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PACIFIC NORTHWEST EXPORT STATISTICS  
AND  
TRANSPORTATION DEVELOPMENTS IN 1976

by

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Speech presented to the  
Pacific Northwest International Trade Council  
June 8, 1976

*ACK 202*



This presentation is assigned to two topics which I have been requested to comment upon. The first is to review what data is available documenting the extent and pattern of exports from the Pacific Northwest region. The second subject is to report upon a study soon to be initiated in the Department of Agricultural Economics at the University of Idaho. The results from this study will undoubtedly be of interest to many members of this audience. It will be concerned with the economic feasibility of moving products overseas from the Pacific Northwest via recently innovated techniques that have applicability to the Snake-Columbia Navigation System.

#### Pacific Northwest Export Statistics

Quotes of export statistics for commodities originated in the Pacific Northwest must be accepted with extreme caution. Regional or state export data is not collected by government sources. The federal government's Foreign Trade Statistics Program is conducted by the Bureau of the Census. These data are primarily compiled from copies of Shipper's Export Declarations which are required to be filed with Custom's officials. Export shipments are credited statistically to the Customs district through which the shipment clears when it leaves the United States. However, the Custom district shown in the statistics is not necessarily the district in which the merchandise was grown, manufactured, or otherwise originated. The latter information, indicating the origin of exports by state as region, is not compiled by the Census Bureau because it is not required to be reported on export declarations.

This is unfortunate as producers, shippers, and carriers would all benefit in having these data for purposes of conducting market share and penetration analyses and studies anticipating the need for and design of future

handling and transportation facilities and equipment. On the other hand, practical and cost considerations in collecting such information may outweigh the benefit of collecting such data. At least this has been the official position taken by the Department of Commerce.

Fortunately, some data is available for certain commodities where it has been compiled by the respective producers association (e.g. Peas and Lentils). Furthermore, an approximate indication of the importance of certain products in the region's exports and of underlying trends in the commodity's trade can be obtained by looking at flows through certain ports or customs districts, if one can be reasonably confident from experience and knowledge of the industry situation that most of the product flow originated in the area. White wheat produced and exported from the Northwest serves as an example. For the period June 1975 to May 1976, 191,075,000 bushels of white wheat were inspected for export at either Columbia River or Puget Sound ports.<sup>1</sup> This represented approximately 93 percent of total export inspections of white wheat for this period. Of the exported white wheat inspected in Pacific Northwest ports, 146,427,000 bushels were inspected in Columbia River ports and 44,648,000 bushels in Puget Sound ports. White wheat export inspections elsewhere included 4,246,000 bushels in Canadian seaway ports, 223,000 bushels in Toledo area lakes ports and 10,033,000 bushels in Atlantic ports. No inspections for exports occurred at any of the Gulf ports, nor California Pacific ports. Since white wheat is grown predominantly in the Pacific Northwest, these inspection figures can be used as an indication of the magnitude of white wheat exports from the Pacific Northwest.

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<sup>1</sup>United States Department of Agriculture, Market News Branch, Grain Division, Agricultural Marketing Service, Grain Market News, Volume 24, No. 25, Independence, Missouri. June 18, 1976, page 21.

In the appendix that accompanies this paper a series of data that might be useful to some members of the audience is included. This data represents ocean freight shipped from Pacific Northwest ports. Also data is presented to indicate the export shares of agricultural products produced in the Pacific Northwest region. This export data is again only useful as an approximate indication of the region's exports as it is based upon the production of each commodity grown in each state times the percentage of total U.S. production of that commodity which goes into export channels. Actual export shares from various states or regions will vary considerably from the national mean.

The data in Table 1 gives a snapshot of the pattern of commodity movement through the Pacific Northwest ports in 1974, the latest available year. It is important to note that these data are presented in physical, not economic terms. Clearly agricultural and forestry products dominate the physical movement of commodities from these ports. Wheat dominates the statistics for Columbia river ports, whereas forest products (logs in particular) dominate ocean going export freight from Washington ports.

Agricultural export shares for Washington, Oregon, and Idaho are presented in Table 2. These data reflect the value of the commodity in question which, except for transportation related considerations, is more relevant for most marketing decisions than are freight tonage figures. As indicated earlier, these data represent only an approximation of actual commodity exports from the region. Nevertheless, the data presents certain interesting insights into the importance of exports to certain industry segments in the area. The category representing Vegetables and Preparations indicates that this category of exports is significant for this region. Nationally, Washington ranks second, Idaho third, and Oregon ninth in terms of export shares. The category includes such products as potatoes, peas, lentils, sweet corn,

beans, onions, and a number of other crops as well. Individually the magnitude of these commodities seems rather small, but as an aggregate they far exceed feed grains and are second only to wheat in agricultural exports from the Pacific Northwest. Knowledge of this might be particularly useful to this organization since a large number of participants in the Pacific Northwest International Trade Council come from this particular agricultural subsector. Finally, it is interesting to note that export shares from this region have more than tripled from 313 million dollars in 1971, to 977 million dollars in 1975. The remaining data in the appendix were compiled by Dr. Robert Wilcox, Washington State University Extension Economist. Hopefully this information will be of pertinence to those in the group concerned with exporting Potato and Alfalfa products.

#### Snake-Columbia Export Transport Study

When John George offered me the opportunity to speak to this group I was especially pleased as the occasion provided an opportunity to announce a study to be initiated at the University of Idaho. This study will be directed at a subject of direct interest to many of the members in the audience today. Its purpose will be to determine the economic feasibility of moving agricultural and forest products from the Pacific Northwest, via the Columbia-Snake navigation system, into overseas markets by selected innovations in inland-ocean water transportation systems. Included among these systems would be container carrying barges and LASH barges.. The two systems seek cost savings by reducing cargo handling costs at the interface between inland and ocean legs of water transportation. Both are extensions of the same intermodal concept that has been widely adopted by motor carrier, rail and ocean steamship firms in the last decade.

Container carrying barge and LASH (barge carrying ocean vessel) services offer the prospect of a new dimension in inland waterway movement. Traditionally, the barge mode has carried bulk commodities such as grain, petroleum, ore, limestone, pulpwood, and fertilizer. With the advent of container carrying and LASH barge services, it would appear that it will be economically feasible to move general cargo commodities by water that require mini-bulk, or break bulk techniques of handling and transport.

These technological developments, and the final extension of slack water barge transportation to Lewiston, Idaho, may allow a host of products to be moved more efficiently from the Pacific Northwest to foreign markets. Some of the most immediate beneficiaries may be producers and shippers of peas, beans, lentils, hay cubes, beet pulp pellets, and paper products shipped via containers loaded onto barges and transloaded at Portland to an ocean vessel, or to truck for eventual transshipment to an ocean vessel in Seattle. Less immediate, but in certain instances more dramatic prospects, may be forthcoming in the LASH intermodal barge concept.

The LASH concept is one of the latest innovations existing in international transportation. Cargo is stored in special barges (lighters) and then floated via tug to the mother vessel to be loaded, and later unloaded, offshore, or at a regular port. An extremely versatile system, there are many potential economies to be exploited. For example, it is common for vessels calling on Persian Gulf ports to be delayed four to six months before their cargo can be discharged because of port congestion. This problem can be circumvented by the LASH ocean vessel disembarking the barges offshore. The barges are then taken to areas on the shore by a separate towing vessel. Meanwhile, the ocean vessel continues its journey in a matter of hours, thus

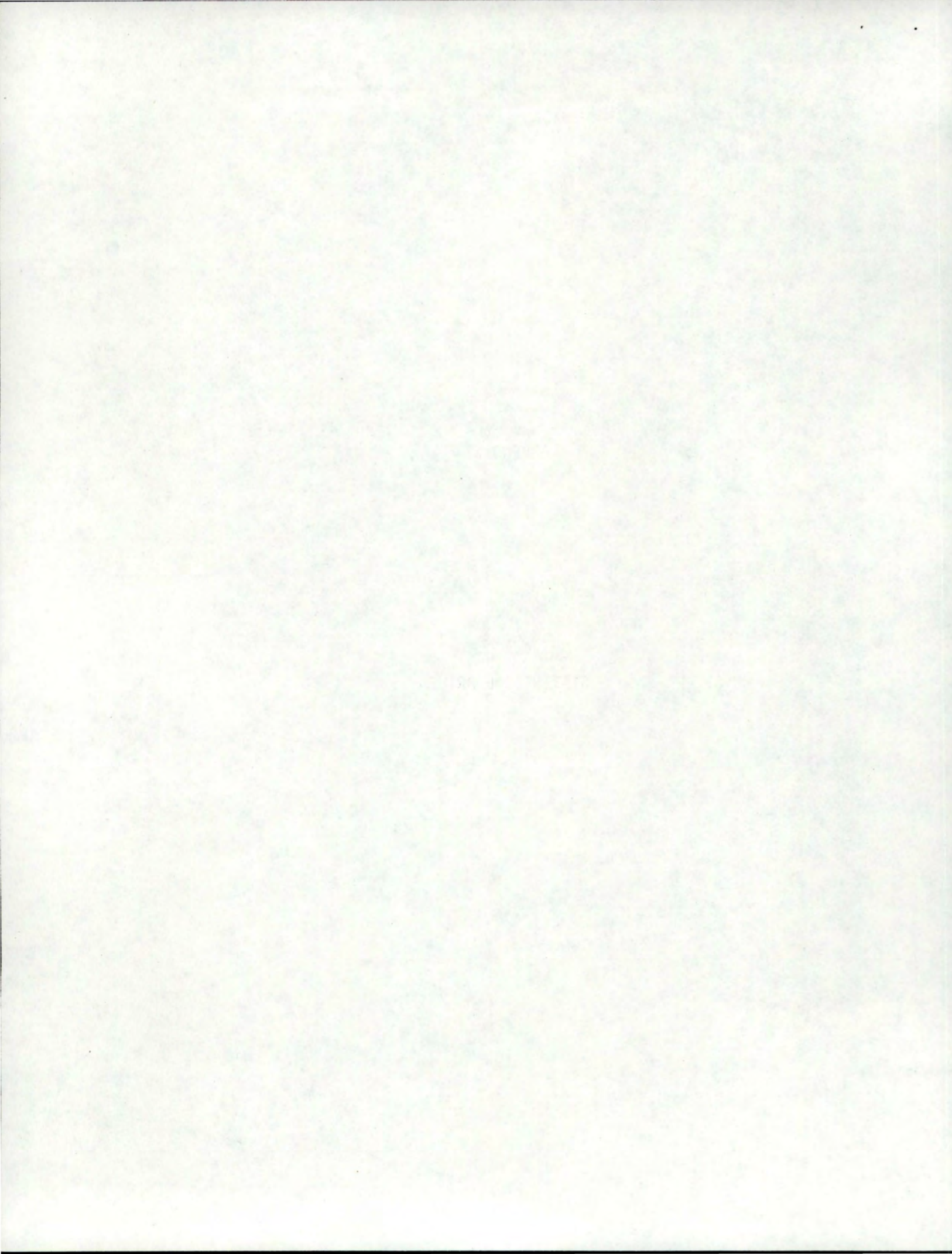
dramatically reducing demurrage charges incurred for a delayed vessel.

The probable duration of the study will be about five years, but some preliminary results will hopefully be available by the latter part of 1977, or the earlier part of 1978. The ultimate success of the project will in part hinge upon the cooperation received from industry people such as are included in this meeting. In particular industry people will be relied upon heavily for information regarding the concerned parties perceived needs in transporting their products to overseas markets.



APPENDIX

STATISTICAL BRIEF



APPENDIX TABLE 1. SHORT TONS OF OCEAN-GOING EXPORT FREIGHT, BY COMMODITY AND MAJOR PACIFIC NORTHWEST PORTS, 1974.

Commodity	Columbia River Ports <sup>1</sup>	Washington Ports <sup>2</sup>	Total
----- (Short Tons) -----			
AGRICULTURAL PRODUCTS			
Wheat	4,103,345	1,375,297	5,478,642
Wheat Flour & Semolina	31,407	50,970	82,377
Prepared Animal Feeds	21,178	22,802	43,980
Barley & Rye	411,286	1,502	412,788
Corn	1,028	25,479	26,507
Oats	3,499	9,635	13,134
Grain Mill Products (NEC*)	493	52,500	52,993
Sorghum Grains	--	25	25
Hay & Fodder	4,928	24,606	29,534
Fresh Fruits & Tree Nuts	7,459	33,304	40,763
Fresh & Frozen Vegetables	22,600	24,597	47,197
Vegetables & Preparations (NEC*)	37,334	72,599	109,933
Prepared Fruit & Veg. Juices (NEC*)	2,517	2,798	5,315
Live Animals	--	3	3
Meat; Fresh Chilled, Frozen	521	7,009	7,530
Tallow, Animal Fats & Oils	16,097	69,578	85,675
Animal & Products (NEC*)	1,453	423	1,876
Meat & Products (NEC*)	770	667	1,437
Animal By Products (NEC*)	15,630	45,284	60,914
Fresh Fish, Except Shellfish	465	12,793	13,258
Fish & Shellfish, Prepared	791	22,089	22,880
Other Agricultural Products	32,298	20,456	52,754
FORESTRY PRODUCTS			
Logs	503,102	5,011,873	5,514,975
Fuel Wood, Charcoal & Wastes	--	9,008	9,008
Timber Posts, Poles & Piling	2,598	22,344	24,942
Pulpwood, Log	--	10,577	10,577
Wood Chips, Stoves & Moldings	802,542	739,501	1,542,043
Lumber	120,629	276,793	397,422
Veneer, Plywood & Worked Wood	36,749	8,169	44,918
Pulp	23,150	414,849	437,999
Standard Newsprint Paper	1,633	23,258	24,891
Paper & Paperboard	100,367	97,813	198,180
Gum & Wood Chemicals	752	40,908	41,660
Paper Waste & Scrap	21,680	40,868	62,548
Wood Manufacturers (NEC*)	7,214	2,820	10,034
Pulp & Paper Products (NEC*)	729	4,383	5,112
Forest Products (NEC*)	459	38,604	39,063
MANUFACTURED & MINERAL PRODUCTS, ETC.	484,452	509,072	993,524

SOURCE: Department of the Army Corps of Engineers. Waterborne Commerce of the United States, Calendar Year 1974. Part 4.

\*Not Elsewhere Classified.

<sup>1</sup>Portland, Vancouver, Longview, and Astoria and other ports contiguous to the Columbia-Snake navigation system.

<sup>2</sup>Seattle, Tacoma, Grays Harbor, Port Townsend, Port Gamble Harbor, Olympia, Everett, Anacortes, and Bellingham (Washington ports on the Columbia River are reported in the column for Columbia river ports).

APPENDIX TABLE 2. U.S. EXPORT SHARES\* OF AGRICULTURAL COMMODITIES, BY PACIFIC NORTHWEST STATES, FOR FISCAL YEARS 1971-1975.

State and Year Ended June 30	Wheat and Flour	Total Feed Grains	Fruits and Preparations	Vegetables & Preparations	Meats & Products Including Poultry	Hides and Skins	Lard & Tallow (Edible & Inedible)	Other	Total
Washington	-----Million			-----Dollars -----					
1971	79.3	6.2	7.9	20.9	1.8	4.2	2.2	33.6	156.1
1972	76.1	5.0	9.0	21.9	2.0	5.4	2.1	41.5	163.0
1973	182.4	6.5	15.1	39.2	2.6	8.4	2.1	47.1	303.4
1974	248.1	15.8	19.8	56.4	3.5	9.5	4.7	51.5	409.3
1975	345.1	10.9	25.2	60.4	3.2	3.2	4.6	36.5	489.1
OREGON:									
1971	22.7	4.0	4.6	3.9	2.0	4.1	3.1	16.1	60.5
1972	22.1	2.6	5.9	4.3	2.2	5.3	2.7	19.5	64.6
1973	55.1	3.5	8.2	6.9	2.9	9.4	2.5	22.1	110.6
1974	98.2	7.7	12.3	10.6	3.9	11.3	6.0	30.4	180.4
1975	149.5	5.5	9.5	10.3	3.1	3.5	4.7	28.4	214.5
IDAHO:									
1971	37.5	7.6	0.5	26.0	1.8	4.1	3.6	15.9	97.0
1972	31.3	4.7	0.9	24.3	2.2	5.6	3.4	18.7	91.1
1973	66.3	8.9	0.7	34.3	3.3	11.1	3.7	20.1	148.4
1974	134.3	21.6	0.8	53.3	4.1	11.4	7.5	25.5	258.5
1975	165.2	17.7	1.3	51.5	3.6	6.1	7.2	20.8	273.4
TOTALS:									
1971	139.5	17.8	13.0	50.8	5.6	12.4	8.9	65.6	313.6
1972	129.5	12.3	15.8	50.5	6.4	16.3	8.2	79.7	318.7
1973	303.8	18.9	24.0	80.4	8.8	28.9	8.3	89.3	562.4
1974	480.6	45.1	32.9	120.3	11.5	32.2	18.2	107.4	848.2
1975	659.8	34.1	36.0	122.2	9.9	12.8	16.5	85.7	977.0

\*Based on each State's portion of U.S. production of individual commodities that go into export.

SOURCES: Foreign Agricultural Trade of the United States (FATUS). Nov. 1974 and Jan. 1976.  
Economic Research Service, U.S.D.A.

APPENDIX TABLE 3 POTATO PRODUCTION, U.S. AND PACIFIC NORTHWEST STATES,  
1962-66 Ave., 1967-1975 annual

Year	U.S.	Idaho	Washington	Oregon
		-----1000 cwt.-----		
Ave. 1962-66	275,023	53,994	15,012	9,190
1967	305,412	63,900	22,090	13,252
1968	293,438	59,505	24,173	12,290
1969	311,903	69,870	29,796	13,412
1970	325,752	74,660	35,590	15,229
1971	319,354	77,290	30,110	13,723
1972	294,490	78,795	30,495	14,436
1973	299,410	78,965	35,260	15,929
1974	341,097	81,205	41,160	17,482
1975	313,003	75,090	48,300	22,779

APPENDIX TABLE 4 POTATO PRODUCTION, U.S. AND PACIFIC NORTHWEST,  
Averages 1962-66 and 1971-75

	U.S.	Pacific Northwest	
	Quantity 1000 cwt.	Quantity 1000 cwt.	Percent of U.S.
1962-66 Average	275,023	78,196	28.4
1971-75 Average	313,471	132,204	42.2

Source: U.S.D.A. Crop Reports  
(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 5 POTATO FLAKES AND GRANULES, EXPORTS BY COUNTRY OF DESTINATION  
SEATTLE AND PORTLAND CUSTOMS DISTRICTS, 1974 and 1975 <sup>1/</sup>

Country	Seattle		Portland	
	1974	1975	1974	1975
	-----Pounds-----			
Canada	807,099	689,474	-	-
Sweden	-	1,815,244	1,269,600	1,674,475
Denmark	-	407,000	61,500	-
United Kingdom	-	2,258,152	312,267	1,189,336
Japan	2,551,830	1,804,280	449,307	2,126,246
Australia	921,393	190,000	-	-
Rep. of So. Africa	93,000	-	95,000	-
Venezuela	-	-	6,006	-
Bahrain	-	-	-	996
Guatemala	-	-	-	10,000
Spain	-	-	-	180,000
Taiwan	-	-	-	2,220
Total	4,373,322	7,164,150	2,193,680	5,183,273

<sup>1/</sup> Eleven months

Source: Monthly Export Reports, Seattle and Portland  
Customs Districts, U.S. Dept. of Commerce  
(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 6 DEHYDRATED POTATOES EXPORTS BY COUNTRY OF DESTINATION  
SEATTLE AND PORTLAND CUSTOMS DISTRICTS 1974 and 1975 <sup>1/</sup>

Country	Seattle		Portland	
	1974	1975	1974	1975
	-----Pounds-----			
Canada	890,850	794,423	-	-
Sweden	-	-	265,718	-
Japan	16,094	-	1,534,762	412,127
Australia	-	-	-	141,750
United Kingdom	-	446,269	1,000	818,333
Rep. of So. Africa	-	-	38,500	-
Netherlands	-	-	1,200	-
France	-	-	2,200	-
Venezuela	-	-	-	3,280
W. Germany	-	-	226,500	-
Taiwan	-	-	-	5,000
Italy	-	-	3,100	7,500
Philippines	-	-	4,900	24,750
Total	906,944	1,240,692	2,077,880	1,412,740

<sup>1/</sup> Eleven months.

Source: Monthly Export Reports  
Seattle and Portland Customs Districts, U.S. Dept. of Commerce  
(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 7 ALFALFA HAY PRODUCTION. U.S., CALIFORNIA, IDAHO, OREGON AND WASHINGTON

Year	U.S.	California	Idaho	Oregon	Washington
	000 Short Tons	000 Short Tons	000 Short Tons	000 Short Tons	000 Short Tons
Ave. 1962-66	72,127	6,273	2,937	1,116	1,448
1967	74,204	6,169	3,295	1,163	1,709
1968	73,251	6,566	2,982	1,086	1,499
1969	74,882	6,210	3,341	1,192	1,642
1970	75,447	6,451	3,520	1,287	1,709
1971	77,169	6,897	3,342	1,274	1,769
1972	78,041	7,188	3,267	1,284	1,792
1973	79,144	6,902	3,608	1,302	1,580
1974	74,672	6,785	3,885	1,386	1,889
1975	77,761	6,608	3,811	1,344	1,750

Source: Annual Crop Summaries, USDA  
 (Compiled by Robert W. Wilcox, Extension Economist, Washington State University)



APPENDIX TABLE 8 U.S. ALFALFA CUBE AND MEAL EXPORTS BY COUNTRY OF DESTINATION, 1973

Country of Destination	Product			Total
	Cubes	Meal		
		Dehydrated	Sun Cured	
	-----Short Tons-----			
Canada	4,818	793	267	5,878
Philippines	-	-	369	369
Taiwan	-	-	740	740
Mexico	908	1,057	-	1,965
Guatemala	-	948	-	948
Salvador	-	450	-	450
C. Rica	-	992	-	992
Panama	-	1,160	-	1,160
Dom. Rep.	-	229	-	229
Venez.	-	1,777	-	1,777
S. Viet.	-	2,681	-	2,681
H. K.	-	655	-	655
Japan	69,248	150,336	190,105	409,689
Other	<u>207</u>	<u>413</u>	<u>90</u>	<u>710</u>
Total	75,181	161,491	191,571	428,243

Source: Publication, FT 410 Bureau of Census  
 (Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 9 ALFALFA PELLETS - EXPORTS BY DESTINATION, 1970-75  
SEATTLE AND PORTLAND CUSTOMS DISTRICTS

Destination	Seattle						Portland					
	1970	1971	1972	1973	1974	1975*	1970	1971	1972	1973	1974	1975*
	-----Short Tons-----											
Canada	1,230	906	-	-	84	279	-	-	-	-	-	-
Taiwan	1,160	-	3,306	140	-	-	-	-	-	-	-	-
Japan	71,712	39,983	10,702	9,114	36	-	1,980	-	-	35	-	-
Total	74,102	40,889	14,008	9,254	120	279	1,980	-	-	35	-	-

\* 11 months

Source: U.S. Bureau of Census Annual Summary of Exports, Seattle Field Office  
U.S. Department of Commerce

(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 10 HAY AND OTHER FODDER EXPORTS, 1970-75  
SEATTLE AND PORTLAND CUSTOMS DISTRICTS

Country of Destination	Seattle	Portland	Total
Japan	16,274	-	16,274
Canada	37,774	-	37,774
Total	54,048	-	54,048
1971			
Japan	13,857	141	13,998
Canada	51,090	-	51,090
Total	64,947	141	65,088
1972			
Japan	2,972	734	3,706
Canada	57,495	-	57,495
Total	60,467	734	61,201
1973			
Japan	7,337	2,615	9,952
Canada	54,801	-	54,801
Total	62,138	2,615	64,753
1974			
Japan	9,314	791	10,105
Canada	86,467	-	86,467
Total	95,781	791	96,572
1975*			
Japan	17,538	716	18,254
Canada	95,703	-	95,703
Total	113,241	716	113,957

\* 11 months

Source: U.S. Bureau of Census records in U.S. Dept. Commerce, Seattle Field Office  
(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)

APPENDIX TABLE 11 ALFALFA CUBE EXPORTS BY COUNTRY OF DESTINATION, 1970-75  
SEATTLE AND PORTLAND CUSTOMS DISTRICTS

Country	1970	1971	1972	1973	1974	1975*
	-----Short Tons-----					
Canada	-	-	671	3,558	3,859	3,321
Japan	-	-	1,943	4,545	8,749	7,625
Total	-	-	2,614	8,103	12,608	10,946

APPENDIX TABLE 12 ALFALFA PELLET EXPORTS BY COUNTRY OF DESTINATION, 1970-75  
SEATTLE AND PORTLAND CUSTOMS DISTRICT

Country	1970	1971	1972	1973	1974	1975*
	-----Short Tons-----					
Canada	1,230	906	-	-	84	279
China (Taiwan)	1,160	-	3,306	140	-	-
Japan	73,692	39,983	10,702	9,149	36	-
Total	76,082	40,889	14,008	9,289	120**	279

\*11 months

\*\*Does not include 3 tons reported as exported to United Kingdom

Source: Compiled from U.S. Department of Commerce - Seattle Field Office Records  
(Compiled by Robert W. Wilcox, Extension Economist, Washington State University)