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**Factors Influencing the Economic Impacts of Establishing
a Utility Grade for Wheat in the PNW Region**

by

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INTRODUCTION

Since the early 1970s, US share of the world wheat trade has declined from nearly 50 percent to a current level of about 30 percent (US Department of Agriculture, World Grain Situation and Outlook). Although several factors have influenced this decline, quality of U.S. exports is a concern. A report by the Office of Technology Assessment (OTA) in 1989 identified several factors that could increase the quality of US grain moving into international trade (OTA, 1989). The OTA study emphasized the importance of developing policies that have a coordinated impact on all factors that influence quality. However, much of the emphasis on quality improvement has focused on changing grain grades and standards. One potential change involves implementing an identity-preserved "utility" classification that would direct lower quality wheat into non-milling use. If properly implemented, such a designation could improve the overall quality of US wheat exported for milling purposes. Additionally, a new "product" (feed wheat) may be provided to better serve selected foreign and domestic markets.

Objective:

The overall objective of this research effort was to conduct a preliminary analysis on the feasibility of establishing an identity-preserved utility grade designation for wheat, focusing on the PNW region.

Survey:

A telephone survey was conducted with 101 members of the PNW grain handling industry, including country, sub-terminal, and export elevators. Grain handling firms were randomly selected from the PNW Grain and Feed Association directory from the states of Washington, Oregon, and Idaho. The survey instrument was designed to focus on industry concerns about the proposed utility grade designation and to solicit participant perceptions regarding the economic impact.

SURVEY RESULTS

Respondent Characteristics

A summary of respondent characteristics is shown in Table 1. The majority of respondents were country elevators, with agricultural cooperatives being the most common organizational structure. Storage capacity of responding firms covered a broad range, but about one-third of the respondents had storage in excess of 2 million bushels. Respondents generally characterized themselves as some type of manager. The responding firms handled a variety of grains and related commodities. All of the firms handled some wheat, with most (87) indicating wheat accounted for over 50 percent of total volume. The range for number of wheat classes handled was between one and six classes, with three classes being handled by the largest number of firms (Table 1).

Seventy-one of the responding firms indicated they currently sell feed wheat (Table 2). The majority of firms presently handling feed wheat indicated they would prefer not to handle. Most of these firms segregated feed wheat into separate storage bins, and 60 firms (86 percent) said their feed wheat markets were either in-state or in the PNW region.

General Attitudes About Wheat Handling

Respondent attitudes on the importance of certain merchandising practices used to generate income are presented in Table 3. Transportation and storage were identified as the two most important sources of income for grain handlers, with cleaning considered slightly or not important to most respondents.

A chi-square statistical test was used to analyze industry attitudes to determine if different groups within the PNW grain handling industry had different response patterns. Responding firms were categorized into three groups: country elevators, inland and river sub-terminals, and export elevators. The chi-square test indicates response patterns on the importance of storage is the only merchandising practice significantly different for the three groups. Between-group differences regarding the importance of storage are shown in Table 4.

As might be expected, storage tends to become a less important merchandising practice as wheat moves from the country elevator to the export elevator.

Future of the Wheat Industry

Respondent perceptions regarding the importance of certain issues facing the US wheat industry are shown in Table 5. Generally, the highest level of importance was placed on international competitiveness, followed by marketing issues and domestic policy issues. Environmental factors and production practices were generally considered less important. The one issue facing the US wheat industry which showed significant between-group differences was domestic policy. Table 6 shows the level of importance placed on domestic policy for each of the three groups. Inland and river sub-terminals perceived domestic policy as a slightly less important issue than country and export elevators.

Table 7 reflects respondent attitudes regarding the relative amount of effort needed by the industry to address certain issues. Respondents viewed working with government to reduce unfair trade and improving service to international customers as needing the most effort. Establishment of a utility grade for feed wheat was perceived as needing the least amount of effort relative to the other three issues. Establishing a utility grade for wheat was the only issue with between-group differences regarding the suggested level of industry effort (Table 8). Inland and river-sub-terminals indicated establishing a utility grade needed more effort relative to the other two groups.

International Wheat Market

With regard to future changes in international and domestic wheat trade for the PNW region, respondents generally felt growth will occur in international trade rather than in the domestic market (Table 9). Table 10 reflects a significant between-group difference with regard to expected changes in international wheat trade for the PNW region. Those firms more directly connected to exports (export elevators) appear to be more optimistic about international trade. Country elevators also provided a strong expectation that the international market would

increase. Inland and river subterminals were generally less optimistic about growth in international wheat trade for the PNW region.

Table 11 reflects how respondents felt about changes in their firm's international and domestic wheat trade. Responses were similar to their expectation for the PNW region. The majority of firms indicated an increase in international trade and no change in domestic trade.

Three potential methods of increasing one's knowledge of international buyer preferences were presented to respondents: participating in overseas visits, attending export seminars, and hosting foreign trade teams. Table 12 summarizes how many times respondents have used each of these three mechanisms. The survey found attending export seminars was the most common way to increase a firm's exposure to international wheat marketing opportunities, followed by hosting a foreign trade team and participation in overseas visits.

Overseas visits and hosting foreign trade teams had significant between-group differences (Table 13). Those firms closest to the actual export activity (export elevators) tended to be more involved in both of the activities. Firms most removed from export activity (country elevators) were generally less involved in working with international customers.

Segregating Wheat

Table 14 summarizes how respondents felt about the seriousness of selected problems associated with the additional effort required for segregating wheat. All of the problem areas were considered a serious or moderate problem by a majority of the firms. However, the first four problem areas (lack of premium, increase in bin space, slower receiving, and increase in operating expenditure) were considered a serious problem by a majority of the respondents. Significant between-group differences for five of the problem areas are presented in Table 15. Generally, country and sub-terminal elevators tended to view potential problems associated with segregation more seriously than did export elevators. This may be due to the fact that segregation would be primarily the responsibility of the first handler, or that the cost of increasing storage capacity for these two groups would be significant.

Segregating wheat based on specific attributes suggests handling more "classes" of grain, some of which may involve smaller quantities. Those firms currently handling lower volume classes were asked to identify the seriousness of potential problems associated with lower volume classes (Table 16). All respondents felt the four problem areas presented were serious to moderate with insufficient margins identified as the most serious concern.

Issues Related to an Identity-Preserved Utility Grade Classification

Developing an identity-preserved utility grade classification for wheat represents one way of segregating based on quality attributes. Respondents were asked their opinion on the importance of several issues related to the development of such a classification (Table 17). The majority of respondents viewed all of the issues as very or somewhat important. However, issues related to the operational impacts (separation and handling) appeared more important than marketing related issues.

Two of the issues related to developing an identity-preserved utility grade had significant between-group differences in response patterns (Table 18). The issues of separation during transportation and identification of an export market were viewed as more important by sub-terminals relative to the other two groups. Additionally, country elevators viewed both issues as more important compared to export elevators.

Respondent expectations about how various groups would be impacted by the development of a utility grade classification are summarized in Table 19. Overall, the most common response was that there would be a negative impact on the four groups selling wheat (growers, county elevators, inland/river sub-terminals, and export elevators). Wheat buyers (flour millers and wheat importers) were generally expected to benefit from the change to a utility classification.

Table 20 summarizes significant between-group differences regarding respondent expectations about impacts of a utility grade designation for wheat on industry participants. Inland and river sub-terminals were generally inclined to expect more positive impacts on the four groups. Export elevators generally expected more groups to be negatively impacted.

Table 21 identifies respondent expectations on how a utility grade designation will impact specific cost categories. The majority of respondents expected to see an increase in each cost category, with the exception of freight costs, which were expected to stay the same. Only one of the cost categories (on-site grading costs) had significantly different response patterns across the three groups of respondents (Table 22). Since grading activities to determine the utility grade classification would likely occur at the first handler level, a larger share of country elevators and inland/river sub-terminals felt that these costs would increase.

Survey Summary

Responding firms agree that something needs to be done in the US to improve service to international markets. However, there seems to be limited agreement for increasing wheat segregation, and even less support for using a utility grade. The key to increasing the US position in international markets is communication both between buyers and sellers and backwards through the marketing channels.

References

Office of Technology Assessment. Enhancing the Quality of U.S. Grain for International Trade. OTA-F-399, Washington, D.C., February 1989.

U.S. Department of Agriculture. World Grain Situation and Outlook. Economic Research Service, Washington, D.C., various issues.

Table 1. Selected Characteristics of Responding Firms

Selected Characteristics	Number of Respondents					
Primary Activity of Firm	<u>Country Elevator</u>	<u>Inland Sub-Terminal</u>	<u>River Subterminal</u>	<u>Export Terminal</u>	<u>Other*</u>	
	70	6	15	7	3	
Organizational Structure of Firm	<u>Investor Corp.</u>	<u>Agricultural Coop</u>	<u>Individual Ownership</u>	<u>Partnership</u>	<u>Other*</u>	
	17	41	30	10	3	
Storage Capacity of Firm (bu.)	<u>Up to 250,000</u>	<u>250,001 to 500,000</u>	<u>500,001 to 1,000,000</u>	<u>1,000,001 to 2,000,000</u>	<u>Over 2,000,000</u>	<u>Other*</u>
	13	15	23	16	30	4
Interviewee Position	<u>Manager (general, asst., Op)</u>	<u>Manager (Mktg., Export)</u>	<u>President CEO or VP</u>	<u>Owner</u>	<u>Secretary</u>	<u>Other*</u>
	71	12	7	5	5	1
Share of Total Volume Associated with Wheat	<u>0 to 25%</u>	<u>26 to 50%</u>	<u>51 to 75%</u>	<u>76 to 100%</u>		
	7	7	37	50		
Number of Classes of Wheat Handled	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
	16	25	30	24	2	1

*"Other" includes those respondents that did not select one of the designated response categories and respondents that did not provide a response on the particular question.

Table 2. Selected Information on Responding Firms that Currently Handle Feed Wheat

Selected Information	Number of Respondents			
Firms Selling Feed Wheat	<u>Sell Feed Wheat</u>	<u>Do not Sell Feed Wheat</u>	<u>Other*</u>	
	71	29	1	
Location of Feed Wheat Markets	<u>In-State</u>	<u>In the PNW</u>	<u>Outside the PNW</u>	<u>Other*</u>
	34	26	8	3
Preference for Handling Feed Wheat	<u>Prefer to Handle</u>	<u>Prefer Not to Handle</u>	<u>Other*</u>	
	29	35	7	
Method of Segregating Feed Wheat	<u>Separate Storage Bin</u>	<u>Ship Out as Received</u>	<u>Other Method*</u>	
	57	3	11	

*"Other" includes those respondents that did not select one of the designated response categories and respondents that did not provide a response on the particular question.

Table 3. Respondent Perceptions Regarding the Relative Importance of Selected Merchandising Practices Used to Generate Income for Grain Handling Firms

Merchandising Practice	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
	Number of Respondents (% of Respondents)			
Transportation	82 (82.0)	9 (9.0)	5 (5.0)	4 (4.0)
Storage	58 (58.0)	29 (29.0)	6 (6.0)	7 (7.0)
Blending	37 (37.0)	38 (38.0)	10 (10.0)	15 (15.0)
Arbitrage	31 (32.9)	38 (39.2)	16 (16.5)	12 (12.4)
Cleaning	9 (9.2)	34 (34.7)	21 (21.4)	34 (34.7)

Table 4. Significant Between-Group* Differences for Respondent Perceptions Regarding the Relative Importance of Selected Merchandising Practices Used to Generate Income for Grain Handling Firms

Merchandising Practice Respondent Group	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
	Number of Respondents (% of Respondents)			
Storage				
Country Elevators	49 (70.0)	17 (24.3)	3 (4.3)	1 (1.4)
Inland and River Sub-Terminals	9 (42.9)	6 (28.6)	2 (9.5)	4 (19.0)
Export Elevators	0 (0.0)	4 (57.1)	1 (14.3)	2 (28.6)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 5. Respondent Perceptions Regarding the Relative Importance of Selected Issues Facing the US Wheat Industry

Issue	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
	Number of Respondents (% of Respondents)			
International Competitiveness	86 (86.0)	11 (11.0)	1 (1.0)	2 (2.0)
Marketing	78 (78.0)	21 (21.0)	1 (1.0)	0 (0.0)
Domestic Policy	64 (64.7)	30 (30.3)	2 (2.0)	3 (3.0)
Environmental Factors	47 (47.5)	39 (39.4)	11 (11.1)	2 (2.0)
Production Practices	30 (29.7)	61 (60.3)	5 (5.0)	5 (5.0)

Table 6. Significant Between-Group* Differences for Respondent Perceptions Regarding the Relative Importance of Selected Issues Facing the US Wheat Industry

Issue Respondent Group	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
	Number of Respondents (% of Respondents)			
Domestic Policy				
Country Elevators	48 (69.6)	19 (27.5)	2 (2.9)	0 (0.0)
Inland and River Sub-Terminals	9 (42.9)	10 (47.6)	0 (0.0)	2 (9.5)
Export Elevators	5 (71.4)	1 (14.3)	0 (0.0)	1 (14.3)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 7. Respondent Perceptions Regarding the Relative Level of Effort Needed by the US Wheat Industry to Address Selected Marketing Issues

Selected Issue	Level of Effort			
	A Lot of Effort	Some Effort	A Little Effort	No Effort
	Number of Respondents (% of Respondents)			
Working with Government to Reduce Unfair Trade	70 (70.0)	25 (25.0)	4 (4.0)	1 (1.0)
Improving Service to International Customers	58 (58.6)	36 (36.4)	4 (4.0)	1 (1.0)
Increasing Segregation of Wheat	27 (27.3)	53 (53.5)	16 (16.2)	3 (3.0)
Establishing a Utility Grade for Feed Wheat	7 (7.1)	37 (37.8)	31 (31.6)	23 (23.5)

Table 8. Significant Between-Group Differences* for Respondent Perceptions Regarding the Relative Level of Effort Needed by the US Wheat Industry to Address Selected Marketing Issues

Selected Issues Respondent Group	Level of Effort			
	A Lot of Effort	Some Effort	A Little Effort	No Effort
	Number of Respondents (% of Respondents)			
Establishing a Utility Grade for Feed Wheat				
Country Elevators	2 (2.9)	25 (36.2)	27 (39.1)	15 (21.7)
Inland and River Sub-Terminals	4 (19.0)	9 (42.9)	3 (14.3)	5 (23.8)
Export Elevators	0 (0.0)	2 (33.3)	1 (16.7)	3 (50.0)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 9. Respondent Expectations Regarding Changes in International and Domestic Wheat Trade for the PNW Region

	Expected Change		
	Increase	Stay the Same	Decrease
	Number of Respondents (% of Respondents)		
International Wheat Trade in the PNW will:	63 (66.3)	26 (27.4)	6 (6.3)
Domestic Wheat Trade in the PNW will:	30 (31.3)	61 (63.5)	5 (5.2)

Table 10. Significant Between-Group* Differences for Respondent Expectations Regarding Changes in International Wheat Trade for the PNW Region

Expectation Respondent Group	Expected Change		
	Increase	Stay the Same	Decrease
	Number of Respondents (% of Respondents)		
International Wheat Trade in the PNW will:			
Country Elevator	46 (70.8)	14 (21.5)	5 (7.7)
Inland and River Sub-Terminals	9 (42.9)	11 (52.4)	1 (4.7)
Export Elevator	6 (85.7)	1 (14.3)	0 (0.0)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 11. Respondent Expectations Regarding Changes in the Firm's International and Domestic Wheat Trade

	Expected Change		
	Increase	Stay the Same	Decrease
	Number of Respondents (% of Respondents)		
International Wheat Trade for Your Firm will:	52 (53.6)	42 (43.3)	3 (3.1)
Domestic Wheat Trade for Your Firm will:	30 (30.3)	61 (61.6)	8 (8.1)

Table 12. Level of Participation in Activities to Increase the Firm's Knowledge about International Buyer Preference

Type of Activity	Number of Times Participating in Activity		
	4 or More	1 to 3	Never Participated
	Number of Respondents (% of Respondents)		
Overseas Visits	6 (7.7)	14 (17.9)	58 (74.4)
Attended Export Seminars	41 (42.3)	21 (21.6)	35 (36.1)
Hosted Foreign Trade Teams	28 (29.5)	23 (24.2)	44 (46.3)

Table 13. Significant Between-Group* Differences for Levels of Participation in Activities to Increase the Firm's Knowledge about International Buyer Preferences

Type of Activity Respondent Group	Number of Times Participating in Activity		
	4 or More	1 to 3	Never Participated
	Number of Respondents (% of Respondents)		
Overseas Visits			
Country Elevators	2 (3.6)	8 (14.3)	46 (82.1)
Inland and River Sub-Terminals	0 (0.0)	5 (23.8)	16 (76.2)
Export Elevators	4 (57.1)	1 (14.3)	2 (28.6)
Hosted Foreign Teams			
Country Elevators	15 (22.1)	16 (23.5)	37 (54.4)
Inland and River Sub-Terminals	5 (23.8)	7 (33.3)	9 (42.9)
Export Elevators	7 (100.0)	0 (0.0)	0 (0.0)

* Between-Group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 14. Respondent Perceptions Regarding the Relative Level of Seriousness for Selected Problems Associated with Wheat Segregation

Selected Problem	Seriousness of Problem			
	Serious Problem	Moderate Problem	Slight Problem	Not a Problem
	Number of Respondents (% of Respondents)			
Lack of Premium for Segregating	74 (74.7)	18 (18.2)	2 (2.0)	5 (5.1)
Required Increase in Bin Space	71 (71.7)	12 (12.1)	4 (4.1)	12 (12.1)
Slower Operation at Receiving Time	64 (64.0)	19 (19.0)	10 (10.0)	7 (7.0)
Increase in Operating Expenses	54 (54.0)	28 (28.0)	10 (10.0)	8 (8.0)
Time Needed for Measuring Segregating Characteristic	46 (46.4)	35 (35.4)	9 (9.1)	9 (9.1)
Accuracy of Measuring Segregating Characteristic	43 (43.4)	31 (31.3)	6 (6.1)	19 (19.2)
Maintaining Separation During Transportation	32 (32.3)	25 (25.3)	17 (17.2)	25 (25.2)
Slower Operation at Shipping Time	16 (16.0)	43 (43.0)	13 (13.0)	28 (28.0)

Table 15. Significant Between-Group* Differences for Respondent Perceptions Regarding the Relative Level of Seriousness for Selected Problems Associated with Wheat Segregation

Selected Problem Respondent Group	Seriousness of Problem			
	Serious Problem	Moderate Problem	Slight Problem	Not a Problem
	Number of Respondents (% of Respondents)			
Lack of Premium for Segregating				
Country Elevator	54 (77.1)	11 (15.7)	2 (2.9)	3 (4.3)
Inland and River Sub-Terminals	15 (71.4)	6 (28.6)	0 (0.0)	0 (0.0)
Export Elevator	4 (66.7)	0 (0.0)	0 (0.0)	2 (33.3)
Slower Operation at Receiving Time				
Country Elevator	47 (67.1)	12 (17.1)	6 (8.6)	5 (7.1)
Inland and River Sub-Terminals	10 (47.6)	7 (33.3)	4 (19.0)	0 (0.0)
Export Elevator	5 (71.4)	0 (0.0)	0 (0.0)	2 (28.6)
Increase in Operating Expenses				
Country Elevator	37 (52.9)	25 (35.7)	5 (7.1)	3 (4.3)
Inland and River Sub-Terminals	13 (61.9)	3 (14.3)	3 (14.3)	2 (9.5)
Export Elevator	3 (42.9)	0 (0.0)	2 (28.6)	2 (28.6)
Time Needed for Measuring Segregating Characteristic				
Country Elevator	35 (50.7)	22 (31.9)	7 (10.1)	5 (7.2)
Inland and River Sub-Terminals	8 (38.1)	10 (47.6)	2 (9.5)	1 (4.8)
Export Elevator	2 (28.6)	2 (28.6)	0 (0.0)	3 (42.9)
Accuracy of Measuring Segregating Characteristics				
Country Elevator	32 (46.4)	21 (30.4)	4 (5.8)	12 (17.4)
Inland and River Sub-Terminals	9 (42.9)	8 (38.1)	2 (9.5)	2 (9.5)
Export Elevators	1 (14.3)	1 (14.3)	0 (0.0)	5 (71.4)

* Between-Group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 16. Respondent Perceptions Regarding the Relative Level of Seriousness for Selected Problems Associated with Handling Lower Volume Classes of Wheat for Firms Handling Lower Volume Classes

	Seriousness of Problem			
	Serious Problem	Moderate problem	Slight Problem	Not a Problem
	Number of Respondents (% of Respondents)			
Insufficient Margins	47 (57.3)	22 (26.8)	7 (8.6)	6 (7.3)
Bin Space	32 (38.6)	27 (32.5)	10 (12.0)	14 (16.9)
Grading and/or Binning Time	28 (33.7)	32 (38.6)	10 (12.0)	13 (15.7)
Transporting Small Shipments	24 (29.7)	27 (33.3)	12 (14.8)	18 (22.2)

Table 17. Respondent Perceptions Regarding the Relative Level of Importance Concerning Issues Associated with the Implementation of an Identity-Preserved Utility Grade for Wheat

Issue	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
	Number of Respondents (% of Respondents)			
Grading and/or Separation at Delivery	61 (62.9)	14 (14.4)	9 (9.3)	13 (13.4)
Separation During Transportation	51 (53.1)	16 (16.7)	11 (11.5)	18 (18.7)
Competitive Advantage in Export Markets	49 (51.6)	27 (28.4)	8 (8.4)	11 (11.6)
Economic Impact from Reduced Blending	47 (48.5)	21 (21.6)	13 (13.4)	16 (16.5)
Identification of a Domestic Market	41 (43.1)	24 (25.3)	11 (11.6)	19 (20.0)
Identification of an Export Market	26 (27.4)	27 (28.4)	15 (15.8)	27 (28.4)

Table 18. Significant Between-Group* Differences for Respondent Perceptions Regarding the Relative Level of Importance Concerning Issues Associated with the Implementation of an Identity-Preserved Utility Grade for Wheat

Issue Respondent Group	Level of Importance			
	Very Important	Somewhat Important	Slightly Important	Not Important
Number of Respondents (% of Respondents)				
Separation During Transportation				
Country Elevator	33 (48.5)	12 (17.6)	8 (11.8)	15 (22.1)
Inland and River Sub-Terminals	17 (85.0)	2 (10.0)	0 (0.0)	1 (5.0)
Export Elevator	1 (16.7)	2 (33.3)	2 (33.3)	1 (16.7)
Identification of an Export Market				
Country Elevator	15 (22.4)	22 (32.8)	13 (19.4)	17 (25.4)
Inland and River Sub-Terminals	10 (50.0)	4 (20.0)	2 (10.0)	4 (20.0)
Export Elevator	1 (16.7)	1 (16.7)	0 (0.0)	4 (66.7)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

Table 19. Respondent Expectations Regarding the Impact of a Utility Grade Classification for Wheat on Selected Groups Within the US Wheat Industry

Selected Group	Expected Impact			
	Positive Impact	Negative Impact	No Impact	No Opinion
Number of Respondents (% of Respondents)				
Wheat Growers	23 (22.8)	47 (46.5)	26 (23.8)	5 (4.9)
Country Elevators	23 (22.8)	46 (45.5)	26 (23.8)	6 (5.9)
Inland and River Sub-Terminals	16 (15.8)	44 (43.6)	28 (27.7)	13 (12.9)
Export Elevators	22 (21.8)	35 (34.7)	27 (26.7)	17 (16.8)
Flour Millers	3 (34.7)	19 (18.8)	29 (28.7)	18 (17.8)
World Wheat Importers	43 (42.6)	14 (13.8)	23 (22.8)	21 (20.8)

Table 20. Significant Between-Group* Differences for Respondent Expectations Regarding the Impact of a Utility Grade Classification for Wheat on Selected Groups Within the US Wheat Industry

Selected Group Respondent Group	Expected Impact**		
	Positive Impact	Negative Impact	No Impact
Number of Respondents (% of Group Respondents)			
Wheat Growers			
Country Elevators	12 (18.2)	33 (50.0)	21 (31.8)
Inland and River Sub-Terminals	10 (47.6)	9 (42.9)	2 (9.5)
Export Elevators	1 (14.3)	5 (71.4)	1 (14.3)
Inland/River Terminals			
Country Elevators	9 (14.5)	33 (53.2)	20 (32.3)
Inland and River Sub-Terminals	7 (36.8)	6 (31.6)	6 (31.6)
Export Elevators	0 (0.0)	5 (83.3)	1 (16.7)
Export Elevators			
Country Elevators	16 (28.1)	21 (36.8)	20 (35.1)
Inland and River Sub-Terminals	6 (30.0)	8 (40.0)	6 (30.0)
Export Elevators	0 (0.0)	6 (100.0)	0 (0.0)
Flour Millers			
Country Elevators	23 (39.0)	16 (27.1)	20 (33.9)
Inland and River Sub-Terminals	12 (66.7)	1 (5.6)	5 (27.8)
Export Elevators	0 (0.0)	2 (40.0)	3 (60.0)

* Between-group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

**Those respondents indicating "No Opinion" are eliminated from the chi-square test to determine between-group differences.

Table 21 Respondent Expectations Regarding the Impact of a Utility Grade for Wheat on Selected Costs

Selected Cost	Expected Impact		
	Increase	Stay the Same	Decrease
	Number of Respondents (% of Respondents)		
Storage/Handling Costs	65 (65.7)	33 (33.3)	1 (1.0)
On-Site Grading Costs	61 (62.2)	35 (35.7)	2 (2.1)
Merchandising Costs	56 (57.7)	39 (40.2)	2 (2.1)
Labor Costs	52 (53.1)	44 (44.9)	2 (2.0)
Freight Costs	31 (31.3)	67 (67.7)	1 (1.0)

Table 22. Significant Between Group* Differences for Respondent Expectations Regarding the Impact of a Utility Grade for Wheat on Selected Costs

Selected Cost Respondent Group	Expected Impact		
	Increase	Stay the Same	Decrease
	Number of Respondents (% of Respondents)		
On-Site Grading Costs			
Country Elevator	45 (65.2)	24 (34.8)	0 (0.0)
Inland and River Sub-Terminals	14 (66.7)	7 (33.3)	0 (0.0)
Export Elevator	2 (33.3)	2 (33.3)	2 (33.3)

* Between group differences are established by categorizing each respondent as a country elevator, inland/river sub-terminal, or an export elevator. A chi-square test is then used to determine if the response patterns are significantly different between the three groups. Only the response patterns significantly different at the 10 percent level or less are presented.

