THE CHANGING DYNAMICS OF GRAIN COOPERATIVES IN EASTERN WASHINGTON

By Jason Monson

Department of Agriculture and Resource Economics

Washington State University

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Research Focus

- To explain the historical development of grain cooperatives in eastern Washington and to identify structural changes in the grain industry and impacts on economic/financial performance.
- Determine the importance of government policies, such as the Commodity Credit Corporation-owned grain storage revenue for cooperatives.
- Draw implications about future trends and performance in the grain industry

Cooperative Principles

- “A cooperative is user-owned and user controlled business that distributes benefits on the basis of use.”
- Cooperatives are more than a business but a philosophy based on equitable treatment of all members
- Principles defines what cooperatives are and their role
- Co-Op Functions: 1. Marketing Products 2. Purchasing Supplies 3. Providing Services

Pacific Northwest Grain Cooperative Development

- Originated in the 1930’s and 1940’s as multiplants with different locations
- Grain storage was located near fields and railroad lines
- Capper Volstead Act, 1922- allowed producers of agriculture products to organize marketing associations without violating antitrust laws
- Cooperatives allow farmers to capture economies of size in marketing functions, such as assembly, storage, cleaning and purchase of supplies

Pacific Northwest Grain Industry Consolidation

- Industrialization of Agriculture= increasing consolidation of farms and integration of the food and fiber system
- Consolidation is due to increasing costs and low profit margins
- The number of grain cooperatives have declined 60% over the past 55 years
- Cooperative storage capacity has increased 312% and average capacity per cooperative by 911% over the past 55 years
- Farmer numbers have declined 40% since 1964 to 1.91 million

Current Situation

- Grain cooperatives are vanishing in the Pacific Northwest as they struggle to remain economically viable.
- Challenges Include: 1. Declining grain volumes, 2. Changes in technology, 3. High cost facilities, 4. Low profit margins, 5. Globalization and 5. Excess storage capacity
- **How will cooperatives position themselves to be economically viable based on the current market structure, conduct, and performance of the grain industry?**

I. Grain Cooperative Market Structure

- The physical environment that influence market power and competition
- Elements of Market Structure: 1. Seller Concentration 2. Buyer Concentration 3. Product Differentiation, and 4. Barriers to Entry and Exit
- Data represents 100% of 22 cooperatives in eastern Washington for 2001/2002

1. Seller Concentration, 2001/2002

- Total commercial storage capacity in eastern WA is 211,592,000 bushels, of which 171,395,000 bushels is operated by cooperatives
- Cooperatives manage 81% of the licensed capacity and 74% of houses
- Total commercial houses are 413, of which 309 are operated by cooperatives
- Average number of houses and locations per cooperative is 14.05 and 9.27
- Top four cooperatives control 47% of the volume and 49% of cooperatives houses

Cooperative Size Categories, 2001/2002

Size Category (1,000 Bu)	Number of Coops.	Percent of Total Coops.	Total Coop Capacity (Bu)	Percent of Coop. Capacity	Total Coop. Houses	Percent of Coop. Houses
0- 3,000	7	31.82%%	9,148,000	5.337%	21	6.80%
3,001- 8,500	7	31.82%%	40,579,000	23.676%	67	21.68%
8,501- 26,500	8	36.36%	121,668,000	70.987%	221	71.52%
Total	**22**	**100%**	**171,395,000**	**100.00%**	**309**	**100.00%**

2. Buyer Concentration

- Volume of production, total number of producers and amount of on farm storage
- 13 year average Washington wheat and barley production is 145,398,000 and 24,508,000 bushels
- 3,014 one thousand acre or greater farms in the 20 grain producing counties of eastern Washington
- 47% of 1,000 acre farms are located in Whitman, Adams, Grant, and Lincoln counties
- On- farm storage is 74,552,300 bushels in 1998 (EWITS Research Report #20)

3. Product Diversification

- **Commodities Handled**:Wheat/Barley= 100%, 50% corn and Legumes/Oats= 13%,
- **Cooperative Tariffs**: 1.Average storage rate for wheat and barley= $0.022 and $0.024 per bushel/ month 2. Average handling rate for wheat and barley=$0.18 and $0.182 per bushel
- **Secondary Products**: Website=73%, Seed Sales=68%, Marketing Services=64%, Feed=50%, Ag Fertilizer/Chemicals=14%
- **Transportation Alternatives**: Barge Facility=86%, Unit Train=64%, and Semis=33%

4. Barriers to Entry and Exit

- 1. Lack of product diversification
- 2. High investment costs
- 3. Limited annual grain volume
- 4. Inability to comply with government regulations- i.e. warehouse laws
- 5. Economies of size

II. Grain Cooperative Performance

- Tools employed to measure cooperative performance: financial ratios and cost curves
- Financial ratios used to evaluate cooperative liquidity, profitability and solvency from 1997-2002
- Responses received from 20 of the 22 cooperatives, corresponding to 94% of cooperative capacity and 76% of all licensed commercial capacity in eastern Washington

Cooperative Size Categories
Used for the Financial Analysis, 2001/2002

Size Category (1,000 Bu)	Number of Coops.	Percent of Total Coops.	Total Coop. Capacity (Bu)	Percent of Coop.Total Capacity	Total Coop. Houses	Percent of Total Coop. Houses
0- 3,000	5	25.00%	7,979,000	4.584%	18	6.14%
3,001- 8,500	7	35.00%	49,383,000	28.374%	80	27.30%
8,501- 26,500	8	40.00%	116,684,000	67.042%	195	66.55%
Total	**20**	**100.00%**	**174,046,000**	**100.000%**	**293**	**100.00%**

Grain Cooperative Liquidity

1997-2002 Time Series Average

Ratio	Small Coops.	Medium Coops.	Large Coops.
Current Ratio	6.022	7.947	2.015
Acid Test Ratio	4.965	7.234	1.102
Working Capital / Total Intake (Bu)	0.260	0.274	0.212

Grain Cooperatives Profitability

1997-2002 Time Series Average

Ratio	Small Coop.	Medium Coop.	Large Coop.
Profit Margin Net Income	0.017	0.013	0.014
Licensed Capacity (Bu) Net Income	0.033	0.046	0.041
Total Intake (Bu)	0.034	0.042	0.051
Average Total Cost Per Bushel	0.312	0.312	0.496
Return on Total Assets	0.042	0.058	0.050
Asset Turnover	3.179	3.500	3.157
Effective Turnover (Bu)	1.233	1.432	0.755

Grain Cooperative Solvency

1997-2002 Time Series Average

Ratio	Small Coops.	Medium Coops.	Large Coops.
Total Debt / Patron's Equity	0.321	0.389	0.655
Patron's Equity / Total Assets	0.817	0.764	0.653
Patron's Equity / Licensed Capacity (Bu)	0.781	0.747	0.665
Debt Ratio	0.183	0.236	0.347
Return on Equity	0.037	0.071	0.066
Equity Leverage	0.083	0.068	0.096

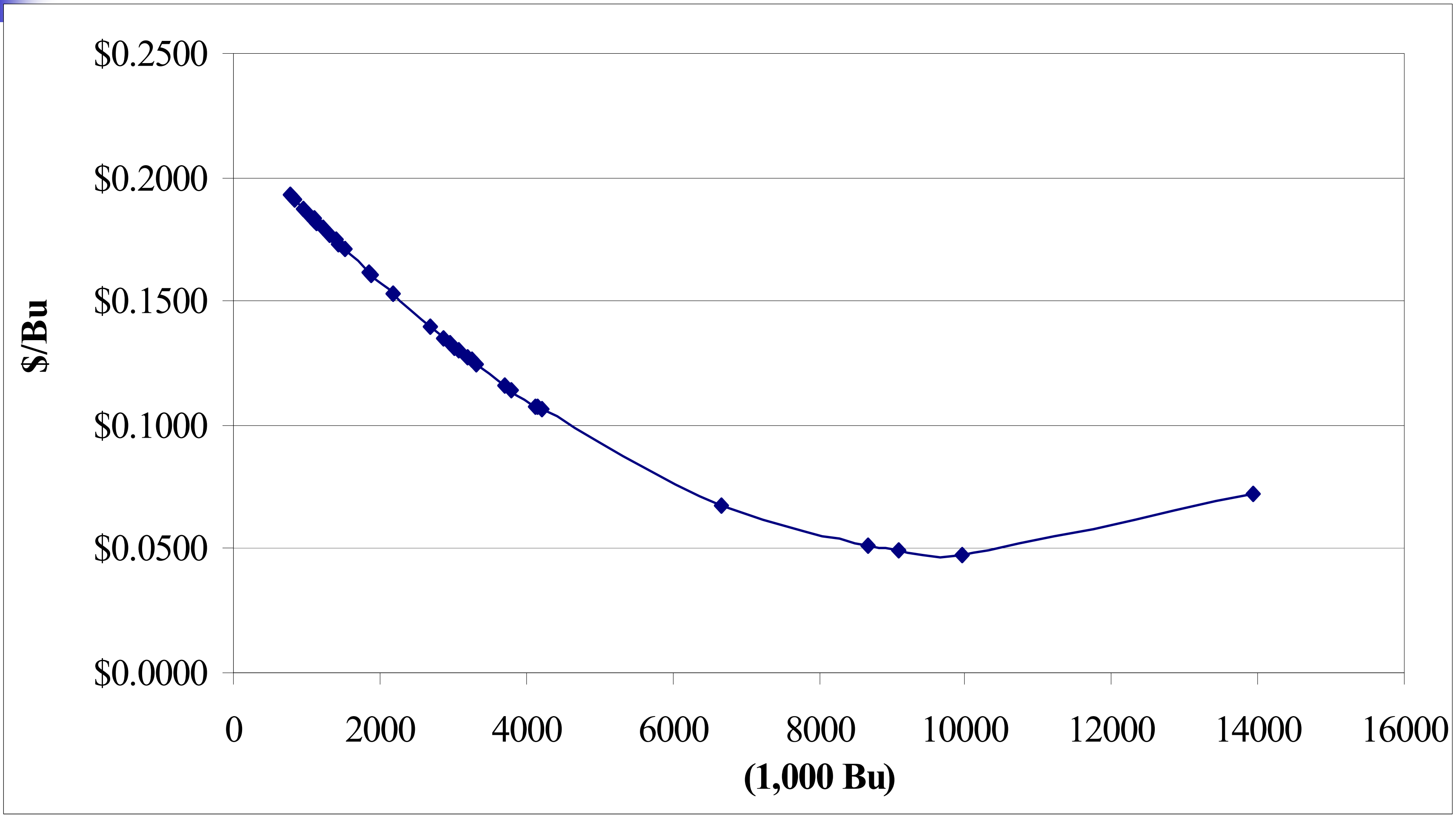
Financial Performance Summary

- The PNW grain industry is financially sound and boasted strong profitability prior to 2002.
- The low returns in 2002 demonstrate the importance of grain volume handled on profitability, reducing costs and the ability to efficiently utilize storage facilities.
- Current ratios exceed two for the three cooperative groups over the past six years.
- Prior to 2002 the ratio of patron's equity to total assets was above 60%.
- Profitability measured by asset productivity remained robust at greater than $2.00 per dollar of assets employed.

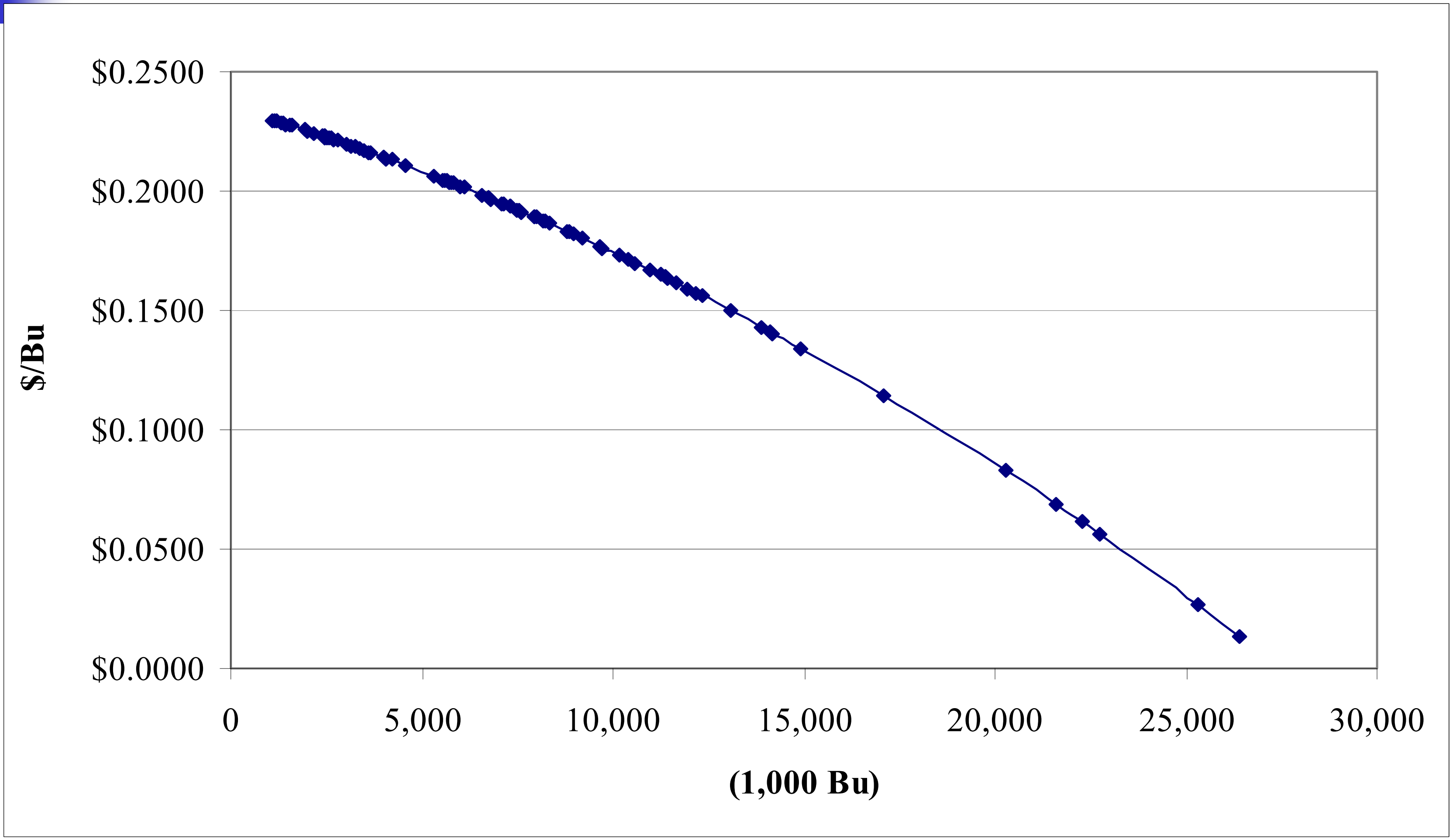
Economic Efficiency

- **Economies of Size=** average costs falls as output increases with some fixed input
- **Concentrated grain** co-op provide no extra services besides grain marketing. **Diversified** gain cooperatives provide a wide array of products and services beyond marketing, storage and handling of grain.
- Minimum point for concentrated grain firms is 10,119,976 bushels at an average total cost per bushel of $0.0478 per bu

Concentrated Grain Cooperative Cost Curve



Diversified Grain Cooperative Cost Curve



U.S. Government Policy Influence on Cooperative Structure and Performance

- **1.Warehouse Laws**-all public grain warehouses must comply with state merchandising and warehousing laws
- **2. Conservation Reserve Program**

  -allows producers to plant to grass and trees on cropland in exchange for annual rental payments

  -contract duration is 10 to 15 years

  -only 25% of total cropland acres in a county can be enrolled in CRP

  -1,273,826 acres of CRP in the 20 eastern Washington counties, September 2002

U.S. Government Policy Influence (cont.)

- **3. Storing Commodity Credit Corporation (CCC) Owned Grain**
- CCC Purpose =stabilize, protect, and support farm incomes and prices
- From 1998-2002 sixteen cooperatives received $31,135,683 for storing CCC owned grain
- Policy shift= government is selling wheat reserves to buy other commodities
- June to December 2002 wheat reserve sales= 26.7 million bushels, of which 9.7 million bushels were soft white wheat (64%)
- Approximate annual impact of these three programs= $10.3 million

Conclusions

- Cooperatives play an important role in the marketing of grains and legumes
- For the profitability of the grain industry to improve there must be a contraction of capacity
- A strong equity base must be maintained and debt used wisely
- A strong cooperative system should be encouraged and supported by producers and government polices
- Alternative strategies: value added activities, storing identity preserved grains, or receiving grain outside of eastern Washington

Final Thought

- "To build toward future success, cooperatives must be willing to consider change, be imaginative and creative, and take a leadership role. Cooperatives must reexamine their traditional role to determine what is unique and applicable today and then seize marketplace opportunities."
- Thank you for listening
- Questions ?