

Agricultural Transportation Infrastructure Study Final Report

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PREPARED BY:

University of Manitoba Transport Institute



Agricultural Transportation Infrastructure Study

Table of Contents:

1.	Background and Introduction	1
1.1	Background.....	1
1.2	Objectives.....	2
2.	Study Methodology	4
2.1	Sample Frame	4
2.2	Questionnaire Content	4
2.3	Data Collection	4
2.4	Analysis and Reporting.....	4
3.	Key Findings	6
3.1	1995-2000 Dynamics – Crop Sector - Cereals	6
3.1.1	Production and Delivery	6
3.1.2	Road Types.....	7
3.1.3	Truck Types.....	8
3.1.4	Drop Off Points.....	8
3.1.5	Changes in Delivery	9
3.2	1995-2000 Dynamics – Crop Sector – Other Crops	15
3.2.1	Production and Delivery	15
3.2.2	Road Types.....	15
3.2.3	Truck Types.....	16
3.2.4	Drop Off Points.....	17
3.2.5	Changes in Delivery	18
3.3	1995-2000 Dynamics – Livestock Sector	24
3.3.1	Production and Delivery	24
3.3.2	Road Types.....	25
3.3.3	Truck Types.....	25
3.3.4	Drop Off Points.....	26
3.3.5	Changes in Delivery	26
3.4	Farmers’ Expectations of 2000 - 2005 Dynamics	29
3.4.1	Continuity of Production.....	29
3.4.2	Possible Future Impacts on Road Usage and Fleet Reinvestment.....	31
3.4.2.1	Road Usage.....	31
3.4.2.2	Reinvestment.....	32
3.5	Observations about Manitoba Roadways (Respondent Commentary)	33
4.	Concluding Observations	34

Appendix 1 – Questionnaire

Agricultural Transportation Infrastructure Study

1. BACKGROUND AND OBJECTIVES

1.1 BACKGROUND

Canada's two main rail carriers, CN and CP, identified the closure of 22 branchlines in their three-year plans (Oct. 2000 and Sept. 2000, respectively). These branchlines have historically carried 1,367,560 tonnes of grain. The closure of these lines will undoubtedly cause the closure of the elevators they service. The grain elevator companies are also rationalizing their networks, replacing older and smaller elevators with high throughput elevators (HTE's). As elevators become few and far between, producers are forced to ship grain further distances by truck. Elevator consolidation and branch line closure keeps the flow of grain on provincial highways and municipal roads as it makes its way to mainline elevators.

The following table illustrates the reality of elevator consolidation for western Canada as well as for Manitoba. The Canadian Grain Commission has reported that there are now fewer than 1,000 prairie elevators, compared to 5,200 in 1962, a decline of more than 80 %. Table 1 shows that elevator capacity during this time has also declined, but by only 31.9%. This lesser reduction in capacity is largely due to the construction of the large HTEs.

Table 1: Primary Elevator Rationalization, 1962/63 to 1999/2000

Crop Year	Manitoba		Western Canada	
	Number	Capacity	Number	Capacity
1962/63	684	1,331,760	5204	10,185,310
1972/73	574	1,348,850	4545	10,497,610
1982/83	361	1,142,560	2918	8,064,650
1992/93	256	1,086,480	1487	6,825,220
1996/97	220	1,040,270	1193	6,455,320
1999/00	205	1,150,950	970	6,935,500
Decrease	70.03%	13.58%	80.71%	31.91%

* Capacity in tonnes. Source: Compiled from *Canadian Grain Commission reports*, 1999-2000.

Pressure for infrastructure change comes from other sectors as well. Manitoba farm commodities are utilized by various industries in both a raw and processed state. The diversity of commodities produced within the province has changed significantly over the past ten years. Statistics indicate that while traditional crops remain popular, there are increasing trends in specialty crop acreage and livestock numbers. This diversity in production brings with it unprecedented transport

requirements. UMTI recognized that the transportation requirements for farm production were changing when they produced the 1996, "Agriculture Trucking in Manitoba" study. At that time producers were facing a new unsubsidized grain transport scene with the repeal of the WGTA.

Since the 1996 study there has been increasing awareness regarding the number of branch line closures and elevator consolidations across the Prairies. A concern has been focused on whether the use of larger trucks to haul grain greater distances has raised the cost of trucking to the farmer and/or has this had a significant impact on government budgets for road repair in Western Canada. This issue was raised during Phase I of the Estey Review.¹ At that time stakeholders voiced concern about the effects branch line closures and elevator consolidation were having on farmers and government. This issue remained one of concern as Justice Estey identified it in Recommendation 11 in his final report.²

"It is recommended that the federal and provincial governments collaborate to apply some part of the considerable fuel tax collections to the construction, maintenance and repair of the municipal grid roads and secondary provincial highways (being those highways in the grain producing lands which are not built to Trans-Canada Highway standards) in the three prairie provinces where those roads and highways are an integral part of the roads from farm to market."

1.2 OBJECTIVES

The broad objective of this study is to investigate and analyze farmers' perceptions of the relationship between trucking practices, available infrastructure, and future needs of agricultural trucking in Manitoba.

This study will evaluate how road infrastructure factors and other factors contribute to decisions on where agricultural commodities are delivered in Manitoba. An earlier 1996 UMTI study addressed some of these issues for the grains and oilseeds sector. This research will expand upon the farmer-level work plan of the 1996 UMTI study. The field crop emphasis of the 1996 farm-level study will be revised to include livestock and special crop shipments, allowing a benchmark assessment of the impact of increased Manitoba-based value-added production and processing on farmers' transportation needs. The proposed objectives are to provide a producer-level:

1. Examination of the changes from 1995 to the present in production and shipping of different crop types, with a focus on the impact of those shifts on types of trucks used and truck distances shipped.
2. Examination of the changes from 1995 to the present in the type and level of use of trucks in moving livestock produced in Manitoba. The shifts in types of trucks used and distances beef animals and hogs are shipped by truck will be observed.

¹ Phase I of the Report as directed by the Terms of Reference was to identify and catalogue, with a brief description, the views of stakeholders, and identify issues of concern in the grain storage, handling and transportation system of Western Canada (May 29, 1998).

² The final Grain Handling and Transportation Review (Estey Review), delivered to the Minister of Transport on December 21, 1998, included 15 recommendations for an improved, more efficient grain handling and transportation system.

3. Examination of farmers' perceptions of whether or not elements in the previous two points will undergo increases, decreases, or stability midway into this decade
4. Evaluation of the degree to which any expected net change in crop mix or value-added processing (e.g. hog processing) as gleaned from farmers perceptions in points 1-3 could be expected to influence future road usage by agricultural trucking in rural Manitoba.
5. An evaluation of the degree, if any, to which farmers believe their truck fleet reinvestment is or will be influenced by the status of road infrastructure in rural Manitoba

The 'Key Findings' section of this report will present the findings of this study in some detail, with observations supported with tables and figures accompanying the report text. A set of detailed tables is available as an accompanying document to this report, for those who wish to review the findings in greater depth.

2. STUDY METHODOLOGY

2.1 SAMPLE FRAME

Manitoba farmers active in shipping agricultural commodities comprised the target group of this study. A telephone survey of 202 Manitoba farm decision-makers was undertaken to provide the basis to extrapolate results to be representative of the Manitoba farm population. Quotas based on agricultural census division or Manitoba Agricultural Region were enforced to ensure a valid sample distribution.

The 1996 Census of Agriculture concluded there were 150,000 farms operating in western Canada. A more recent estimate indicates that in 1999 there were 23,400 farms situated in Manitoba. Most of the inferences presented in this study are based upon percentage shifts or relative shares of a behavioural profile within the overall group.

2.2 QUESTIONNAIRE CONTENT

The survey consisted of four sections based on commodity produced. These included: cereals or board grains; canola, oilseeds and all other crops; beef; and hogs. The final section compiled general data and demographics on respondents. Each commodity-based section took respondents through a series of questions to disclose their operation's use of agricultural trucking and Manitoba roadways.

Participants provided information in areas such as: production over the last five years; where deliveries are made; mode of transport used in the past and present, truck purchase decisions, and impact, if any, of road conditions.

2.3 DATA COLLECTION

After the questionnaire instrument was finalized, it was converted into CATI (Computer Assisted Telephone Interviewing) format and pretested among a small subset of respondents to ensure clarity, continuity and to provide an opportunity to revise precoded lists, layout and other operational aspects. The data collection process began on March 5, and continued till March 15, 2001. In all, 202 surveys were completed, following a geographic distribution similar to that found in the most recent Census of Agriculture.

2.4 ANALYSIS AND REPORTING

This draft summary of overall key findings highlights significant observations from the survey and, where appropriate (and where sample size permits), draws observations from the key sample subsets. This draft report will be reviewed by representatives of Manitoba Transportation & Government Services, after which the Transport Institute will prepare a final version.

Before turning to the results, a brief digression concerning statistical significance is in order. In the text, no references are made to statistical significance *per se* because such references can, at

times, be very misleading. For a given sample size, it is possible to set what are called confidence intervals around an observed percentage and assert that such limits are correct 95 percent of the time. These are valuable indicators of the reliability of the observed results and should always be considered when looking at the survey results because such intervals vary dramatically by sample size or cell size in a table. Having said that, we must also point out that the one very real problem with such tables is that they do not give any indication of whether an observed percentage is meaningful. That depends upon the context and the interpretation which will be made, not just the confidence level.

3. KEY FINDINGS

While 202 surveys were completed, the composition of module within that set reflected the relative percentage of Manitoba producers who were involved in each of the four production sectors. In total, 176 respondents (87%) reported producing cereals or Board Grains, 160 (79%) reported producing other crops, 66 (33%) reported beef production, and 12 (6%) were involved in hog production. These findings reflect the extent of complex crop production choices in Manitoba, as well as the highly concentrated hog production sector. In fact, the percentage of respondents in this study involved in hog production slightly exceeded the percentage reported in the 1996 Census of Agriculture (based on operators' self-classification of farm type).

Given the mix of crop vs. livestock production in Manitoba, it is clear that, based on population alone, crop producers have a significant potential for impact on the agricultural transportation infrastructure in this province.

3.1 1995-2000 DYNAMICS – CROP SECTOR - CEREALS

3.1.1 Production and Delivery

Based upon the cereal/Board grain farmers who could estimate their 1999-2000 production, about one-third (36%) produced up to 200 tonnes in the 1999-2000 crop year, while 38% reported 201 to 800 tonnes of cereals or Board Grains. The remaining 26% reported producing more than 800 tonnes. Respondents shipped an average of 1059 tonnes of cereals or Board Grains in the 1999-2000 crop year. This was essentially the same as the average of 1063 tonnes reported as to their 1995-1996 production. Among farmers shipping up to 200 tonnes, the mean was 117 tonnes. Farmers shipping from 201 to 800 tonnes moved, on average, 439 tonnes. Farmers in the highest stratum (over 800 tonnes) shipped, on average, 3,275 tonnes. Farmers in this stratum clearly dominated, accounting for about 80% of the cereals shipped.

Most (166 of 176) 1999-2000 cereal/Board Grain producers indicated they also shipped in 1995-1996, however there are likely other operators who shipped in 1995-1996 but didn't ship in 1999-2000 (and therefore were not part of this crop module data collection). The main conclusion to be drawn is that, at least among respondents to the survey, there is a high degree of stability in production tonnage.

Farmers were asked to indicate where they shipped most of their production in 1999-2000. Several questions followed which dealt with distances to the drop off point or elevator, usage of different road types, reasons for not taking direct routes, and reasons for not necessarily shipping to the closest elevator.

In 1999-2000, cereal crop producers moved their grain 28 miles to the elevator, on average. However, 38% were within 10 miles of their main elevator in 1999-2000. Thirty-six percent moved cereals to elevators that were between 11 and 30 miles from their main on-farm storage, with the remaining 26% having to travel over 30 miles.

3.1.2 Road Types

In the course of moving cereals to the elevator, farmers traveled over various road types, from provincial trunk highways to unpaved municipal roads. Of the total miles traveled, 84% were on the PTH system or other paved roads. Among those moving over 30 miles to the elevator, this ratio rose to 95%. Conversely, the “short haul” farmers (up to 10 miles) were more likely to spend a higher percentage of their mileage on unpaved roads (49%).

Table 2A – Cereals				
Percentage of Miles on Different Road Types in 1999-2000 compared with Tonnes of Cereals in 1999-2000				
N=176				
Percentage of Miles on Different Road Types in 1999-2000:	Total	Tonnes Cereals in 1999-2000		
		Up to 200 tonnes	201 to 800 tonnes	Over 800 tonnes
Provincial Trunk Highway	77%	75%	86%	62%
Paved Provincial Roads	7%	4%	5%	19%
Unpaved Provincial Roads	2%	3%	1%	4%
Unpaved Municipal Roads	13%	18%	8%	15%

Table 2B – Cereals				
Percentage of Miles on Different Road Types in 1999-2000 compared with Miles to Main 1999-2000 Drop off				
N=176				
Percentage of Miles on Different Road Types in 1999-2000:	Total	Miles to Main 1999-2000 Drop off		
		Up to 10 miles	11 to 30 miles	Over 30 miles
Provincial Trunk Highway	77%	40%	68%	87%
Paved Provincial Roads	7%	11%	6%	7%
Unpaved Provincial Roads	2%	6%	5%	1%
Unpaved Municipal Roads	13%	43%	21%	5%

Observations between groups within a particular time frame can possibly be used to proxy shifts over time. For example, if, over time, farmers, on average, move greater road distances to the elevator or HTE, it is probable that a disproportionate share of that increased mileage would be on the PTH and other paved road system.

3.1.3 Truck Types

Cereal respondents were also asked to indicate which truck types they were using to move their cereals or Board Grains to the elevator. Overall, 30% of respondents reported using 3-ton trucks or smaller to move at least some of their cereals in 1999-2000 (see Table 7-Cereals on Page 14). Five ton trucks were less popular, being used by only 19% of growers. About one-quarter (23%) used 10-ton trucks, with one-half of respondents using 5 axle semis to move cereals in 1999-2000. Large 7 or 8 axle “B” Trains were mentioned by a relatively small percentage of growers (18%). The total of these percentages exceeds 100% since operators often use more than one truck type in the process of moving grain.

The actual tonnage moved by the various types of trucks presents a slightly different picture. While a large percentage of farmers reported using 3-ton trucks, these trucks only accounted for 5% of the cereal grain tonnage being moved to elevators. Ten-ton trucks move about 24% of the tonnage, but semis are clearly the most popular choice, moving 53% of the cereals. Only about 9% is moved by “B” Trains. However, when distance is factored in, “B” Trains become much more of a consideration, moving 31% of the cereals travelling more than 30 miles. Consequently, “B” Trains’ ton-mile share is substantially larger than would be extracted from a simple share of total ton calculation.

Using the same logic that observations across strata at a given time can be used to proxy a similar pattern over time, it could be argued that if farmers, on average, move grain greater distances in the future, then a higher percentage of that grain will be moved over longer distances by larger “B” Train units.

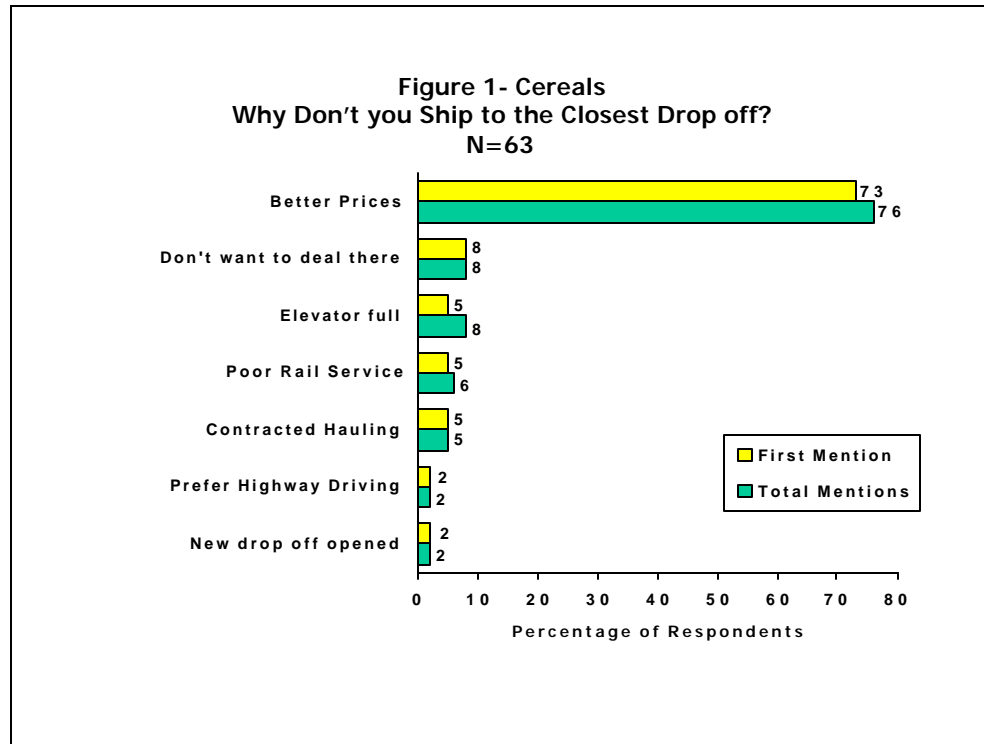
3.1.4 Drop off Points

Ninety-five percent of operators indicated they moved their grain to their main drop off or elevator by the shortest route possible. Virtually all of operators moving 10 miles or less to their elevator chose the most direct route, while farmers moving greater distances were the main source of those who took other routes. Among the small number of cereal farmers who don’t take the most direct route, an inability of the roads to take the weight was the main reason.

Cereal operators were also asked if their main drop off was indeed the closest possible site, and over one-third (36%) indicated there were other closer sites. As expected, those shipping 10 miles or less were not as likely to have a closer option (14%), but the majority (65%) of those shipping over 30 miles reported closer options were available. Interestingly, over half (54%) of those who had already changed their main drop off point or elevator since 1995 indicated there were closer drop off points in 2000. In contrast, almost 4 out of 5 (78%) of those who continued to ship to their main 1995-1996 drop off point indicated they were shipping to the closest location in 1999-2000. It would appear that those with a track record of changing their drop off location are also those less likely to be influenced solely by distance in their choice of elevator.

Cereal producers who chose not to ship to the closest site were asked why they made that choice. As illustrated in Figure 1-Cereals, better prices and/or service was clearly the overriding reason.

Among farmers shipping over 800 tonnes of cereals, this was essentially the only reason given for not shipping to the closest elevator.



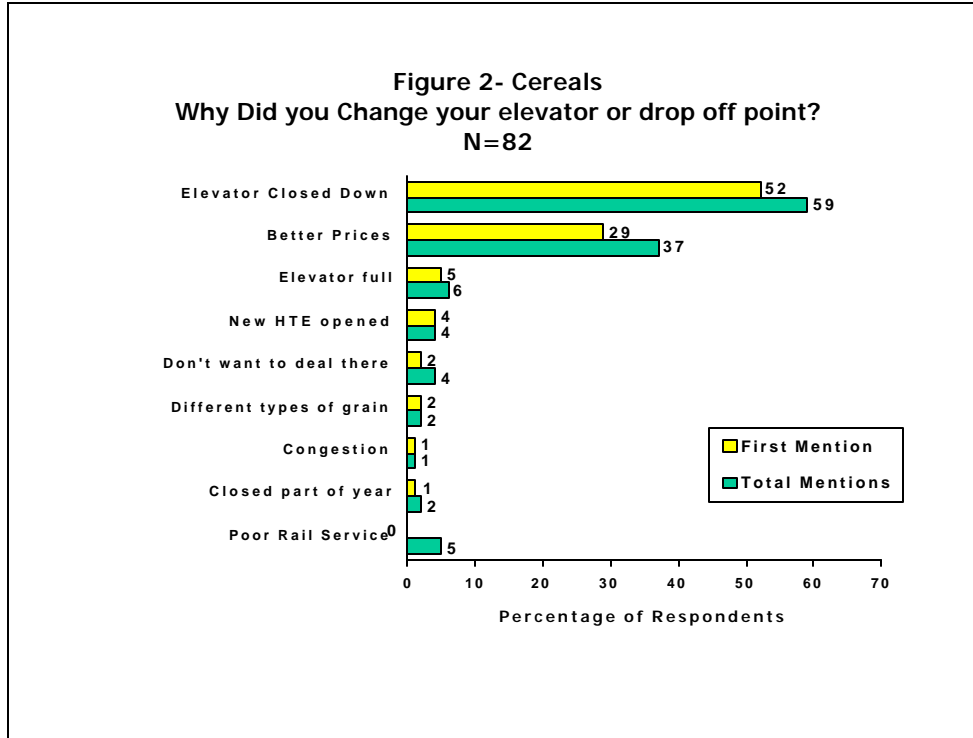
3.1.5 Changes in Delivery

Most of the 176 respondents who shipped cereals or Board Grains in 1999-2000 also shipped these crops in 1995-1996 (n=166). Among those shipping cereals in both the 1995-1996 and 1999-2000 crop years, one-half reported shipping to the same drop off point in both crop years (Table 3-Cereals). However, there were some interesting subgroup variations in the sample. For example, three-quarters of the largest strata operators (over 800 tonnes) reported having changed their main drop off point since the 1995-1996 crop year. Also, a high percentage (88%) of farmers now shipping over thirty miles changed their drop off point since 1995-1996. Farmers who changed their truck fleet since the 1995-1996 crop year were also more likely to have changed their drop off point (76%).

Table 3A – Cereals 1995-1996 vs 1999-2000 Drop off Point compared with Cereal Tonnage in 1999-2000 n=166				
	Total	Tonnes Cereals in 1999-2000		
In 1995-1996, did you ship to the same location as in 1999-2000?		Up to 200 tonnes	201 to 800 tonnes	Over 800 tonnes
Yes, same elevator or drop off	50%	67%	44%	23%
No, different elevator or drop off	49%	33%	56%	74%

Table 3B – Cereals 1995-1996 vs 1999-2000 Drop off Point compared with Distance to 1999-2000 Drop off Point n=166				
	Total	Miles to Main 1999-2000 Drop off		
In 1995-1996, did you ship to the same location as in 1999-2000?		Up to 10 miles	11 to 30 miles	Over 30 miles
Yes, same elevator or drop off	50%	78%	48%	12%
No, different elevator or drop off	49%	22%	51%	88%

Those farmers who changed their drop off point since the 1995-1996 crop year were then asked to indicate why this shift was made. As illustrated in Figure 2-Cereals, elevator closure was cited by over half of the growers (59%), although this was a much more significant factor among farmers shipping up to 200 tonnes of cereals (86%). While it was also a significant factor among farmers shipping over 200 tonnes, this group of farmers was also very likely to cite better prices or service at other locations as a reason for moving away from their 1995-1996 drop off site (38%).



While there may be relative stability in production, such is not necessarily the case with distances this production is shipped. Only 53% of farmers who shipped 10 miles or less in 1995-1996 continued with this short distance in 1999-2000 (Table 4B-Cereals). Four out of five growers who shipped between 11 and 30 miles in 1995-1996 continued to do so in 1999-2000, and none of the 1995-1996 longer distance shippers (over 30 miles) succeeded in reducing their mileage as of 1999-2000.

Table 4A – Cereals
Miles to Main 1999-2000 Drop off compared with
Change of Drop off since 1995-1996
n=166

Miles to Main 1999-2000 Drop off	Total n=166	Same Drop off as in 1995-1996?	
		Yes n=83	No n=82
Up to 10 miles	38%	59%	17%
11 to 30 miles	37%	35%	38%
Over 30 miles	25%	6%	45%

Table 4B – Cereals				
Miles to Main 1999-2000 Drop off compared with				
Miles to Main 1995-1996 Drop off				
n=166				
	Total	Miles to Main 1995-1996 Drop off		
Miles to Main 1999-2000 Drop off	n=166	Up to 10 miles	11 to 30 miles	Over 30 miles
		n=115	n=44	n=7
Up to 10 miles	38%	53%	5%	0%
11 to 30 miles	37%	23%	80%	0%
Over 30 miles	25%	24%	16%	100%

With about one-half of growers changing their drop off points from 1995-1996 to 1999-2000, and the majority of those moving greater distances in 1999-2000, the question arises as to the net effect on miles traveled.

Collectively, the 176 farmers shipping cereals in 1999-2000 accounted for 4881 miles in 1-way trips to their main elevator (mean=27.7 miles). The 166 growers who also provided this information for 1995-1996 collectively contributed 1992 miles (mean=12 miles). Tonne-mile estimates were generated for each operator providing valid estimates of both distance and cereal tonnage. In total, 127 cereal respondents provided the necessary 1999-2000 information, while 109 respondents provided this information for 1995-1996. The mean tonne-miles for 1999-2000 were 27,208. The mean for 1995-1996 was 15,431 tonne-miles. Based upon tonne-miles per grower, one could argue an increase in cereal tonne-miles of 76% from 1995-1996 to 1999-2000. However, the number of CWB permit book holders has declined about 12% over the last few years. While there is often more than one CWB permit book holder per household, this is likely still a good estimate of the “shrinkage” of the number of operations moving cereals. As such, the increase in cereal tonne-miles from 1995-1996 to 1999-2000 would be closer to 55%, still a substantial increase. Also, while backhaul is assumed empty, this still represents additional costs and wear on the total system. Increasing truck size is also a factor in determining net increases in wear on the system. If the increase in tonne-miles is accomplished with no changes in the truck fleet, then extensive and proportional additional wear can be expected. However, if the increase is met with increases in truck size (reducing the number of trips for a given tonnage), then the net effect is less clear.

Generally, those who kept their main 1995-1996 drop off point also maintained their 1995-1996 fleet structure (83%). Conversely, 76% of those who had changed their fleet also changed their drop off point from 1995-1996 to 1999-2000.

Slightly over one-third of operators (38%) reported making changes to their truck fleets from 1995-1996 to 1999-2000 (Table 5-Cereals), with farmers shipping higher tonnages being more likely to have changed their fleet (over 800 tonnes: 52%). Also, farmers shipping over 30 miles were much more likely to have made fleet changes since 1995-1996. Farmers who hadn't changed their drop off point since 1995-1996 were also unlikely to have made changes to their trucking fleet (17%).

Table 5A – Cereals				
Truck Fleet in 1995-1996 vs 1999-2000 compared with Tonnes in 1999-2000				
n=166				
	Total	Tonnes in 1999-2000		
Changed Truck Fleet since 1995-1996?	n=166	Up to 200 n=42	201 to 800 n=45	Over 800 n=31
Same/Similar Fleet	62%	67%	53%	48%
Changed Fleet	38%	33%	47%	52%

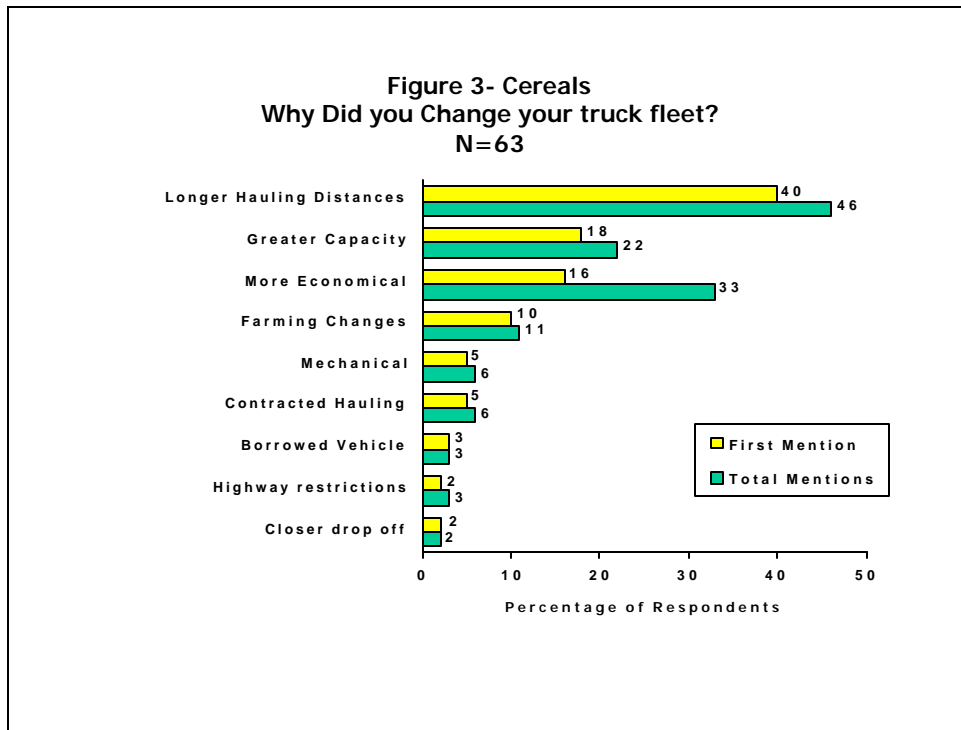
Table 5B – Cereals				
Truck Fleet in 1995-1996 vs 1999-2000 compared with Miles to Main 1999-2000 Drop off				
n=166				
	Total	Miles to Main 1999-2000 Drop off		
Changed Truck Fleet since 1995-1996?	n=166	Up to 10 n=63	11 to 30 n=61	Over 30 n=42
Same/Similar Fleet	62%	81%	64%	31%
Changed Fleet	38%	19%	36%	69%

The increase in tonne-miles has been accompanied by a shift in the truck fleets used to move cereals. As illustrated in Table 6-Cereals and Table 7-Cereals, a significant percentage of farmers shifted from 3, 5, and 10-ton trucks to highway tractor units, ranging from 5-axle units to larger “B” Trains. As expected, farms shipping smaller tonnages of cereals were more likely to opt for smaller vehicles, although in 1999-2000 even these smaller operators adopted larger trucks.

Table 6 – Cereals				
Use of Truck Types in 1995-1996 compared with Tonnes in 1999-2000				
n=166				
	Total	Tonnes in 1999-2000		
Truck Types Used in 1995-1996	n=166	Up to 200 n=42	201 to 800 n=45	Over 800 n=31
3-ton trucks	46%	69%	53%	19%
5-ton trucks	22%	17%	27%	29%
10-ton trucks	30%	12%	27%	55%
5 axle Semis	33%	29%	38%	42%
7-8 axle B Trains	7%	10%	4%	0%

Table 7 – Cereals Use of Truck Types in 1999-2000 compared with Tonnes in 1999-2000 n=176				
Truck Types Used in 1999-2000	Total	Tonnes in 1999-2000		
	n=176	Up to 200 n=46	201 to 800 n=48	Over 800 n=33
3-ton trucks	30%	54%	23%	12%
5-ton trucks	19%	15%	21%	27%
10-ton trucks	23%	9%	31%	27%
5 axle Semis	51%	48%	54%	67%
7-8 axle B Trains	18%	13%	21%	21%

The 63 growers who reported making changes to their fleets were asked to indicate why the changes were made. Longer hauling distances, economy, and capacity were the main motives for these changes, with relatively few subgroup variations.



3.2 1995-2000 Dynamics – Crop Sector – Other Crops

Given the different marketing and handling options available for Non-Board Grains and other crops, it was appropriate to address the handling of this sector separate from such a discussion about cereals and Board Grains. Many respondents provided data for both sectors and, as such, information on a grower basis is not additive across the findings in Sections 3.1 and 3.2. However, information about tonnage, and consequently about tonne-miles, is additive.

3.2.1 Production and Delivery

The segment comprising farmers producing non-Board Grains (farmers or producers for the purposes of Section 3.2) numbered 160. Of the 121 who could estimate their 1999-2000 tonnage, about 57% produced up to 200 tonnes in the 1999-2000 crop year, and 28% reported 201 to 800 tonnes. The remaining 15% reported producing more than 800 tonnes. Respondents shipped an average of 487 tonnes in the 1999-2000 crop year. In Manitoba, Board Grains still dominate the production profile (at least on a tonnage basis). However, farmers have increased their production of other crops since 1995-1996, when these growers (that also grew these crops in 1995-1996) produced an average of 418 tonnes. One hundred and forty-five of the 160 producers indicated they also shipped in 1995-1996, however there are likely other operators who shipped in 1995-1996 but didn't ship in 1999-2000 (and therefore were not part of this crop module data collection). Farmers are shifting their focus from cereals and board grains to other crops, increasing mean production per grower of these other crops by about 17% since 1995-1996.

Several questions followed which dealt with distances to the drop off point or elevator, usage of different road types, reasons for not taking direct routes, and reasons for not necessarily shipping to the closest elevator.

In 1999-2000, producers moved their crops an average of 39 miles to the elevator. One-third shipped no more than 10 miles to their main elevator in 1999-2000. Thirty-eight percent moved to elevators that were between 11 and 30 miles from their main on-farm storage, with the remaining 29% having to travel over 30 miles. These growers generally have to move farther to their drop off point than farmers moving cereals or board grains. However, they are generally moving lower tonnages.

3.2.2 Road Types

In the course of moving crops to the elevator or other drop off point, farmers traveled over various road types, from provincial trunk highways to unpaved municipal roads (Table 2-Other Crops). Of the total miles traveled, 89% were on provincial trunk highways or other paved roads. Among those moving over 30 miles to the elevator, this ratio rose to 96%. Conversely, the "short haul" farmers (up to 10 miles) were more likely to spend a higher percentage of their mileage on unpaved roads (51%).

Table 2A – Other Crops				
Percentage of Miles on Different Road Types in 1999-2000 compared with Tonnes of Other Crops in 1999-2000				
N=160				
	Total	Tonnes Other Crops		
Percentage of Miles on Different Road Types in 1999-2000:		Up to 200 tonnes	201 to 800 tonnes	Over 800 tonnes
Provincial Trunk Highway	80%	69%	86%	79%
Paved Provincial Roads	9%	15%	7%	7%
Unpaved Provincial Roads	1%	2%	1%	1%
Unpaved Municipal Roads	10%	14%	6%	13%

Table 2B – Other Crops				
Percentage of Miles on Different Road Types in 1999-2000 compared with Miles to Main 1999-2000 Drop off				
N=160				
	Total	Miles to Main 1999-2000 Drop off		
Percentage of Miles on Different Road Types in 1999-2000:		Up to 10 miles	11 to 30 miles	Over 30 miles
Provincial Trunk Highway	80%	40%	64%	87%
Paved Provincial Roads	9%	9%	10%	9%
Unpaved Provincial Roads	1%	5%	3%	0%
Unpaved Municipal Roads	10%	46%	24%	4%

3.2.3 Truck Types

Respondents were also asked to indicate which truck types they were using to move their crops to the elevator or other drop off point. Overall, 31% of respondents reported using 3-ton trucks or smaller to move at least some of their crops in 1999-2000. Five-ton trucks were less popular, being used by only 16% of growers. About 22% used 10-ton trucks, with 44% using 5 axle semis to move their other crops in 1999-2000. Large 7 or 8 axle “B” Trains were mentioned by a relatively small percentage of growers (15%). Overall, this pattern was quite similar to that reported by cereal farmers. Given that many of the respondents provided both sets of data for this study, this similarity was not surprising. However, it does confirm that farmers do not keep a dedicated fleet for different crop types.

The actual tonnage moved by the various truck types shifts the interpretation slightly. While a large percentage of farmers reported using 3-ton trucks, these trucks only accounted for 4% of the

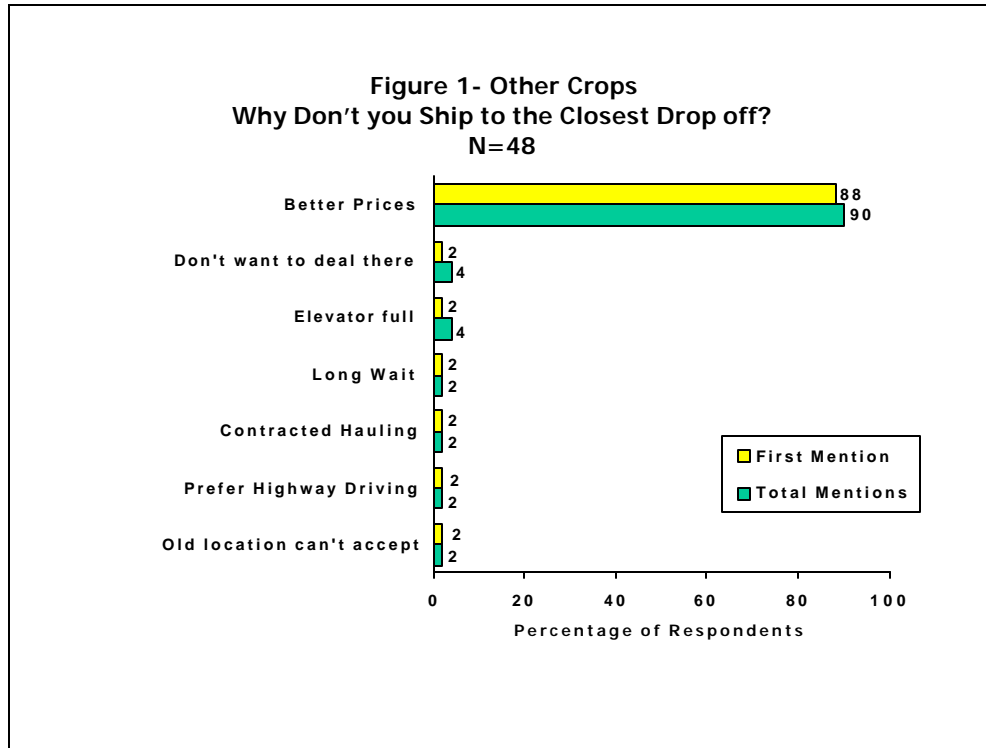
tonnage being moved to elevators. Ten-ton trucks move about 36% of the tonnage, with semis 43% of the tonnage. Only about 8% is moved by “B” Trains. However, as with cereals, when distance is factored in, “B” Trains move 17% of the other crops moving more than 30 miles. “B” Trains’ tonne-mile share is larger than would be extracted from a simple share of total tonne calculation, although the emphasis on “B” Trains is still the greatest in moving cereals rather than other crops. However, further research into the tonnage and tonne-mile split by truck type is necessary, as sample sizes in this survey segment were quite small.

3.2.4 Drop off Points

Growers were asked if they moved their grain to their main drop off or elevator by the shortest route possible. The vast majority (95%) indicated they shipped via the shortest route. All operators moving 10 miles or less to their elevator chose the most direct route, while farmers moving greater distances were the main source of those who took indirect routes. Among the small number of farmers who don’t take the most direct route, an inability of the roads to take the weight was the main reason (67%).

Operators were also asked if their main drop off was indeed the closest possible site, and 30% indicated there were other closer sites. Those shipping 10 miles or less were unlikely to have a closer option (8%), but the majority (62%) of those shipping over 30 miles reported closer options were available. Four out of five (82%) of those who continued to ship to their main 1995-1996 drop off point indicated they were shipping to the closest location in 1999-2000.

Producers who chose not to ship to the closest site were asked why they made that choice. As illustrated in Figure 1-Other Crops, better prices and/or service was clearly the overriding reason, to even a greater extent than with cereals or other Board Grains. As with cereals, while smaller operators (up to 200 tonnes) may have also provided some focus or other reasons, price and service is almost an irresistible incentive for those shipping higher tonnages.



3.2.5 Changes in Delivery

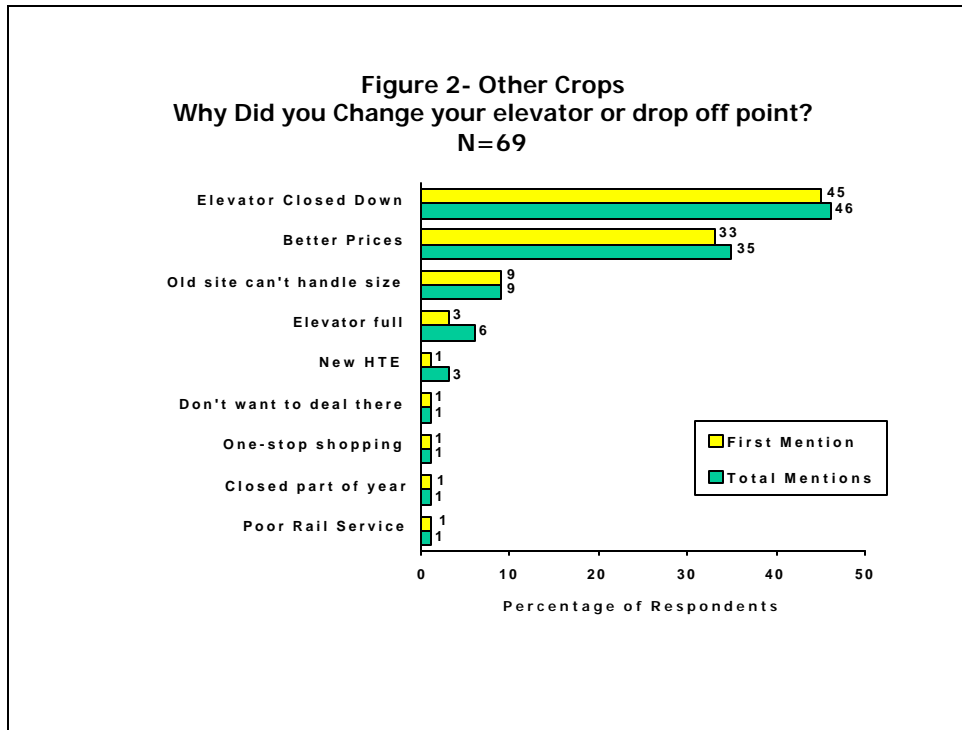
Most of the 160 respondents who shipped other crops in 1999-2000 reported also shipping these crops in 1995-1996 (n=145). Among those shipping these crops in both the 1995-1996 and 1999-2000 crop years, one-half (51%) reported shipping to the same drop off point in both crop years (Table 3-Other Crops). However, there were some interesting subgroup variations in the sample. For example, 4 out of 5 of the largest strata operators (over 800 tonnes) reported having changed their main drop off point since the 1995-1996 crop year (Table 3A-Other Crops). Also, farmers now shipping over thirty miles were more likely to have changed their drop off point since 1995-1996 (71%) (Table 3B-Other Crops). Farmers who changed their truck fleet since the 1995-1996 crop year were also more likely to have changed their drop off point (78%).

Table 3A – Other Crops
1995-1996 vs 1999-2000 Drop off Point compared with
Other Crop Tonnage in 1999-2000
n=145

In 1995-1996, did you ship to the same location as in 1999-2000?	Total	Tonnes Other Crops		
		Up to 200 tonnes	201 to 800 tonnes	Over 800 tonnes
Yes, same elevator or drop off	51%	51%	55%	20%
No, different elevator or drop off	48%	46%	46%	80%

Table 3B – Other Crops 1995-1996 vs 1999-2000 Drop off Point compared with Miles to Main 1999-2000 Drop off n=145				
In 1995-1996, did you ship to the same location as in 1999-2000?	Total	Miles to Main 1999-2000 Drop off		
		Up to 10 miles	11 to 30 miles	Over 30 miles
Yes, same elevator or drop off	51%	71%	55%	25%
No, different elevator or drop off	48%	29%	45%	71%

Those farmers who changed their drop off point since the 1995-1996 crop year were then asked to indicate why this shift was made. As illustrated in Figure 2-Other Crops, elevator closure was cited by over half of the growers (46%), although this was a slightly more significant factor among farmers shipping up to 200 tonnes of cereals (53%). Farmers shipping over 800 tonnes, were just as likely to cite better prices or service at other locations as they were to mention elevator closure.



Production of other crops has increased (on an average tonnage basis). This is compounded by an increase in the average distance shipped. Only 57% of farmers who shipped 10 miles or less in 1995-1996 continued with this short distance in 1999-2000 (Table 4B-Other Crops). Four out of

five growers (82%) who shipped between 11 and 30 miles in 1995-1996 continued to do so in 1999-2000.

Table 4A – Other Crops			
Miles to Main 1999-2000 Drop off compared with			
Change of Drop off since 1995-1996			
n=145			
	Total	Same Drop off as in 1995-1996?	
Miles to Main 1999-2000 Drop off		Yes	No
	n=145	n=74	n=69
Up to 10 miles	31%	43%	19%
11 to 30 miles	39%	42%	36%
Over 30 miles	30%	15%	45%

Table 4B – Other Crops				
Miles to Main 1999-2000 Drop off compared with				
Miles to Main 1995-1996 Drop off				
n=145				
	Total	Miles to Main 1995-1996 Drop off		
Miles to Main 1999-2000 Drop off		Up to 10 miles	11 to 30 miles	Over 30 miles
	n=145	n=79	n=44	n=22
Up to 10 miles	31%	57%	0%	0%
11 to 30 miles	39%	23%	82%	9%
Over 30 miles	30%	20%	18%	91%

Almost one-half of growers changed their drop off points from 1995-1996 to 1999-2000, and the majority of those moving greater distances in 1999-2000, leading to the question as to the net effect on miles traveled.

Collectively, the 160 farmers shipping other crops in 1999-2000 accounted for 6252 miles in 1-way trips to their main elevator (mean=39 miles). The 145 growers who also provided this information for 1995-1996 collectively contributed 2882 miles (mean=19 miles). This represented higher miles than for shipping cereals even though a smaller number of operators were involved.

Tonne-mile estimates were generated for each operator providing valid estimates of both distance and other crop tonnage. In total, 121 respondents provided the necessary 1999-2000 information, while 95 respondents provided this information for 1995-1996. The mean tonne-miles for 1999-2000 were 22,796. The mean for 1995-1996 was 6,621 tonne-miles. Extrapolation based strictly on the changes in tonne-miles per grower would suggest that tonne-miles in the movement of non-board crops rose by 244% from 1995-1996 to 1999-2000. However, small sample sizes, outliers, and a high variance in calculated tonne-miles places some possible suspicion on that estimate. Using comparison of medians rather than means would result in an estimated increase in other crop tonne-miles of 67%. With a continued reduction in the number of Manitoba farmers, the estimate of tonne-miles should incorporate a “shrinkage” of about 5% in the number of

operations should be used. As such, the increase in other crop tonne-miles from 1995-1996 to 1999-2000 would be closer to 63%, an even greater percentage increase than for cereal tonne-miles. The data for cereals, Board Grains or other crops clearly point to a very significant additional use of the road network since the 1995-1996 crop year.

There appeared to be somewhat more stability in the truck fleets used to move other crops than had been the case for cereals. About 28% of respondents reported changing their fleet since 1995-1996, although higher tonnage farmers (over 800 tonnes) and those shipping over 30 miles were more likely to have reported changing their truck fleets (60% and 48%, respectively).

Table 5A – Other Crops Truck Fleet in 1995-1996 vs 1999-2000 compared with Tonnes in 1999-2000 n=145				
	Total	Tonnes in 1999-2000		
Changed Truck Fleet since 1995-1996?	n=145	Up to 200 n=61	201 to 800 n=33	Over 800 n=15
Same/Similar Fleet	70%	75%	58%	40%
Changed Fleet	28%	23%	42%	60%

Table 5B – Other Crops Truck Fleet in 1995-1996 vs 1999-2000 compared with Miles to Main 1999-2000 Drop off n=145				
	Total	Miles to Main 1999-2000 Drop off		
Changed Truck Fleet since 1995-1996?	n=145	Up to 10 miles n=45	11 to 30 miles n=56	Over 30 miles n=44
Same/Similar Fleet	70%	80%	80%	48%
Changed Fleet	28%	20%	20%	48%

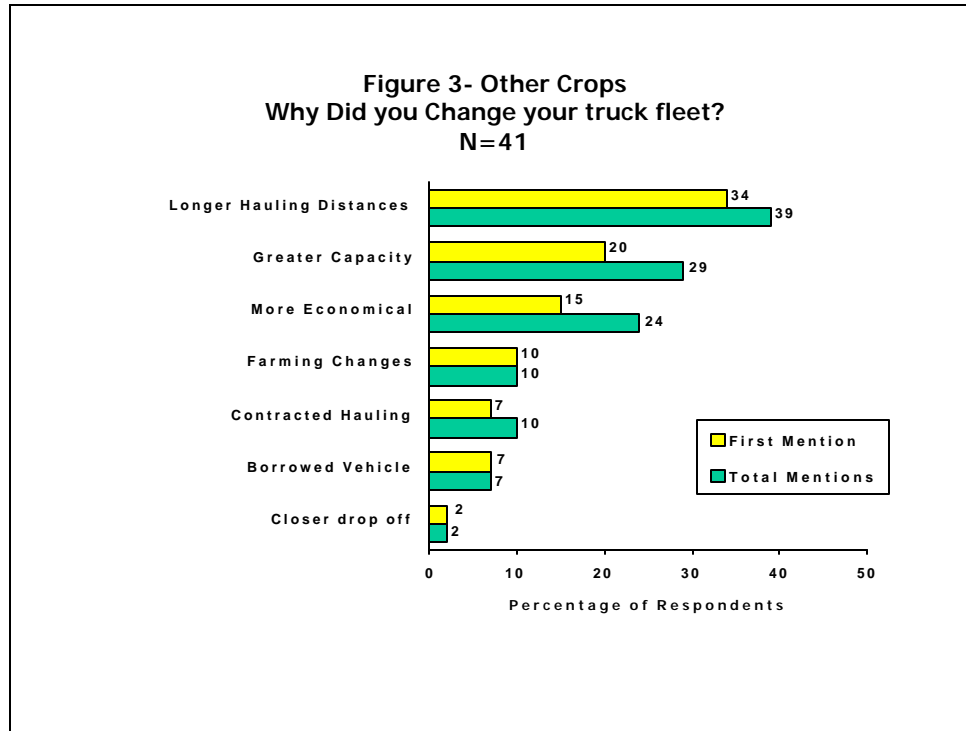
Generally, those who kept their 1995-1996 drop off also maintained their 1995-1996 fleet structure (64%). Conversely, 78% of those who had changed their fleet also changed their drop off point from 1995-1996 to 1999-2000.

The increase in tonne-miles has been accompanied by a shift in the truck fleets used to move other crops. As illustrated in Table 6-Other Crops and Table 7-Other Crops, a significant percentage of farmers shifted from 3, 5, and 10-ton trucks to highway tractor units, ranging from 5-axle units to larger “B” Trains. As expected, farms shipping smaller tonnages were more likely to opt for smaller vehicles. Interestingly, even among the smaller growers, 5 axle semis were quite popular, particularly in 1999-2000.

Table 6 – Other Crops				
Use of Truck Types in 1995-1996 compared with Tonnes in 1999-2000				
n=145				
	Total	Tonnes in 1999-2000		
Truck Types Used in 1995-1996	n=145	Up to 200 n=61	201 to 800 n=33	Over 800 n=15
3-ton trucks	41%	48%	24%	27%
5-ton trucks	21%	21%	39%	7%
10-ton trucks	29%	18%	36%	67%
5 axle Semis	35%	28%	42%	60%
7-8 axle B Trains	8%	7%	12%	0%

Table 7 – Other Crops				
Use of Truck Types in 1999-2000 compared with Tonnes in 1999-2000				
n=160				
	Total	Tonnes in 1999-2000		
Truck Types Used in 1999-2000	n=160	Up to 200 n=69	201 to 800 n=34	Over 800 n=18
3-ton trucks	31%	33%	18%	22%
5-ton trucks	16%	16%	29%	6%
10-ton trucks	22%	15%	24%	33%
5 axle Semis	44%	42%	47%	78%
7-8 axle B Trains	15%	12%	27%	11%

The 41 growers who reported making changes to their fleets were asked to indicate why the changes were made. As with the sample of cereal growers, longer hauling distances, economy, and capacity were the main motives for these changes. There were few subgroup variations of note, although farmers shipping more than 30 miles were somewhat more likely to focus on longer distances as a reason for these changes.



3.3 1995-2000 Dynamics – Livestock Sector

The previous two main subsections dealt with movement of cereals and other crop types, and reflected the opinions and actions of the majority of survey respondents. While Manitoba has a diverse agricultural sector, the number of beef and hog operators are definitely in the minority. As such, there were substantially fewer operators of these types in this sample. Sixty-six (32%) of the respondents were involved in beef operations in 2000, and twelve (6%) of the respondents provided data on hog operation usage of the Manitoba road system. With these sparse samples, the same level of detail of analysis found in Sections 3.1 and 3.2 would be inappropriate. Consequently, most analysis is at an aggregate level.

3.3.1 Production and Delivery

Beef producers shipped, on average, 91 animals in 2000, with one-quarter of respondents shipping up to 25 animals. The sample of 66 producers represented 6,006 beef animals shipped. Just over one-half of respondents shipped between 26 and 120 animals, with the remaining 23% of respondents shipping more than 120 animals in 2000.

The small number of hog operations in the sample shipped, on average, 8,917 hogs in 2000. What is lacked in number of operations is made up in scale of those operations, with the operations collectively accounting for 107,000 hogs in 2000. One-quarter of the operations shipped 1200 or fewer hogs, while 42% shipped over 4000 hogs.

In comparison to crop producers, beef producers, on average, shipped a significantly greater distance, averaging 90 miles. Hog operators, on average ship even further (113 miles). For both beef operators and hog operators the larger operators appear to move greater distances to their drop off point. Operators shipping more than 120 beef animals move the animals, on average, 160 miles. Similarly, the 4,000+ hog production strata moved animals, on average, 132 miles.

All but one of the 66 beef operation respondents reported also shipping beef animals in 1995. The average number of animals shipped has risen slightly from the 83 animals reported for 1995. Ten of the 12 hog sector respondents reported also shipping hogs in 1995. In contrast to the modest 10% average increase in beef animals shipped per respondent, the average number of hogs shipped by the survey respondents rose 71% (5,211 hogs/operator in 1995 vs 8,917 hogs/operator in 2000).

Farmers were asked to indicate where they shipped most of their production in 2000. Several questions followed which dealt with distances to the drop off point or processing plant, usage of different road types, reasons for not taking direct routes, and reasons for not necessarily shipping to the closest drop off point or processing plant.

In 2000, beef producers moved their animals, on average, 91 miles to the drop off point. One quarter shipped within 25 miles to their main drop off in 2000. Fifty-two percent moved to drop off points or processing plants that were between 26 and 70 miles from their main on-farm barns

or handling facilities, with the remaining 24% having to travel over 70 miles. Respondents in the sample collectively accounted for 5,967 miles.

In 2000, the 12 hog operators in the sample accounted for 1,351 miles in moving hogs to their main drop off point or processing plant.

3.3.2 Road Types

In the course of moving livestock to the processing plant or other drop off point, farmers traveled over various road types, from provincial trunk highways to unpaved municipal roads. Of the total miles traveled in moving beef animals, 96% were on provincial trunk highways or other paved roads. Similarly, 97% of “hog-miles” were on paved roads.

	Total Beef N=66	Total Hogs N=12
Provincial Trunk Highways	86%	84%
Paved Provincial Roads	10%	13%
Unpaved Provincial Roads	0%	1%
Unpaved Municipal Roads	4%	2%
Total Miles	5,967	1,351

3.3.3 Truck Types

Livestock producers were also asked to indicate which truck types they were using to move their beef or hogs to the drop off point. Overall, 58% of beef operators reported using 3-ton trucks or smaller to move at least some of their animals in 2000. This truck type was particularly popular with operators moving no more than 25 animals during the course of the year. No 5-ton trucks were mentioned, and only one respondent reported using 10-ton trucks to move beef animals. Five axle semis were popular for moving beef animals in 2000 (32%), particularly so among operators moving over 120 animals (47%), and those moving over 70 miles (50%). As expected, no operators mentioned using 7 or 8 axle units. However, 5th wheel or “Gooseneck” trailers were used by 21% of operators. These trailer types are particularly well suited to the medium scale (26 to 120 animal) operations and low to medium distance movement. In this manner, they fill the gap between 3-ton trucks and 5 axle semis.

Virtually all hogs shipped by the 12 hog operation respondents were sent by 5 axle semi trailers.

3.3.4 Drop off Points

Livestock operators were asked if they moved their beef animals or hogs to their main drop off or processing plant by the shortest route possible. All but 3 beef operators reported they took the most direct route. Among the small number of farmers who don't take the most direct route, congestion or road quality appeared to be the reason. Hog operators' usage of the shortest route is also almost universal, although sample size relegates any analysis of reason to be purely anecdotal.

Operators were also asked if their main drop off was indeed the closest possible site, and 36% of beef operators and 33% of hog operators indicated there were other closer sites. Producers who chose not to ship to the closest site were asked why they made that choice. Consistent with findings from the crop sector, decisions to deliver to more distant sites are closely linked with price advantages or better service.

3.3.5 Changes in Delivery

All but one of the respondents reporting beef production in 2000 also reported shipping beef animals in 1995, and all but 2 of the hog operators also produced hogs in 1995. Operators shipping in both time periods were asked if they retained their 1995 shipping location or if they changed their drop off point between 1995 and 2000.

In 1995, did you ship to the same location as in 2000?	Total Beef n=65	Total Hogs n=10
Yes, same processing plant or drop off	77%	60%
No, different processing plant or drop off	22%	40%

Those farmers who changed their drop off point since 1995 were then asked to indicate why this shift was made. As illustrated in Table 4-Livestock, better prices or better service drove those who chose to make that change, particularly among the beef operators making changes to their drop off.

Table 4 - Livestock		
Why did you Change your Drop Off Point?		
(Total Mentions)		
Why did you Change your Drop Off Point?	Total Beef	Total Hogs
(Total Mentions)	n=10	n=4
Better prices, service	71%	25%
Closure	7%	25%
Can't handle high volumes	7%	25%
Old location not accepting certain transports	7%	25%

Table 5 - Livestock		
Miles to Main Drop off or Processing Plant		
	Beef	Hogs
Average Distance - 1995	96 miles	140 miles
Average Distance - 2000	90 miles	113 miles

In both crop segments, operators reported increases in distances from 1995-1996 to 1999-2000. Such was not the case in the livestock sector. Average distances beef operators move their animals dropped slightly (-6%), while the average distance moved by hog operators dropped 19%.

While distances may have dropped, animal-mile estimates are affected by the significant increase in livestock production over the past five years. Sample sizes are extremely small, but it would appear that there is a 10% increase in the average number of beef animals shipped, a small reduction in the average distance traveled, and a likely slight attrition in the number of farm operators. Combining these factors, it is likely that there has been no significant change in road usage from 1995 to 2000 as a result of beef operation activity.

However, for hogs, the reduction in average distance traveled has been more than made up for by the increase in the number of animals shipped (71%). The median “hog-mile” per producer has risen from 222,000 in 1995 to 332,000 in 2000, an increase of 50%. Small sample sizes place restrictions on the use of means or sums in this analysis, and the median analysis may, itself, be subject to variance. However, an estimated increase of 50% on the one-way traffic loading from hog operation activity would not be indefensible.

There was substantially more stability in the truck fleets used to move beef animals than had been the case in the crop sector (Table 6-Livestock). On a percentage basis, there appeared to be some volatility in the hog sector fleet composition, although sample sizes make it unwise to generate an analysis of farmers’ reasons for those changes.

Table 6 - Livestock Changed Truck Fleet since 1995?		
	Beef N=65	Hogs N=10
Same/Similar Fleet	88%	50%
Changed Fleet	12%	50%

While the crop sector has seen a significant shift away from 3, 5, and 10-ton trucks towards highway tractor units, ranging from 5-axle units to larger “B” Trains, such has not been the case with hog or beef operations. Aside from a slight increase in the use of 5th wheel cattle trailers, the beef sector has been relatively stable in miles, production, and technology. Hog operations have, for the most part, increased scale but have given little indication of shifts other than those consistent with higher volumes, and correspondingly higher road usage.

3.4 Farmers' Expectations of 2000-2005 Dynamics

3.4.1 Continuity of Production

Turning to the future, respondents were asked if they would be continuing in their respective sectors in 2005-2006 (in the case of crops) or in 2005 (in the case of livestock). As illustrated in Table 8, crop producers are reasonably comfortable that they will still be in production in 2005, while livestock operators (particularly hog operators) are more confident in the likelihood of their continued production.

	Cereals/ Board Grains N=176	Other Crops N=160	Beef N=66	Hogs N=12
Yes, will continue production	77%	77%	86%	100%
No, will not continue production	17%	18%	12%	0%
Don't Know	7%	6%	2%	0%

Those who indicated they were unlikely to continue by 2005 were asked to indicate why they would be leaving production. The most common reason was impending retirement, a comment understandably more frequent among operators in the higher age stratum. The next most common response, particularly from operators in the livestock sector, focused on a perceived lack of financial viability of production.

Respondents who were planning on continuing production were asked if they would be shipping to the same drop off point as in 1999-2000 (in the case of crops) or in 2000 (in the case of livestock).

	Cereals/ Board Grains N=135	Other Crops N=123	Beef N=54	Hogs N=12
Yes, will ship to same location	59%	68%	95%	92%
No, will not ship to same location	31%	23%	3%	8%
Don't Know	10%	10%	2%	0%

As with continued production, farmers in the crop sector expressed a greater level of uncertainty about shipping to the same location in the future. The livestock sector respondents were extremely comfortable in their continued delivery to their 2000 drop off point.

Those not expecting to ship to their 2000 site were asked to suggest why this would be the case. Farmers in the crop sector clearly focused on expected increased elevator closures (cereals/Board Grains: 62%)(other crops: 57%). However, crop sector operators also mentioned better prices and service at other locations (cereals: 10%)(other crops: 14%) as well as the opening of new, closer drop off sites (cereals: 19%)(other crops: 14%).

3.4.2 Possible Future Impacts on Road Usage and Fleet Reinvestment

3.4.2.1 Road Usage

Production in the livestock sector is expected to continue unabated, according to survey participants. Despite relative pessimism in the crop sector, production will continue, and while some producers may leave the sector, others will compensate.

Future crop tonnage, number of beef animals, and number of hogs will be driven by the parameters of markets and climate. Extrapolation of future tonne-miles, or animal-miles is therefore best based upon a proportion of expected miles per sector in 2005.

Farmers were asked to indicate the distance they would expect to ship (in cases where their 1999-2000 site would not be used). These responses were blended with those of operators who would continue to ship to their 1999-2000 elevator. The resulting findings are presented in Tables 10 and 11.

	Cereals	Other Crops
Average Distance – 1995-1996	12 miles	20 miles
Average Distance – 1999-2000	28 miles	39 miles
Average Distance – 2005-2006	34 miles	50 miles

	Beef	Hogs
Average Distance - 1995	96 miles	140 miles
Average Distance - 2000	90 miles	113 miles
Average Distance - 2005	106 miles	113 miles

Assuming stable production levels from 2000 to 2005, cereal/Board Grains could be expected to experience tonne-mile increases of 21% in 2005-2006. The other crop increase would be on the order of 28%. Beef production could expect to place an 18% increased burden on the road system, while hog production's road usage would likely remain stable.

It should be remembered that these estimates do not address incidental movement (feed movement for livestock, production input movement, greater centralization of machinery due to increased farm size, etc.) but rather only address the impacts of movement of final product to market access points. Other research would be required to factor these and other items into the net effect on road usage.

Also, estimates of future road usage are based on a fairly static situation. Econometric analysis could be used to impute a fluid nature into production decisions and thereby obtain other estimates of production. In such cases, elements of this study could be used to assign road load coefficients to different production landscapes for Manitoba.

3.4.2.2 Reinvestment

In a final series of questions, respondents were asked to indicate if they had plans for changes to their truck fleets between now and 2005. As illustrated in Table 12, relatively little is planned in terms of major changes to truck fleets by 2005. As the cereals and other crop segments are heavily represented in the overall sample of 202 respondents, it is not surprising to see those sectors being reflected in the "Total" column.

Planned Truck Changes between Now and 2005?	Total N=202	Cereals/ Board Grains N=176	Other Crops N=160	Beef N=66	Hogs N=12
Yes, will make changes	15%	15%	15%	18%	25%
No changes to be made	71%	69%	69%	77%	75%
Don't Know	14%	15%	16%	5%	0%

A very small percentage of operators cited road conditions as a reason for not making truck fleet changes since 1995 (Table 13). Only the operators in the hog sector differentiated themselves as blaming road concerns for postponing fleet changes.

Since 1995, were there any changes that you didn't make because of concerns about roads?	Total	Cereals/ Board Grains N=176	Other Crops N=160	Beef N=66	Hogs N=12
Yes, would have made changes	8%	9%	9%	6%	17%
No, roads not a factor in truck fleet changes	91%	89%	89%	94%	83%
Don't Know	2%	2%	2%	0%	0%

When asked to specify the types of truck changes which had not been made due to roads, the focus was clearly on foregoing increasing truck capacity and, to a lesser extent, on increasing the number of trucks in the fleet. Given some of the comments made by respondents in the last question of the survey (briefly highlighted in Section 3.5), another question may have been to ask if any truck fleet changes were made because of road concerns, rather than foregone for this reason.

3.5 Observations about Manitoba Roadways (Respondent Commentary)

The final question asked respondents to express any final comments about the Manitoba road or highway system as related to the operation of their farm. There were several consistent points presented:

There was general consensus that provincial roads are in need of repair. Three general points were heard throughout the comments:

1. The roads need to be repaired to carry heavier loads.
“A lot more trucks on the road, heavier trucks and the roads have not been upgraded to accommodate them.”
2. Money collected from fuel taxes should pay for road maintenance and repair.
“No where near enough fuel tax dollars coming back to help maintain/fix roads, they are in terrible condition.” (Note: As farm trucks are exempt from provincial fuel taxes, this comment is more appropriately directed to the Federal tax level)
3. Road conditions will worsen with elevators becoming fewer and further between.
“They are going to take a beating in the next few years. We are all going to be hauling further. I imagine the majority of grain from farmers is going to be hauled by semi-trailers and the distance is going to be a lot further.”

A voice could also be heard for the return of the rail system.

“Bring back the rail and elevator system that we had in the past. The price of fuel is too high.”

“We need roads to replace the railways we have lost because we have to haul further?”

Producers identified that truck damage as a result of increased use and travel on rough roads coupled with the rising cost of fuel as a financial burden they are not prepared for given current economic conditions.

“The roads are giving our vehicles a beating.”

“They are just terrible, they are destroying our trucks. The Manitoba government should pay for the repairs on my trucks.”

4. Concluding Observations

- In Manitoba, most operators are able to use paved roads for a high percentage of their production delivery, and as mileage increases, the percent of that mileage on the paved road system will also increase.
- Farmers almost always take the shortest route to drop off points, only rarely deterred by road limitations.
- Producers often go to drop off points that are not necessarily the closest to their operation, citing better service or better prices as the reason for bypassing the closer establishment.
- In crop production, while 3-ton trucks and 10-ton trucks are still quite common, farmers are moving more to 5 axle semi-trailers, a particularly popular choice for higher volume producers and longer haul movement.
- 7 or 8 axle “B” Trains, while increasing in number, still represent only a small part of fleets, although they move a disproportionate share of long haul, high volume production.
- Crop production has placed a dramatically increased tonne-mile load on Manitoba roads from 1995 to 2000, mainly as a result of greater distances traveled, not because of increased tonnage.
- About one-half of cereal or other crop producers reported changing their main drop off point from 1995 to 2000. These farmers strongly cited elevator closure as their main reason for changing drop off points.
- While operators often cited elevator closure as the reason for changing their drop off location, improved service and better prices were also acknowledged as a strong incentive behind their decisions to change drop off points. It raises the point that in some cases, elevator closure may have been the result rather than the cause of farmers’ choice of a new drop off point.
- Increases in tonne-mile load on the road system by livestock production have been more moderate than that found in the crop sector (although incidental production-related road wear – feed shipments, etc. are not factored into this analysis).
- Road wear can be expected to increase significantly by 2005, again fueled by higher mileage rather than by increased tonnage.
- Although farmers were very critical of the state of the provincial road system, they rarely indicated their truck fleet decisions are influenced by the condition of the roads.