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Analyzing U.S. Grain Marketing May Help Project Changes in Canadian Market

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As the agriculture industry attempts to become more efficient and flexible in responding to market changes, a borderless North American grain marketing system — aimed at marketing grain in the world market — becomes a realistic possibility. Such a system, however, may be encouraged or discouraged by regulatory and economic forces.

In the U.S., deregulation of the rail industry initiated major changes to the grain marketing system, including a move toward unit-train rail shipments, rationalization of the elevator and rail systems, and the emergence of the short-line rail industry. With Canadian agriculture beginning to position itself to recognize some of the same procurement efficiencies, a look at the U.S. experience and potential Canadian changes may help U.S. producers to be proactive in their market.

Similarities and Differences Between U.S., Canadian Environments

In comparing the situation in the U.S. prior to deregulation to the current situation in Canada, it is important to note both similarities and differences between the two systems. Both the pre-deregulation U.S. and the Canadian systems share:

- ***Uniform*** (arbitrary, cost-based) ***rate structures***
- Numerous ***unprofitable branch lines***
- A large number of ***small capacity grain elevators***
- ***Unprofitable*** railroads

However, they differ in several aspects:

- A ***lower number of transportation alternatives*** available to Canadian shippers
- ***Greater degree of regulation*** of Canada's marketing system
- Much ***smaller commodity mix*** available to Canadian railroads

Taking into account these similarities and differences, a look at U.S. rail-line and grain elevator rationalization may provide insight into the potential for rationalization in the Prairie Provinces under a less regulated grain transportation and marketing system.

U.S. Rail-Line Abandonment and Short-Line Railroads

More than 33,000 miles of rail line (approximately 18% of that operated by Class I and II railroads) have been abandoned since

1979 — a process affected by politics, strength of shipper opposition and potential for future profits.

Because transportation competitiveness is so important in determining the proportion of rail lines abandoned, the parts of the Prairie Provinces likely to experience the heaviest abandonment are those in close proximity to U.S. rail and highway systems and those with a large number of branch lines. Canadian areas experiencing economic and population declines, and those with less dense grain production, are also more prone to experience large amounts of rail abandonment.

In the U.S. experience, short-line railroads have often been able to operate profitably over light-density branchlines, where Class I operation was not profitable. However, just as rail abandonment is more likely in transportation-competitive areas, short-line operations are less likely to succeed there. It is likely that in most transportation-competitive areas of the Prairie Provinces, most unprofitable light-density lines will be abandoned, rather than operated by short-line railroads. Province-specific successor rights laws also remain in place, currently limiting short-line operations in the provinces.

U.S. Grain Elevator Rationalization

Since the widespread introduction of multi-car and trainload rates on grain, the U.S. grain elevator system has consolidated into a smaller number of high capacity train-loading facilities. In many cases, subterminal-satellite systems have developed, with small gathering elevators shipping to a large facility to take advantage of shipment savings for high volumes. In estimating a model of elevator survival time, it is shown that:

- Individually owned elevators are more likely to survive than those owned by large companies, because large grain companies are likely to have better access to information, more resources available for consolidating, and less loyalty from the local community.
- Elevators with larger storage capacity are also less likely to close, since they realize economies of size in grain handling and volume discounts through large shipments.
- Elevators located in areas where a large number of bushels of grain are produced per elevator are more likely to survive due to a decreased potential for cross-country competition.
- Elevators handling a wider range of products and services are less susceptible to reductions in demand, and thus to consolidation.
- A greater proportion of shipments handled by truck negatively impacts survivability, because elevators more reliant on trucking are likely to pay higher transportation costs and may not have access to high-end markets.

With Canadian elevators beginning to seek efficiencies in a less regulated market, looking at U.S. grain elevator rationalization may provide valuable insight. However, the Canadian Wheat Board continues to play a dominant role in originating and distributing grain.

Canadian Experts Forecast the Future

Because Canada's situation — the facilitation of rail abandonment, the construction of several high-volume inland grain shipment terminals, single-desk marketing by the Canadian Wheat Board, changing pooling points and car allocation — is unprecedented, we also conducted a survey to assemble expert opinions about likely changes in Canada's rail and grain handling sectors. Ten Canadian authorities representing industry, government and academics responded with their views on areas in which policy developments and economic pressures could spur significant changes:

Primary Elevators: Experts predict a continued decline in primary elevator delivery, with lost delivery points having important implications for the road system, producer truck equipment requirements and light-density branchlines. Respondents estimated a loss of a between 390 and 789 elevators in the next five to ten years.

Grain Production: All respondents expect an increase in grain production, possibly from 1-3% yearly, attributable to advances in farm practices, technology, varieties and yields. With elevators expected to increase their annual throughput, positioning elevators with the ability to efficiently transfer grain from the country to the terminal market would be an important aspect of a more competitive Canadian grain marketing system.

Canadian Wheat Board: In the future Canadian grain marketing system, the Canadian Wheat Board will still be key in determining how the nation's grain industry and transportation respond to market forces. Experts cited changes in management structure and possible loss of the barley monopoly as important factors that could affect the CWB.

Barley Market: In light of recent increases in the export of wheat and barley from Canada to the U.S., experts were asked about continental barley flows in a liberalized market. Most felt less than 20% would be exported to the U.S., with one commenting that he anticipates a more thoroughly integrated North American barley market.

Wheat Market: With wheat no longer under the control of the Canadian Wheat Board, nine of ten respondents thought that 0-20% of Canadian production would go to the U.S. Respondents generally expect Canadian grain elevator origination costs to be competitive, relative to those of their U.S. counterparts.

Prairie Rail and Short-Line Miles: Railroad lines are affected by legislative changes, elevator numbers and new rail opportunities. Experts estimated that rail miles in the Prairie Provinces (currently totaling more than 15,000) would be cut by one-fifth to one-third in the next five years. Between 20 and 25% could be categorized as short-line miles, but one respondent noted that the railroads' negative attitudes towards short lines would leave still fewer miles available for the short-line option.

Conclusion

Deregulation of the U.S. rail industry has led to streamlining of the grain procurement infrastructure and transportation system in the north central region. Differential pricing, rewards for procurement efficiencies, and flexibility in responding to market pressures have delivered a more efficient and a relatively more mature U.S. grain procurement system. Canadian experts expect to see a more efficient grain procurement system characterized by high-throughput elevators, rationalized rail-line operations, and expansion of short-line track miles.

A copy of the full report, "Implications of a North American Grain Marketing System for Prairie Transportation and Elevators" (MPC Report No. 97-84), is available from the Upper Great Plains Transportation Institute. Contact: John Bitzan (701) 231-8949.