

ECONOMIC AND SOCIAL BENEFITS ASSESSMENT

FINAL REPORT

Duncan Farmers' Market

Duncan, British Columbia

A collaborative project of
Duncan Farmers' Market
and

David J. Connell, PhD
University of Northern British Columbia



December, 2016

Report prepared by
David J. Connell, PhD

Data collected by
Barry O'Riordan
Executive Director, Duncan Farmers' Market

SUMMARY

The demand for locally produced fresh, nutritious food by local consumers has grown rapidly over the past ten years. So too has the number of farmers markets. As the most visible and accessible component of our local food systems, farmers markets have strengthened their role as providing unique places for local producers and local consumers to connect. Although this role of farmers markets within local food systems is well recognised, it is important to know not only what markets contribute to local areas but also to know how much they contribute.

This report presents the findings from the assessment completed for the Duncan Farmers' Market. The report is based on data collected on three days during the 2016 season: May 28, August 20, and October 22. The report includes results of a province-wide assessment of BC's farmers markets completed in 2012 and incorporates some results from a national study of farmers markets completed in 2008¹. The provincial project was completed by the BC Association of Farmers markets, in collaboration with Dr. David Connell of the University of Northern British Columbia. In total, 33 assessments were completed across the province in 2012¹.

The estimated annual economic benefits of the Duncan Farmers' Market is \$6.28 million. The estimated 'spillover' effect for neighbouring businesses is \$4.8 million.

Other highlights of results for the Duncan Farmers' Market:

- **The estimated number of market customers on each assessment day:**

May 28	3,450
August 20	4,104
October 22	4,374
- **The following number of market visitors participated in the study:**

May 28	515
August 20	570
October 22	519
- **Average customer spending at the market per visit: \$34.81**
- **Average customer spending at neighbouring businesses: \$32.35**
- **Almost half (45.7)% of the survey respondents visit the market either 'regularly' (almost weekly) or 'frequently' (2-3 times per month)**

¹ All reports are available at <http://www.bcfarmersmarket.org/resources/subpage/economic-and-social-benefits-study>

DESCRIPTION OF MARKET

Duncan Farmers' Market

Market Website: <http://www.duncanfarmersmarket.ca/>

Every Saturday morning, all year round, rain or shine, come for the freshest local fruits and vegetables, baking, jams & jellies, honey, crafts, clothing, pet treats, and more!

With our "you make it, you bake it, you grow it, you sell it" philosophy, you will find a wide variety of local products to fulfill your "100 mile diet" needs.

Please join us in the Market Square in downtown Duncan (look for the clock tower) every Saturday and help make your year-round farmers market the best in BC!

We are open year round January through December.

Availability:	Open year round Spring/Summer 9am-2pm Nov-Dec 10am-2pm Jan-Mar 10am-2pm
# Vendors:	Spring/Summer ~ 100 Fall/Winter ~ 50-65
Location:	City Square adjacent to City hall and along Ingram Street 200 Craig Street Duncan, BC, Canada
Contact Info:	info@duncanfarmersmarket.ca Duncan Farmers' Market Society PO Box 20074 Duncan BC V9L 5H1 Phone: 250-732-1723

RESEARCH METHOD

The assessment of individual farmers markets is organised around two sets of activities: rapid market assessment and market surveys. These are the same methods used for the BC study in 2012 and 2006.

1) Rapid Market Assessment:

The Rapid Market Assessment (RMA) technique was developed by researchers at Oregon State University for studying farmers markets. This method has been implemented successfully in markets throughout Oregon and Washington states. The RMA method consists of three parts: customer survey; crowd count; environmental observations. The environmental observations are optional for markets in this present study and so are not included in this report.

- a) Flip-chart survey: The flip-chart survey method engaged consumers in friendly interaction through multiple-choice questions posted in large print on flip charts. This approach has a high response rate, thereby increasing validity and accuracy.

The set of questions used for the survey (Box 1) were developed in two parts. The first four questions were developed by the research team and have been asked at all farmers markets participating in previous assessments. Asking the same questions at all markets is necessary to compare results. The Duncan Farmers' Market developed the fifth question.

Box 1. Flip-chart survey questions

1. How often do you come to this farmers market?
2. When did you start shopping at this market?
3. How much have you spent, or do you plan to spend, at the market today?
4. If you plan to do additional shopping or eating while in this area of town today, how much do you plan to spend?
5. Where do you live?

- b) Crowd count: During a ten-minute period of each hour the market is open, members of the assessment team stood at each major entry point to the market and counted people entering. The total number of attendees is estimated from these systematic counts.

2) Market surveys

The analysis of community benefits of farmers markets involves more detailed surveys of market customers and local businesses.

- a) Customer surveys. A small sample of customers was asked to participate in a short interview. People were asked about where they shop, factors they consider when buying food, how long they spend at the market, and how they spend their time when at the market. Customers were also asked if they shop at other businesses on the same day that they visit the farmers market. The small sample size means that the results cannot be generalised to all market customers. Nevertheless, the information collected expands upon the flip-chart survey information and lends further insights to market customers and the relation between the market and neighbouring businesses.
- b) Business surveys. Businesses located near the farmers market were surveyed to assess the influence of the market on neighbouring businesses and to explore the nature of the relationship. The information collected from these surveys is specific to each local market and will lend insight to how relations might be further developed. The business information will also help to understand the relation between farmers markets and businesses generally.

Together, the market assessment and the more detailed market surveys improve our understanding of what makes the Duncan Farmers' Market successful and how it contributes to the local area, in terms of both its economic and social benefits.

RESULTS

This section reviews the results of the rapid market assessment, including the crowd count estimates and flip-chart surveys. The results for the one-on-one customer interviews and business interviews follow.

Rapid Market Assessment

There were approximately 100 vendors present during each assessment. The weather varied during the assessments. It was rainy on May 28 and August 20, which resulted in a quieter days than usual. It was sunny on October 22.

Crowd count

The actual and extended counts for the assessment are shown in Table 1. The total estimated counts are also shown in Chart 1.

Table 1. Estimated Crowd Counts

(a) May 28, 2016

Time period	Count period	Actual count	Extended total
1st hour (9:00-10:00)	9:30 am -9.40 am	53	318
2nd hour (10:00-11:00)	10.30 am-10.40 am	140	840
3rd hour (11:00-12:00)	11:30 am-11:40 am	175	1,050
4th hour (12:00-1:00)	12:30 pm-12:40 pm	117	702
5th hour (1:00-2:00)	1:30 pm-1:40 pm	90	540
Estimated total crowd count for the day			3,450

(b) August 20, 2016

Time period	Count period	Actual count	Extended total
1st hour (9:00-10:00)	9:30 am -9.40 am	121	726
2nd hour (10:00-11:00)	10.30 am-10.40 am	157	942
3rd hour (11:00-12:00)	11:30 am-11:40 am	178	1,068
4th hour (12:00-1:00)	12:30 pm-12:40 pm	148	888
5th hour (1:00-2:00)	1:30 pm-1:40 pm	80	480
Estimated total crowd count for the day			4,104

(c) October 22, 2016

Time period	Count period	Actual count	Extended total
1st hour (9:00-10:00)	9:30 am -9.40 am	48	288
2nd hour (10:00-11:00)	10.30 am-10.40 am	201	1,206
3rd hour (11:00-12:00)	11:30 am-11:40 am	234	1,404
4th hour (12:00-1:00)	12:30 pm-12:40 pm	134	804
5th hour (1:00-2:00)	1:30 pm-1:40 pm	112	672
Estimated total crowd count for the day			4,374

(d) All dates, percent of total customers by hour

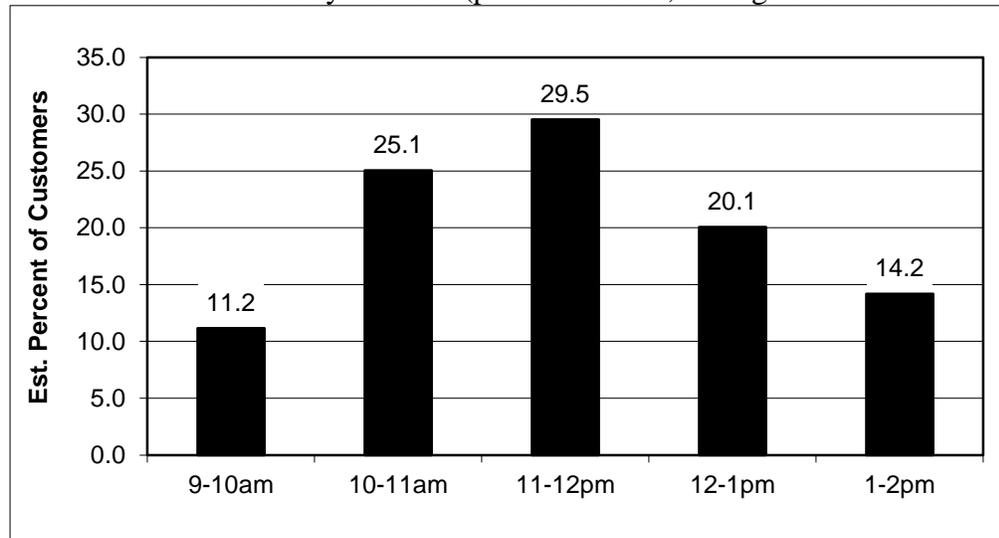
Time period	Count period	Percent
1st hour (9:00-10:00)	9:30 am -9.40 am	11.2
2nd hour (10:00-11:00)	10.30 am-10.40 am	25.1
3rd hour (11:00-12:00)	11:30 am-11:40 am	29.5
4th hour (12:00-1:00)	12:30 pm-12:40 pm	20.1
5th hour (1:00-2:00)	1:30 pm-1:40 pm	14.2

(e) All dates, percent of total customers by entry point

Entry point	Percent
Canada Avenue/Lois Lane	12.0
Ingram St/Jubilee St	12.1
Ingram/Craig St	37.3
Kennith St/Craig St	38.6

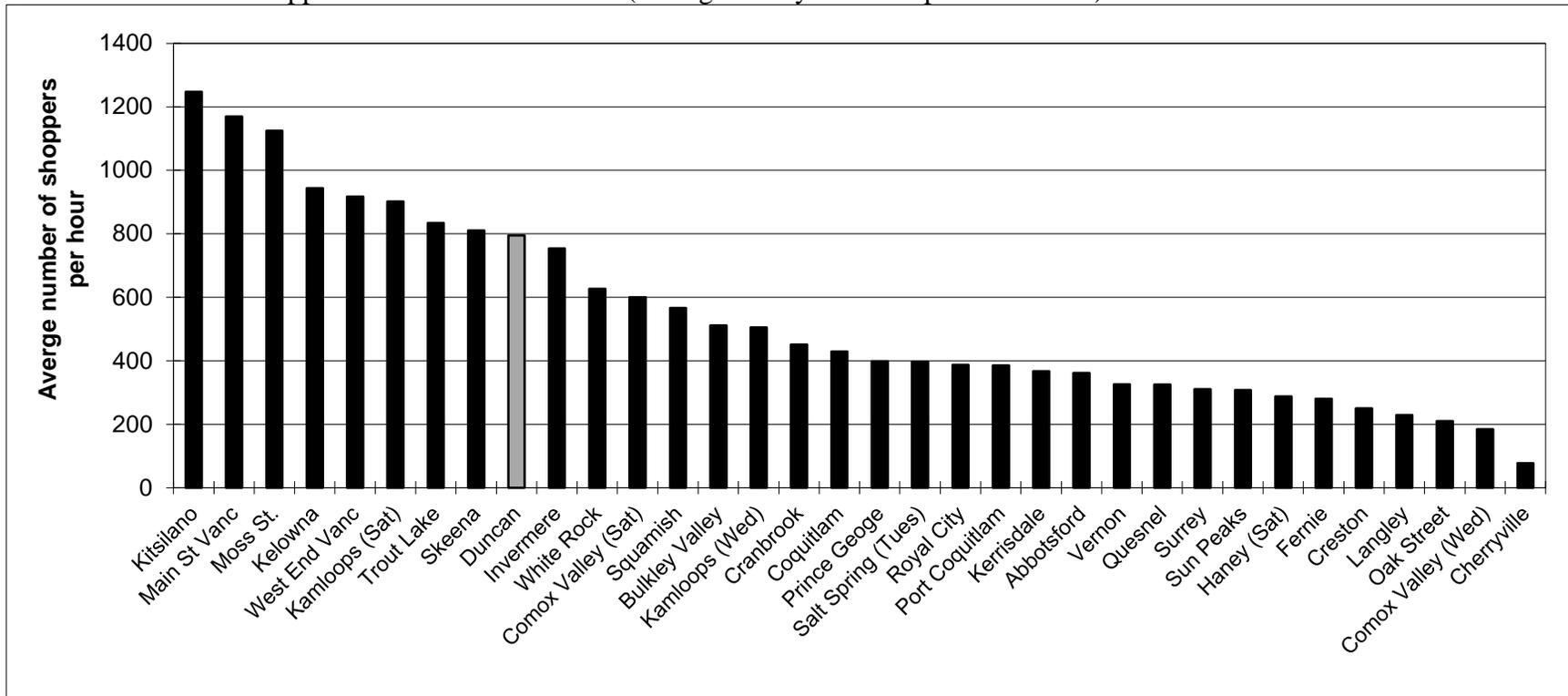
Chart 1 shows the estimated crowd totals for each hour. The percentages shown are based on the averages for all three assessment days.

Chart 1. Crowd count by the hour (percent of total; average of three assessment days)



As shown in Chart 2 (next page), the number of shoppers attending the Duncan Farmers' Market is among the top estimates when compared to other markets that we assessed in BC in 2012. The data are based on the average number of shoppers attending a market on an hourly basis (not on the total number of shoppers).

Chart 2. Number of shoppers at BC farmers markets (average hourly crowd at peak of season)



Flip-chart survey

The number of people who participated in the dot survey ranged between 515 and 570. The rate of participation dropped from 14.9% to 13.9% to 11.9% with each assessment from May to August to October. The following five charts show the results for each of the flip chart survey questions.

Where applicable, we also highlight differences between local shoppers and tourists. People answering the flip charts were distinguished between shoppers from the local area and shoppers who self-described as tourists. Tourist shoppers were given a specific coloured dot that enabled the researchers to track their responses. Of all shoppers, 22% identified themselves as tourists.

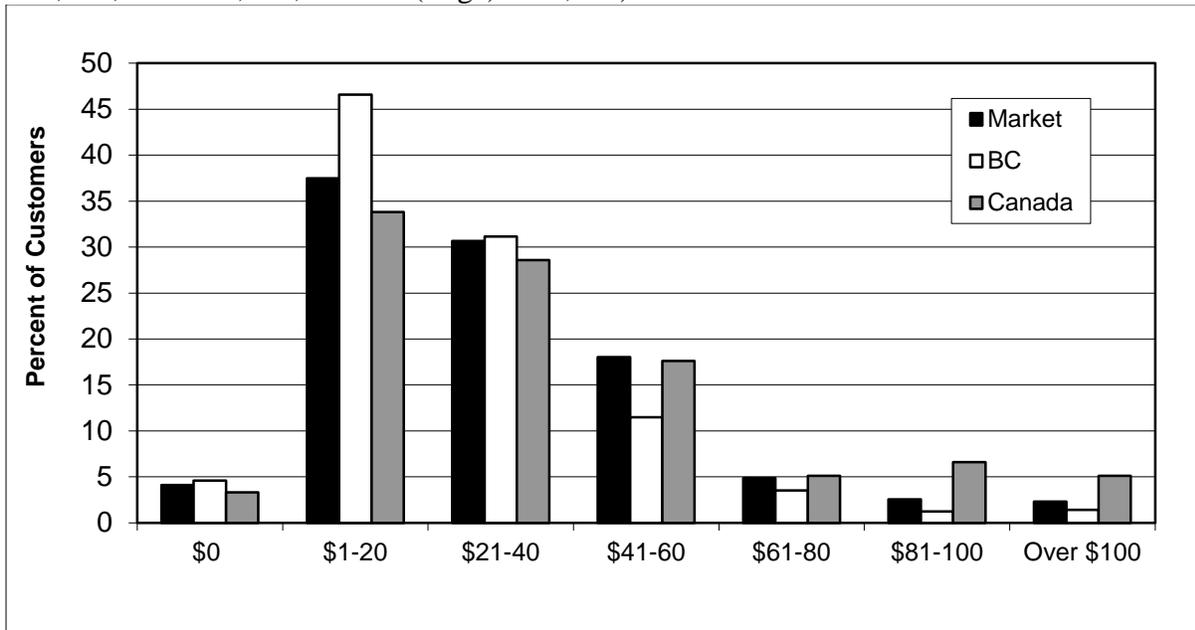
Question 1. How much have you spent, or do you plan to spend, at the market today?

Overall, respondents spent an averageⁱⁱ of \$34.81 at the market. The amount spent varied slightly among the three assessments, as follows:

May 28	\$31.45
August 20	\$36.94
October 22	\$35.80

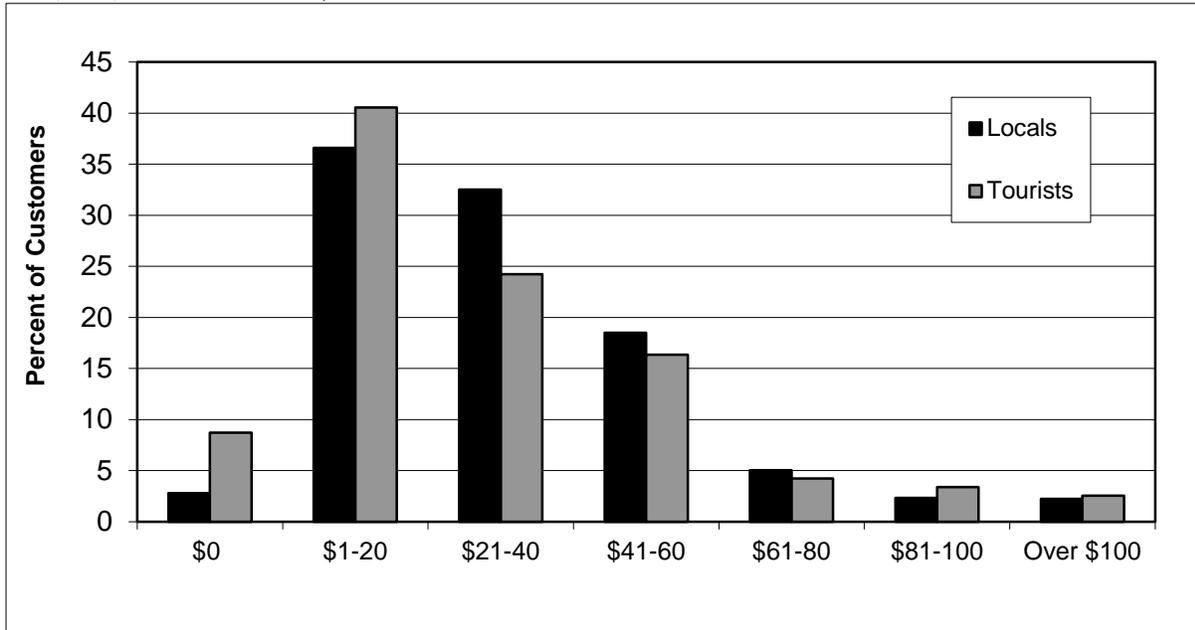
As shown in Chart 3, most customers surveyed (68%) said they would spend up to \$40 at the market. The spending pattern is consistent with both provincial and national studies.

Chart 3. How much have you spent, or do you plan to spend, at the market today? (Market: n=1,604; BC: n=9,819; Canada (large): n=1,013)



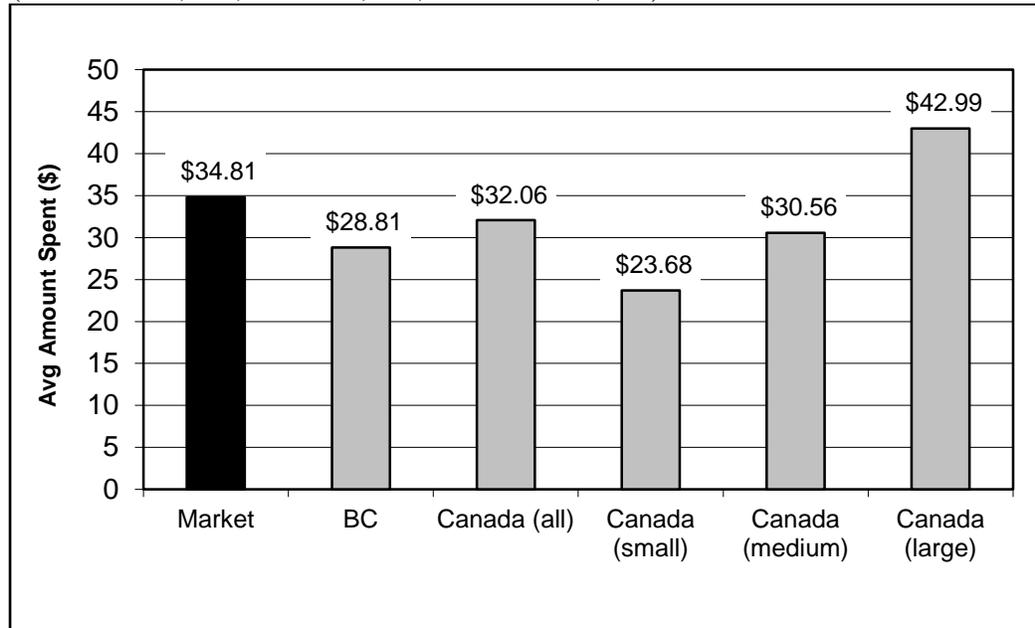
As shown in Chart 4, the spending patterns of local shoppers and tourists is similar, with the average amount spent by locals being slightly higher: Local shoppers - \$35.31; Tourists - \$33.05.

Chart 4. How much have you spent, or do you plan to spend, at the market today? (Locals n=1,249; Tourists n=355)



The results shown in Chart 5 (next page) illustrate how the Duncan market compares to the average amount spent by customers at all BC markets (2012 data) and at small (<20 vendors), medium (20-39 vendors), and large farmers markets (40+ vendors) in Canada. As a large market, the Duncan Farmers' Market is higher than the average spent at all markets in BC but lower than the amount spent at large markets across Canada.

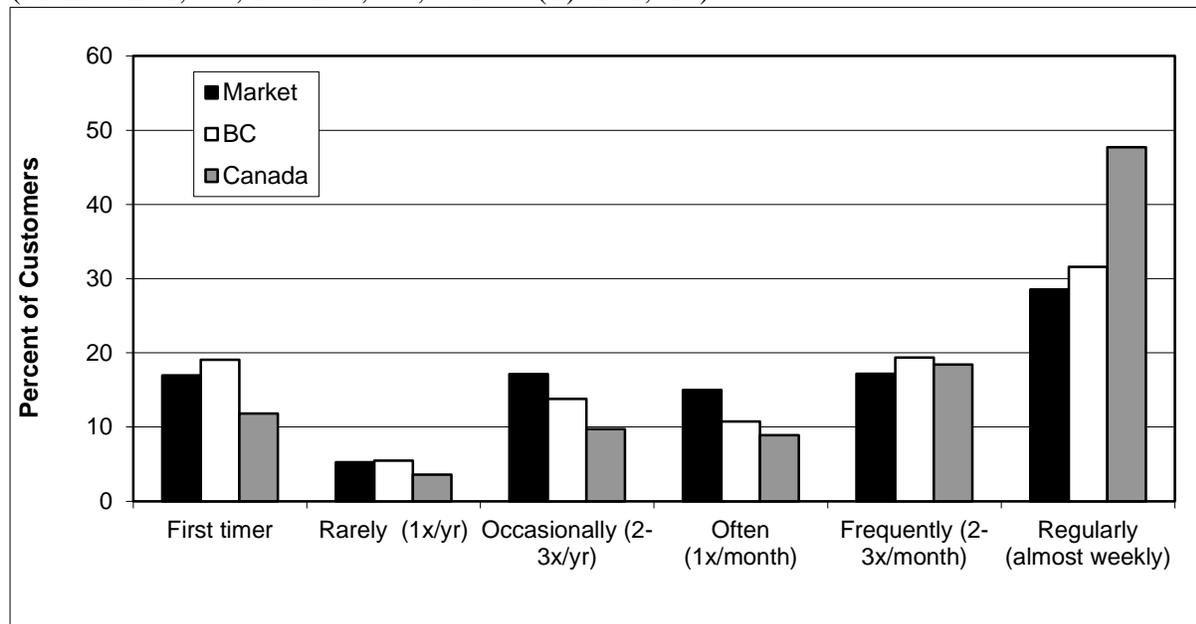
Chart 5. Average amount spent by market shoppers
(Market: n=1,604; BC: n=9,819; Canada: n=3,167)



Question 2. How often do you come to this farmers market?

As shown in Chart 6, the Duncan market has a fairly equal distribution in the frequency of visits, though regular shoppers account for the highest percentage. Three of ten customers (28.5%) shop regularly and first-time visitors to the market accounted for 16.9%. Compared to BC and national results, the Duncan market has slightly fewer regular and frequent customers. The results were similar across all three assessments.

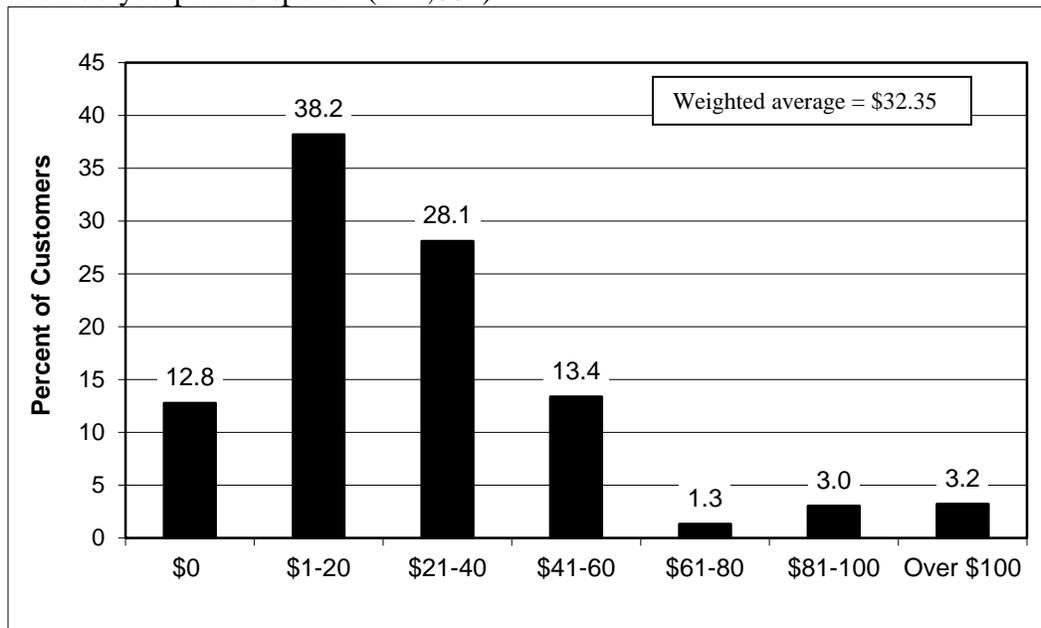
Chart 6. How often do you come to this market?
(Market: n=1,604; BC: n=9,874; Canada (L): n=1,013)



Question 3. If you plan to do additional shopping or eating while in this area of town today, how much do you plan to spend?

Chart 7 shows the range of additional spending by market customers, with almost 90% of respondents saying they would do additional shopping at neighbouring businesses that day. Two-thirds (66.3%) of customers surveyed said they would spend up to \$40; 20.9% said they would spend more than \$40.ⁱⁱⁱ The average amount spent per customer at neighbouring businesses was \$32.35. The results were similar across all three assessments. The results for local and tourist shoppers were very similar. Given the variability among markets, no comparison is made with BC or national results.

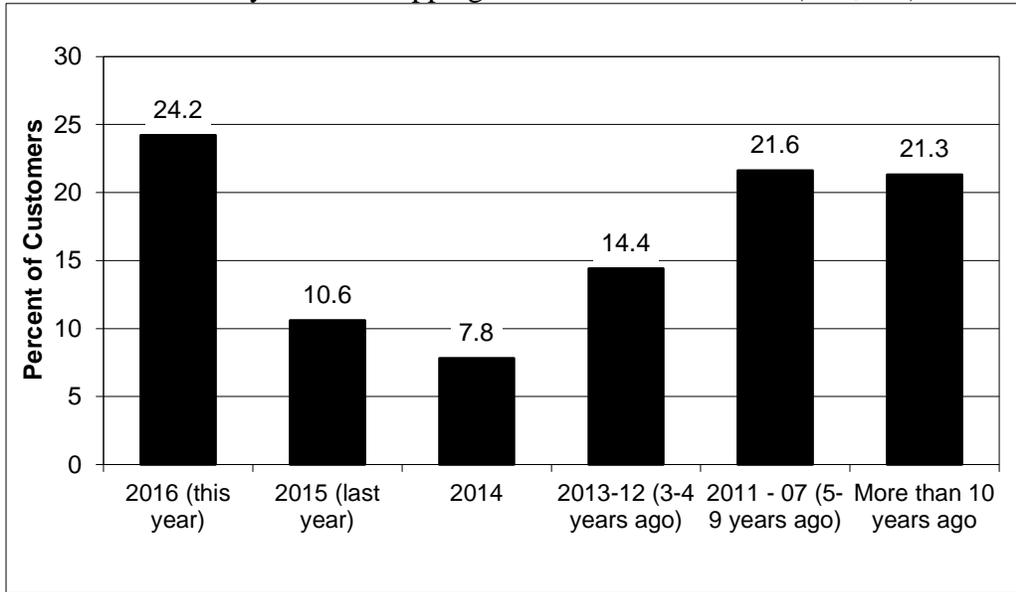
Chart 7. If you plan to do additional shopping or eating while in this area of town today, how much do you plan to spend? (n=1,604)



Question 4. When did you start shopping at this farmers market?

As shown in Chart 8 (next page), the Duncan market has a good portion of long-time, loyal customers. Over 40% of all customers surveyed (42.9%) have been coming to the market for five years or more, and 21.3% of all respondents have been coming to the market for more than 10 years. In addition to the long-time regulars, there were also 24.2% of respondents who were first-time visitors to the market.

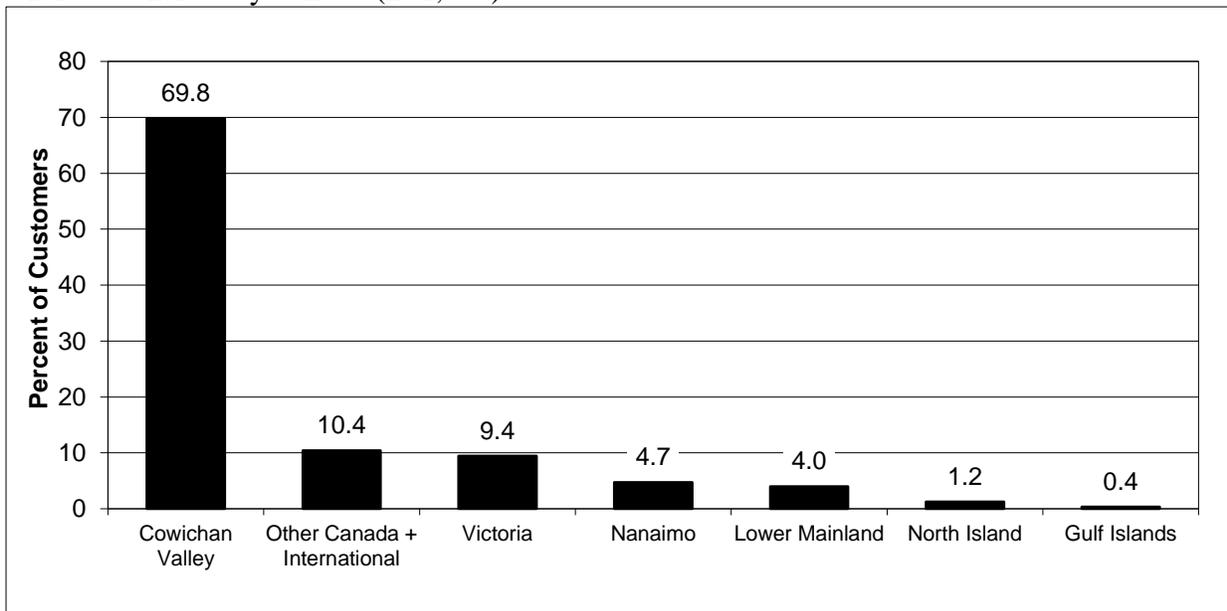
Chart 8. When did you start shopping at this farmers market? (n=1,604)



Question 5. Where do you live?

The results in Chart 9 show where respondents live. The majority (69.8%) of respondents are from the Cowichan Valley. This number rose to 75.1% for the October assessment. During the August assessment, 6.5% of respondents were international.

Chart 9. Where do you live? (n=1,604)



Market surveys

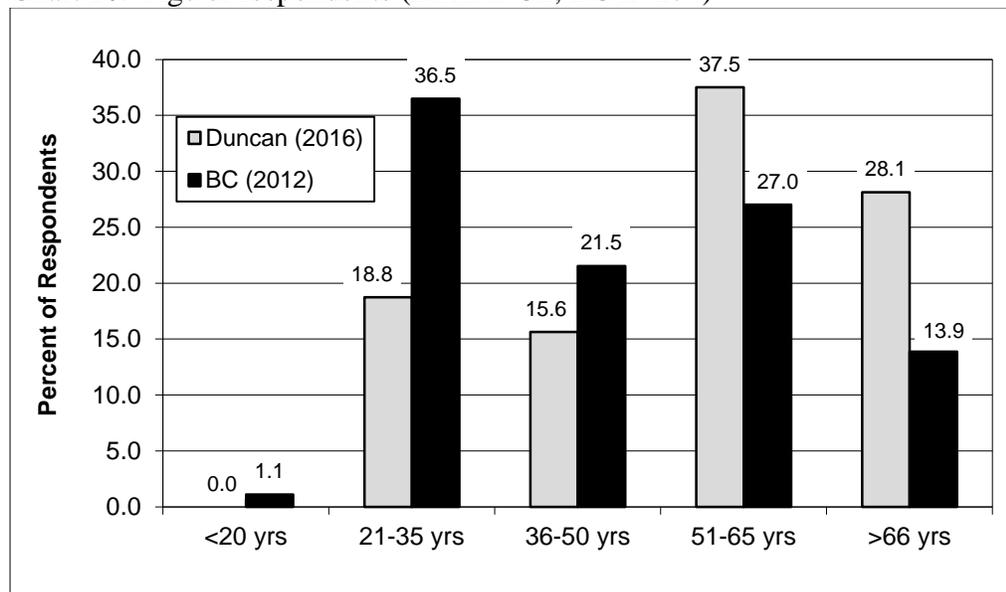
Customer Survey

We conducted interviews with a total of 38 market shoppers during the three assessments. When interpreting the results of these surveys, it should be noted that the people who agreed to participate in the one-on-one interviews over-represent regular shoppers, as regular shoppers are also more likely to participate in such market surveys. The over-representation of regular shoppers is evident when we compare the customer survey results (38 responses) against the results gathered from the flip chart surveys (1,604 responses) (as evident in Chart 12, below). The flip chart surveys show a wider representation of different market shoppers

The following charts show results compared to the results of the provincial assessment completed in 2012, during which 291 customers were surveyed across 33 markets in BC.

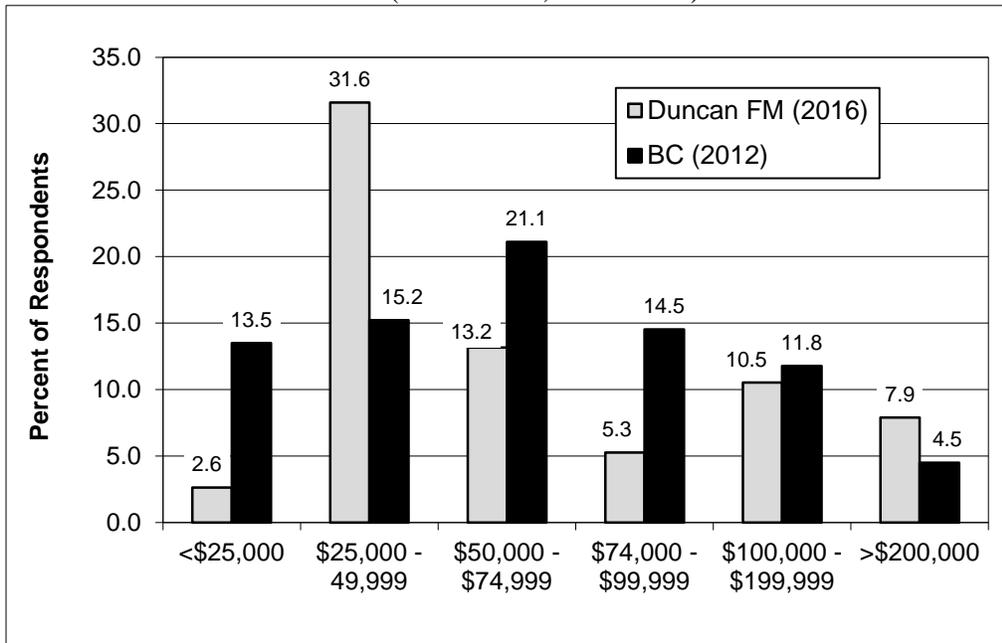
The results in Chart 10 show the age range of farmers market customers at the Duncan Farmers' Market who completed the shopper survey. The results show that the survey respondents were much older than the shoppers who completed the BC survey.

Chart 10. Age of respondents (DFM n=32; BC n=274)



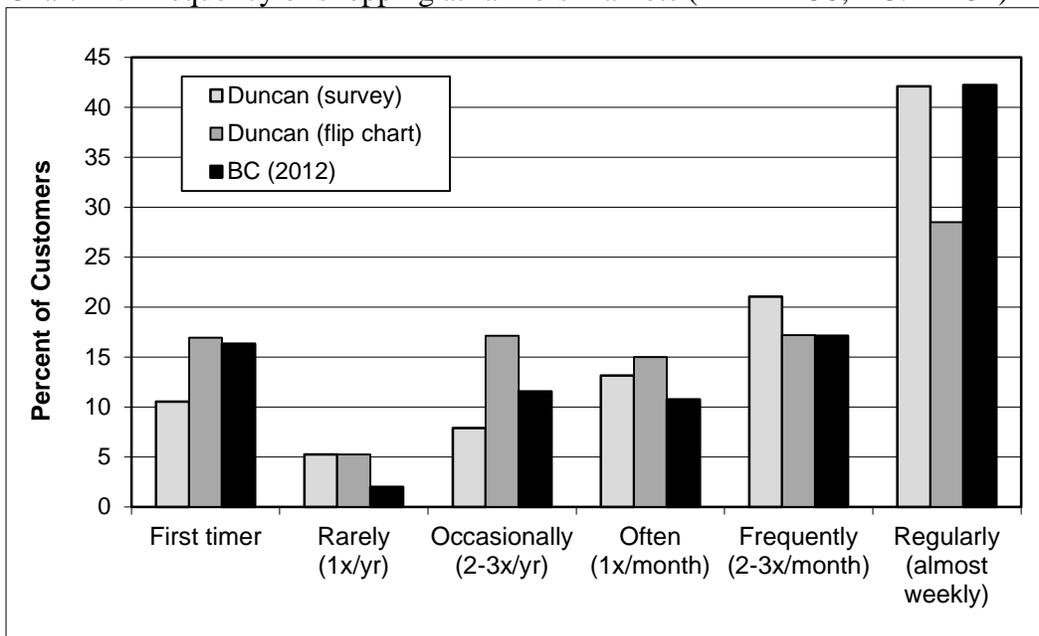
The household income of shoppers at the market is shown in Chart 11 (next page). The results show that people from households with a range of incomes completed the shopper survey at the Duncan market.

Chart 11. Household income (DFM n=27; BC n=233)



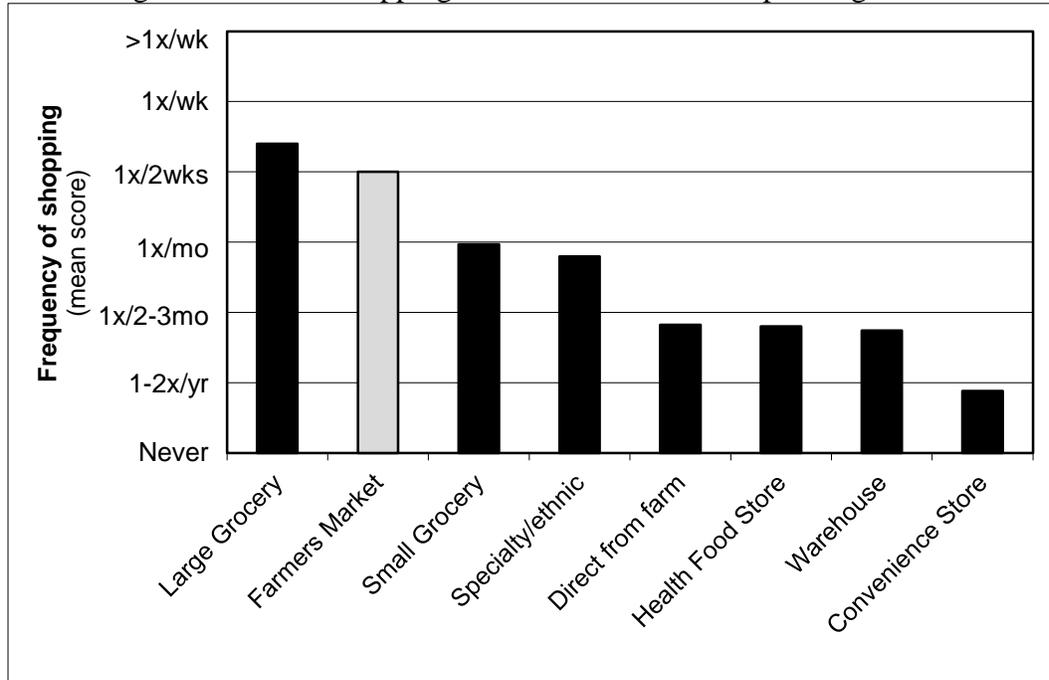
Among the shoppers who completed the survey at the Duncan Farmers' Market, over 40% shop at the market regularly (almost weekly), with an additional 21% shopping at least two to three times per month (Chart 12). These results are similar to the BC results. The results for the Duncan market indicate that six of ten shoppers can be considered among the core group of market shoppers, although, as noted, the results do over-represent regular shoppers. The actual results are likely to be lower but still significant.

Chart 12. Frequency of shopping at farmers markets (DFM n=38; BC: n=251)



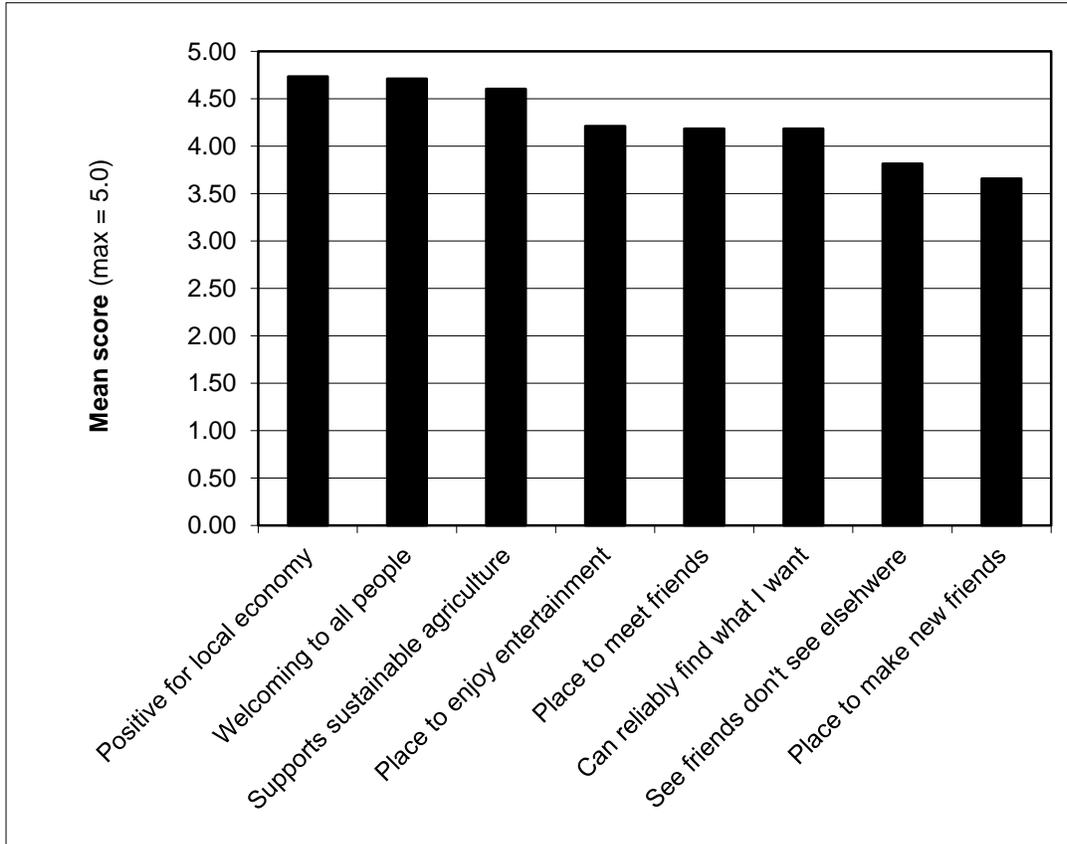
We also asked shoppers where and how often they buy groceries at other food retail outlets during the summer market season. The people surveyed indicated that shopping at the farmers market is second only to large grocery stores (Chart 13).

Chart 13. Where shoppers shop during the outdoor market season (DFM: n=36)
Note: a higher bar means shopping more often at the corresponding store.



To help understand why people shop at farmers markets we asked shoppers to indicate the extent to which they agreed with statements describing characteristics of markets. As shown in Chart 14 (next page), the three characteristics that shoppers agreed with the most were positive for local economy, welcoming to all people, and supports sustainable agriculture.

Chart 14. The extent to which shoppers agree/disagree with the following statements (DFM: n=38). Note: a higher bar means a higher level of agreement.

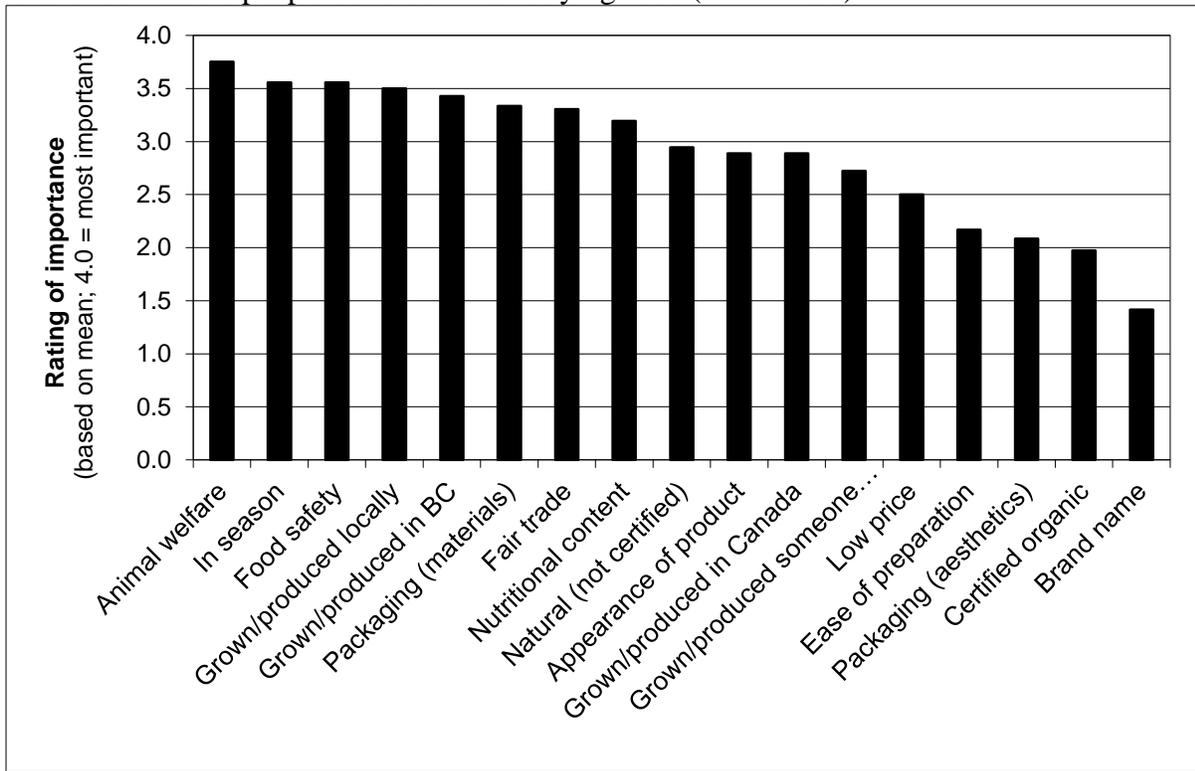


Another part of the answer to explain the shopping pattern of market customers is evident in Chart 15 (next page), which shows the relative importance of factors customers consider when buying food. During the farmers market summer season the five most important factors to market customers are:

- Animal welfare
- In season
- Food safety
- Grown/produced locally
- Grown/produced in BC

Packaging (materials), fair trade, and nutritional content were also important factors. Brand name was the least important, with ease of preparation, packaging (aesthetics), and certified organic among the lowest rated factors that influence food purchasing decisions.

Chart 15. Factors people consider when buying food (DFM n=38)



We also asked customers how much time they spend at the market (Chart 16) and how much of that time they spend talking with vendors and friends (Chart 17). The results highlight the important social aspect of farmers markets. Almost all respondents (86.8%) said that they spend over 30 minutes at the market, and over half (52.6%) of all respondents said they spend at least half their time at the market socialising with others.

Chart 16. Amount of time customers spend at the market (DFM n=38; BC: n=290)

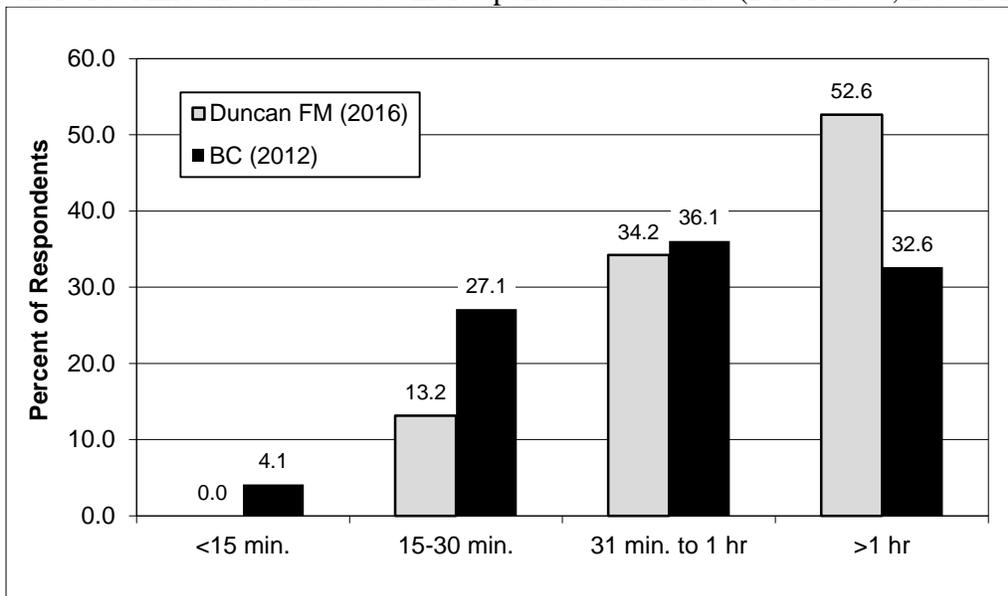
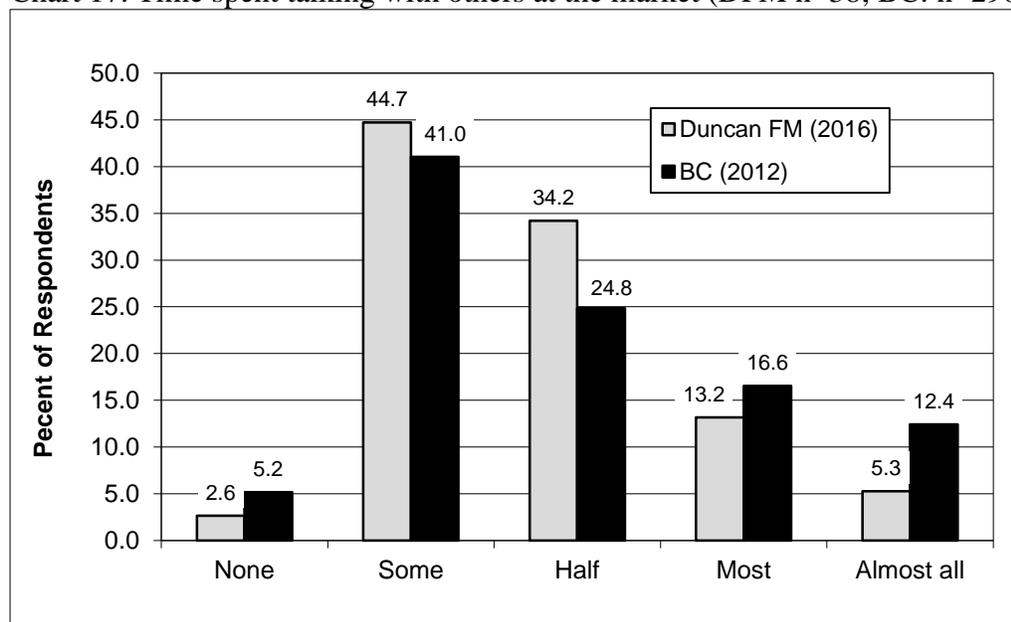


Chart 17. Time spent talking with others at the market (DFM n=38; BC: n=290)



The results of the above two questions are combined in Table 2. The shaded boxes highlight that most people spend 15 minutes to an hour at the market *and* up to half of that time talking with vendors, friends, and acquaintances. Altogether, these people represent about two-thirds of the shoppers surveyed at the Duncan market.

Table 2. Time spent at market talking with others (percentage) (DMF: n=38)

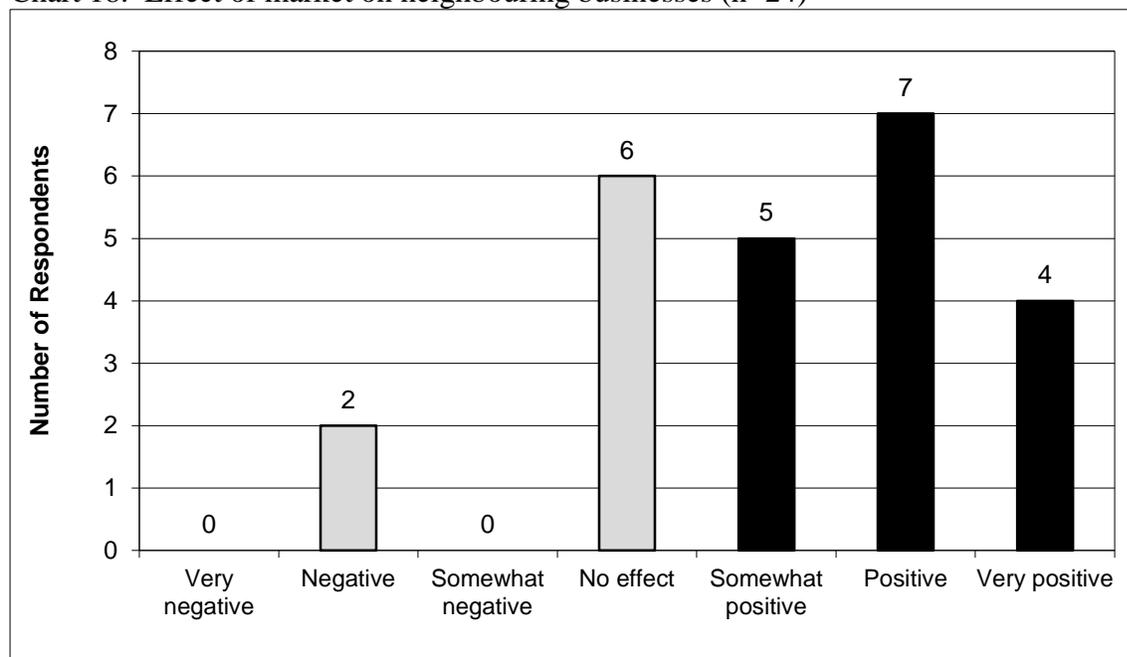
		How time spent					Total
		None	Some	Half	Most	Almost all	
Time spent at market	<15 min.	0	1	4	0	0	5
	15-30 min.	1	7	4	1	0	13
	31 min. to 1 hr	0	9	5	4	1	19
	>1 hr	0	0	0	0	1	1
Total		1	17	13	5	2	38

Business survey

There were several businesses located within visible range of the Duncan Farmers' Market, which include many types of businesses (e.g., sports store, wine bar, service agency, spa). Based on availability of businesses for interviews, and whether they are open on market days, we conducted surveys with 25 neighbouring businesses.

Two-thirds of the businesses surveyed indicated positive support for the market (Chart 18). The most noted benefits are that the market brings people to the area, generates foot traffic, and increased sales. Several markets noted no effects. The two businesses that reported negative impacts cited concerns about parking. Some businesses noted slower sales but saw the market as good for the downtown area.

Chart 18. Effect of market on neighbouring businesses (n=24)



Economic Benefits

The information collected in this assessment enables us to measure the economic benefits of the Duncan Farmers' Market.

To measure the economic benefits of farmers markets means to measure the ripple effect of people spending dollars at the market: if I spend \$1 at the market then how does this dollar benefit the local economy? The ripple effect includes both the profit to the market vendor and the monies the vendor spent on inputs to get to the market (e.g., seeds, feed, ingredients, etc.).

Economic benefits, which can include direct, indirect, and some induced effects, are measured in terms of revenue (\$), output (\$), and employment (jobs). In this study we measure only revenues. We chose to calculate revenue benefits using a multiplier of 1.5^{iv}. This multiplier means that for every dollar spent at the market, another \$0.50 is spent in the local economy. Compared to some other studies of farmers markets, this multiplier is conservative.

The annual economic benefit is calculated by multiplying direct annual sales by the multiplier (1.5). Direct annual sales are calculated as follows:

$$\text{Average expenditure by customer}^v \times \text{Number of spending customers per session}^vi \times \text{Number of sessions per year}^vii \times \text{Seasonal factor}^viii$$

For the Duncan Farmers' Market, seasonally adjusted annual direct sales are:

$$\$36.94 \text{ per customer visit} \times 3,240 \text{ spending customers} \times 50 \text{ (adjusted) sessions} = \$4,188,554$$

Using a multiplier of 1.5, the annual economic benefit is approximately:

Annual economic benefit (2016): \$6.28 million

This calculation means that the Duncan Farmers' Market contributes an estimated \$6.28 million to the local economy each year. These monies benefit not only market vendors but also the local businesses that supply these vendors.

The estimated annual direct benefit is allocated to the spring/summer and fall/winter markets as follows:

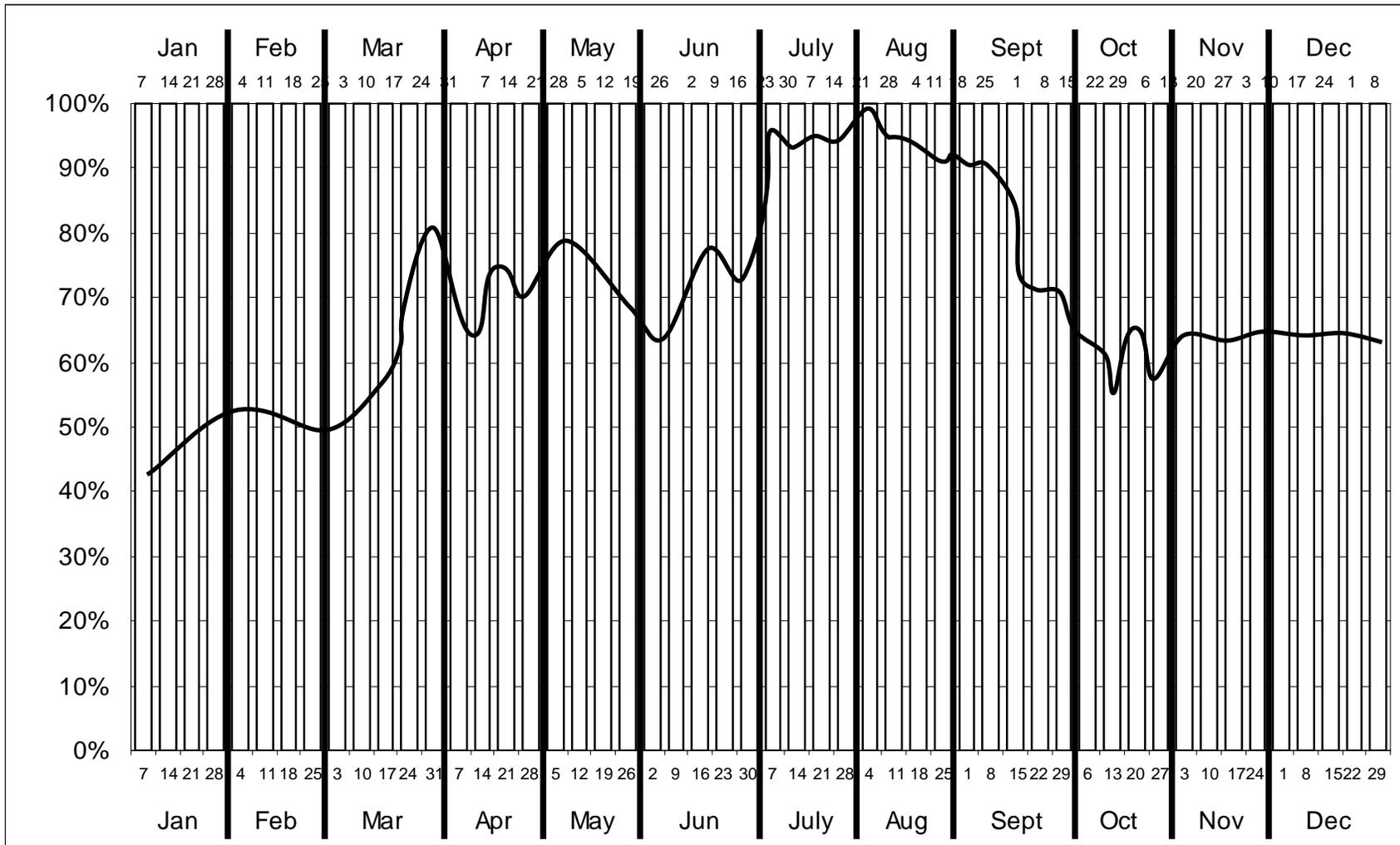
Spring/summer	\$2.89 million
Fall/winter	\$1.29 million

The total estimated annual economic benefit for all farmers markets in BC in 2012 was **\$170.5 million.**

We can also assess the 'spillover' effect that the Duncan Farmers' Market has on its neighbouring businesses. Based on survey results, we can estimate the benefits of market customers spending additional dollars at local businesses on the day of the market. Using the same formula as above, the annual economic benefit of additional spending at other neighbouring businesses is over **\$4.80 million.**

The economic and social contributions of the market to the downtown area are supported by the results of the shopper survey. Although the total number of respondents is limited, 90% of the respondents indicated that their primary reason for coming to the area that day was to shop at the farmer's market, with 65% stating that they planned to do additional shopping. A higher percentage (87%) of the 'flip chart' survey respondents indicated that they would shop at nearby businesses the day of the market assessment.

Appendix: Seasonal activity chart for Duncan Farmers' Market (2016)



End notes

ⁱ Source: Experience Renewal Solutions and David J. Connell (2009). National Farmers market Impact Study 2009 Report. Prepared for Farmers markets Canada.

ⁱⁱ The average spent per customer is weighted by category based on results of a national study of farmers markets completed in 2008.

ⁱⁱⁱ The average spent at nearby businesses is weighted by category based on results of a national study of farmers markets completed in 2008.

^{iv} The number used for multipliers for farmers markets varies, ranging from 1.21 to 3.0. A multiplier of 2.0 is commonly used for convenience. We chose to use a multiplier of 1.5 as this appears to be more accurate based on studies by Hughes, Brown, Miller, and McConnell (2008) and Otto and Varner (2005). We used a multiplier of 2.0 in the 2006 study; the results from the 2006 study that are cited in this report have been revised based on a 1.5 multiplier.

^v Based on assessment completed on August 20, 2016.

^{vi} This is based on the estimated crowd count. However, not all people attending the market are included in the calculation. Some people may not spend any money while other people included in the crowd count are members of the same household and should not be double-counted. Based on results of the national study of farmers markets in Canada in 2008, we estimate that 75 per cent of the crowd count is considered a paying customer.

^{vii} Includes special days, if any, such as 'Christmas markets'.

^{viii} The seasonal factor accounts for varying sales/crowd levels during the season. For the outdoor season, markets generally start off slow and peak for a number of weeks during the summer and then decline. The seasonal factor is calculated for each market based on data collected from the market's manager and long-time vendors. A seasonal activity chart for your market is included in the Appendix.