Feasibility and Location Considerations for a White Wheat Futures Contract

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ABSTRACT

This report examines the potential for establishing a white wheat futures contract. General characteristics necessary for a successful futures market commodity are discussed, and the white wheat industry is examined in light of these characteristics. An attitude survey of wheat growers, grower organizations, grain handlers, and commodity brokers is used to supplement the statistical data. Particular attention is given to the desirability of opening a new Portland exchange versus placing the contract on one of the existing commodity exchanges.

FEASIBILITY AND LOCATION CONSIDERATIONS FOR A WHITE WHEAT FUTURES CONTRACT

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OBJECTIVES

The objective of this study is to examine the potential for developing a workable white wheat futures contract. More specifically, this report will

- explore the industry and commodity characteristics necessary for a workable futures contract as they relate to the Pacific Northwest white wheat industry;
- (2) develop the general considerations in choosing a futures contract trading location;
- (3) summarize a broad base of industry opinion concerning trading location; and
- (4) develop general time and cost guidelines for opening a Portland exchange.

No exchange has, as yet, made a commitment to develop a white wheat futures contract. The contract itself has been proposed by an industry steering committee sponsored by the Oregon Wheat League.

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CONCLUSIONS AND SUMMARY

Page references are given, for easy access, to the sections of this report which support each conclusion.

- Wheat producers, grain handlers, and commodity brokers support the introduction of a white wheat contract. (See pages 40-43.)
- 2. These groups favor the introduction of such a contract within the next 12 to 18 months. (See pages 40-43.)
- 3. Opening a Portland exchange would add at least one additional year to the time required for establishing a contract. (See pages 47-48.)
- 4. White wheat possesses characteristics essential for successful futures trading. However, the crop is a regional one, causing distrust on the part of outside speculators as to the potential for industry price control by local cash grain traders. (See page 33.)
- 5. The proposed contract would face a difficult break-in period, even if traded on an existing exchange under the most favorable conditions. (See pages 34, 53.)
- 6. A one-commodity futures exchange has not proven to be a viable unit. Based on the experience of the recently opened Pacific Commodities Exchange, a Portland exchange would have to add at least three more commodities over the first 4 or 5 years of operation. (See pages 32-34, 48.)
- 7. To begin operation, a Portland exchange would require an investment of at least \$500,000 over a three-year period. In addition, a floortrader pool of speculative capital in excess of \$5 million would be necessary. (See pages 48-50.)

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- 8. At present, only one Portland grain handler, one State of Washington grain handler, and one State of Washington producer organization strongly support a Portland-based exchange. A total of 29 grain handlers, brokers, and producer organizations indicate strong support for a Chicago-based exchange. (See pages 40-42.)
- 9. The likelihood of success for a Portland exchange is slight. This conclusion is based on:
 - (a) The lack of industry support. (See Item 8 above.)
 - (b) The substantial failure rate for previous exchanges and contracts. (See pages 34, 52.)
 - (c) The lack of comparative advantage for other contracts which might be added to a Portland exchange. (See page 48.)
 - (d) The lack of knowledge about Northwest markets on the part of outside speculators. Trading on an existing exchange would ease the educational effort needed to attract these speculators. (See page 34.)
 - (e) The feeling on the part of outside speculators that industry concentration in the Northwest is high enough to allow insider manipulation by cash grain traders. Trading on a Portland exchange would intensify this feeling. (See page 33.)
 - (f) The difficulty of attracting floor traders to a new exchange. (See pages 32-33, 35, 53, and Items d and e above.)
 - (g) The difficulty of spreading between existing exchanges and a new exchange with uncertain volume. (See page 33.)
- 10. In light of one white wheat contract failure during the 1920's and another during the 1950's, the chances of interesting another exchange in the contract would be slight if a new white wheat contract should fail.
- 11. From the point of view of the grain trade, very little would be gained from the introduction of a Portland futures exchange. (See pages 51-52.)

- 12. Given the above factors, the proposed contract should be offered first to the <u>Chicago Board of Trade</u>, second, to the Kansas City Board of Trade if Chicago declines. (See pages 52-53.)
- 13. The choice of using either the Chicago or Kansas City exchange will provide local growers and handlers with the maximum chance for a market of sufficient volume to provide a viable hedging alternative. The Pacific Commodities Exchange (San Francisco) would be a desirable alternative, but it is too soon to judge its chance of success. If neither Chicago nor Kansas City lists a white wheat contract, the Pacific Commodities Exchange should be reconsidered. Enough time should have elapsed by then to allow a judgment as to the viability of this marketplace. (See pages 52-53.)

INTRODUCTION

Why Establish A White Wheat Futures Market?

A white wheat futures market would offer the Pacific Northwest grain trade

- -- additional flexibility in choosing the time of year to establish a market price for white wheat;
- -- an opportunity to collect a payment, through hedging, for the carrying charges resulting from storage of wheat, either on-farm or in commercial facilities;
- -- a valuable source of market information from independent sources analyzing the local grain trade;
- -- an increased willingness of commercial interests to purchase grain inventories from local producers early in the crop year. This would be encouraged by the price protection afforded through hedging.

Trading in commodity futures is by no means a new concept. It has long been an integral part of grain marketing in the Midwest. However, none of the wheat futures contracts currently traded reflects Northwest market conditions closely enough to offer adequate hedging potential. As a result, Northwest grain traders have not been able to use the Chicago futures market (soft red winter wheat), the Kansas City futures market (hard red winter wheat), or the Minneapolis futures market (spring wheats) to offset local price risk.

Over the past two years Oregon State University, various county extension personnel, the Oregon Wheat League, and a League-appointed industry steering committee have been exploring the possibility of developing a white wheat futures contract. At this point in time a proposed contract has been written by the steering committee; a series of commodity futures workshops has been held throughout Eastern Oregon to acquaint producers with the techniques, advantages, and disadvantages of futures trading; and a preliminary contract feasibility study has been completed at Oregon State University.

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This bulletin presents the results of the recently completed feasibility study. The discussion assumes a basic knowledge of futures trading and of hedging. Readers wishing to acquire such a background are referred to one of the following texts:

> Hammonds, T. M. <u>The Commodity Futures Market from an</u> <u>Agricultural Producer's Point of View</u>, M.S.S. Publishers, Inc., New York City, 1972.

Gold, G. Modern Commodity Futures Trading, Commodity Research Bureau, Inc., New York, 1961.

Hieronymus, T. A. <u>Economics of Futures Trading</u>, Commodity Research Bureau, Inc., New York, 1971.

The point of view assumed in this bulletin is that of the Northwest grain trade. The reason for exploring the development of this market is to provide the Northwest with a potentially beneficial wheat marketing tool. However, there are also dangers associated with futures trading. Two in particular relate to this market. First, traders may enter the commodity futures market without an adequate understanding of proper trading techniques and without an appreciation of the many unique features of this market. Second, hedgers may be trapped in a low-volume ("thin") market and find themselves subject to unusually large price fluctuations. Each of these difficulties will be discussed in this bulletin.

Commodity Characteristics Needed for Futures Trading

There are two general characteristics of all successful futures market commodities [1, p. 13]. First, they are subject to significant price fluctuations in the cash market. Transferral of the price risk associated with these fluctuations is the reason for the development of commodity futures. Second, the nature of the industry requires a substantial product inventory, either in storage or in production. Inventories require ownership and, therefore, create price risk over time when coupled with fluctuating prices. Beyond these two basic characteristics, we may list several others. A futures market commodity should:

-- be gradeable and homogeneous (separable into relatively uniform lots).

- -- be marketed in bulk and raw or semi-processed form (this characteristic is desirable but not necessarily a pre-requisite).
- -- be readily storable (this characteristic is desirable but not necessarily a prerequisite).
- -- have a nonrestricted flow through market channels (competitive market).
- -- have a large supply and demand (large enough to preclude price manipulation by traders).
- -- have industry interest and support.
- -- have speculative interest and support.
- -- have readily available market information.

It should be pointed out that merely having the above-mentioned characteristics does not guarantee the successful initiation of trading. The development of a new futures contract is always a difficult process and never can be predicted with certainty. Much of the difficulty lies with the relationship between hedging and speculation. This relationship will be outlined in the section dealing with the proper trading location for the proposed white wheat contract.

A feasibility study for wheat is easier to execute than most new contract studies, since wheats of various types have a long-established trading history on futures markets. It is the task here to point out the basic readiness of the Northwest market at this point in time, when no white wheat futures contract has ever traded successfully to this date.

A brief discussion of the nature of the Pacific Northwest white wheat industry will provide a background for the analysis which follows.

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THE PACIFIC NORTHWEST WHITE WHEAT INDUSTRY $\frac{1}{2}$

The Columbia Basin (Figure 1) of the Pacific Northwest (PNW) produces approximately 70 percent of the white wheat grown in the United States. Table 1 indicates the physical supply of U.S. wheat, by class, over the last 20 years, and Table 2 presents the same information in percentage terms. This type of wheat requires the mild winters found in Oregon, Eastern Washington, and Northern Idaho.

Soil and weather conditions play an important role in determining the protein content of wheat at maturity. Hard wheat (10 to 17 percent protein) is typically grown in areas with cold winters followed by hot, dry summers. During the pre-ripe period, the translocation of nitrogen from the plant to the grain takes place. The shorter the period between formation and ripening of the kernel, the higher its protein content will be. A drought or physiological shock during this period often aids in the development of a high-protein grain.

In the Columbia Basin of the PNW, a marine climate produces relatively mild winters followed by a summer with frequent cool evening periods. The climatic pattern makes it difficult to produce hard wheat of consistently high protein content. It does, however, favor the growth of soft white wheat having a protein content ranging from 6 to 10 percent. Flour milled from soft wheat lacks the strength and stability necessary for domestic breads. It is used primarily in cakes, pastries, crackers, and noodles for consumption in foreign countries.

Marketing Pattern

In the PNW the bulk of the grain is delivered to farmer-owned cooperative country elevators and warehouses during the harvest season. Typically, the producer retains ownership of the grain for a considerable period of time after harvest. Country elevators tend to buy from growers only after they have a

 $[\]frac{1}{2}$ Material taken from [7, 8, 9, 10].



Figure 1. The Columbia Basin

Year	All wheat	Hard winter wheat	Soft red wheat	Hard spring wheat	Durum	White
			(million	bushels)		
1949	1 098	541	203	169	20	146
1950	1.019	459	162	207	38	153
	-,				•••	-50
1951	988	382	148	256	36	166
1952	1,306	723	193	181	23	186
1953	1,173	504	231	217	14	207
1954	984	489	185	145	5	160
1955	935	416	173	184	20	142
19 <u>5</u> 6	1,004	446	187	178	39	154
1957	956	429	155	169	40	163
1958	1,457	836	192	233	22	174
1959	1,121	620	156	151	20	174
1960	1,357	794	190	188	34	151
1961	1,235	754	202	115	21	142
1962	1,094	537	157	175	70	155
1963	1,142	545	218	161	51	166
1964	1,291	636	226	180	67	181
1965	1,316	673	185	209	70	179
10//	1 010	(70	017	1 7 7	()	
1966	1,312	6/9	21/	1//	63	1//
1967	1,522	/06	2/4	230	66	246
1968	1,577	811	224	228	100	214
1969	1,443	785	186	190	108	174
1970	1,351	755	174	198	53	171
$1071\frac{a}{}$	1 610	7/7	212	266	0.2	201
1072b/	1 5/5	747	414 227	200	74	201
TA / 7	1,040	/04	<i>LL</i>	274	13	207

Table 1. U.S. Wheat Proc	duction b	y Class
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SOURCE: [12, 15].

<u>a</u>/ Preliminary.

 \underline{b} / Projected.

Year	All wheat	Hard winter wheat	Soft red wheat	Hard spring wheat	Durum	White
			(per	cent)		
1949 1950	100 100	49.3 45.0	18.5 15.9	15.4 20.3	3.6 3.7	13.3 15.0
1951	100	38.7	15.0	25.9	3.6	16.8
1952	100	43 . 0	14.8	18.5	1.8	14.2
1954 1955	100 100	49.7 44.5	18.8 18.5	14.7 19.7	0.5 2.1	16.3 15.2
1956	100	44.4	18.6	17.7	3.9	15.3
1958	100	44.9 57.4	13.2	16.0	4.2 1.5	17.1
1959 1960	100 100	55.3 58.5	13.9 14.0	13.5 13.9	1.8 2.5	15.5 11.1
1961	100	61.1	16.4	9.3	1.7	11.5
1962	100	49.1 47.7	14.3	16.0	6.4 4.5	14.2 14.6
1964 1965	100 100	49.3 51.2	17.5 14.0	14.0 15.9	5.2 5.3	14.0 13.5
1966	100	51.7	16.5	13.5	4.8	13.6
1967	100	46.4 51.4	18.0	15.1 14.5	4.4 6.3	16.2 13.6
1969 1970	100 100	54.4 55.9	12.9 12.9	13.2 14.7	7.5 3.9	12.1 12.7
1971 <u>a</u> / 1972 <u>b</u> /	100 100	46.2 49.4	13.1 14.7	22.6 17.7	5.7 4.7	12.4 13.4

Table 2. Production by Class in Percentage of Total Production

SOURCE: [12, 15].

 $\frac{a}{}$ Preliminary.

 $\frac{b}{}$ Projected.

firm order from an exporter, miller, merchandiser, or feeder. As a result, the producer carries the price risk during the post-harvest season.

Recently producers have attempted to avoid the out-of-pocket elevator storage costs by constructing their own on-farm storage. Grain is moved off the farm when the local elevators are able to offer a firm and attractive price. As a result of this practice, excess storage capacity is developing at country elevators. Some elevator operators are now attempting to increase their revenue by purchasing wheat to hold in expectation of a price increase. They are now assuming a portion of the price risk which producers have assumed by default in the past. On-farm storage provides some advantage in servicing an export market buying low-protein wheat. Small-lot storage facilitates protein testing and blending to obtain the proper protein level in export shipments.

Two facts of interest in relation to potential hedging volume emerge from this marketing pattern. First, producers in the PNW carry a larger degree of price risk than is common in other areas of the nation. This means that potential hedge volume has a wide base among growers. Second, country elevators are now feeling a need for in-storage hedging, which has not previously been a matter of concern for them.

Product movement beyond the elevator is primarily to Pacific seaboard terminals for export. Fifteen to 20 years ago there were approximately 10 major exporting firms. The price-setting arena was limited in membership and enjoyed a concentration of power. Under these conditions, there was not a great need for hedging purchases or contract commitments. Today there are at least 6 major domestic export firms, 13 Japanese firms based in the PNW, and 6 to 10 grain merchandisers buying for grain export. The increase in competition in this phase of the marketing channel has diluted the price-setting power once enjoyed. Major exporters now feel the need to use hedging as part of their operations and have much less reason to oppose; another price-setting mechanism in the form of a futures market. The decline in government subsidy programs and elimination of export subsidy payments have contributed greatly to the need for an effective hedging mechanism.

Domestically, some white wheat is purchased by millers for flour-blending purposes. A small portion is used for feed and seed. Table 3 shows the export

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Year	All wheat	Hard winter wheat	Soft red wheat	Hard spring wheat	Durum	White
+ <u></u>		(million bushel	.s)		
10/0	302	180	35	23	2	62
1950	369	199	30	49	10	81
1051	470	251	22	00	1/	100
1951	4/3	201	23	00 17	14	103
1952	321	104	40	17	3	77
1953	220	/8	00	11		/5
1954	278	124	62	28	0	64
1922	350	164	69	29	1	87
1956	553	254	60	35	11	103
1957	402	215	30	38	1	118
1958	443	255	43	46	1	98
1959	510	290	40	49	ī	130
1960	662	432	54	32	6	138
1961	719	486	56	42	16	119
1962	644	430	41	39	4	123
1963	856	562	84	48	29	133
1964	725	/Q.8	80	25	10	112
1965	867	595	45	86	34	107
10//			<i>(</i>)	100		
1966	/44	377	68	120	47	132
1967	761	375	121	71	31	163
1968	544	271	50	77	46	100
1969	606	336	28	89	34	119
1970	738	450	26	113	39	110
1971 <u>b/</u>	632	337	43	104	44	104
1972 <mark></mark> /	1,150	710	70	180	50	140

Table 3. U.S. Wheat $Exports^{a/}$ by Class

SOURCE: [12, 15].

 $\frac{a}{In}$ In addition to wheat grain, it includes grain equivalent of flour made from U.S. wheat; also, semolina and macaroni in terms of wheat.

 $\frac{b}{}$ Preliminary.

 \underline{c}' Projected.

volume for the major wheat categories. Table 4 expresses these figures in percentage terms. Table 5 presents the export volume for that portion of white wheat grown in the PNW. Reliable figures for this subgroup are not available prior to 1967. Table 6 presents the total supply and disposition for PNW white wheat, and Table 7 for all types of PNW wheat.

A consistently higher percentage of the PNW white wheat crop is exported than for any other domestic wheat variety. Over the 1967-1971 period, approximately 82 percent of the crop production moved to the export market. This should prove very attractive to speculators watching foreign market developments, especially those purchases made by Japan, Russia, and China. Table 8 summarizes terminal storage capacities.

Year	All wheat	Hard winter wheat	Soft red wheat	Hard spring wheat	Durum	White
		میں ہوتے ہوتے ہوتے ہوتے ہیں۔ ویک کے میڈی سیک کے میڈی میڈ م	(percent)		د کا منہ وہ میں میں کا منہ منہ م وہ کا منہ وہ وہ منہ منہ کا ان منہ منہ م	
1040	21 40	25 42	15 09	0.27	2 51	25 84
1949	21.49	23.42	15 71	9.27	J.JI 15 78	JJ.04 //2 55
1930	23.33	27.99	13./1	9.90	13.70	45.55
1951	34.51	42.11	13.22	24.31	23.33	52,55
1952	20,55	22.44	19.14	5.70	7.89	39.09
1953	12.37	8.68	20.82	3.19	2.38	30.61
1954	14.49	11.82	24.31	8.24	.00	24.24
1955	17.76	15.00	30.94	8.15	4.55	31.41
1956	27.15	22.34	29.41	9.64	23,91	67.25
1957	21.55	19.96	18.18	10.41	1.89	57.56
1958	18.96	17.62	21.72	10.55	2.04	47.12
1959	21.14	18.64	22.60	12.19	2.38	55.08
1960	24.81	24.05	27.00	7.88	11.54	64.49
1961	27.20	26.16	26.17	11.90	39,02	67.23
1962	26.68	26.98	22.78	10.66	5.33	71.10
1963	36.55	37.97	37.67	13.22	29.59	74.72
1964	33.18	38.16	35.24	6.94	9.17	60.87
1965	40.65	49.16	23.44	21.03	24.64	56.61
1966	40.28	39.89	30,22	33.06	40,17	67.01
1967	39.09	39.14	41.87	20.64	32.68	62.45
1968	25.71	24.09	19.69	20.75	37.10	41.32
1969	26.59	25.57	12.33	25.28	23.13	49.79
1970	32.99	33.86	13.20	29.97	29.32	54.73
$1971\frac{a}{-1}$	26.89	27,20	18,94	20.27	29.33	47.06
1972 <u>–</u> /	47.74	57.54	28.57	32.67	35.21	59.07

Table 4. Percent of the Individual Class Supply Which is Exported

SOURCE: [12, 15].

 $\frac{a}{Preliminary}$.

 $\frac{b}{}$ Projected.

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Year	Million bushels	Percent of PNW production	Percent of PNW supply
1967	143.8	88.4	78.9
1968	90.9	70.5	56.8
1969	110.4	85.4	65.6
1970	106.2	91.2	76.6
1971	101.5	73.0	69.5

Table 5. PNW White Wheat Exports

SOURCE: [14].

Year	Total supply	Production	In-shipments	Seed	Feed	Flour	Exports	Ending stocks
		ہے جن ہے جن ہے ^ج نا کے عز عز ہے وہ ہے و	(mill:	ion bushe	ls)			
1967	182.2	162.6	10.4	3.9	8.0	8.3	143.8	16.1
1968	160.0	128.9	16.0	3.1	11.2	12.7	90.0	33.9
1969	168.2	129.3	2.0	3.0	9.6	12.8	110.4	20.4
1970	138.7	116.5	2.2	3.2	7.7	11.9	106.2	5.9
1971	146.0	139.1	1.0	3.4	10.8	10.4	101.5	17.3
1972		153.4						

Table 6. PNW White Wheat Supply and Disposition (Oregon, Washington, Northern Idaho)

SOURCE: [14].

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Year	Total supply	Production	In-shipments	Seed	Feed	Flour	Exports	Ending stocks
			(mill:	ion bushe	ls)			
1967	302.3	169.2	114.2	4.3	8.0	33.4	235.0	25.4
1968	286.0	139.1	122.3	3.9	11.2	36.6	188.7	44.5
1969	294.8	133.6	114.1	3.6	9.5	32.0	213.6	39.4
1970	274.4	134.0	101.0	3.8	7.7	34.2	216.3	24.2
1971	246.8	164.9	57.7	4.2	10.8	29.8	178.7	35.9
1972		177.8						

Table 7. PNW Wheat (All Types) Supply and Disposition (Oregon, Washington, Northern Idaho)

SOURCE: [14].

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Terminal	Storage Capacity
	(million bushels)
Portland	
Terminal 4	8.1
Public grain terminal	9
Dreyfus	••• <u>1.9</u>
TOTAL	10.9
<u>Vancouver</u> United Grain	••• 5.35
Longview Continental	••• 5.02
<u>Kalama</u> North Pacific Grain Growers	••• 4.0
Astoria	
Kerr Grain	1.2
	· · · · · · · · · · · · · · · · · · ·

Table 8. Terminal Storage Capacity

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Discussion

Several of the characteristics necessary for a successful futures market now may be evaluated for the Northwest market. First, we may dismiss the easy questions. The white wheat industry has functioned effectively in cash market transactions for years. Marketing channels are well established and work smoothly. The commodity is readily gradeable, readily storable, and is sold primarily in a bulk raw state. The market system is competitive with a welldeveloped news-reporting system. Four questions remain: the size of supply and demand for white wheat, the magnitude of price movement, the adequacy of industry interest and support, and the adequacy of speculative interest and support.

Crop Size

In discussions with the Northwest commercial grain trade and with Midwest commodity futures traders, the number-one concern is that the white wheat crop is too small to attract the necessary trading volume. This is, of course, a valid concern. A market which is too "thin" is subject to market corners and manipulation by traders. Such a condition would make hedging unsafe and, therefore, not feasible. However, the data of Tables 1 and 2 should dispel this fear. The domestic production of white wheat is approximately equal to the domestic production of soft red winter wheat. Since soft red winter wheat volume is sufficient to form the base for the current Chicago wheat futures contract, no problem should exist because of crop size.

The argument may be raised that the Chicago market serves as a hedge for non-wheat crops which are closely related in price fluctuation patterns to the soft red winter market. In answer to this, the potential also exists for the white wheat futures to develop as a hedge for non-wheat products closely tied to the export market.

Price Fluctuation

Table 9 shows the average monthly wheat prices for several major wheat classes, 1967-1972. Table 10 summarizes these data in more convenient form. The most reliable indicator in an analysis of this type is the coefficient of

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Year	Month	Portland, Oregon No. 1 Soft White wheat	Chicago No. 2 Soft Red wheat	Kansas City No. 1 Hard and Dark Hard Winter wheat	Minneapolis No. 1 Dark Northern Spring wheat
 1967	Jan.	\$1.74	\$1.71	\$1.77	\$1.89
	Feb.	1.67	1.70	1.73	1.88
	Mar.	1.72	1.80	1.82	1.94
	April	1.75	1.73	1.76	1.92
	May	1.92	1.67	1.76	1,96
	June	1.89	1.58	1.68	1.92
	July	1.61	1.50	1.61	1.91
	Aug.	1.60	1.49	1.56	1.75
	Sept.	1.60	1.51	1.57	1.67
	Oct.	1.59	1.52	1.59	1.65
	Nov.	1.58	1.45	1.56	1.63
	Dec.	1.62	1.46	1.58	1.60
1968	Jan.	1.66	1.49	1.60	1.61
	Feb.	1.70	1.51	1.61	1.61
	Mar.	1.66	1.50	1.60	1.64
	April	1.63	1.41	1.54	1.62
	May	1.60	1.38	1.53	1.58
	June	1.60	1.30	1.44	1.55
	July	1.48	1.28	1.37	1.45
	Aug.	1.45	1.22	1.35	1.43
	Sept.	1.45	1.20	1.34	1.51
	Oct.	1.46	1.25	1.40	1.57
	Nov.	1.49	1.32	1.42	1.59
	Dec.	1.49	1.33	1.40	1.57
1969	Jan.	1.48	1.38	1.41	1.58
	Feb.	1.48	1.36	1.40	· 1.56
	Mar.	1.46	1.32	1.40	1.57
	April	1.46	1.32	1.39	1.54
	May	1.48	1.33	1.39	1.54
	June	1.49	1.28	1.35	1.53
	July	1.42	1.30	1.28	1.53
	Aug.	1.38	1.27	1.31	1.51
	Sept.	1.40	1.31	1.39	1.59
	Oct.	1.44	1.36	1.43	1.65
	Nov.	1.47	1.41	1.46	1.70
	Dec.	1.51	1.48	1.46	1.72

Table 9. Monthly Cash Wheat Prices, by Class, for the Years 1967-1972

(continued)

Year	Month	Portland, Oregon No. 1 Soft White wheat	Chicago No. 2 Soft Red wheat	Kansas City No. 1 Hard and Dark Hard Winter wheat	Minneapolis No. 1 Dark Northern Spring wheat
1970	.Tan .	\$1.53	\$1.49	\$1.46	\$1.73
2770	Feb	1.52	1.55	1.46	1.70
	Mar.	1.53	1,53	1.45	1.67
	April	1.58	1.55	1.47	1.72
	May	1.57	1.48	1.44	1.68
	June	1 57	1.41	1.40	1 70
	oure	1.57	* • • * *	1.40	1.70
	July	1.53	1.45	1.38	1.72
	Aug	1.53	1.52	1.47	1.75
	Sept.	1,59	1.67	1,59	1.85
	Oct.	1.63	1.74	1.58	1.88
	Nov.	1.72	1.77	1,59	1.86
	Dec.	1.77	1.74	1,59	1.80
1971	Jan.	1.78	1.75	1.58	1.75
	Feb.	1.77	1.74	1.58	1.70
	Mar.	1.77	1.70	1.55	1.65
	April	1.77	1.67	1.56	1.65
	May	1.83	1.61	1,61	1.63
	June	1.75	1.64	1,63	1.62
	• ===			2000	1.02
	July	1.60	1.54	1.54	1.57
	Aug.	1.55	1.45	1.54	1.50
	Sept.	1.54	1.45	1.53	1.50
	Oct.	1.56	1.42	1.56	1.51
	Nov.	1.55	1.60	1.56	1.55
	Dec.	1.56	1.71	1.58	1.57
`	•				
1972	Jan.	1.57	1.69	1.58	1.56
	Feb.	1.57	1.61	1.57	1.54
	Mar.	1.60	1.62	1.58	1,54
	April	1.70	1.66	1.61	1.52
·, ·	May	1.74	1.63	1.62	1.53
	June	1.67	1.46	1.52	1.50
, ·	July	1.60	1.53	1.58	1.57
	Aug.	1.82	1.76	1.82	1.72
	Sept.	2.12	2,11	2.15	2.02
	Oct.	2.41	2.11	2.15	2.02
	Nov.	2.53	2.28	2.25	2.08
	Dec.	2.78	2.60	2.62	2.32

Table 9. (continued)

SOURCE: [13].

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-	Portland, Oregon No. 1 Soft White wheat	Chicago No. 2 Soft Red wheat	Kansas City No. 1 Hard and Dark Hard Winter wheat	Minneapolis No. 1 Dark Northern Spring wheat
High	\$2.78	\$2.60	\$2.62	\$2.32
Low	1.38	1.20	1.28	1.43
Range	1.40	1.40	1.34	.89
Mean	1.65	1.55	1.52	1.67
s.D. <u>a</u> /	.2379	•2369	.2151	.1660
c.v. <u>b</u> /	14.42%	15.28%	13.70%	9.94%
1972 C.V	22.11%	18.94%	19.59%	16.06%

Table 10. Monthly Price Statistics by Class for the Years 1967-1972

a/ Standard deviation
$$\sqrt{\frac{\sum x_1^2 - (\sum x_1)^2}{n}}$$

$$\frac{b}{x}$$
 Coefficient of variation $\frac{S \cdot D}{\overline{x}} \times 100$.

variation. It would appear that Chicago wheat is slightly more volatile than the other three, with soft white a close second. Although historically less volatile than Chicago wheat, PNW soft white shows a similar range from high to low and, during this year's bull market, has proved more price-volatile.

These data indicate that price fluctuation for white wheat is ample to provide the necessary hedging incentive for futures trading.

SPECULATIVE INTEREST

Futures markets exist because of a need to hedge commercial inventories or future inventory requirements. Even established futures markets cannot persist if commercial hedging interest declines to a low level. Therefore, the first concern in establishing a futures market must be to write an effective and useable contract from the commercial point of view. However, hedgers alone cannot support a successful futures contract. This is not an obvious proposition, and its several aspects deserve closer analysis.

Hedging, by its very nature, typically means the offsetting of price risk resulting from an inventory holding. To accomplish this offset, the hedger would sell commodity futures contracts. Most hedgers then will initiate short positions (net sales) in the futures markets. Buyers for these short positions cannot be expected to appear through Providence alone. In fact, if only industry traders were active in the market, buyers could hold out for significant price concessions from sellers anxious to place their hedges. It is the speculator who steps in to provide the necessary long (net buying) positions. Speculators provide the essential buying power to allow a balanced market, with sufficient liquidity for rapid trading without undue price concessions on the part of either buyer or seller.

This proposition is illustrated in Table 11. The Commodity Exchange Authority periodically reports volume positions for individual commodities, and this table represents a sampling of the available data. Unfortunately, reports of this nature appear only at infrequent intervals. These data are fragmentary, but support the proposition that commercial interests tend to be net sellers while speculators tend to be net buyers. A more comprehensive data set is provided in Table 12. Once again it is clear that hedgers tend to be net sellers and speculators tend to be net buyers in the initiation of new futures market positions. However, even a clear demonstration of the importance of speculators in total will understate the substantial importance of certain types of speculators, namely, floor traders and brokerage house members trading on the exchange floor.

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	Comm	odity dlers	(spe	Others culators)	Percent by spec	tage held culators
Commodity	Long	Short	Long	Short	Long	Short
Wheat ^{a/}						
8/31/64 9/29/67	53.8 60.6	99.8 122.4	120.9 189.1	74.4 127.4	69% 76%	43% 51%
Corn ^{a/}						
9/29/69 1/27/67	41.6 194.6	56.8 237.6	113.8 172.7	98.6 130.0	73% 47%	63% 35%
Soybeans ^{a/}						
11/30/59	58.9	104.8	133.0	88.9	69%	46%
Cotton ^{b/}						
9/28/56	1378	1503	497	373	26%	20%
Eggs ^{c/}						
7/29/60	2454	5152	8043	5345	76%	51%

Table 11. Holdings of Selected Open Futures Contracts

SOURCE: [2, p. 23; 1, p. 149].

 \underline{a}^{\prime} Million bushels, Chicago Board of Trade.

 $\frac{b}{}$ Thousand bales, New York Exchange.

<u>c</u>/ Carlots, Chicago Mercantile Exchange.

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	Smal			Large-scale positions					
	post	ltions	Specu	ulation	Spre	$ading^{a/}$	Hec	lging	
Commodity	Long	Short	Long	Short	Long	Short	Long	Short	
Wheat	49.7	24.4	8.9	4.6	20.4	20.2	20.9	50.7	
Corn	41.5	24.6	11.5	4.7	18.1	18.0	29.0	52.6	
Soybeans	35.1	29.8	8.0	6.2	31.0	31.0	25.9	33.0	

Table 12. Percentage Composition of Open Interest in Selected Commodity Futures; All Contract Markets Combined, 1961-1971 Average

SOURCE: [17].

 $\frac{a}{a}$ The simultaneous purchase and sale of futures contracts in different delivery months.

Many speculators trade by telephone and are not tied to any particular exchange. Volume from these individuals is highly variable and may be entirely absent in times of market stress. There is another class of speculator which remains in the market in both good times and bad, and which provides the reliable day-to-day volume essential to market liquidity. This class of speculator is the trader who has purchased a seat and actually trades on the floor of that exchange. He pays reduced commissions and is geographically tied to the exchange. As a result, he is a much more reliable supplier of speculative volume than is the more casual trader. The 1967 Commodity Exchange Authority wheat report indicates that floor traders and brokerage house employees together held, on a volume basis, 42 percent of the combined long and short positions of all speculators for the Chicago wheat contract in the month of September. The next single largest class of speculator held only slightly over 8 percent [1, p. 149]. The 1967 corn report indicates that Chicago Board of Trade members, including hedgers, held combined positions, on a volume basis, of 36 percent of all long positions and 65 percent of all short positions. Exchange members trade a much larger volume than do commission house phone-in customers [6, p. 109]. A large number of active floor traders is absolutely essential to the success of a futures contract.

Speculators also provide another valuable and often overlooked contribution to futures trading. The volume of trading which they supply makes possible the low commission rates which are common in successful futures markets. Typically, the commission charges are less than 1 percent of the contract value. Without the high volume of trading provided by speculators, hedgers would be forced to pay a higher transaction cost for their trades.

The chief difficulty in opening a Portland exchange lies with attracting a sufficient number of floor traders. Since these traders are geographically tied to a market, they would be very reluctant to migrate to a fledgling exchange. In addition, most floor traders deal in a number of commodities. A Chicago floor trader, for example, might trade in corn, soybeans, soybean meal, soybean oil, wheat, iced broilers, and plywood through the course of a year. They would have very little incentive to locate in an area offering only one commodity

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futures contract. The availability of several commodity contracts frees the floor trader from the worry that a poor trading year in a limited market would seriously curtail his income-earning potential.

With a limited number of floor traders, a Portland exchange could not produce the speculative liquidity which is essential for a successful exchange. The resulting "thin" market would be subject to undue price fluctuations and would be a dangerous vehicle for local hedgers to use. Another result of the "thin" market would be higher transaction costs. The exchange would probably have to offer a low commission rate as an incentive to speculators, with a supporting subsidy from the state or from the local grain industry.

One of the most effective ways to build volume for a new futures contract is through "spreading". As Table 12 illustrates, spreading regularly accounts for 20 to 30 percent of trading volume. On a new contract, this percentage would be even larger, since small-scale traders and speculators would not be as active. Spreading would be easiest to accomplish if the white wheat contract were traded on an existing exchange with an existing wheat contract. Spreads between exchanges are more difficult to execute and, as a result, spreading diminishes. This would be especially true if one of the exchanges was newly opened and trading volume was uncertain.

One final note of caution must be sounded relative to the opening of a new futures exchange. Many commodity futures traders and analysts have expressed a lack of understanding of the Northwest wheat market or a suspicious feeling that it is a small, close-knit industry. Trading a futures contract locally would only serve to heighten their distrust. As a result, speculative trading volume might be further reduced. It is ironic that many locals fear speculative maniulation by outsiders, and many outside speculators fear industry manipulation by regionally concentrated and powerful insiders.

Futures contracts, like stock certificates, are largely independent of their trading location and can, therefore, be placed on an exchange located outside of the producing region. For example, the Northwest plywood contract specifies Portland, Oregon, as the par pricing delivery point, but it is traded

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on the Chicago Board of Trade. This may lead to the very legitimate concern that the futures contract would be dominated by "outside interests". This is not the case. White wheat would only be deliverable in the Northwest. If "outside interests" should attempt to drive the price too high, local producers could simply sell futures contracts and deliver at the unrealistically inflated price. If these "outside interests" should attempt to drive the price too low, local exporters could purchase their contracts and demand delivery at the depressed price level. We can see that a valid delivery threat keeps cash and futures market prices in their proper relationship. In fact, a local "thin" market would offer far greater danger of price manipulation than would one of the established exchanges. Potential manipulation is a fact of life for all futures exchanges. The best defense is high trading volume.

It would appear that opening a new exchange, especially one trading a single commodity, would be a high-risk operation. This is borne out by the failure rate of contracts and exchanges. Ten exchanges, trading a total of 43 contract commodities, have failed in the United States. All of the exchanges deliberately setting out to trade only one commodity have failed, if we count the currently operating but financially beleaguered New York Cocoa Exchange.

Trading any new futures contract is a highly risky venture. Add to this the opening of a new exchange, and the risk becomes substantial indeed. Speculators have historically proven very difficult to attract to any new futures contract. They tend to deal with contracts with which they are familiar and to avoid new ventures. Typically, the contract industry must provide the initial trading volume through hedging and spreading between contract months. Only through a considerable amount of educational and promotional effort, coupled with a substantial open interest generated by industry participants, will speculators enter a market.

This process is facilitated when a contract is opened on an existing exchange. Floor traders can see readily volume generated by industry traders when the contract is on an active trading floor. An active exchange management may even be able to convince a few key floor traders to "prime the pump" for a new contract in anticipation of subsequent volume. It is much more difficult to attract the attention and interest of traders to a new exchange.

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Summary

The chief difficulty in opening a Portland exchange lies in attracting a sufficient number of floor traders. A one-commodity futures market has not, historically, been able to do this successfully. A minimum of four separate commodities would be necessary to develop a new exchange into a market with the long-run liquidity necessary for a viable hedging tool. The number of commodities necessary is based on the experience of the Pacific Commodities Exchange and the Bank of America in opening the new San Francisco futures market.

INDUSTRY INTEREST

Trading Location

It would, of course, be desirable to have an exchange located in Portland if it would have a high probability of success and if it would afford the trading volume necessary for an effective hedge. The previous section has established the substantial risk associated with opening a new exchange. However, these difficulties might be overcome with a high level of industry support.

In an effort to ascertain the level of industry support for a white wheat futures contract, a questionnaire was developed. Over 500 copies were distributed to all segments of the Oregon and Washington wheat trade. A total of 159 were returned. In addition, the major grain traders, producer groups, and commodity brokers were personally interviewed and encouraged to express their feelings in a separate letter, as a supplement to the questionnaire. The questionnaire used is reproduced on the next two pages. Separate versions of the questionnaire were formed to include all possible orderings of the three exchanges listed. This technique eliminates any positional bias which may exist.

Do you feel that a Pacific Northwest Wheat Futures Contract would 1. be beneficial to the Northwest wheat industry? Of no Very benefit beneficial 1 2 3 4 5 (circle one) 2. Do you feel that it is important that such a contract be established within the next 12 to 18 months? Very Very unimportant important 1 2 3 4 5 (circle one) 3. Would you prefer to have the trading location for the contract in: Portland (check one) _____ Kansas City

_____ Chicago

Other

4. Have you actually traded in a commodity futures market?

Yes No

. . .

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Please use this page for any additional comments which you wish to make.

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OPTIONAL:

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NAME:

ADDRESS:

OCCUPATION:

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Overall results concerning the exchanges listed are presented in Table 13. $\frac{2}{}$

Preference	Number	Percent
Unqualified Chicago	92	57.9
Unqualified Portland	55	34.6
Qualified Portland ⁴	7	4.4
Qualified Chicago ^{b/}	1	0.6
Others	4	2.5
	159	100.0

Table 13. Total Questionnaire Response

 $\frac{a}{1}$ Indicates doubt that enough volume would be achieved.

 $\frac{b}{l}$ Indicates a preference for Portland, but a selection of Chicago because of volume.

This total may be broken into three major components: growers and grower organizations, grain handlers, and brokers. The three breakouts appear in Tables 14-16. There were seven questionnaires unidentifiable as to occupation.

Table 14.	Grower	Response	on	Trading	Location
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Preference	Number	Percent
Unqualified Chicago	53	49.1
Unqualified Portland	45	41.7
Qualified Portland	5	4.6
Kansas City	2	1,9
Qualified Chicago	1	0.9
Others	2	1.9
	108	100.0

^{2/} The difference between the tables and the list of organizations indicating strong support exists because each organization could submit more than one questionnaire, and some individuals were not identified with any particular group.

Number	Percent
23	76.7
5	16.7
2	6.7
30	100.0
	Number 23 5 <u>2</u> 30

Table 15. Grain Handler Response on Trading Location

Table 16. Commodity Broker Response on Trading Location

Preference	Number	Percent
Unqualified Chicago	13	100.0
Unqualified Portland	0	0.0
	13	100.0

Growers are divided roughly equally as to Portland vs. Chicago. Several questionnaires expressed concern over the higher delivery costs from shipping grain to Chicago. As stated in the questionnaire cover letter, grain would be deliverable only on the West Coast, regardless of trading location. This pattern does, however, point out the fact that many growers would be more at ease with a Portland exchange. Placing the market elsewhere is likely to cause some growers to forego hedging opportunities. Most of those concerned with this aspect expressed a feeling that speculator manipulation would be more likely in a Chicago-based market. In fact, all exchanges must face attempts at manipu-These attempts are most likely to be successful in low-volume markets. lation. High volume and a valid delivery mechanism serve to keep manipulation attempts in check. Therefore, manipulation is actually more likely in a Portland-based market than in a Chicago-based market. This, of course, assumes that a Portland exchange would tend to be of low volume, as developed in the previous section.

The question concerning previous trading experience was included to help sort growers according to market knowledge. This sorting was not effective, since over 75 percent of both those favoring Portland and those favoring Chicago reported no previous trading experience.

The level of knowledge was much higher for the grain handlers. Over 76 percent of this group indicated actual trading experience. The response indicates a strong preference for Chicago as the trading location. Many members of this group voiced a desire for a strong Portland-based futures market, but simply felt that this was not a realistic possibility.

In many respects local <u>brokers</u> may give the most valuable feedback as to trading location. This group couples a high degree of market knowledge with a good feeling as to whether their current customers would actually use a local market. Local brokers would also stand to gain considerable income from a viable. Portland market. This group unanimously favored Chicago.

Summary

Only three organizations from the Oregon-Washington grain trade indicate strong support for a Portland-based futures market. This lack of support, coupled with the substantial difficulties raised in the previous section, make the likelihood of success for a Portland exchange seem remote. The three organizations indicating a Portland preference submitted a total of five questionnaires as indicated in Table 15.

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Contract Desirability

The sectors of the industry sampled responded to the two questions on contract desirability and timing as follows:

1. Do you feel that a Pacific Northwest Wheat Futures Contract would be beneficial to the Northwest wheat industry?

Of no			Very		
benefit			beneficial		
1	2	3	45 (circle one)		

2. Do you feel it is important that such a contract be established within the next 12 to 18 months?

Very unimportant			Very importan	<u>it</u>
1	2	3	45	(circle one)

where

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horizontal line = interquartile range
vertical bar = mean response
(4.60 for 1 and 4.33 for 2)
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Clearly the industry strongly favors a contract and favors its early establishment.

The white wheat industry has shown an unusual amount of interest at this stage of contract development. A steering committee, established through the Oregon Wheat League, has already written a futures contract proposal. In addition, over 100 industry members participated in a nine-week futures trading workshop series held during 1972 by Dr. Timothy Hammonds of Oregon State University, in cooperation with various county extension agents. Five bi-weekly meetings were held during the workshop, coupled with a futures trading exercise. Willingness to participate ran high, even though no contract was available at the time. A similar series was held during 1973, with approximately 90 livestock and wheat producers participating.

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As a supplement to the 1972 workshop feedback, an industry survey probe was taken between November 1971 and March 1972. The objectives of the probe were to obtain an additional reading on industry interest and to forecast any market changes in the foreseeable future which would hinder or facilitate futures trading.

The probe utilized the Delphi technique which was developed by the Rand Corporation as a vehicle to forecast technological change. This technique requires a relatively small panel of industry experts (non-random) to develop market projections. In this survey, the group consisted of four university and extension personnel, two bankers, five wheat producers, seven grain handlers, two commodity brokers, one miller, three exporters, and one officer of the Oregon Wheat League.

The results of this survey are discussed below by topic.

Soft White Wheat Demand

Several developments in the export market are currently altering the quantities of soft white wheat demanded. The most recent development is a series of wheat sales to Russia and China. The 1972 panel felt that this was potentially the most important development on the demand side of the market. It was given a rating of approximately 4.5 on a 5-point scale, with 1 representing very unimportant and 5 representing very important. While it was felt that preliminary trade could develop very early, the trading pattern would stabilize during the 1973-75 period. In other words, a continued pattern of trading is forecast.

This development is offset somewhat by the "Green Revolution". Some countries currently purchasing soft white wheat show promise of becoming more selfsufficient in the production of their food grains. In addition, other countries, Japan for example, are becoming more sophisticated in their tastes and shifting away from the low-protein wheats to some extent. The panel felt that these were significant issues but that any resultant volume decline would be offset - possibly more than offset - by the shift of under-developed countries consuming primarily rice to consumption of wheat as their development proceeds. A shift in the purchase patterns is underway to some extent, and is likely to continue. However, no significant volume decline is forecast.

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Soft White Wheat as a Feed Grain

The panel felt it likely that the price of soft white wheat could become competitive as a feed grain. The ranking for this factor was 4.0 on a 5-point scale. The feeling was that this would occur during 1972, but a good deal of uncertainty was expressed when the panel was asked if this would be a permanent change. Many felt that trade with Russia and China was likely to drive the price of white wheat out of competitive range for a feed grain after 1972. Clearly the panel underestimated the speed with which the export volume would accelerate. At the present time, no expansion of white wheat as a domestic feed is taking place. A separate bulletin, E.C. 812, "The Role of Hard Red Winter Wheat in the Pacific Northwest" [10], describes the competitive relationships between the hard and soft wheats in the PNW.

New Wheat Varieties

The panel felt that new wheat varieties were very likely by 1975-77, with a ranking of approximately 4.1 on a 5-point scale from very unlikely to very likely. These varieties should give improved yields and disease resistance. There was no strongly expressed desire for developing a lower-protein variety, although the panel voted 10 to 7 in favor of offering a price premium for lowprotein levels.

White Wheat Futures Contract

Approximately 75 percent of the panel felt it very likely that a futures contract would be established within the next three years. Ratings of approximately 4.0 on 5-point scales from very unlikely to very likely were assigned to the exporter's and miller's need for a hedging mechanism, to the producer's need for a hedging mechanism, and to the likelihood of a contract being established.

The panel was concerned with the attractiveness of the potential contract for speculators. As a consequence, they were also uncertain as to whether the contract would generate enough volume to be successful. Speculators are the group about which the panel was least knowledgeable and about which they were most concerned. The need for an educational program at the producer level was

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given a rating of 5 on a 5-point scale. There was a definite feeling that although producers were interested, they would need instruction before they could hedge successfully. Such an educational program is currently underway through the sponsorship of Oregon State University and county extension agents. As a result, in terms of hedging knowledge, Oregon producers should be far ahead of most producer groups facing a new futures contract.

Summary

The industry panel does not identify any changes in the white wheat market in the foreseeable future which would be hostile to the development of a futures contract. In addition, industry interest concerning the futures contract runs high. The panel feels it very likely that a need exists for hedging potential within the industry and that a contract will, in fact, develop.

We may draw on the earlier discussion to see why an increased interest in hedging is developing in this market. Producers in the Northwest are demonstrating a willingness to construct on-farm storage and undertake a long-term commitment to store their own wheat over the crop year. As a result, they are becoming interested in the price protection afforded by hedging. Also as a result, the excess capacity in country elevators is prompting an increased willingness on the part of country terminals to undertake ownership and thereby place themselves in a position where a hedge would be useful. A futures contract which provides adequate hedging potential should increase the willingness of commercial operators to purchase cash grain inventories from Northwest producers earlier in the crop year than is currently done. This development would provide an additional marketing alternative which would be beneficial even to those producers who never make use of the futures market.

Perhaps even more important in stimulating industry interest in futures trading is the increase in competition among exporters. The elimination of export subsidy payments has already forced this group to hedge as best they can with the current Chicago soft red winter contract.

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TIME AND EXPENSE GUIDELINES FOR A PORTLAND MARKET

It is fortunate that the Pacific Commodities Exchange provides so recent an example of opening a new regional exchange. The situation closely parallels the white wheat situation. That is, the original interest was stimulated by a local industry group (coconut oil). A timetable for this exchange appears below.

Table 17. Timetable for the Pacific Commodities Exchange, San Francisco

Date	Event
September 1969	Project started, first feasibility study begun.
August 1, 1972	Designation by $CEA^{a/}$ as a contract market
October 1, 1972	Trading began in coconut oil futures.
February 21, 1973	Trading began in shell egg futures.
a/	

- Commodity Exchange Authority, U.S. Department of Agriculture.

As Table 17 shows, a period of three years elapsed from the time this market was first seriously considered until the time the first contract trade was made. At present, 30 floor traders are registered, with 5 to 6 currently active. The exchange requires that each floor trader be able to demonstrate at least \$50,000 of net working capital for membership. Volume on both contracts remains low, and it is not yet clear whether this exchange will be viable.

The Pacific Exchange raised funds through the Bank of America and through a public stock offering. It is the only commodity exchange in operation with public ownership. The stock offering through the Securities Exchange Commission consumed more time than conventional funding.

Current grain exchange facilities in Portland would not be useful in establishing a new futures market. In fact, there is substantial advantage to organizing the exchange independent of any industry group. The Pacific Exchange founders

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quickly recognized the extreme difficulty of opening a one-commodity exchange and organized independently, not associating themselves directly with the coconut oil industry, even though this group provided the initial market support. The current goal of the PCE is to add <u>one new contract every six months</u>. This, they hope, will provide the opportunities and flexibility so necessary to attract a workable number of floor traders. In fact, the PCE board chairman, John Gallwas, states that they could not have obtained brokerage house support and could not have obtained Bank of America financing if they had organized as a one-commodity operation.

If a Portland exchange is opened, it must plan on adding several commodities, preferably at least four within the first five to six years. It is difficult to envision a Portland trading advantage for this many commodities.

Given the PCE experience as a guide, it is not unreasonable to expect that their timetable could be cut by as much as one-third. This means an approximate lead time of <u>two years</u>. This period would probably split as follows: six months for location of a qualified president with broad futures market experience and futures industry support, six months to attract the necessary financial support and loan guarantees, six months to design a clearing house in compliance with CEA regulations, and six months to attract additional membership and carry out the necessary promotional effort. This is a tight schedule, and the additional year taken by the PCE might be needed.

Meeting CEA regulations requires:

- 1. Acquiring physical facilities and staff,
- 2. Acquiring sufficient membership to allow trading without undue fluctuations, and
- 3. Writing the necessary by-laws and rules of operation.

Consider for a moment what Regulation No. 2 means. At least 1,000 contracts of open interest, and preferably 2,000, are required for listing in the Wall Street Journal. Let us be more optimistic and assume an open interest of 5,000 contracts for a viable market. Kansas City operated with a 1970-71 average of 7,283 contracts of open interest.

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This would mean a total of 25 million bushels of wheat on both the long and the short side of the market. Valuing this wheat at \$2 per bushel, we arrive at \$50 million on each side of the market. Let us further assume that a conservative 10 percent of the short side must be carried by floor traders. This means a speculative capital pool of \$5 million on the floor of the exchange.

The pre-operating budget of the PCE is reproduced in Table 18.

Item	1972 amount
Salaries & employee benefits	\$92,749
Rent	25,430
Professional fees	9,892
Public relations	28,219
Systems development & research	18,234
Office equipment & other expenses	26,495
Depreciation & amortization	8,292
Net interest	14,676
TOTAL	\$223,987

Table 18. PCE Summary of Pre-Operating Expenses, 1972

In Portland it is likely that the rent would be somewhat lower. On the other hand, some PCE employees are partially reimbursed in exchange stock. Let us assume that these factors net out and that a pre-operating figure of \$225,000 is reasonable. It takes from two to three years for the trading pattern of any new futures contract to stabilize. Let us assume an equal yearly outlay with a trading volume sufficient to recover one-fourth of the expenses in the first year of operation, three-fourths during the second year, and a break-even volume in the third year. Neglecting the time value of money, these assumptions produce a financial commitment of: This optimistic estimate produces a financial commitment of \$450,000 for operating expenses. We can then add a contingency fund and arrive at a total commitment ranging from at least \$500,000 to \$600,000 over a three-year period.

Existing exchanges absorb all development and promotional costs associated with a new contract. Expense to the local industry would be negligible under this alternative.

Summary

A Portland exchange would require a minimum of two years to establish, a three-year commitment of at least \$500,000, and a floor-trader pool of speculative capital in excess of \$5 million. The actual portion of the \$5 million total speculative capital commitment which would need to be backed by actual cash at any one time is difficult to determine. Taking an average margin requirement of 7 1/2 percent, and adding a reserve to meet one margin call, produces a cash position of approximately \$500,000. However, it is well known that traders should not commit all of their funds on one position. One popular suggestion is to commit no more than 20 percent of the available trading funds at any one time. Applying this factor, an actual cash fund of \$2.5 million is obtained.

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SELECTION OF TRADING LOCATION

From the point of view of the grain trade, very little would be gained from the introduction of a Portland futures exchange. It is true that many growers would be much more comfortable with a Portland market. Growers distrust the futures market in general and speculators in particular. An effective educational effort should be able to overcome this distrust. It is also true that more local control of a Portland market would exist. However, this point is not as potent as it would seem at first. As the discussion in the section concerning speculative interest points out, it is a mistake to tie an exchange to one industry. A futures market must be an independent body, trading several commodities. It is also true that a two-hour time zone difference would provide some inconvenience if the contract were traded in Chicago.

It is not true that trading only white wheat would cause more concentrated interest and, therefore, enhance public participation. A one-commodity exchange discourages public participation. It is also not true that placing the futures contract on another exchange would encourage cash grain traders to relocate in the futures trading center. The cash traders in Portland indicated very strongly that this would be highly unlikely.

Given the lack of industry support, the difficulty of attracting floor traders, the substantial failure rate for previous exchanges, and the time and expense involved, the opening of a Portland exchange does not appear to be an attractive venture. It is true that a successful Portland exchange would bring in new jobs, additional income, and enhance the image of Portland as a major grain trading center. However, industry interests in terms of speed of contract introduction, likelihood of success, and trading volume would be served best by placing the contract on an existing exchange.

Since the maximum safety and convenience for Northwest hedgers is offered by high-volume markets, an initial decision may be made by looking at relative volume data. The evidence on this point is clear: The Chicago Board of Trade regularly handles from 80 to 90 percent of the total wheat futures transactions.

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At the time of the 1967 wheat futures report cited earlier, Chicago had approximately 250 million bushels of open interest, while Kansas City and Minneapolis combined had only 50 million [1, p. 152]. Although the domestic production of hard red winter wheat, which serves as the base for the Kansas City contract, is over three times the production of soft red winter wheat, which serves as the base for the Chicago contract (759 million bushels vs. 221 million bushels in 1971), Chicago's trading volume overwhelms Kansas City and Minneapolis combined. This is, in part, a reflection of the great variety of contracts offered to floor traders in Chicago vs. Kansas City, which trades only in grain sorghum and wheat; and Minneapolis, which now trades only wheat. $\frac{3}{}$ During the 1969 calendar year. the Chicago Board of Trade handled 79.9 percent of the total wheat volume, the Kansas City Board of Trade handled 15.6 percent, and the Minneapolis Grain Exchange handled 4.7 percent. $\frac{4}{}$ The Chicago Board of Trade is clearly a better first choice than the Kansas City Board of Trade. The Chicago Mercantile Exchange is not interested in any new agricultural commodities. The CME is currently placing all of its resources behind its new international currency futures market.

As a preliminary judgment, the Chicago Board of Trade may be selected as the most promising location for the new contract. A key factor now becomes the willingness of the exchange to support a white wheat contract with the publicity necessary to inform floor traders and speculators about the PNW wheat market and to attract their business. This is especially critical in the current bull market, when floor traders may feel that they have ample action in the present wheat contract.

In preliminary discussions with the Chicago Board of Trade, they seem receptive to the idea of further exploring the white wheat contract potential. In fact, to the extent to which current export speculation distorts the price-setting

 $[\]frac{2}{2}$ Eight other contracts on the Minneapolis Exchange are currently inactive.

^{4/} Wheat has been traded on the Milwaukee Grain Exchange and on the Seattle Grain Exchange. Both of these futures markets went out of existence during the early 1960's as a result of low trading volume. The St. Louis Merchants Exchange (mill feeds), the Memphis Board of Trade (cottonseed meal, soybean meal, soybeans), and the New Orleans Cotton Exchange (cotton, cottonseed oil), also failed during this period.

mechanism for the primarily domestic soft red futures contract, the Board of Trade has an incentive to open trading in the export-market-oriented white wheat. Since a significant volume of trading comes from spreading, it also makes sense to have the most active domestic wheat contract and the white wheat contract, which would represent the export market, trading in the same pit to facilitate this process.

The Chicago Board of Trade should be allowed to develop the white wheat futures contract, if they are willing. If they are not, the contract should then be offered to the next largest volume market, Kansas City. The San Francisco exchange would appear to be an attractive third choice if it proves to be viable.

The Pacific Commodities Exchange is a well-financed and well-organized unit. It is the first new regulated futures market to be opened in over 50 years and has now been operating for 6 months. If neither the Chicago Board of Trade nor the Kansas City Board of Trade is interested, enough time should have elapsed to judge success or failure of the PCE. If successful, the PCE should then be offered the white wheat contract. The PCE currently has a backlog of commodity futures contracts which it intends to add before considering any new commodities. Therefore, the decision to explore other exchanges for the white wheat contract will not affect the chances of success for the San Francisco market at this time.

Even if the Chicago Board of Trade accepts the contract, building a viable volume will prove difficult. There is a low level of speculative interest in white wheat in all exchange markets. Lack of speculative interest is typical for a new commodity, and can be overcome by a strong exchange promotional effort. The local industry must, however, create enough initial volume to attract speculative attention on the trading floor. This means that the industry must assume both the long and short sides of the market through spreading between contract delivery months. The industry must risk its own capital in this type of operation in order to build a viable futures contract.

A white wheat contract would face a difficult breaking-in period, even under the most favorable conditions.

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APPENDIX

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The Proposed Wheat Contract

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PROPOSED PACIFIC NORTHWEST WHEAT CONTRACT^a/

Since wheat has a long futures market trading history, much of the preliminary contract work has been done for other classes. The contract reproduced below is based on the existing Chicago (soft red winter) wheat contract, with appropriate modifications.

CONTRACT

Wh eat	Class of White Wheat with all its sub- classes (Soft White Wheat, Western White Wheat, White Club Wheat, Hard White Wheat) to apply.
Basis of contract	Contract will be on a rail basis, Coast delivery as defined below.
Delivery months	August, October, January, April, June (conforming to the crop year in the Pacific Northwest).
Grades deliverable	At contract price: No. 1 White Wheat (including subclasses).
	Portland Merchants Exchange Rules and Regulations (as published) to govern for discounts and/or premiums, but in no case shall wheat grading less than No. 2 be applicable.
Trading units	6,000 bushels round lots.
Price quotations and minimum fluctuations	Quoted in cents and eighth of a cent per bushel, with 1/8 cent per bushel (\$7.50 per round lots) as the minimum charge.
Carrying charges	1/23 of a cent per bushel per day for . storage and insurance.

a/ Proposed by the Industry Steering Committee (Bob Martin, Chairman), sponsored by the Oregon Wheat League. The final contract form may differ from this proposal.

Points from which	
delivery can be made	In-store licensed and bonded public grain warehouses that have rail-loading facili- ties in Oregon, Washington, Idaho, via warehouse receipt. The delivering ware- house is obligated to deliver to buyer FOB buyer's conveyance at point of delivery, with rail freight to be for the account of the seller from that delivery point to the Coast. (The rail freight, as defined in Rule III, Section I, to be deducted from Coast settlement price at time of delivery.)
Price basis	Shall be "Coast", which is interpreted as meaning Pacific Northwest Terminals as follows: Longview, Kalama, Portland, Astoria, Vancouver, Seattle, or Tacoma.
Commissions (non-members)	\$30 per round lot for traders in United States, Canada, Puerto Rico, Mexico, and Virgin Islands.
· · · · ·	\$36 per round lot for spread positions.
	\$20 per round lot for day trades.
Daily limits on price movement	10 cents per bushel advance or decline from previous day's close.
Position limits:	
1. Daily trading limit	3,000,000 bushels in any one futures or all futures combined.
2. Position limit	2,000,000 bushels in any one futures or all futures combined. Positions of 200,000 bushels require reports.
Margin on trade	Variable; consult your broker.
Trading hours	10:00 a.m. to 1:15 p.m. Central Daylight/ Standard Time.

Discussion

Delivery Months

The months of August, October, January, April, and June conform more closely to the white wheat crop year than do the trading months for the current Chicago contract. This is a highly desirable feature, since it would aid in minimizing

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confusion between the white and red contracts, should they be traded in the same pit.

Contract Size

Two hopper cars will hold approximately 6,000 bushels of wheat. This would then be a convenient trading unit for the white contract. However, if the current Chicago contract remains at 5,000 bushels, the size of this contract should be reduced to 5,000 bushels. It is important that spreading be made as easy as possible in order to encourage trading volume.

Carrying Charges

The charge of 1/23 of a cent per bushel per day was taken from the Uniform Grain Storage Act.

Classes Deliverable

Only white wheat and its subclasses qualify for delivery. This limitation helps to preserve the export flavor of this contract. Preserving the export character should aid in differentiating this contract from the soft red contract. Speculators interested in the export market should find this attractive. To the extent which this removes any bias from the soft red contract, caused by export speculation through a primarily domestic wheat contract, the new white contract would aid in keeping the current futures market orderly.

Delivery

In view of the trade flow toward export terminals, delivery is suggested at Pacific tidewater terminals located in Portland, Vancouver, Kalama, Longview, Astoria, Seattle, or Tacoma. Actual local delivery may be made via warehouse receipt at any in-store licensed and bonded public grain warehouse with railloading facilities located in Oregon, Washington, or Idaho. In such a case, the deliverer is liable for the freight charges from the delivery point to the most distant designated tidewater terminal. The seller would then receive the coastal price minus the freight charges to the most distant coastal terminal, unless the buyer agrees to accept the grain at a coastal terminal requiring a lower rate. In other words, if the buyer accepts delivery in a terminal other

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than the one farthest from the seller's location, the actual freight rate differential is applied as a discount instead of the rate to the most distant point.

Many producers are disturbed by this provision making them liable for freight charges to the most distant terminal. It would be desirable to reconsider making the delivery location the seller's option.