

ACTIVITY REPORT 2016
Yellowknife Farmers Market
Waste Reduction and Compost Project

INTRODUCTION

The Yellowknife Farmers Market (YKFM) holds a weekly market every Tuesday during the summer months in the Somba K'E Civic Plaza in Yellowknife. In 2016 the Tuesday's markets were held June 7th to September 20th from 5:15pm to 7:15pm.

The market host about 49 vendors selling produce, meals and crafts. The meals are sold by 23 food concessions. On average 900 people attend the Tuesday's markets and many of the patrons purchase their dinners from the food concessions. All food concessions use disposable containers to serve their meals. These disposable containers would have created an incredible amount of waste if the Yellowknife Farmers Market had not taken action to address the situation.

In 2015 the YKFM initiated its "Waste Reduction and Compost Program" to deal with the waste generated at its weekly markets.

The program was build with 3 components:

1. Many of the food vendors used compostable disposable containers;
2. The public was asked to discard the compostable items in compost units;
3. The YKFM collected and disposed of the compostable waste at each market.

Throughout the 2015 summer the public learned to discard their compostable waste in the proper units. The compostable waste was collected at the end of each market and properly disposed in the city's organic bin and then taken to the industrial compost operation at the City of Yellowknife Solid Waste Facility.

In 2016 the program was improved by focusing on 4 new components:

4. The public was asked to bring their plate and cup to reduce the use of disposable containers;
5. All the vendors committed to use only compostable disposable containers. Plastic and foam could not be used;
6. The public was given information on waste reduction and composting;
7. The evaluation and results measurements of the program were improved.

The YKFM was able to implement the 7 components of its "Waste Reduction and Compost Program" thanks to the \$13,000 grant received from GNWT's *Waste Reduction and Recycling Initiative*.

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The funding allowed to:

- Hire Ecology North to educate the public on waste reduction and composting and to assist with results measurements;
- Hire a student to set up and take down the 10 compost bins and the Education station;
- Hire a communications coordinator to put weekly compost news in the local newspaper and on social media;
- Purchase weekly advertisement in the local newspaper to inform the public about the Compost Program. (June 3 to September 23, 2016);
- Implement a “Loyalty card” initiative where \$15 prizes were offered to people who brought their plate and cup to the market;
- Purchase 25,000 compostable utensils for the patrons of the food vendors.

A dedicated team of volunteers and sponsors complemented the financial resources and allowed the program to achieve and exceed its anticipated result which was to reduce by 50% the waste generated by the YKFM.

The project ran from May 1st to September 30th 2016. The main activities occurred on market days from June 7th to September 20th 2016 in Yellowknife at the Samba K'E Civic Plaza.

MAIN ACTIVITIES OF THE PROJECT

COMPONENTS 1 & 5

All the food vendors used compostable containers and utensils, no plastic or foam was used.

In 2015 most food vendors used compostable containers but the challenge had been to convince all vendors to use compostable cutlery, avoid plastic envelopes for condiments and not use plastic or foam cups.

In 2016 the YKFM made it mandatory for all vendors to use only compostable packaging. The vendor application form included a clause where vendors committed to use only compostable items at the market.

At a meeting in May 2016 the vendors were given the following information:

- They were reminded to use only compostable items. No foam or plastic could be used.
- They received information about compostable containers and where to purchase them.

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- They were asked to use refillable bottles to contain sauces and condiments rather than individual plastic envelopes such as those used for soya sauce.
- They would be provided with compostable utensils throughout the season.
- They would receive updates on the compost program regularly throughout the season by e-mail and social media.

On June 7th, the first day of the market, most vendors were using compostable containers and all were using refillable bottles. Some vendors were using plastic wrap and they were asked to find an alternative. Initially we could not find a suitable replacement however with the help of the local distributor a container made with PLA 7 was found and used by the vendors.

All food vendors (23) were provided with disposable compostable utensils throughout the market season and they did not to use disposable plastic utensils. The vendors were given utensils weekly based on their inventory and their need. The distribution was done by the same person who kept a record of every vendor's usage. The number of compostable utensils distributed was closely monitored to ensure there was no waste or abuse of the "free" utensils. The distribution of the utensils allowed for a brief conversation with each vendor and a quick assessment of the packaging they used. If an item was not compostable it was suggested to change it for a compostable product.

The main supplier of compostable items, NorthBest Distributors, was very supportive of the program. We maintain a weekly conversation of the progress of the program with the staff and the owner and they were receptive in helping when we asked. For example: we realized early in the summer that we had underestimated the amount of utensils needed. This was due to more people attending the market. We ask for a donation of utensils and the owner generously donated 10 boxes of compostable utensils, valued at \$600. This allowed us to stay within our budget. As well the supplier helped us by stocking a variety of compostable items to suit the needs of the vendors, by posting information about the available compostable items at their front desk and by reminding the vendors to purchase only compostable packaging.

Measurements

- The food vendors were monitored weekly to ensure they used compostable containers/cups and refillable bottles for sauces and

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condiments. This was done when the compostable utensils were distributed.

- The volunteers standing by the garbage and compost bins paid attention to the items being discarded to see if all containers, plates, utensils, cups were compostable. Non-compostable items were reported to the program.
- The content of each garbage and compost bag was inspected at the end of each market. This allowed to verify what containers were used by the vendors. The observations were recorded and served as a qualitative measure in evaluating the compost program.

Results

- Most food vendors used compostable containers and utensils throughout the summer. There was the occasional use of cups lined with a plastic film. When it happened the vendor was promptly identified and he usually complied by the following week.
- All vendors used refillable bottles for their sauces and condiments, no plastic envelopes were used.
- Some vendors used tin plates and an alternative compostable plate was not found. This will be addressed in 2017.
- 25,000 compostable forks, spoons and knives were purchased by the YKFM at a cost of \$1,068. and distributed to the 23 food concessions. There were no plastic utensils used.
- The vendors were very appreciative to receive “free” compostable utensils. It appeared to create a strong engagement toward the program. The vendors were receptive when they were asked to change some of their products.
- The compostable utensils were a big “hit” for the public. People were intrigued and asked questions such as “What are they made of ?” “How long to compost ?”. This often started conversations about composting with the volunteers at each compost bin and allowed to provide information to the public.
- The use of compostable utensils “made it easy” for people to put their containers in the compost bins without having to remove the utensils.
- PLA 7 clam shell containers were used rather than using plastic wrap. The public was as well intrigued by the fact that PLA 7 items were compostable.
- Recyclable items ex: plastic water bottles, not sold at the market, were often found in the garbage bags. The program asked the city to put bins for recyclable items. The bins were installed throughout Somba K’E Civic Plaza in October 2016.

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Lessons learned

- Remain vigilant and constantly monitor the packaging used by the vendors;
- Provide and repeat information on compostable containers regularly to vendors;
- Engage the main supplier of compostable items in the program to have his support and collaboration.

COMPONENT 2

The public discarded the compostable items in the compost units.

The YKFM used 10 City compost units to collect the compostable items. The YKFM staff and volunteers put up the units up each Tuesday next to the garbage cans in the plaza. The units were stored when not in use at the market. There were 6 compost and garbage stations throughout the market. The busiest stations had 2 compost units. A team of 3 to 6 volunteers assisted the compost program weekly. A volunteer was posted by each compost and garbage station. For most of the summer there were 3 volunteers attending 3 compost and garbage stations. At the end of the summer we sometimes had 6 volunteers i.e. one at each station. The volunteers invited the public to discard their compostable waste (container/cup, food, utensils, napkins) in the compost bins. The volunteers received a brief orientation to the program and were asked to thank the public for using the compost bins and answered their questions re: the compostable items.

Measurements:

- We wanted to measure the impact the volunteers had on convincing the public to choose the compost units to discard the compostable packaging. We identified the compost and garbage bags of each station by putting numbered stickers on every bags. I.e. The bags of station 4 were all labelled with #4 stickers. At the end of each market all the bags were opened and their content was observed to see if the compostable packaging were discarded in the compost units. Then we noticed if there were more or less “pollution” in the bags from the stations attended by volunteers than by the stations without volunteers.

Results

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- The measurement was done for a short time (3 weeks) and the accuracy of the measurement was not rigorous. However we noticed that volunteers seem to have a positive impact on convincing the public to choose the compost bins to discard their compostable packaging.
- After 14-15 weeks of market the volunteers observed that they no longer had to tell people where to discard their waste, by 14-15 weeks people had learned.

Lessons learned

- Volunteers informing the public at each station is essential for the success of the program.
- Identify the volunteers as “Compost Program Volunteers” otherwise the public will ignore them. I.e.: Volunteers should wear a “YKFM Compost” apron or T-shirt;
- Use basic fact when informing the public about composting. Ex: Most people were surprised to find out that food is compostable.

COMPONENT 3

The YKFM collected and disposed of the compostable waste at each market.

The city of Yellowknife collected the garbage after each market and the YKFM collected the compost bags. All the bags were disposed of in garbage or compost containers provided by the city. To measure the anticipated result of the program, which was to reduce by 50% the waste generated by the market, the YKFM gathered all the garbage and the compost bags in the same area to be weighed and examined at the end of each market. Each compost and garbage bag was weighed and the total weight of compost and garbage served to calculate the % of compost versus the total waste. The weekly % of compost versus the total waste was recorded and reported in the Yellowknifer and on social media.

After being weighed each compost and garbage bag was opened and examined by the program staff. The compost bags were examined to see if their content was all compostable material. The observations were recorded and served to assess if the food vendors were using compostable containers and if the public was putting the compostable waste in the proper units. The garbage bags were also examined to see if they contained compostable items. If so the compostable items were removed from the garbage bags and put in the city’s compost container.

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Measurements

- The program tracked each week the weight of garbage and compost bags. The percentage of compost/total waste was recorded and reported.
- The content of the bags was examined to see if the food vendors were using compostable containers and if the public was putting the compostable waste in the proper units.

Results

- Throughout the summer an average of 75% of the waste from the market was composted and diverted from the landfill; by the end of the summer **86%** of the waste from the market was to be composted. This exceeded by 36% the objective of the project which was to reduce by 50% the waste generated by the YKFM.
- More than **1,758 lbs of compostable material** were sent to the Compost operation of the Yellowknife Solid Waste Facility. This is equivalent to approximately 293 Green Compost Carts (120L)
- The observation of the compost and garbage bags revealed that the public learned over the course of 16 weeks which items were compostable and to discard them in the compost units.
- The tracking and reporting of the percentage of compost/total waste had a significant positive impact on volunteers, food vendors and the public. It brought credibility and enthusiasm to the program.

The environmental, social and economic benefits of the project.

- The use of compostable containers showed the public and food vendors that alternatives to plastic and foam are available.
- People observed and became aware of the waste generated by other public events and how the YKFM managed their event responsibly.
- The project reduced the solid waste sent to the land fill and hence reduced the costs of operating the Solid Waste facility of the City of Yellowknife

Lessons learned

- It is important to share the results of the program on a weekly basis to the public. This rallies people to contribute towards the success of the program.
- The results should be easy to understand ex: % of total waste was composted.
- “Convince” vendors, suppliers and the public to endorse the program rather than enforce it. Use a POSITIVE approach, make it “EASY” and “THANK” all for their support.

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Communication, education and awareness

- The compost team i.e. the coordinator, Ecology North, the market manager and the 3 most active volunteers met weekly to discuss the program and provide solutions to address challenges as they arise. Weekly communication/education content was determined at those weekly meetings.
- The weekly communication/education content was given to the Communication/Social media coordinator who took care of transmitting the messages in a simple manner. All messages were illustrated with a picture, a graph or a drawing ensuring the messages were accessible to all.
- Communication with the vendors, the patrons and the volunteers was done weekly by e-mail and social media.
- Communication with the public was done with weekly advertisements in the local newspaper, with the YKFM social media and with bulletin board at each market.

COMPONENT 4

The public was asked to bring their plate and cup to reduce the use of disposable containers.

The total waste could be further reduced if people brought their own containers rather than using disposable containers when purchasing food at the Market. In 2016 patrons were invited to bring their own containers/plate, cutlery, bottle/cup and carry bags when they attended the market.

Two (2) activities called the “#Marketkit” and the “Loyalty Card” were implemented to convince patrons to bring their own containers.

The #MarketKit was a logo, illustrating a food container, utensils, a cup and a bag all of which made up a #MarketKit. The patrons were asked to bring their #MarketKit when coming to the market. The logo was used as advertisement in Social media and in the weekly newspaper, the “Yellowknifer”.

The “Loyalty Card” was handed out to individuals who brought their own container at the market. The card was punched every time a patron used its own container. People who brought their own container 8 times throughout the summer “won” a free meal at the market.

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Measurements

- The “Loyalty Card” was used to count the number of people who brought their own container at the market.
- Each time a patron used its own container it was indicated on its “Loyalty Card” and recorded in a ledger.
- A meal certificate was given to people who brought their container 8 times.

Results

- **82 people** brought their containers a few times throughout the summer and **16 people** brought their containers 8 times.
- During the busy months of June and July there was an average of 25 people using their containers per market.

Lessons learned

- People liked the “Loyalty card” and thought it was a great initiative.
- There were many positive comments such as “Loyalty cards strikes a competitive cord in me, so keep up the good work”.
- Food vendors supported the “Loyalty cards” by reminding their patrons to bring their containers.
- How ever despite a lot of publicity many people told us they did not know about the “Loyalty cards”. There fore more publicity will be needed in 2017.

Communication, education and awareness

- Most people who acquired a “Loyalty card” understood that bringing their containers would contribute to reduce waste.
- The incentive to win a free meal motivated many of the card holders to come to the market and to bring their container.

Into the future

- Convincing people to bring their containers when purchasing “take out” food is achievable.
- Initially, incentives are necessary to remind people to adopt this new habit. Eventually people will bring their containers to “take out” food just like people adopted the habit of bringing their bags to the grocery stores.
- The YKFM is a great platform for public education and convincing people to adopt waste reducing habits. The market will continue in 2017 to convince people to bring their containers when purchasing “take out” food.

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COMPONENT 6

Education and Communications

In 2015 the program observed that most people did not understand the importance of composting since they did not understand how compost happens. In 2016 the program hired Ecology North to provide compost information to the public. An education station was set up at each market and was staffed by Ecology North. The station was intended to provide the public with information on composting and to monitor the “Loyalty Card”.

The education station was very efficient in managing the “Loyalty Card” however the public would not come to the table to get information on composting. Most of the information provided to the public on composting was done by the volunteers standing by the compost units and by the signage posted throughout the market.

The most important signage was the one put on each compost unit. The sign illustrated the compostable containers used at the market. The volunteers would refer to the sign when informing the public about compostable packaging. As well the public would refer to the signs when there was no volunteer at a compost station.

Other signage informing people about composting were posted throughout the market. Ex: The weekly market blackboard often posted compost information.

A weekly compost information message was posted on the YKFM Facebook page and advertised in the Yellowknifer.

“Compost Minutes” were tried and well received by the public. The “minutes” were done during the “Music at the market” performances. A staff of Ecology North would go on stage during the intermissions and do a 2-3 minute presentation on the compostable containers used at the market.

Measurements

The knowledge acquired by the public was measured by:

- observing and documenting the behaviour and comments of individuals at the compost bins and at the education station.
- observing the content of the compost and garbage bags.

The attendance at each market was tracked to count the number of people exposed to the compost education material on a weekly basis.

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Results

- By the 14th and 15th week of the market the majority of the public had learned where to dispose the compostable material. This was observed by the volunteers who saw that people needed no instruction to choose the compost bins for their compostable material. It was also observed when examining the compost and garbage bags at the end of each market and finding that most compostable items were in the compost bags.
- The public commented that they liked the compost minutes. They will be repeated in 2017.
- 4.4% of the Yellowknife population was exposed to the Compost program on a weekly basis for a period of 16 weeks; ($900/20,300 \times 100 = 4.4\%$, based on 2013 pop. data)

The environmental, social and economic benefits of the project

- The public attending the YKFM collectively adopted waste reduction and composting behaviours. This might have generated a sense of community and good citizenship.

Lessons learned:

- Compost information must be “sold” to the public using pro-active marketing techniques. Most people will not come to an education table to seek information about composting when attending a farmer’s market.
- The compost information material must be simple, attractive and answer the questions of the public.
- Volunteers at the compost bins were the most efficient compost educators.
- Compost minutes were well received by the audience and should be repeated in 2017.
- It takes time for the public to adopt a “composting behaviour”. The same message had to be repeated many times before the public chose to voluntarily put their compostable waste in the proper units.
- The YKFM offers an ideal platform and length of time to convince people to adopt a “composting behaviour”.

Into the Future

- Public education must be offered for a waste reduction program to be efficient.
- Volunteers at the compost bins, interacting with the public are essential since they are the most efficient educators so far.

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- An education station might be efficient if using a pro-active approach to interact with the public.
- Attractive and varied compost information material should be developed, tested and used throughout the 16 weeks of the market.

COMPONENT 7

The evaluation and results measurements of the program were improved

In 2016 the program was able to better measure and keep track of different components of the program such as:

- the number of compostable utensils,
- the ratio of compost/total waste,
- the number of people bringing their containers,
- the observation of the disposable containers used by the vendors and
- the observation of the content of the garbage and compost bags.

A ledger keeping track of the purchases and weekly distributions of utensils allowed to monitor the need of the vendors, anticipate shortages and take necessary the actions for the program to stay within its allocated budget. The program was able to obtain a donation of 10 boxes of utensils valued at \$600. because the utensils ledger convinced the sponsor that the program was well run and a donation would be well managed.

The tracking of the compost/ total waste ratio was the greatest measurement improvement in 2016. Staff of Ecology North were contracted to weigh and record the ratio of the weekly compost /total waste collection. After each market Ecology North and some volunteers weighed and examined each garbage and compost bag. This was done at the market site and the vendors and the public could see how each bag was weighed and examined. The “seriousness” of the methodology brought credibility to the program. Food vendors saw the efforts that were put in the program and would ask how they could contribute further. Members of the public who observed the measurement would then offer to volunteer for the program. The results of the measurements were publicised weekly and used to stimulate discussions with the public and the volunteers on how to achieve a higher ratio of compost/ total waste.

The Loyalty Card accomplished more than counting the number of people bringing their plate/cutlery to the market. It brought people to the Education

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table where they would have conversation on waste reduction with Ecology North.

Results

- Overall the tracking and measurements of the different components were documented and allowed to report on the results achieved.
- The reporting of those results brought more than numbers. It brought engagement from all those involved in the program. For example the volunteers and the public wanted to achieve a 80% compost/total waste ratio and all worked to achieve that goal. The people using the loyalty card wanted to complete their card by bringing 8 times their container to the market.

Lessons learned

- The results measurements and the evaluation used in 2016 were very basic and they need to be further developed and refined. However the methods used are a great start and the program will continue to measure and evaluate.
- The program will need to develop better measurements and will have to seek expertise to do so.
- Recording and reporting on the results proved to be very efficient on many fronts. It guided the program in decision making, gave the program credibility and provided a sense of accomplishment that could be shared with all.
- Keeping and reporting data can mobilise people behind a common goal and significantly improve the anticipated results.

Conclusion

The grant provided by the “Waste Reduction and Recycling Initiative” allowed the program to develop better measurement tools, to educate the public, to reduce waste and to engage the public in adopting behaviours favorable to waste reduction and composting.

The success of the YKFM compost program was also due to the dedication of the volunteers, the market manager and the staff of Ecology North. They were all very reliable and engaged in the project. They provided ideas and solutions to assure the efficiency of the project.

The project is grateful to the local businesses and organisations for their generosity. Namely Northern News Services who contributed \$16,080 in-kind by publishing a full page advertisement for 16 weeks on the market and its

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waste reduction and composting program, Northbest Distributors who donated 10 boxes of compostable utensils and Creative Basics who donated 2 boxes of compostable bags. We thank them all.

The Yellowknife Farmers Market is an ideal platform to develop a waste reduction program for public events. Because the market lasts 16 weeks it is possible to try new approaches to waste reductions. The new approaches can be tested and adjusted according to the reaction of the public. The public will provide comments when we ask their opinions and they will give suggestions for improvements. Many of the program's components such as signs, posts on social media, advertisements were adjusted following comments from the public.

All those elements allowed the program to improve and to refine its methodology so it can continue in 2017 to develop a successful waste reduction and compost program for public events. In a near future all public events held in Yellowknife could be asked to use an approach similar to the one developed by the YKFM to reduce permanent waste. This would result in a significant waste reduction at public events.