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Priorities and Problems in the Organic Grain Supply Chain

This document is based on the results of producer, marketer and processor surveys administered as part of the marketing study being conducted by the Project on Organic Agriculture in the Department of Agricultural Economics. The objective of the study is to examine the issues, opportunities and challenges in organic grain marketing and to provide insight to the organic grain industry on what can be done to improve the organic marketing system for the benefit of all participants. These papers are designed to provide industry participants with a brief summary of this information. This document is one of a series that will constitute the complete marketing study.

1. Introduction

It is important that firms in a supply chain understand their customers' priorities and problems. Likewise, it is also important that customers understand their suppliers' situation and problems. A clear understanding between buyer and seller can help to facilitate a smoothly functioning supply chain, where goods are transacted efficiently and effectively. The first objective of this paper is to assess product attributes that are most important to organic wheat and flax buyers. The second objective of this paper is to assess the marketing problems that are experienced by organic producers, marketers and processors.

Surveys were undertaken as part of the University of Saskatchewan Project on Organic Agriculture that attempted to find out the marketing priorities and marketing problems of organic producers, marketers and processors in Saskatchewan. Questionnaires were mailed to 90 organic grain producers randomly picked from across Saskatchewan. The sample included producers from 4 Certification Bodies (OCIA, Pro-Cert, COCC and SOCA¹). The membership of OCIA is divided into eight chapters in Saskatchewan, of which five participated in the study.² The sample

yielded 58 producer respondents that answered the questions relating to marketing priorities and problems. Five grain marketing companies and five grain processing companies also answered questions relating to marketing priorities and problems. This paper summarizes the results of the surveys, compares the results across the groups and discusses some of the implications of the results.

2. Survey Questions

The marketing relationships between producers, marketers and processors were examined in three ways: rankings of buyer priorities, ratings of buyer and seller problems, and verbal comments on marketing problems and issues.

First, respondents were asked to rank the importance of several priorities for buyers:

1. Quality of the supplier's commodity
2. Quantity that the supplier promised
3. Timeliness of supplier's delivery to the buyer
4. To buy at a cheap price from the supplier (*Price*)
5. The supplier's audit trail is complete

Since buyers and sellers answered the same question, this provided "mirror-image" responses that could be compared. If the buyer and seller rank the priorities in a similar fashion, this indicates that there

¹ OCIA – Organic Crop Improvement Association
COCC – Canadian Organic Certification Cooperative
SOCA – Saskatchewan Organic Certification Association

² Of the three excluded OCIA chapters, one was excluded because it did not certify organic wheat producers, one could

not be successfully contacted, and one declined to participate.

is a mutual understanding of the factors that are important to the buyer. If the seller ranks the priorities differently than the buyer, this indicates that the seller may not understand the priorities of buyers.

Secondly, respondents were given a list of potential marketing problems and were asked to indicate the extent to which each was a problem to them when selling organic spring wheat and brown flax. The responses were reported on a scale of 1 to 5, where 1 indicated that there was “not a problem” and 5 indicated that there was a “major problem”. Buyers and sellers were asked about similar problems. These responses of buyer and seller can be compared in order to understand the similarities and differences in problems between producers, marketers and processors.

Thirdly, the survey gave producers, marketers and processors a chance to comment on problems in the organic grain supply chain, including marketing problems.

3. Results

The results of the marketing priority rankings are first presented, followed by the marketing problem results. Discussion of the comments made by producers, marketers and processors conclude the presentation of the results.

Marketing Priorities

The marketing priority results are contained in Table 1. The main purpose of the marketing priority questions is to assess whether or not producers, marketers, and processors have similar priorities when they buy and sell organic grains. First, the responses from each respondent were aggregated in order to provide average rankings for producers, marketers and processors. A statistical test of association was used in order to measure if the rankings were significantly similar. The test was used for three cases:

- 1) Producers selling vs. marketers buying
- 2) Producer selling vs. processor buying
- 3) Marketer selling vs. processor buying

Each case is a potential buyer-seller combination in the organic grain supply chain. Producers sell to either grain companies or brokers (referred to as “marketers”) or processors, and marketers sell to processors or other downstream companies. The three cases were tested on wheat and flax for each priority.

Upon closer inspection of the individual rankings, it is apparent that there were differences in some of the responses. *Quality* was ranked highly by all groups, which indicates that buyers and sellers recognize the importance of quality. *Quantity* was ranked low by processors and marketers. *Timeliness* was very important for marketers buying, but less important for processors buying. *Price* was given lower ranking by all groups in the survey. This result suggests that sellers are aware that price is not of utmost importance. *The supplier’s audit trail is complete* was ranked very low by producers, while it was ranked most important by wheat-buying processors and flax-buying marketers and processors. This result indicates that producers are severely underestimating the importance of the audit trail. In fact, the results suggest that the importance of the audit trail is the priority that producers are underestimating the most. Overall, the results suggest that organic producers are less aware than organic marketers of buyers’ priorities. The rankings that marketers provided were significantly similar to the rankings of processors (their customers), while the rankings that producers provided were not significantly similar to the rankings of processors.

Table 1 – Buyer Priorities, Mirror Image Results

Priority/Concern	Rankings (1=highest priority, 5=lowest priority)				Significantly Similar Rankings*
	Producer (when selling)	Marketer (when buying)	Marketer (when selling)	Processor (when buying)	
Wheat:					
Quality of supplier's commodity	1	2	2	1	Marketer (when selling) vs. Processor (when buying)
Quantity that the supplier promised	2	3	5	4	
Timeliness of the supplier's delivery	3	1	4	4	
Price	5	5	3	3	
The supplier's audit trail is complete	4	4	1	1	
Flax:					
Quality of supplier's commodity	1	3	2	1	Marketer (when selling) vs. Processor (when buying)
Quantity that the supplier promised	2	4	5	5	
Timeliness of the supplier's delivery	3	2	2	4	
Price	4	5	4	3	
The supplier's audit trail is complete	5	1	1	1	

*The Spearman Rank Correlation statistic is used to detect significant association between the rankings of different groups.
Source: Organic Producer, Marketer and Processor Surveys

Marketing Problems

The main purpose of the marketing problem questions is to assess the importance of several marketing-related problems and to compare the similarities in responses across producers, marketers and processors. Understanding the problems of firms in the organic grain supply chain is an important step towards improving the entire marketing system.

Similar to the marketing priority rankings, the responses from each respondent were aggregated in order to provide average ratings for producers, marketers and processors. Statistical tests were used to determine whether the ratings for individual questions were significantly different between producers, marketers or processors. The tests were used for three cases:

- 1) Producer selling problems vs. marketer buying problems
- 2) Producer selling problems vs. processor buying problems
- 3) Marketer selling problems vs. processor buying problems

The three cases were tested on wheat and flax for each problem.

The marketing problem responses for wheat and flax are summarized in Table 2 and Table 3 respectively. Inadequate quality (problem 1) was rated highest among the processors in the case of wheat and flax. Producers were most concerned with problems of poor price information, not getting the best price possible, price volatility and difficulty finding a buyer (problems 5, 6, 7 and 8 respectively). Marketers, when both buying and selling, provided the lowest overall ratings of the three groups. Marketers revealed that the inability to estimate supplies in advance (problem 12) and inability to find a buyer (problem 8) were their biggest problems.

Table 2 – Buyer Priorities, Mirror Image Results, Wheat

Problem	Average Ratings, 1 to 5 scale (1=no problem, 5=significant problem)				Significantly Similar Rankings*
	Producer (when selling)	Marketer (when buying)	Marketer (when selling)	Processor (when buying)	
1) Buyers dispute quality upon delivery/Inadequate quality	1.36	1.38	1.50	2.75	
2) Difficult to provide/obtain enough high-quality grain to meet requirements	1.94	1.50	1.25	2.25	P-P, M(selling)-P
3) Buyers/suppliers do not honour contracts	1.43	1.00	1.25	1.25	
4) Buyers do not pay on time	1.75		1.50		
5) Prices are volatile/Difficult to negotiate a reasonable price with suppliers	2.18	1.50	1.75	2.25	
6) Buyers have much better information on prices than I do/Producers do not know what their grain is worth	2.76	1.50	1.25	2.25	
7) I do not get the best price possible when I sell	2.24	1.00	1.50	2.00	P-M(selling)
8) Not being able to find a buyer/seller when I want to sell/buy	2.29	1.00	2.25	1.50	P-M(selling), P-P
9) I/suppliers have a poor understanding of the final market for the products resulting from my crops	1.90	1.25	1.25	2.00	M(selling)-P
10) I/suppliers have a poor understanding of my buyers' business situation and problems	1.96	1.00	1.50	1.67	
11) Having problems/disputes with buyers when I try to market "on my own"	1.44		2.50		
12) Suppliers are unable to accurately estimate quantities prior to harvest		2.67		1.67	

*A two-sample t-test is used to detect significant difference across the ratings of different groups.
P-M(Buying) = Significant difference between producer responses (when selling) and marketer responses (when buying)
P-P = Significant difference between producer responses (when selling) and processor responses (when selling)
M(Selling)-P = Significant difference between marketer responses (when selling) and processor responses (when buying)
Source: Organic Producer, Marketer and Processor Surveys

Overall, the problems were all rated at three or less, indicating that none of the problems were “relatively significant” or “major.” Looking at the differences in responses across groups, there are some interesting results to consider. First, inadequate quality (problem 1) is rated as a much larger problem by processors compared to marketers or producers. The results also illustrate that it is difficult for processors to obtain enough high-quality grain (problem 2). These results highlight the importance of quality to end-users. Secondly, producers are significantly more concerned about volatile prices and not getting the “best price possible” when they sell, compared to marketers. This indicates that producers feel they are making poorly informed decisions about when and where to sell their grain. Thirdly, it is a much greater problem for sellers to find buyers than vice versa. Producers

encounter this problem for both wheat and flax, while marketers encountered this problem with wheat.

Marketing Comments

The main purpose of the marketing comments was to allow producers, marketers and processors the opportunity to make any statements about the marketing problems that they face and possible solutions to these problems. The verbal responses by producers, marketers and processors compliment the results from the marketing priority and marketing problem questions.

Table 3 – Buyer Priorities, Mirror Image Results, Flax

Problem	Average Ratings, 1 to 5 scale (1=no problem, 5=significant problem)				Significantly Similar Rankings*
	Producer (when selling)	Marketer (when buying)	Marketer (when selling)	Processor (when buying)	
1) Buyers dispute quality upon delivery/Inadequate quality	1.21	1.33	2.00	2.80	P-P
2) Difficult to provide/obtain enough high quality grain to meet requirements	1.84	1.67	2.00	2.00	
3) Buyers/suppliers do not honour contracts	1.47	1.33	1.67	1.20	P-P
4) Buyers do not pay on time	2.00		1.67		
5) Prices are volatile/Difficult to negotiate a reasonable price with suppliers	2.41	1.33	2.67	2.40	P-M(buying)
6) Buyers have much better information on prices than I do/Producers do not know what their grain is worth	3.05	1.67	1.67	2.60	
7) I do not get the best price possible when I sell	2.10	0.67	1.33	2.00	P-M(buying), M(selling)-P
8) Not being able to find a buyer/seller when I want to sell/buy	2.26	1.00	1.33	1.50	P-M(buying), P-P
9) I/suppliers have a poor understanding of the final market for the products resulting from my crops	1.85	1.33	1.33	2.20	
10) I/suppliers have a poor understanding of my buyers' business situation and problems	1.90	0.50	1.00	2.00	
11) Having problems/disputes with buyers when I try to market "on my own."	1.31		1.00		
12) Suppliers are unable to accurately estimate quantities prior to harvest		2.50		2.50	

*A two-sample t-test is used to detect significant difference across the ratings of different groups.
P-M(Buying) = Significant difference between producer responses (when selling) and marketer responses (when buying)
P-P = Significant difference between producer responses (when selling) and processor responses (when selling)
M(Selling)-P = Significant difference between marketer responses (when selling) and processor responses (when buying)
Source: Organic Producer, Marketer and Processor Surveys

Producer Comments

The questionnaires gave organic producers the opportunity to provide written comments about organic marketing issues. Organic producers provided a total of 122 comments about a variety of problems that they face. Fifty four of these comments were separated into seven categories:

- Volatile prices/lack of price information
- lack of trust with buyer
- difficulty finding markets
- CWB (like/dislike)
- Certification body problems
- Lack of a national standard
- Difficulty with cleaning and transportation

The number of producer responses for each type of problem is given in Table 5.

Volatile prices and a lack of price information received the most comments in the producer survey. This result agrees with the responses from the marketing problem questions discussed earlier, where producers rated price volatility and a lack of price information as their greatest problems.

Producers also provided a variety of ideas for potential solutions to these marketing problems. Some producers suggested that price data be collected and distributed for producers in order to alleviate the problem of poor price information. Some producers suggested that buyer trust could be improved by enforcing the bonding of buyers through the Canadian Grain Commission and publishing a list

of “bad buyers.” Markets could be more easily found if a list of potential buyers was published.

Table 5 – Producer Comments on Marketing Problems

Problem Category	Number of complaints
Volatile prices/Lack of price information	15
Lack of trust with buyer	9
Difficulty finding markets	6
CWB (like/dislike)	8
Certification body problems	6
Lack of national standard	5
Difficulty with cleaning and transportation	5

Source: Organic Producer Survey

Marketer Comments

Marketers made several comments on the marketing of organic crops. Comments included problems with the CWB, problems finding buyers, too much paperwork, and a lack of a national standard.

Processor Comments

Processors made several comments on the marketing of organic crops. Processors complained about the lack of adequate information on organic grain prices and quantities available. Processors also commented on the need for better agronomic information for producers in order to grow more high-quality product and the need to grow at least 30-40 tonnes in order to fill a truck and economize on transportation costs from the farmgate.

4. Discussion and Implications

This paper has examined several different priorities and problems that producers, marketers and processors consider when buying and selling organic grains. It is clear from the priority questions that quality and the audit trail are of utmost importance for marketers and processors. While producers understand the importance of quality, they are surprisingly unaware of their customers’ emphasis on the condition of the audit trail. The audit trail that follows all shipments of organic grains is an integral part of organic marketing, as it gives assurance that

the grain is indeed organic. A problem with the audit trail at any point can jeopardize an entire sale. These results suggest that efforts must be made to emphasize the importance of the audit trail for producers.

Processors stated that inadequate quality was their biggest problem with buying organic wheat and flax. Agronomic research may help to increase the quality of organic grains available to processors. Extension of existing agronomic information to organic producers is also important.

Producers considered a lack of information on markets and prices as their biggest problem. The results of this study suggest that producers do not seem to fully understand the preferences of their buyers and the prices and markets that exist. Providing producers with enhanced information on prices and markets would allow them to make more informed decisions on when and where to sell.

The results suggest that organic marketers have a much better idea of their customers’ priorities than organic producers, and they do not suffer from the problem of poor market information that afflicts producers. Marketers and processors stated, however, that they have difficulty estimating supplies of producers’ grain before harvest. This situation could be aided by the formal collection and distribution of information on organic crop planted acreage. This activity could be undertaken by public or private organization.

To conclude, the results suggest that the marketing relationships in the organic grain supply chain could be improved in several ways. An increase in information and understanding throughout the supply chain is an important step towards increasing its effectiveness and efficiency.

For a more detailed account of organic price information issues, see *Organic Producer Perceptions*

of Market Information Availability (Number 4) and *Information in the Organic Grain Market* (Number 10). For a more detailed account of the CWB's involvement in organic wheat and barley, see *Organic Grains and the Canadian Wheat Board* (Number 13). The verbal responses of producers, marketers and processors are also discussed in the *Organic Marketing Study Recommendations* (Number 20).

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The marketing study consists of the following papers:

- Number 1: Introduction*
- Number 2: Organic Producer Perceptions of their Marketers*
- Number 3: Organic Producer Perceptions of Organic Regulation in Canada*
- Number 4: Organic Producer Perceptions of Market Information Availability*
- Number 5: Organic Producer Perceptions of the Role of Certification Bodies*
- Number 6: Analysis of Organic Wheat Buyers in Saskatchewan: A Vertical Coordination Approach*
- Number 7: Contracting in Organic Grains*
- Number 8: Priorities and Problems in the Organic Grain Supply Chain*
- Number 9: Organic Regulation in Canada: Opinions and Knowledge of Producers, Marketers and Processors*
- Number 10: Information in the Organic Grain Market*
- Number 11: The Performance and Role of Certification Bodies*
- Number 12: Costs in the Organic Grain Supply Chain*
- Number 13: Organic Grains and the Canadian Wheat Board*
- Number 14: How Retailers Procure Organic Products – Opportunities for Saskatchewan*
- Number 15: Organic Wheat Supply Chain Profile*
- Number 16: Organic Oats Supply Chain Profile*
- Number 17: Organic Flax Supply Chain Profile*
- Number 18: Organic Lentils Supply Chain Profile*
- Number 19: Summary*
- Number 20: SWOT Analysis, Conclusions and Recommendations*