# Reducing Household For Waste

Paul van der Werf 1 April 2020







# Research question

Can providing a household with local food waste quantity and impact data (i.e. monetary, environmental and social) coupled with information to improve their food literacy motivate them to reduce their food waste disposal?

### Household food waste survey







71 Questions -sociodemographic -self-reported food wasting -expanded TPB -ranking motivators



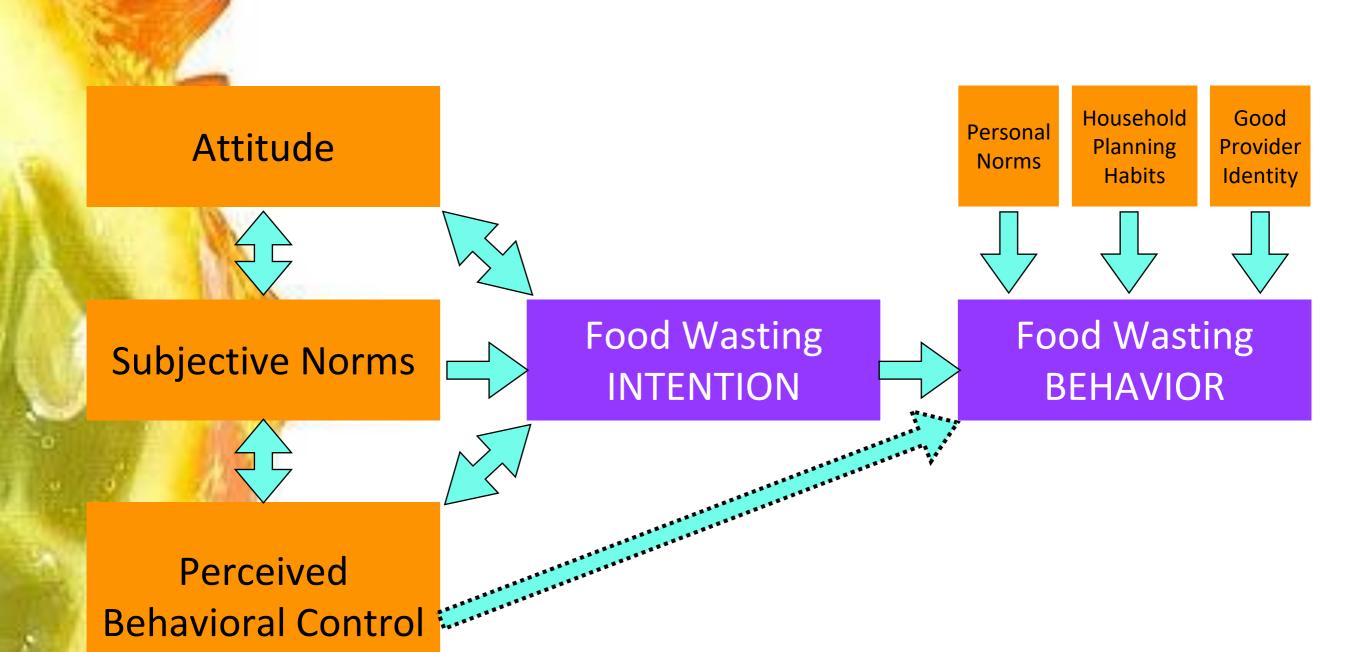






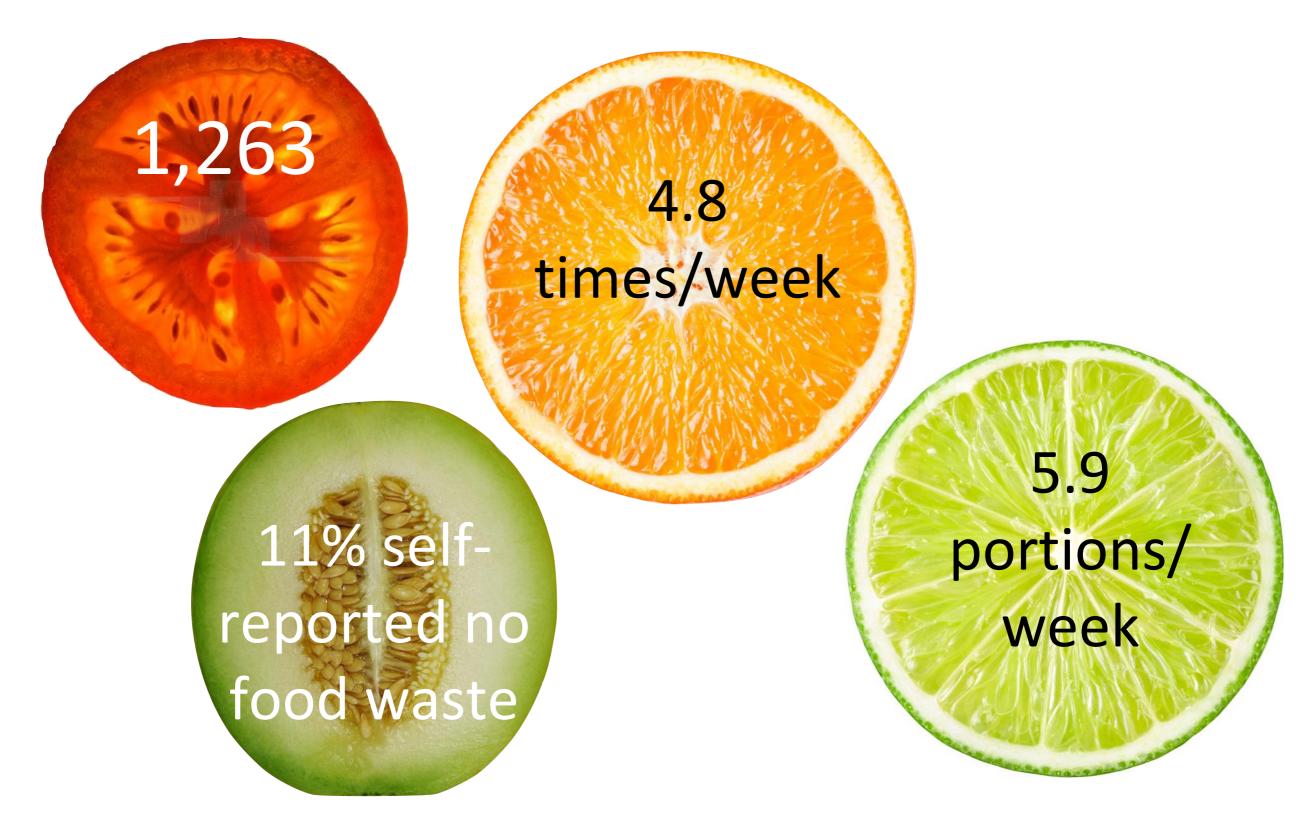
**Communications** plan to attract respondents 23 May-8 July 2017

### Theory of Planned Behavior (TPB)



Adapted from: Visschers, V., Wickli, N., & Siegrist, M. (2016). Sorting out food waste behaviour: A survey on the motivators and barriers of self-reported amounts of food waste in households. *Journal of Environmental Psychology*, 45, 66-78.

## Self-reported food wasting behavior





Reduce money wasted

58.9%

Reduce environmental impact (climate change)

23.9%

Reduce social impact (hunger)

17.2%

# What it means

Reducing the amount of money wasted the key motivator to reducing amount of food that becomes waste

Perceived behavioral control more important determinant of food wasting behavior than intention







# Intervention development Food waste measurement

Food waste measurement methodology

Avoidable&
Unavoidable
Bread& Baked Goods
Dairy
Meat & Fish
Fruit & Vegetables
Dried Food
Other Food

# REDUCE FOODWASTE SAVE MONEY



On average each London household wastes 125kg of food worth \$600 per year.



Plan your meals ahead of time.



Make a grocery list and stick to it.



Store your food properly.



Prepare just enough.



Love those leftovers.

To learn more about these tips go to www.foodwaste.ca



Please find your Household Food Waste Reduction Toolkit. Check inside the toolkit and at www.foodwaste.ca for more details!







October 2017 P.E. Household Feed Waste Reduction Toolks

Presse find your Heusehold Food Waste Reduction Toolkill

It is estimated that Lorcon acceptoids generate 125kg of feed waste, worth \$600 annually. It is important to rolly that this introdes only what happens in the howeshold and door not include food waste from meals currounced in restaurant or at work.

Western University researchers (Legaraner) of Separaty, the Heal Laboratory), in association with the Dityrol condon (Environmental and Engineering Services), are working to develop a bottor understanding of neurosport food wester generation. The research results will ultimately be used to help develop programs and policies to help reduce and manage food wester.

The first part of this research was nur Housefeed FDOD Waste Survey (May-June) that was completed by someone in your household. There you her completing this survey and value desting (lest quadrillon in the survey) to let us collect waste camples from the garbage bins you put out for (if y pickey on your waste collection day to measure the arround.) Indeed, that is thrown QUIL, All data, that we collect will be made anonymous, grouped together and presented in a summerical feether so that it is not possible to identify information from individual households.

One of our key findings in the survey was that a key motivater to reduce from the waste's saving review. To that end we have put logister a Foundhold food waste reduction tools? that is gained to help your household save money by providing simple tips and materials to help you got started. Your notice includes:

- . e fridge magnet of food waste foots and food waste reduction tips
- et inigge magnet of rock waste auct, and rock waste such as access to our www.foodwaste.ce was after which expands on these tipe
   accertainer that can be used to lieful riar tain fruit and vegetable freshness for a longer time.
- meal planning/grocery list pad end freezer attuvers

As woll, over the next few weeks, we will be sending cut a few email tipe as well to help you with your food waste.

In the future, we will follow up with a survey to help us understand what gams of this toolkit worked and what did not.

Should you have any cuestions or concerns about portio poting in this project, you can contact the leaf researcher. Dr. Jason Gilliand, at Western University. P. (519) 661-2111 ed. 61239 or E. jgillia@uwo.ca or his PhD student Paul van der Warf. P:519-317-7733 or Et psande2@uwc.ca.

Jason Gilliand, PhD. Professor, Department of Geography Paul van der Wert, M.Sc. PhD Candidate. Department of Geography

Day of Lendon Disclaimer. All information collector will be lead compensary confidential analyst institution for the Marticipa. Freedom of information and All Endom of Projection of Project and policies to helicreduce and mishage ferritment. Names and additional activities will be analystical. The study and all other personal information will be analystical. The personal information that is not provided to the professional information should be accessed to Lay Martins. Dispetitly, Projecting, Projecting Projecting, 2003 Duffser, Associated the Social Masts, City of London, 2003 Duffser, Associated the Compensation and Projecting Compensat

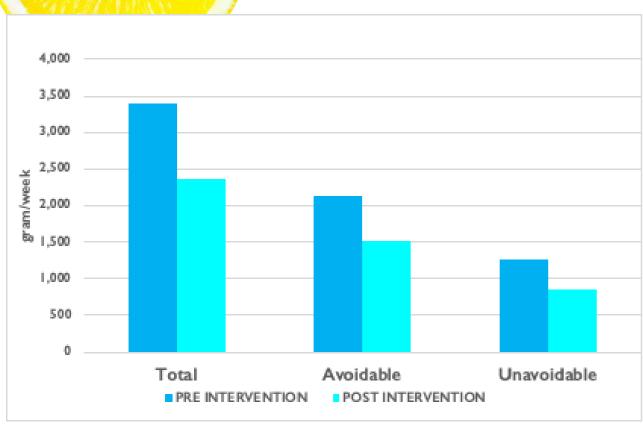


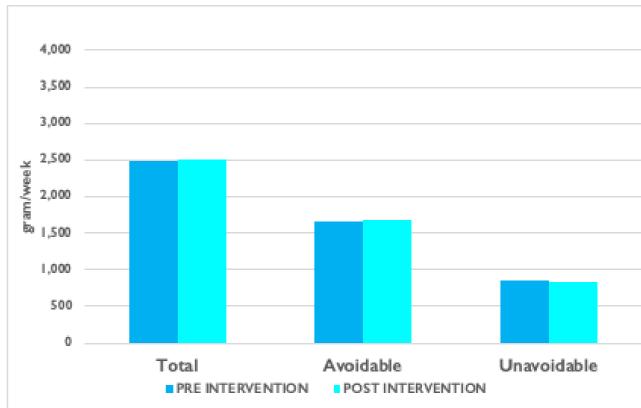




# What we found

#### **Treatment House Control Households**





Treatment household food waste reduction significantly greater than control households.

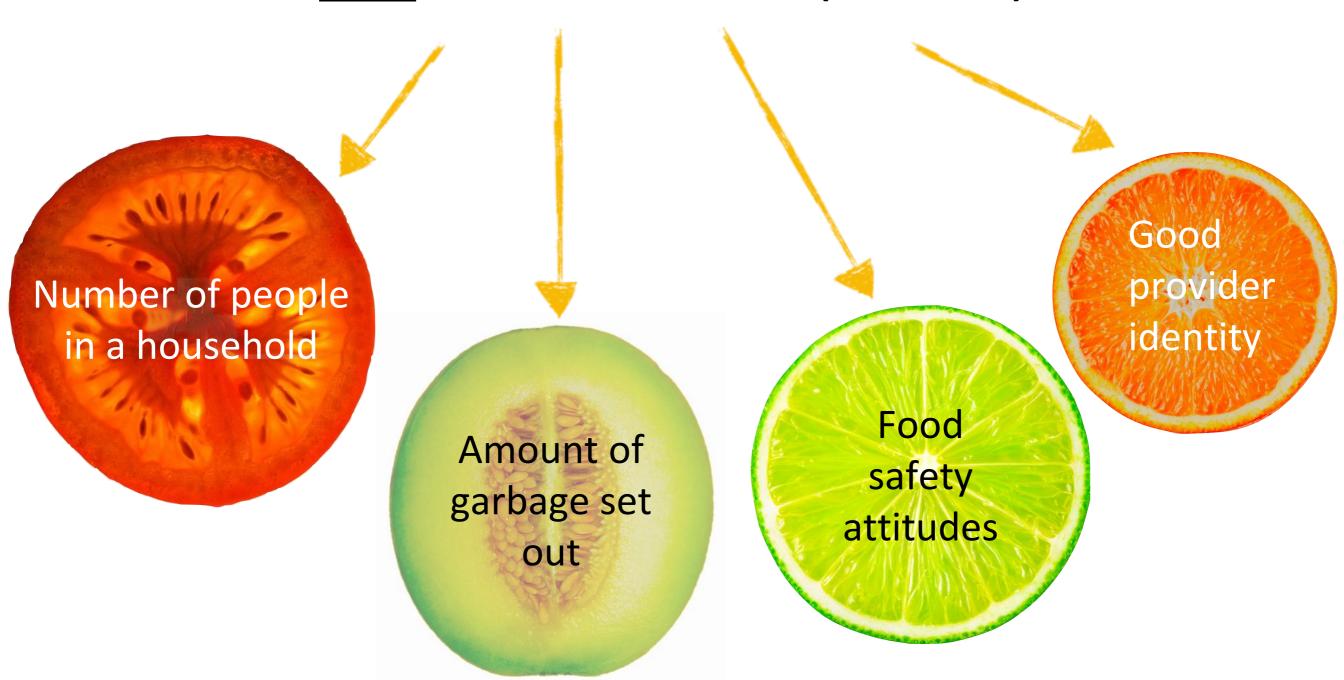
31% decrease of total food waste 30% decrease of avoidable food waste 32% decrease in unavoidable food waste

Avoidable food waste decrease for all food waste types (17-56%)



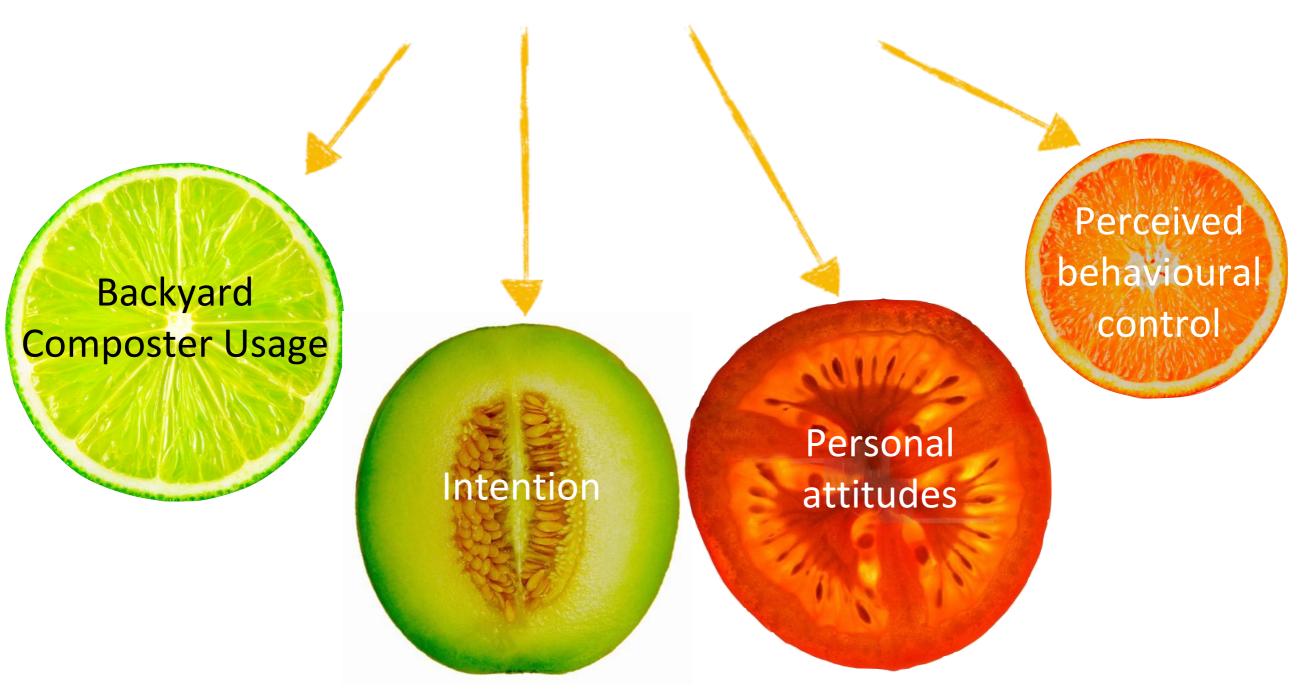
# What we found

#### **More** avoidable food waste (treatment)



# What we found

#### **Less** avoidable food waste (treatment)





# Thank-you

2cg@sympatico.ca (email) foodisfood.ca (blog) @allfoodisfood (twitter)

van der Werf, P.; Gilliland, J.A. A systematic review of food losses and food waste generation in developed countries. *Proceedings of the Institution of Civil Engineers-Waste and Resource Management* **2017**, 1-12.

van der Werf, P.; Seabrook, J.A.; Gilliland, J.A. The quantity of food waste in the garbage stream of southern Ontario, Canada households. *Plos One* **2018**, *13*, e0198470.

van der Werf, P.; Seabrook, J.A.; Gilliland, J.A. Food for naught: Using the theory of planned behaviour to better understand household food wasting behaviour. *The Canadian Geographer / Le Géographe canadien* **2019**, *63*, 1-16, doi:10.1111/cag.12519.

van der Werf, P.; Seabrook, J.A.; Gilliland, J.A. "Reduce Food Waste, Save Money": Testing a Novel Intervention to Reduce Household Food Waste. *Environment and Behavior* **2019**.

van der Werf, P.; Seabrook, J.A.; Gilliland, J.A. Food for thought: Comparing self-reported versus curbside measurements of household food wasting behavior and the predictive capacity of behavioral determinants. *Waste Management* **2020**, *101*, 18-27.



