fiber.

Oregon's food processing industry employs many people.



Some Specific Conclusions

Do you know that:

- *** Oregon farmers and ranchers produce surplus feeder cattle that are fattened in other states. If economic conditions were "right," 150,000 to 200,000 of these cattle could be fattened here providing at least 700 new jobs.
- *** Improved pastures and range have played an important role in the growth rate of cattle numbers in Oregon which is ahead of the national average.
- *** Oregon dairymen produce one billion pounds of milk each year, more than a quarter of a ton for each of us. Processing and handling provided nearly 3,000 jobs.
- *** We are surplus producers of turkeys, and yet we produce only one-half of our broiler chickens.
- *** The production of turkey hatching eggs is a multimillion dollar industry in this state and its importance may increase.
- *** Oregon grain growers produced nearly 700,000 tons of wheat in 1963, enough to fill 23,000 railroad cars and enough to fatten all of Oregon's feeder cattle if at feed-grain prices. However, about 85% of this production was exported to foreign countries to be used as foods, creating much activity in transportation and port facilities.
- *** Oregon producers sold \$28,000,000 worth of feed crops (barley, hay, corn, and oats) but production was valued at \$73,000,000. This means that \$45,000,000 worth of feed was fed on farms where it was produced. Yet we are deficit producers of feed grains.
- *** Green beans are king in Oregon—worth \$46,000,000 when canned and frozen—enough to provide 50,000,000 people with all the beans they want.
- *** Oregon's vegetable production for processing (green beans, corn, peas, beets, and carrots) increased 32% in the last seven years.
- *** Oregon's vegetable and fruit industry created the equivalent of 1,700 new off-farm jobs in the last seven years.
- *** All of Oregon's vegetables and fruits and nuts were worth \$226,000,000 in 1963 when processed and ready for sale to wholesalers and retailers.
- *** Seed crops continue to increase in tonnage and value—worth \$33,000,000 when cleaned, graded, and sacked.
- *** Value of nursery and greenhouse products increased 62% in the last seven years—a \$20,000,000 industry in 1963.
- *** Value added in processing totaled \$230,000,000 for all Oregon farm production in 1963. Direct payroll was \$83,000,000; packaging materials cost \$62,000,000; and "other" accounted for \$85,000,000. The "other" category includes depreciation, repairs, power, heat, lights, water, telephone, office supplies, advertising, licenses, insurance, rent, taxes, interest, bad debts, and profit.

- *** This study shows that food processing provided direct payroll for average annual employment of about 18,000 persons. Much other employment results in the manufacture of packaging materials and in general plant and equipment maintenance and operations. Thousands of jobs are involved, but it is difficult to make an accurate estimate.
- *** Manufacture (in Oregon) of supplies needed in farm production and food processing, handling at wholesale and retail levels, plus performance of services, provided at least 5,000 Oregon jobs in 1963.
- *** Of the 26,000 persons employed in transportation in 1963, about 4,000 owed their jobs to the transport of agricultural commodities and supplies needed in farm production.
- *** The Commission of Public Docks, Portland, operates the largest dry cargo port on the west coast. In 1963, 82.5% of all out-bound tonnage consisted of agricultural commodities. It was estimated that 17% of all port tonnage was Oregon-produced farm commodities, providing employment for about 500 persons in 1963.

Cans and packaging materials to preserve and handle vegetables and fruits cost millions of dollars each year.



Summary: CASH RECEIPTS FROM MARKETINGS AND VALUE ADDED BY PROCESSING, BY COMMODITY GROUPS,
OREGON, 1963

Commodity groups	Income rec'd. by farmers ^b	Value added by processing ^a				Total F.O.B. value
		Payroll	Packaging materials	Other ^c	Total	
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
<i>Livestock products:</i>						
Meat animals	98,722,000	12,284,000	4,182,000	9,671,000	26,137,000	124,859,000
Dairy products	42,802,000	16,296,000	8,982,000	10,173,000	35,451,000	78,253,000
Poultry and eggs	33,315,000	4,845,000	2,470,000	3,554,000	10,869,000	44,184,000
Other livestock products.....	8,433,000	106,000	85,000	191,000	8,624,000
Total livestock	183,272,000	33,531,000	15,634,000	23,483,000	72,648,000	255,920,000
<i>Crops:</i>						
Grain and hay crops	72,252,000	940,000	1,534,000	2,474,000	74,726,000
Vegetables	49,994,000	24,731,000	26,620,000	32,794,000	84,145,000	134,139,000
Fruits and nuts	42,293,000	14,201,000	17,124,000	18,380,000	49,705,000	91,998,000
All other crops	70,995,000	9,992,000	2,123,000	8,765,000	20,880,000	91,875,000
Total crops	235,534,000	49,864,000	45,867,000	61,473,000	157,204,000	392,738,000
All commodities	418,806,000	83,395,000	61,501,000	84,956,000	229,852,000	648,658,000

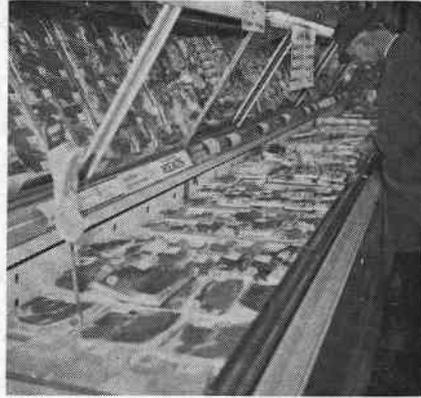
^a Value added in processing includes all the activities performed by processors or first handlers such as meat packers, canners, freezers, or simply cleaning, grading, and sacking as in the case of grass seeds. It does not include wholesaling and retailing.

^b These data were taken from *Farm Income State Estimates 1949-63*, USDA, ERS, FIS-195 Supplement, August 1964. The data showing cash receipts from marketings for each commodity produced in Oregon were also taken from this publication.

^c Includes depreciation, repairs, power, heat, lights, water, telephone, office supplies, advertising, licenses, insurance, rent, taxes, interest, bad debt loss, and profit. Profit in most cases is a very minor item in terms of total expenses in processing and handling farm products.

Meat Animals

Oregon 1963



Efficient production and processing assure the customer of quality selection at reasonable prices.

Summary

Received by producers for all meat animals	\$ 98,722,000
Total value added by livestock slaughter and meat packing	26,137,000
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Total received by producers plus value added by slaughter and meat packing	\$124,859,000
Number of employees:	
Meat packing (average salary \$6,600/yr.)	1,861
Commercial feeding	100
North Portland terminal market	90
Livestock auctions and livestock buyers	175 ²
Animal husbandry services	150 ³
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Total	2,376

If all livestock produced in Oregon were fattened and slaughtered here, value added by meat packing would increase by \$22,000,000. This alone would increase employment by about 1,560 persons. This could happen if livestock feeding should become more profitable in the state. Current research is directed toward this goal.

Cattle and Calves

Amount paid to producers	\$81,941,000
Number of cattle slaughtered	279,000
Number of calves slaughtered	30,000
Estimated number of cattle and calves sold outside Oregon ⁴	294,000

² Oregon Department of Employment data show 598 persons under the general heading of "Agricultural Services." This heading includes livestock auctions plus several other activities. It is estimated that at least 175 people work in auctions and operate as livestock buyers.

³ This figure includes market news personnel, meat graders, and others who are employed here because a livestock industry exists in the state.

⁴ Mostly feeder cattle. Of this number, 147,000 were shipped to California; 126,000 of these were feeders.



Beef carcasses in the cooler.

Sheep and Lambs

Amount paid to producers		\$ 8,539,000
Number of sheep and lambs slaughtered	224,000	
Estimated number of sheep and lambs sold outside Oregon ⁵	348,000	

Hogs

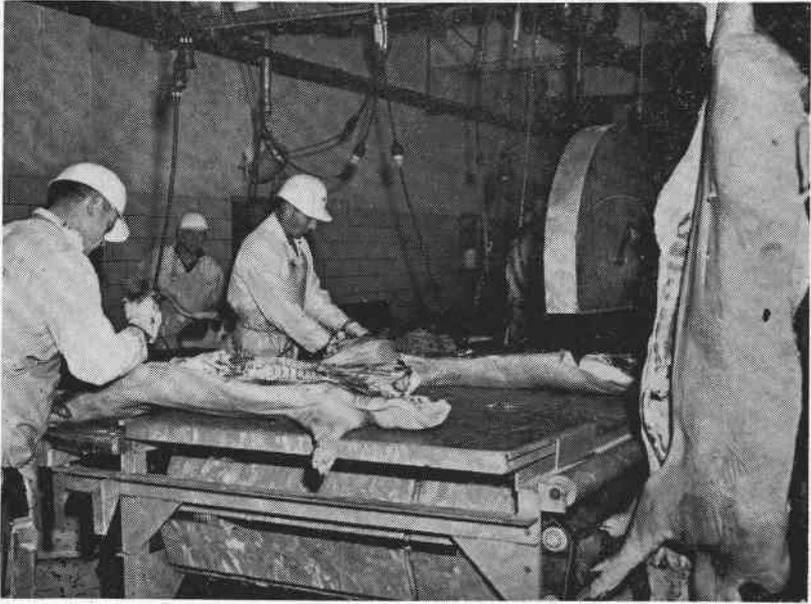
Amount paid to producers		\$ 8,242,000
Number of hogs slaughtered	425,000	
Number produced in Oregon	229,000	
Number shipped in for slaughter	196,000	

Livestock Slaughtered in Oregon

Cattle: 281,790,000 lbs. @ \$18.20/cwt.		\$51,285,000
Calves: 9,570,000 lbs. @ \$23.90/cwt.		2,287,000
Sheep and lambs: 21,374,000 lbs. @ \$17.08/cwt.		3,651,000
Hogs: 94,350,000 lbs. @ \$16.30/cwt.		15,379,000
Total farm value of livestock slaughtered in Oregon		\$72,602,000
Payroll (47%)	\$12,284,000	
Packaging materials (16%)	4,182,000	
Other (37%)	9,671,000	
Total value added by slaughter and delivery		\$26,137,000 ⁶

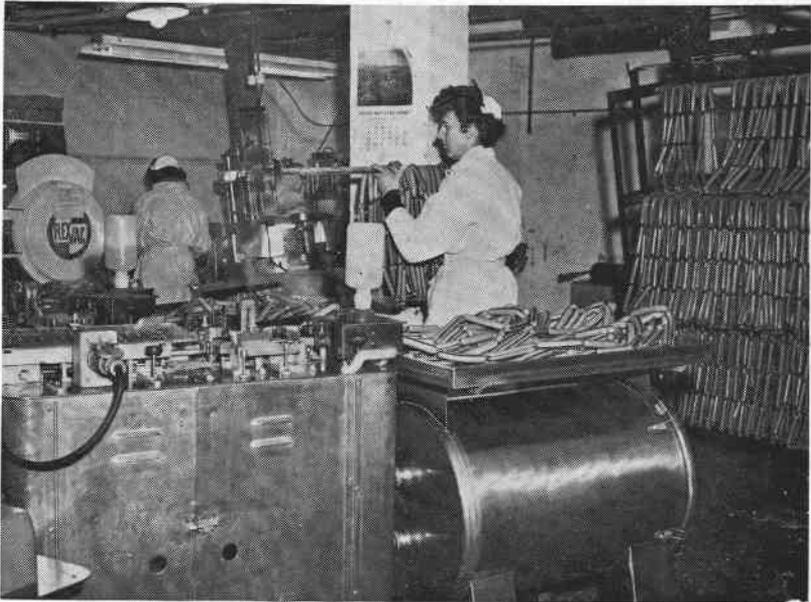
⁵ Most lambs produced in southern Oregon counties are sold in California markets.

⁶ *Financial Facts About the Meat Packing Industry*, 1963, published by the American Meat Institute, shows value added to cost of livestock through meat packing (slaughter, processing, delivery) amounted to 36% in 1963. Included are activities of prepared-meat plants some of which do no slaughtering but buy meat from local packers as well as frozen beef and pork trimmings from outside the state.



Breaking pork sides into wholesale cuts in the packing plant.

The prepared meats section in an Oregon meat packing plant.





One man plus a large capital investment in milk bottling machinery.

Dairy Products Oregon 1963

Summary

Received by producers for all milk	\$42,802,000
Value added in processing and distribution of milk and milk products	35,451,000
Total value of Oregon-produced milk after processing and home delivery	\$78,253,000
Number of people employed	2,925

Compared with 1956, Oregon dairy farmers are now producing 10% less milk. Milk used for fluid consumption was about the same in 1963. The reduction was in milk used for manufacturing.

Detailed data below clearly show that milk going into fluid uses generates more payroll and economic activity than milk used for making butter and cheese. This means that in the years ahead the dairy industry may become more important in the state as a higher proportion of our milk goes into fluid uses. Milk for fluid uses will be shipped into the state unless our dairy industry is able to remain competitive. This should be of concern to all the people of the state because more than 10% of total farm income comes from the sale of milk, providing much economic activity at both the farm and marketing levels.

All Milk

Amount paid to producers (all milk)	\$ 42,802,000
Total pounds of milk produced in	
Oregon	1,044,000,000
Less home use	85,000,000
Total pounds sold	959,000,000
Average price per 100 lbs. received by farmers, all uses.....	\$4.35

Use⁷

For fluid consumption, total pounds milk	505,516,000
Whole milk equivalents used in manufacturing.....	453,484,000
Creamery butter, lbs. milk	186,806,000
Cheese, lbs. milk	158,467,000
Ice cream, (includes all frozen products)	
lbs. milk	101,695,000
Other, lbs. milk	25,865,000
Less duplication, lbs. milk	-19,349,000
(Skim milk equivalents, lbs.)	138,792,000 ⁸

Fluid

Payroll (48%)	\$13,103,000
Packaging materials (24%).....	6,551,000
Other (28%)	7,644,000
Total value added by processing and distribution	
(\$5.40/cwt.) ⁹	\$27,298,000
Number of people employed in fluid milk processing	
and distribution (\$5,700/yr.)	2,299

Butter

Payroll (48%).....	\$ 807,000
Packaging materials (20%)	336,000
Other (32%)	538,000
Total value added by processing (\$.90/cwt.) ¹⁰	\$ 1,681,000
Number of people employed in butter manufacturing and	
distribution (\$5,100/yr.)	158

⁷ Data taken from *Production of Manufactured Dairy Products, 1963*, USDA, Statistical Reporting Service, July 1964.

⁸ Used in the manufacture of cottage cheese and dry or powdered milk.

⁹ U. S. Department of Agriculture studies pertaining to 1963 indicate dairymen received 42% of the retail price for all fluid milk sold. The other 58% went for processing and distribution. In view of the fact that about 60% of all fluid milk sales are through stores for which the Oregon dairy industry can take no credit, it is estimated that value added amounted to 50% rather than 58%.

¹⁰ The yield from 100 lbs. of 4.15% milk was an average of 5.26 lbs. of butter.



Mechanical boxing of milk for delivery.

Cheese

Payroll (48%)	\$ 1,186,000
Packaging materials (20%)	495,000
Other (32%)	791,000
Total value added by processing (\$1.56/cwt.) ¹¹	\$ 2,472,000
Number of people employed in cheese processing (and curing) (\$5,100/yr.)	233

All Other¹²

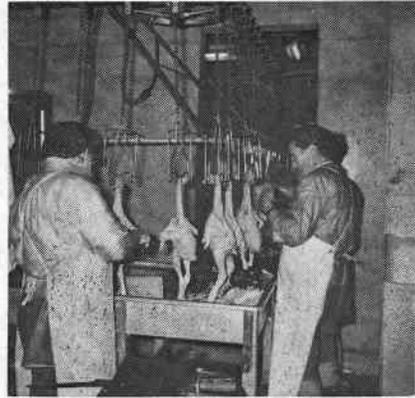
Payroll (30%)	\$ 1,200,000
Packaging materials (40%)	1,600,000
Other (30%)	1,200,000
Total value added by processing ¹³	\$ 4,000,000
Number of people employed (\$5,100/yr.)	235

¹¹ The yield from 100 lbs. of 4.15% milk was an average of 11.96 lbs. of American cheese.

¹² Consists primarily of ice cream, frozen desserts, and evaporated milk.

¹³ It is estimated that more value was added in the making of ice cream and canning evaporated milk than the farmers received for the raw product (milk). In 1963, dairy farmers received only 27% of the consumer's dollar spent for ice cream and 41% spent for evaporated milk.

Poultry and Eggs Oregon 1963



Processing Oregon broilers is big business.

Summary

Total received by producers	\$33,315,000
Total value added in processing	10,869,000
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Total F.O.B. processed value	\$44,184,000
Number of people employed in poultry processing (\$5,200/yr.).....	462
Number of people employed in chicken egg processing (\$4,500/yr.)	360
Number of people employed in turkey hatching egg processing (\$5,100/yr.)	161

Between 1956 and 1963, broiler production increased 9% and turkey production was up 16%.

The farm price of broilers averaged 22.5¢ in 1956 and was only 17.0¢ in 1963, a decline of nearly 25%. Turkey prices declined 12% between 1956 and 1963.

Oregon is a deficit producer of chicken meat and a surplus producer of turkeys. As a matter of fact, chicken production in 1963 averaged only 14 pounds per person, whereas consumption was 30.8 pounds per person. Lower feed prices in Oregon would stimulate more broiler production in the state; hence, more employment in poultry processing and feed manufacturing.

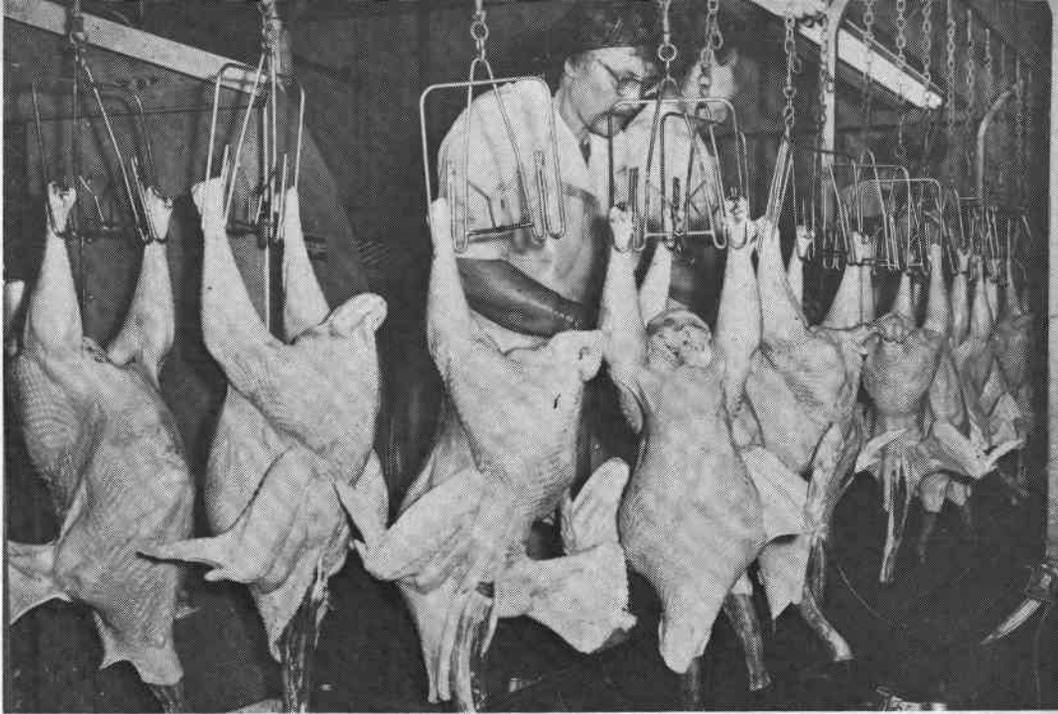
Oregon egg production declined 12% between 1956 and 1963, and price declined 19% during the same period.

Oregon is an important producer of turkey hatching eggs with millions of them sold in other states.

Broilers

Amount paid producers	\$ 4,977,000
Total pounds sold (17.0¢/lb. live wt.)	29,276,000
Total pounds sold, dressed weight ¹⁴	21,078,000
Total payroll (47%)	\$ 1,030,000
Packaging materials (25%)	548,000
Other (28%)	614,000
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Value added by processing (10.4¢/lb. dressed wt.).....	\$ 2,192,000
Total F.O.B. processed value	\$ 7,169,000

¹⁴ The dressing percentage was estimated to be 72%.



Processing Oregon turkeys a week before Thanksgiving.

Farm Chickens

Amount paid producers		\$ 554,000
Total pounds sold (6.6¢/lb. live wt.)	8,394,000	
Total pounds sold, dressed weight ¹⁴	6,044,000	
Total payroll (47%)	\$ 296,000	
Packaging materials (25%)	157,000	
Other (28%)	176,000	
Value added by processing (10.4¢/lb. dressed wt.)		\$ 629,000
Total F.O.B. processed value		\$ 1,183,000

Turkeys

Amount paid producers		\$ 7,419,000
Total pounds sold (23.6¢ per lb. live wt.)	31,436,000	
Total pounds sold, dressed weight ¹⁵	25,149,000	
Total payroll (45%)	\$1,075,000	
Packaging materials (20%)	478,000	
Other (35%)	836,000	
Value added by processing (9.5¢/lb. dressed wt.)		\$ 2,389,000
Total F.O.B. processed value		\$ 9,808,000

Eggs

Amount paid to producers		\$16,365,000
Dozen sold (36.3¢/doz.)	45,083,000	
Total payroll (45%)	\$1,623,000	
Packaging materials (30%)	1,082,000	
Other (25%)	902,000	
Value added in processing—grading, cleaning, and packaging (8.0¢/doz.)		\$ 3,607,000
Total F.O.B. processed value		\$19,972,000

¹⁵ The dressing percentage was estimated to be 80%.

Turkey Hatching Eggs

Amount paid to producers (estimated)		\$ 4,000,000
Total number of eggs sold (22.2¢/ea.)	18,000,000	
Payroll (40%)	\$ 821,000	
Packaging materials (10%)	205,000	
Other (50%)	1,026,000	
Total value added by processing and handling ¹⁶		\$2,052,000
Total F.O.B. value		\$6,052,000

Other Livestock Products Oregon 1963

Summary

Total received by producers	\$8,433,000
Total value added in processing	191,000
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Total F.O.B. value	\$8,624,000
Number of people employed (\$5,100/yr.)	21

Wool

Amount paid to producers		\$3,299,000
Total pounds sold (50¢/lb.)	6,598,000	
Payroll (55%)	\$106,000	
Other (45%)	85,000	
Total value added in grading, handling, and marketing ¹⁷		\$ 191,000
Total F.O.B. value		\$3,490,000

Honey¹⁸

Amount paid to producers	\$ 432,000
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Mohair¹⁸

Amount paid to producers	\$ 63,000
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Beeswax¹⁸

Amount paid to producers	\$ 18,000
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Other Livestock¹⁹

Amount paid to producers	\$4,621,000
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¹⁶ About 50% of the eggs were shipped out of the state by hatcherymen who received about 6¢ per egg for this function. Of the remaining 50%, 5,400,000 salable poults were hatched and sold at an average price of 65¢ each.

¹⁷ About 20% of wool moved through a large cooperative at a cost of 8.5¢/lb., and the remaining 80% was purchased direct by mills from county wool pools (ungraded basis). The buying commission was about 1.5¢/lb.

¹⁸ No value added due to processing, handling, or marketing was computed for these commodities. Although relatively unimportant, these commodities contributed something to the economy of the state.

¹⁹ Includes horses, mules, goats, and rabbits. Value added in processing and handling is not included because of insufficient data.



Harvesting wheat in eastern Oregon.

Grain and Hay Crops Oregon 1963

Summary

Total received by growers	\$72,252,000
Value added in handling	\$ 2,474,000
Total F.O.B. value	\$74,726,000
Total number of people employed (\$5,100/yr.).....	184

Wheat production is recognized as one of Oregon's most important industries and could become even more important in the years ahead. It is reasonable to conclude that most of the income received from the sale of wheat is spent in the state. Furthermore, the transportation agencies and the Commission of Public Docks, Portland, profit from the movement of wheat (as shown in other parts of this report).

Wheat production is largely controlled by federal programs. It is well known that wheat production could be increased greatly. More pounds of wheat can be produced per acre in many places than can be produced by planting barley. There is a considerable likelihood that Oregon's livestock feeding industry will expand if wheat continues to be available at prices competitive with other grains. Lower wheat prices do not necessarily mean lower net incomes to growers. The important questions of who gains and who loses under various circumstances are being debated and studied.

Coarse grains and hay do not add very much value in handling, but they are basic ingredients for our livestock and poultry industries which generate considerable employment. As a matter of fact, the \$28,000,000 shown as received for coarse grains and hay does not truly reflect the importance of the industry because 19% of the barley, 78% of the hay, 41% of the oats, and 44% of the corn grown in Oregon was used for feed or seed on farms where produced. In other words, the value of Oregon's coarse-feed crop production amounted to \$73,000,000 with only \$28,000,000 of this amount being sold to others rather than being fed on farms.

Oregon is a deficit producer of feed grains and particularly those suited for poultry production, unless wheat continues to be available at feed-grain prices. It is unlikely that the livestock industry in this state will show much growth unless more feed becomes available. However, more facts, together with logical interpretation, are needed so decisions can be made that will make the best use of the state's resources.

Wheat

Amount paid to growers		\$43,767,000
Total tons sold (\$63.33/ton)	691,094	
Payroll (38%)	\$570,000	
All other (62%)	930,000	
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Total value added (\$2.17/ton) ²⁰		\$ 1,500,000
Total F.O.B. value in country elevators		\$45,267,000

Rye

Amount paid to growers		\$ 360,000
Total tons sold (\$41.07/ton)	8,766	
Payroll (38%)	\$ 8,000	
All other (62%)	12,000	
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Total value added (\$2.32/ton)		\$ 20,000
Total F.O.B. value in country elevators		\$ 380,000

Barley

Amount paid to growers		\$13,107,000
Total tons sold	324,000	
Payroll (38%)	\$283,000	
All other (62%)	462,000	
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Total value added (\$2.30/ton)		\$ 745,000
Total F.O.B. value in country elevators.....		\$13,852,000

Hay

Amount paid to growers		\$10,949,000 ²¹
Total tons sold (\$23.50/ton)	466,000	

²⁰ Only value added by handling in country elevators or river terminals plus limited storage was considered. It is recognized that considerable other economic activity was generated through transportation and in the Port of Portland. The importance of transportation and the Port of Portland are shown elsewhere.

²¹ Most of the hay sold in Oregon moves from one farmer to another farmer or a feeder. Considerable value is added by transportation, but this is included in another part of this report. Hay passing through the hands of feed dealers does provide employment but is also shown elsewhere.

Oats

Amount paid to growers		\$ 2,925,000
Total tons sold (\$43.10/ton)	68,000	
Payroll (38%)	\$59,000	
All other (62%)	97,000	
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Total value added (\$2.30/ton)		\$ 156,000
Total F.O.B. value in country elevators		\$ 3,081,000

Corn

Amount paid to growers		\$ 1,144,000
Total tons sold (\$50.70/ton)	23,000	
Payroll (38%)	\$20,000	
All other (62%)	33,000	
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Total value added (\$2.30/ton)		\$ 53,000
Total F.O.B. value in country elevators		\$ 1,197,000

Aerial view of eastern Oregon grain fields.





Processing and canning carrots for institutional use.

Vegetables Oregon 1963

Summary

Total received by growers	\$ 49,994,000
Total value added in processing	\$ 84,145,000
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Total F.O.B. processed value	\$134,139,000
Total number of year-around employee equivalents (\$4,000/yr.)....	6,182

Compared with 1956, Oregon vegetable production for processing (beans, peas, corn, carrots, and beets) tonnage increased by 32% and further increases are expected in the years ahead.

It is estimated that the vegetable and fruit industry created about 1,700 new job equivalents in processing and handling in the last seven years.

Many more people are involved than the number shown above because this industry provides seasonal employment to high school and college students and women and children. The vegetable and fruit industry employs up to 80,000 seasonal workers, 80% of whom are either local or migratory within the state.

The vegetable and fruit industry has considerable promise for growth in the future because of conditions of climate, soil, and water, as well as the technological knowledge that now exists in the state.

Furthermore, buyers (chain stores, supermarkets, wholesalers) look to Oregon for reliable supplies, quality, and competitive prices. We will continue to increase our share of this market only as long as we aggressively search out and employ the latest technology in production, processing, and marketing. Our competitors in other states will attempt to do the same thing. We cannot afford to let them get ahead of us.

Snap Beans

Amount paid to growers		\$14,825,000
Total tons sold, all uses (\$116.00/ton)	127,800	
Payroll (25%)	\$ 7,782,000	
Packaging materials (30%)	9,340,000	
Other (45%)	14,010,000	
<hr/>		
Total value added by processing		\$31,132,000
F.O.B. value of pack		\$45,957,000

Potatoes

Amount paid to growers		\$13,162,000
Total hundredweight sold, all uses (\$1.80/cwt.)	7,312,000	
Less potatoes sold for livestock feed		
and seed (22%)	1,608,000	
Estimated total hundredweight sold for food and starch	5,704,000	
Payroll (28%)	\$3,193,000 ²²	
Packaging materials (34%)	3,877,000	
Other (38%)	4,333,000	
Total value added by processing (75¢/cwt. for potatoes sold fresh		
—80% of crop; and \$7.00/cwt. for potatoes processed—20%		
of crop—weighted average of \$2.00/cwt.)		\$11,403,000
F.O.B. value of pack		\$24,565,000

Green Peas

Amount paid to growers		\$ 5,729,000
Tons sold, all uses (\$89.00/ton)	64,000	
Payroll (30%)	\$4,468,000	
Packaging materials (32%)	4,767,000	
Other (38%)	5,660,000	
<hr/>		
Total value added by processing		\$14,895,000
F.O.B. value of pack		\$20,624,000

Onions

Amount paid to growers		\$ 4,549,000
Total hundredweight sold (\$3.00/cwt.)	1,516,000	
Payroll (35%)	\$ 425,000	
Packaging materials (38%)	461,000	
Other (27%)	327,000	
<hr/>		
Total value added by grading, sacking, handling (80¢/cwt.)		\$ 1,213,000
Total processed (graded and sacked) value		\$ 5,762,000

²² It is believed that about 50% of the payroll was in potato processing, even though 80% of the potatoes moving in trade were estimated to have been sold in the fresh form.



Green bean processing employs thousands of seasonal workers.

Sweet Corn

Amount paid to growers		\$ 3,500,000
Total tons sold, all uses ²³ (\$28.15/ton, weighted average)	124,000	
Payroll (32%)	\$2,800,000	
Packaging materials (30%)	2,625,000	
Other (38%)	3,325,000	
Total value added by processing		\$ 8,750,000
F.O.B. value of pack		\$12,250,000

Broccoli

Amount paid to growers		\$ 1,287,000
Total hundredweight sold (\$7.38/cwt.)	174,000	
Payroll (50%)	\$1,126,000	
Packaging materials (25%)	563,000	
Other (25%)	563,000	
Total value added by processing		\$ 2,252,000
F.O.B. value of pack		\$ 3,539,000

Dry Peas

Amount paid to growers		\$ 732,000
Total hundredweight sold (\$4.30/cwt.)	170,000	
Payroll (40%)	\$ 58,000	
Packaging materials (23%)	33,000	
Other (37%)	54,000	
Total value added by processing (85¢/cwt.)		\$ 145,000
F.O.B. cleaned and sacked value of crop		\$ 877,000

Beets

Amount paid to growers		\$ 812,000
Total tons sold (\$19.20/ton)	42,300	
Payroll (32%)	\$1,949,000	
Packaging materials (36%)	2,192,000	
Other (32%)	1,949,000	
Total value added by processing		\$ 6,090,000
F.O.B. value of pack		\$ 6,902,000

Carrots

Amount paid to growers		\$ 785,000
Total hundredweight sold (\$1.03/cwt.)	762,000	
Payroll (32%)	\$1,507,000	
Packaging materials (36%)	1,696,000	
Other (32%)	1,507,000	
Total value added by processing		\$ 4,710,000
F.O.B. value of pack ²⁴		\$ 5,495,000

²³ Less than 4% of corn was sold in fresh form at \$3.70/cwt. The other 96% was sold for processing at an average price of \$26.40/ton.

²⁴ Some sold in fresh form, otherwise processed value would be even greater.

Asparagus

Amount paid to growers		\$ 483,000
Total hundredweight sold (\$13.80/cwt.)	35,000	
Payroll (40%)	\$ 167,000	
Packaging materials (30%)	125,000	
Other (30%)	125,000	
Total value added by processing		\$ 417,000
F.O.B. value of pack ²⁵		\$ 900,000

Cauliflower

Amount paid to growers		\$ 569,000
Total hundredweight sold (\$3.76/cwt.)	151,000	
Payroll (40%)	\$ 456,000	
Packaging materials (30%)	341,000	
Other (30%)	341,000	
Total value added by processing		\$ 1,138,000
F.O.B. value of pack ²⁶		\$ 1,707,000

Cabbage²⁷

Amount paid to growers		\$ 469,000
Total hundredweight sold (\$2.07/cwt.)	227,000	

Watermelons²⁸

Amount paid to growers		\$ 333,000
Total hundredweight sold (\$1.85/cwt.)	180,000	

Cantaloupes²⁸

Amount paid to growers		\$ 180,000
Total hundredweight sold (\$3.00/cwt.)	60,000	

Lettuce²⁸

Amount paid to growers		\$ 266,000
Total hundredweight sold (\$4.60/cwt.)	58,000	

Tomatoes²⁹

Amount paid to growers		\$ 394,000
Total hundredweight sold (\$7.80/cwt.)	50,000	

²⁵ Twenty percent of Oregon-produced asparagus was sold in the fresh market, otherwise F.O.B. value of pack would be higher.

²⁶ It is believed that considerable cauliflower is sold fresh, although no data are available.

²⁷ Because most cabbage is considered to have been sold fresh, no value added is determined, even though it is recognized that a considerable amount of money was spent for crates, labor, and transportation. The labor is largely farm labor already counted and transportation arising from agricultural production is shown as a total for all of Oregon.

²⁸ It is well known, of course, that this vegetable is sold in fresh form.

²⁹ About 80% of the dollar value of tomatoes were sold in the fresh market; therefore, no value added in processing is determined.

Miscellaneous Vegetables³⁰

Amount paid to growers		\$ 1,919,000
Payroll (40%)	\$ 800,000	
Packaging materials (30%)	600,000	
Other (30%)	600,000	
		<hr/>
Total value added by processing		\$ 2,000,000
F.O.B. packed value		\$ 3,919,000

Fruits, Nuts Oregon 1963

Summary

Amount paid to growers		\$42,293,000
Total value added in processing		\$49,705,000
		<hr/>
Total F.O.B. processed value		\$91,998,000
Total number of year-around employee equivalents (\$4,000/yr.)....		3,550

Most of the summary statement under the vegetable section of this report applies to fruits and nuts. As long as vegetable and fruit growers continue to operate efficiently and adopt new technology as developed, this industry has a bright future in Oregon.

Strawberries

Amount paid to growers		\$ 8,629,000
Total pounds sold (12.1¢/lb.)	71,000,000	
Payroll (23%)	\$2,382,000	
Packaging materials (35%)	3,624,000	
Other (42%)	4,349,000	
		<hr/>
Total value added by processing		\$10,355,000
F.O.B. value of pack		\$18,984,000

Pears

Amount paid to growers		\$ 9,298,000
Total bushels sold (\$2.55/bu. p.h.d.)	3,646,000 ³¹	
Payroll (30%)	\$4,007,000	
Packaging materials (36%)	4,808,000	
Other (34%)	4,542,000	
		<hr/>
Total value added by processing (and packing)		\$13,357,000
F.O.B. value of pack		\$22,655,000

³⁰ Includes lima beans, cucumbers, green peppers, spinach, dry edible beans, and miscellaneous vegetables.

³¹ Nearly 40% were canned and 60% were sold in fresh form.



Grading and sizing pears.

Cherries

Amount paid to growers		\$ 5,259,000
Tons sold:		
Sweet cherries, all uses (\$332/ton)	15,100	
Sour cherries, all uses (\$194/ton)	1,200	
Payroll (30%)	\$ 2,366,000	
Packaging materials (30%)	2,366,000	
Other (40%)	3,156,000	
Total value added by processing ³²		\$ 7,888,000
Total F.O.B. value of pack		\$13,147,000

Apples

Amount paid to growers		\$ 3,634,000
Total bushels sold (\$1.22/bu.)	2,979,000	
Payroll (30%)	\$ 1,430,000	
Packaging materials (36%)	1,716,000	
Other (34%)	1,620,000	
Total value added by processing (and packing) ³³		\$ 4,766,000
F.O.B. value of pack		\$ 8,400,000

Filberts

Amount paid to growers		\$ 2,935,000
Total tons sold (\$470/ton)	6,200	
Payroll (50%)	\$ 496,000	
Packaging materials (20%)	198,000	
Other (30%)	298,000	
Total value added by processing (\$160/ton)		\$ 992,000
F.O.B. value of processed nuts		\$ 3,927,000

³² It is difficult to determine value added because while a large percentage of cherries are brined (about 75%), some are reprocessed in Oregon. Of course, a considerable number are canned and frozen in Oregon plants and this adds more to value than brining.

³³ About 10% of apples are canned.

Plums—Prunes

Amount paid to growers		\$ 1,475,000
Total tons sold, all uses (\$95.90/ton)	15,400	
Payroll (20%)	\$ 649,000	
Packaging materials (40%)	1,298,000	
Other (40%)	1,298,000	
<hr/>		
Total value added by processing ³⁴		\$ 3,245,000
F.O.B. value of pack		\$ 4,720,000

Peaches

Amount paid to growers		\$ 1,005,000
Total bushels sold, all uses (\$3.35/bu.)	300,000	
Payroll (30%)	\$ 270,000	
Packaging materials (36%)	324,000	
Other (34%)	306,000	
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Total value added by processing ³⁵		\$ 900,000
F.O.B. value of pack		\$ 1,905,000

Walnuts

Amount paid to growers		\$ 1,748,000
Total tons sold, all uses (\$450/ton)	3,900	
Payroll (50%)	\$ 351,000	
Packaging materials (20%)	140,000	
Other (30%)	211,000	
<hr/>		
Total value added by processing (\$180/ton)		\$ 702,000
F.O.B. value of processed nuts		\$ 2,450,000

Cranberries

Amount paid to growers		\$ 442,000
Total pounds sold, all uses (11.7¢/lb.)	3,778,000	
Payroll (30%)	\$ 150,000	
Packaging materials (40%)	200,000	
Other (30%)	150,000	
<hr/>		
Total value added by processing ³⁶		\$ 500,000
F.O.B. value of processed pack		\$ 942,000

Other Fruit—Nuts³⁷

Amount paid to growers		\$ 7,868,000
Payroll (30%)	\$2,100,000	
Packaging material (35%)	2,450,000	
Other (35%)	2,450,000	
<hr/>		
Total value added by processing		\$ 7,000,000
F.O.B. value of pack		\$14,868,000

³⁴ Packout reports indicate about 35% were canned.

³⁵ Probably no more than 20% were commercially canned in Oregon.

³⁶ Ninety percent of pack was sold in processed form (mostly canned).

³⁷ Includes apricots, blackberries, blueberries, currants, raspberries, gooseberries, and other. About 77% of dollar value of "other fruit" consisted of blackberries and raspberries.



Digging an order of magnolias.

All Other Crops Oregon 1963

Summary

Total amount received by growers	\$70,995,000
Total value added in processing	\$20,880,000
Total F.O.B. processed value	\$91,875,000
Total number of people employed	1,776

It is important to point out that income from the sale of nursery crops increased by 62% between 1956 and 1963. Nursery crops are estimated to give employment to about 1,900 person equivalents in production and marketing. If this industry should expand only 25% in the next seven years, it would create employment for about 500 additional people. This is equivalent to bringing a new major industry into the state.

Nurserymen estimate that about 85% of all nursery stock and bulbs produced in the state are sold in other states. This involves considerable transportation, estimated to be from 1,400 to 1,500 semi-trailer truck or carload equivalents. This economic activity is counted under transportation, shown elsewhere in this report.

While relatively little value is added in processing seed crops, it is a \$33,000,000 industry. Much transportation is involved, and 19,000 tons were exported through the Port of Portland, thereby creating additional economic activity.

The tonnage of sugar beets produced in Oregon increased by 25% between 1956 and 1963. This is an industry that adds considerably to value through processing, thus helping to create off-farm jobs in eastern Oregon.

Seed Crops

Amount paid to growers (all seeds)		\$28,924,000 ³⁸
Total pounds sold, all seeds (clean seed basis)	213,390,000	
Payroll ³⁹ (43%)	\$1,687,000	
Packaging materials (19%)	745,000	
Other (38%)	1,490,000	
Total value added by cleaning, sacking, handling		\$ 3,922,000
Total F.O.B. value of clean seed in dealer hands		\$32,846,000
Number of people employed (\$5,100/yr.)		331

Nursery and Greenhouse⁴⁰

Amount paid to growers		\$18,077,000
Payroll (60%)	\$1,519,000	
Other (40%)	1,012,000	
Total value added in wholesaling (20% of 70% of dollar volume)....		\$ 2,531,000
Total F.O.B. value		\$20,608,000
Number of people employed (\$4,000/yr.)		380

Forest Products

Total received by farmers		\$10,350,000 ⁴¹
Payroll (55%)	\$5,408,000	
All other (45%)	4,424,000	
Total value added by processing		\$ 9,832,000
Total F.O.B. value of lumber and other products		\$20,182,000
Total number of people employed (\$6,900/yr.)		784

Sugar Beets

Amount paid to growers		\$ 6,325,000
Total tons sold (\$12.00/ton)	527,000	
Payroll (30%)	\$1,378,000	
Packaging materials (30%)	1,378,000	
Other (40%)	1,839,000	
Total value added by processing (\$8.72/ton) ⁴²		\$ 4,595,000
Total F.O.B. value of refined sugar and dried beet pulp		\$10,920,000
Average number of workers employed (\$4,900/yr.)		281

³⁸ Includes ryegrass seed, 148,213,000 lbs.; alfalfa seed, 9,857,000 lbs.; all fescue seed, 18,542,000 lbs.; bentgrass seed, 7,000,000 lbs.; all vetch seed, 8,468,000 lbs.; crimson clover seed, 7,055,000 lbs.; Merion bluegrass seed, 1,820,000 lbs.; red clover seed, 4,419,000 lbs.; white clover seed, 803,000 lbs.; Austrian peas, 7,114,000 lbs.; alsike clover, 99,000 lbs.; and "other seeds" for which growers received \$1,860,000.

³⁹ Payroll was reduced by 25% because a substantial amount of grass seed was cleaned on farms by labor that is counted as part of agricultural employment.

⁴⁰ Includes trees, shrubs, vines, ornamentals, cut flowers, potted plants, florist greens, bedding plants, flower seeds, vegetable seeds, bulbs, and mushrooms.

⁴¹ U. S. Census data indicate that about one-half of this amount resulted from the sale of standing timber. The remaining sales consisted of firewood, pulpwood, fence posts, sawlogs, and Christmas trees.

⁴² One ton of sugar beets yields 250 lbs. of refined sugar valued at 7.25¢ lb. Each ton of sugar beets produced about 140 lbs. of byproduct (dried beet pulp) valued at \$1.85/cwt. Total value added in processing amounted to \$8.72/ton of sugar beets processed.

Mint⁴³	
Amount paid to growers	\$ 4,805,000
Total pounds sold (\$5.20/lb.)	924,000

Hops⁴⁴	
Amount paid to growers	\$ 2,514,000
Total pounds sold (47.0¢/lb.)	5,349,000

Employment Generated by Providing Agricultural Equipment, Supplies, and Services Oregon 1963

Activity	Annual average employment ⁴⁵
	<i>Number</i>
Agricultural services	423
Animal husbandry services	317
Making prepared feeds for animals and fowls	520
Textile bags manufacturing	250
Manufacturing of bags, except textile	75
Manufacturing of folding paperboard boxes	50
Manufacturing of corrugated and solid fiber boxes.....	125
Manufacturing of sanitary food containers.....	300
Fertilizer handling and mixing	51
Agricultural pesticides	253
Manufacturing of glass containers and metal cans.....	500
Food products machinery-manufacturing	248
Public warehousing of farm products	400
Hardware and farm equipment—retail	1,000
Farm supply stores	300
Farm machinery equipment and supplies distribution— wholesale	350
TOTAL	5,162

⁴³ Most growers own or share ownership in a still, but a small percentage of the crop (probably less than 25%) must be trucked off the farm for custom distillation. Most custom distillation operations are run by owners of large farms who use their equipment and labor and charge about \$1.00/lb. of oil recovered. For these reasons no value added as a result of processing is shown. The number of people employed on Oregon farms in 1963 is shown elsewhere.

⁴⁴ In most cases hops are cut, dried, and baled on the farm with farm labor. Some value is added off-the-farm by storage and selling, but it was not determined because the amount would be relatively small.

⁴⁵ These data come from the State of Oregon Department of Employment records. In some cases, not all of activity as reported by the Department of Employment is chargeable to agriculture. For example, 545 people were employed in the manufacturing of textile bags, but only the employment of 250 people was estimated to be required to make bags for seed and food packaging.



Storing Oregon processed vegetables and fruits.

Transportation Oregon 1963

The data below show that all transportation in Oregon (rail, truck, local, water, air) employed an average of 25,800 persons in 1963. Estimates are made to show the number of persons that may owe their jobs to agricultural production and marketing.

	Total average number of employees for all of Oregon, ⁴⁶ 1963	Estimated number of employees involved in hauling agricultural commodities and supplies
Railroads	10,600	2,120
Trucking and warehousing..	10,000	1,500
Local (suburban and interurban transit)	2,200	0
Water (does not include longshoremen)	1,600	272
Air and services	800	20
Other	600	60
TOTAL	25,800	3,972

Railroads. Data prepared by the Public Utility Commissioner's Office, Salem, indicate that about 15% of outshipments measured in tons were agricultural commodities in 1962. Total inshipments amounted to about 65% of total outshipments. Of the total inshipments, about 30% were agricultural commodities and equipment and supplies needed in farm production. It is believed that most of the inshipments of an agricultural nature can be credited to Oregon's agriculture. The fact that Oregon is a surplus producer of some food items and a deficit producer of others stimulates trade among different parts of the country. This trade creates economic activity.

Based on the facts cited above, it is believed that at least 20% of all railroad employees are involved in transport of agricultural commodities and supplies needed in production.

Trucks. Data pertaining to total tonnages hauled in and out of Oregon by trucks are not available. Sketchy data indicate that trucks play an important role in the transport of agricultural products within the state and to other points. About two-thirds of the potatoes in Klamath County are hauled by truck and about one-half in central Oregon. From 30 to 40% of all canned and frozen vegetables and

⁴⁶ Data from the records of Oregon State Department of Employment, Salem.



Railroads and trucks haul hundreds of thousands of tons of Oregon produced agricultural commodities.

fruits is believed to be hauled by trucks. It is estimated that 80 to 90% of all livestock are shipped to market in Oregon via truck. In spite of the impressive examples cited above, trucks may be relatively less important in hauling agricultural commodities and supplies than railroads. Most grain is shipped to market via rail and water. Furthermore, it is well known that most agricultural commodities moving beyond the three west coast states and Arizona are shipped by rail. For these reasons, it is estimated that 15% of truck employees are involved in hauling agricultural commodities and equipment and supplies needed in production.

Water. It was estimated that 17% of the tonnage handled by the Portland Port operated by the Commission of Public Docks in 1963 was Oregon-produced agricultural commodities. Therefore, 17% of the employees in this category (excluding longshoremen) were credited to Oregon agricultural activity. The importance of longshoremen is shown under port activities.

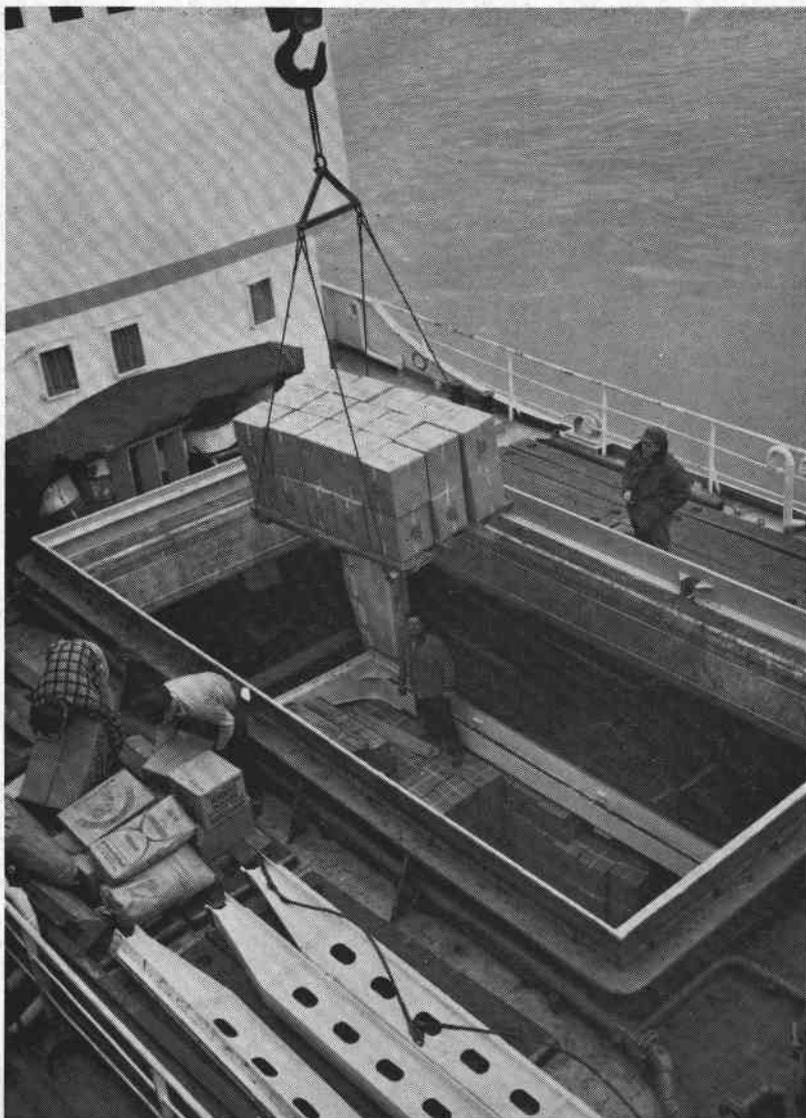
The Importance of Waterborne Commerce Oregon 1963

A study prepared for the Commission of Public Docks, Portland, by the Bureau of Business Research,⁴⁷ University of Oregon, covering 1959, shows that nearly 7,500 persons had jobs directly connected with the export-import of commodities of all kinds.

In 1963, 82.5% of the outbound tonnage was agricultural commodities. When total tonnage (exports plus imports) was determined, agricultural commodities still consisted of 60% of all business. The foreign and domestic commerce in agricultural products originating at the Portland Public Docks in 1963 are shown on the next page.

⁴⁷ *The Impact of Harbor Activity on Portland's Economy*, prepared for Portland Public Docks of City of Portland, Oregon, by Bureau of Business Research, University of Oregon, 1959.

Loading food for export shipment.



Waterborne Commerce in Agricultural Commodities, Portland Harbor, 1963⁴⁸

Foreign commerce (from Portland) Exports (short tons)

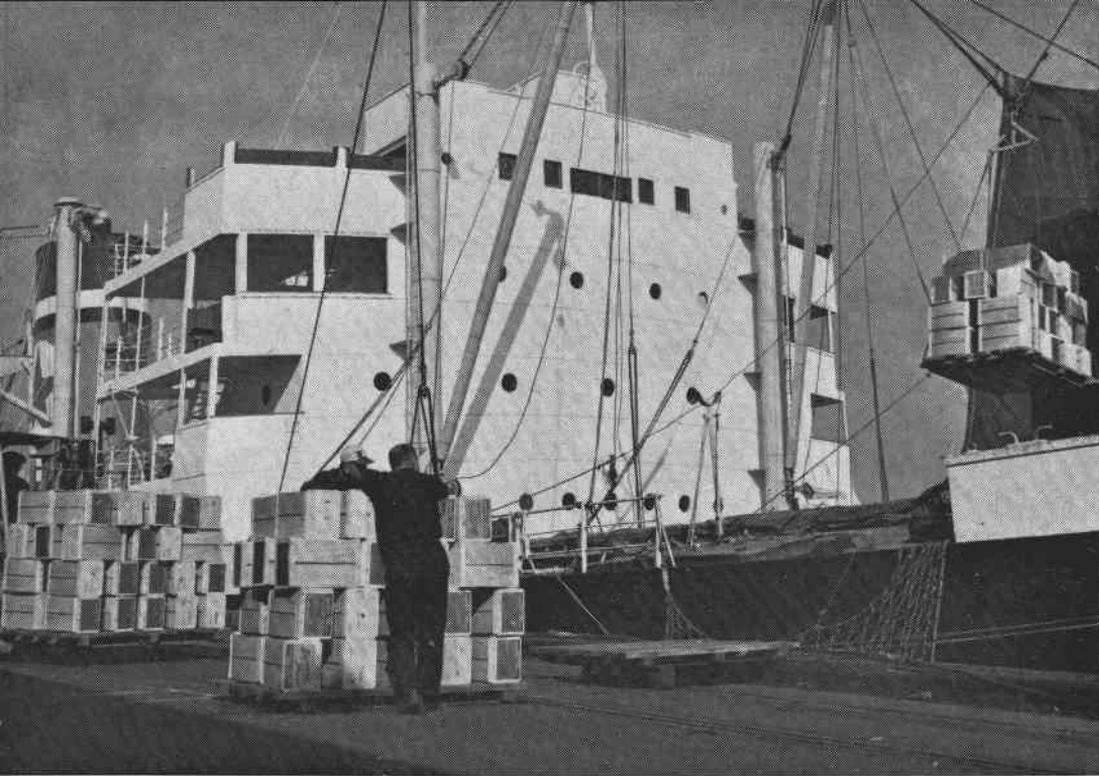
Commodity	
Apples, dried	304
Apples, fresh (515,338 boxes)	12,881
Barley (10,644,368 bu.)	255,466
Beans, dried	7,544
Corn (270,190 bu.)	7,565
Fertilizers	151
Foodstuffs	12,180
Flour (2,400,066/cwt.)	120,005
Fruits and juices, canned	2,765
Hides	10,019
Hops	258
Lentils	11,892
Milk, canned	591
Milk, powder	9,427
Millfeed	469
Milo (167,500 bu.)	4,690
Nuts	134
Oats (724,073 bu.)	11,586
Onions	4,690
Pears, fresh (255,128 boxes)	6,380
Peas, dried	62,110
Poultry and stock feed	30,078
Prunes, dried	1,107
Rye (685,925 bu.)	19,206
Seeds	19,057
Tallow	12,921
Vegetables, canned	5,332
Wheat (74,926,834 bu.)	2,247,805

Domestic commerce (from Portland)

Barley (1,489,964 bu.)	35,760
Canned goods	2,871
Feed and grain	5,417
Flour	5,773
Total tons (foreign and domestic)	2,926,434

These data show that wheat exports amounted to nearly 75,000,000 bushels or 77% of all agricultural exports. Oregon's agriculture can take credit for only a part of the economic activity created by these waterborne shipments. For example, Oregon produced 23,000,000 bushels of wheat in 1963, yet 75,000,000 bushels were exported. However, it is estimated that Oregon did export 85% of its wheat production in 1963.

⁴⁸ Data from the Commission of Public Docks, Portland, Oregon.



Thousands of boxes of fresh pears and apples are exported to foreign countries each year.

After wheat and some of the other exports were adjusted downward, it was estimated that 811,000 tons were Oregon-produced commodities.

$$\begin{array}{r} \text{Oregon-produced commodities} \dots\dots\dots 811,000 \text{ tons} \\ \text{Total exports plus imports} \dots\dots\dots 4,845,000 \text{ tons} \end{array} = 17\%$$

The above relationship between Oregon-produced agricultural commodities and total tonnage shows that 17% of the economic activity at the port may be credited to Oregon. Much of the other tonnage of agricultural commodities comes from other states, notably Washington, Idaho, and Montana. Of course, the state of Oregon, particularly the Portland area, benefits from the large tonnage of agricultural commodities coming from surrounding states.

It is estimated that the general cargo (agricultural commodities) component generated \$12.50 a ton and grain \$2.50 a ton in direct payroll in 1963. Below is shown the total direct payroll and the average number of employees that are involved in Oregon-produced agricultural commodity water shipments:

General cargo.....	158,000 tons @ \$12.50/ton =	\$1,975,000
Grain	653,000 tons @ \$ 2.50/ton =	1,633,000
		\$3,608,000
Total payroll		\$3,608,000
Average number of employees (\$7,600/year).....		475