

Measuring the Mob: Getting Reliable Visitor Counts

2 versions of counting at markets:

Sample Counting (presented by Garry Stephenson) and Full Counting (presented by Richard McCarthy).

Garry Stephenson is a professor at Oregon State University and Coordinator of the OSU Small Farms Program. For over 15 years he has been involved in research and organizational support of farmers markets. He currently serves on the Oregon Farmers Market Association Board of Directors, and is the author of *Farmers' Markets: Success, Failure, and Management Ecology*.

Richard McCarthy is the founder and executive director of marketumbrella.org in New Orleans. As ED, he has led the organization from a once a week farmers market into an internationally recognized mentor for markets with an annual operating budget of \$750K and a staff of seven.

The organization's flagship project, the Crescent City Farmers Market, had an \$9.88 million economic impact on its city and region last year. That number is courtesy of marketumbrella.org's SEED tool, which measures the economic impact of farmers markets and that tool is available through their marketshare project online.

With so many markets adding community partners and new projects to their workload, finding meaningful evaluation is even more necessary than before. In almost every report, counting how many people that enter your market is a key piece of data. What is also true is that any data collection conducted by the market can present significant challenges, depending on your market type and capacity.

However, a good visitor count can be a baseline for other data so it is vital that it is done as accurately as possible. In his powerpoint, Garry points out that counting visitors is important for both retail and civic measurements, and that there are both internal and external reasons to conduct counts. Richard explains some of the many ways that the information can be used during his presentation.

Please review both presenter presentations, look through the q&a and check out the resources listed at the end of this document. Unfortunately, we did not get a recording of the webinar but feel free to email Liz (liz@farmersmarketcoalition.org) or Darlene (darwolnik@gmail.com) with any more questions that are not answered within the documents listed.

Audience Questions and Answers: (answers identified with the person who verbally answered during or in written form after the webinar GS=Garry Stephenson, RM=Richard McCarthy and DW=Darlene Wolnik)

Q: We have thought of putting stickers on people as they came in at each entrance then counting them. How would that turn out I wonder?

A: (GS): I have not used the stickers, so will defer to Richard who mentioned them in his presentation. (RM): Handing stickers to each person as they enter (and then counting the number given out) seems like a bit of invasion of personal space. However, when doing individual surveys of shoppers, it is often useful to hand stickers to those who have completed the interview, so they are not bothered again.

Q: Why not count kids? We've counted any child who can walk, since they act as purchasing influences. Sounds like this is not the way to go, but curious why? Many of our vendors feel that children are important to their sales -- our primary fruit vendor asked how many kids were at our market as part of his interview of us.

A: (RM) If the visitor count is part of an intercept survey (like SEED) you only count the demographics of those who are answering the survey, meaning adult shoppers, since you wouldn't intercept children. (DW) The basic idea about counting only adults is that it is hard to gauge how many children are potential shoppers, while almost all adults ARE potential shoppers. However, if your market has focused children events, then it would be helpful to separately count those attending the events for civic engagement purposes. (GS) An important function of customer counts is to demonstrate the value of the market to decision makers and nearby businesses. It is stronger to state 5000 adults. They represent shoppers and citizens. In addition, since only adults participate in our surveys it is important to have an estimate of adults so a level of participation in the survey can be calculated. I like the idea of separately counting kids or families because it could be used as an important community indicator.

Q: How to you help avoid "leakage'? My market has many entry points and not a lot of staff to help keep track.

A: (RM?) It's important to not over correct leakages (as one attendee pointed out, some vendors would balk at losing their "secret" pathway.) However, getting ready for counting means you need to identify all of the leakages, stationing counters with "zones of responsibility." (DW) If you feel you can and should address them, you might ask vendors to assist by blocking some off just for that day. (GS) There may be ways to position counters to see all the leaky entries. Sometimes it means locating a bit further away. We had one instance where the entire 200 foot long flank of the market was used as access. We positioned counters at each end of the market and split up the view of the "flank" by using a landmark in the middle. This way they each counted people entering for half the length of the market.

Q: Although market opens & selling begins at 9am, we have early birds. Would you suggest to start counting an hour prior to opening OR a quick count of those already in market?

A: (GS) We quickly walk through when the market opens and count everyone in the market and add to the first hour count. (RM) Yes, the same for the method of counting everyone-count everyone who entered early.

Q: Do you include vendors in your count? We know they spend or barter throughout the day.

(GS/RM) No we do not, but that's an interesting idea. (GS) I'm not sure I think it is a good idea for typical counts. I recognize it is an economic activity of market.

Q: Also, at what point do you consider a child to be an adult? Teenagers? Anyone who is not with a parent?

(GS/RM) Both feel it is up to that market to decide. (DW) I would add that there will be a few things that the counters may have to decide upon getting to the location. There should be a designated leader for the counters who gathers opinions from counters and market leaders and makes a decision then.

Q: Is there a protocol for creating a mystery shopper program? Also do you have recommendations for recruiting and training volunteers for counting?

(RM) marketumbrella.org has an example among its series of Shares that is downloadable for marketshare members. Log on and you will have access to the Shares. This type of low-tech evaluation can be useful for many issues, but what's most important is to not call attention to the mystery shopper by having any paperwork with them and to use someone who can offer objective analysis. *Part 2 of question* (GS/RM) We recommend training counters at least a bit before the counting starts and watching for problems throughout the day. (DW) Recruiting through Facebook or the email newsletter is a good idea, as it also alerts your community to the fact that you are conducting evaluation. Asking vendors who bring young adult family members and can spare them to help may also work.

Q: I'd also like to hear Garry elaborate on how to choose your 20 minute periods.

(GS) Use the "shank" of the hour. Not when the market opens but when the shopping is going. So if a market opens at the top of an hour, we recommend counting at the bottom, or between 20 minutes after the hour and 40 minutes after the hour. Each count

must be for the same time period after the first one is chosen.

Q: Note that many of our vendors like to have leak points and, I suspect, would fight the blocking of secondary entrances.

A: Both speakers agreed with this point and cautioned against over correction.

Q: Do you think it would be valuable to only track EBT sales if the mission of your market is to serve low-income communities in urban settings?

A: (DW) VERY helpful! There are literally hundreds of pieces of data a market could collect, based on its needs.

(RM) Nearly every action should refer back to the market's mission (or where appropriate, also the fiscal agent's mission). The marvelous thing about EBT sales, and especially if the market manages a centralized scrip system, is that a market can begin to assemble an historical record of EBT impact. This speaks to demographics, repeat business (or the ability of a market to successfully serve a customer base and maintain loyalty). Specifically, in our markets in New Orleans we have designed a back office protocol for managing and tracking the flow of wooden tokens -- both for credit/debit and for benefit. As a result, we can share a multi-year history of EBT transactions. For instance, in three-years, we have tracked the increase in transactions from 2% of wooden token transactions to 17%. We also track the dollar value. And this is where it gets interesting. Since we estimate the total dollar sales in the market using our SEED methodology, we can now begin to estimate what percentage of total sales is in wooden coins versus cash-money. At present, it looks like wooden tokens are approximately 10% of all transactions. Herein lies the excitement and value for evaluating our people, products, and the places we operate.

Q: Where can you buy clickers?

A: office supply stores

Q: How you you include that pre count into your daily total?

A: Add it to the first hour. (DW) This is counted in RM's count everyone method, but only those that remain after 20 minutes into the market in GS sampling method.

Q: What about the initial rush?

see above.

Q: When Garry said that, when using the 20 minute method, they sometimes take a count of all of the early shoppers in the market just before the official opening

time. Does that number need to be manipulated in any way or just added on to the daily total?

A: If it is part of the 20 minutes you are sampling in Garry's methodology, it is simply added to the first hour total.

Q: We get a lot of groups with kids who come to the market as an educational tool. Wouldn't you want to count the kids who are there learning even though they aren't buying?

A: (DW) Both presenters opined that it is subjective, since visitor count is mostly about shopping, but of course, counting groups is another type of data collection but also necessary. (RM) Since the market is a platform for learning -- and for kids they are learning enterprise, shopping, inter-generational communications, and food sources -- is essential that resources are devoted to measuring how markets affect children. As managers, we know that kids who sell at market mature quickly. We tried to capture this in a short youtube film

<http://www.youtube.com/user/marketumbrella#p/c/1201C1FCAA052B30/12/f88zmgpyxv0> . The impact upon shoppers is always harder to capture: There are many more and the nature of our relationship with our shoppers is less intimate than the one we enjoy with our vendors. Certainly a simple count of the number of children who entered the market on scheduled school, church, camp visits is a good start. Measuring their initial food knowledge before or upon entering is of interest. So is measuring what they've learned. This, of course, requires more work and greater knowledge about informal education.

Q: Do you compensate volunteers with food or money?

(DW) Both. I know RM has begun to pay counters sometimes (with grant money found to evaluate or with unrestricted funds marketumbrella.org puts aside for non-market expenses.) However, volunteers who get a t-shirt or maybe lunch and get to work with their favorite market are also often available for these short-term jobs. (GS) When we conduct formal Rapid Market Assessments we have participants (often market managers) serve several roles: counter, dot survey assistant, and offering constructive comments on the market. We compensate these participants. Markets doing their own counts and dot surveys use volunteers or staff. I'm not sure if those markets provide incentives.

Q: I would like to know how to utilize the count for building business relationships and for funding purposes. Who could help with that?

(DW) I'd be happy to talk further with you about that (darwolnik @ gmail.com) and also recommend that you sign up for SEED on marketumbrella.org's site which shows

you how to use all of the economic impact data SEED gives you. The same way marketumbrella.org suggests that you use economic impact data like SEED would work for visitor counts as well. marketumbrella.org will also have another Share soon called "Visitor Counts" (that I am assisting with) that will help.

Q: We count all customers (as best we can) every half hour on the half hour using a volunteer walking throughout with a clicker. We then estimate that the market turns over every 30 minutes and calculate the total for the day. What do you think of this method?

(GS) Any method that is done "exactly" the same each time can give you a better idea of attendance than a gut-level estimate. That said, the challenge with this method is the assumption that the market turns over every 30 minutes. I think that would vary a lot depending on weather, high season (a lot of product) vs. low season (not a lot of product), if there is an event taking place, music, shade, seating, and so on. If you are short on staff, a 10 minute count at each entrance once an hour would provide a more accurate and "scientific" count especially if you need to use the attendance totals for other uses such as estimating spillover sales in nearby business districts, or for influencing public policy. (DW) As Garry says above, you must be able to explain and defend why you arrive at the decision that the market turns over at 30 minute increments This is the part that RM uses to explain why laboriously counting everyone is better to do a few times a year. (RM) The deeper one dives into evaluation, the more you learn how figures that run our lives -- be it consumer index or some other important finding shared in the media -- are not as firm as they may first appear. Measuring humans is messy. We're unpredictable (or more accurately, it takes so many resources to track why we do things and when). So, if the 30 minute method fits your bill, that's okay. You'll learn things in the process. You may share findings that will garner you new friends, allies (who in turn may help improve the methods in the future). I concur with Garry that you don't want to zip and zag with methods too often. And yet, no sense measuring badly forever based on the firm commitment of "that's how we've always done it." These are times that cry out for critical thinking, especially since expectations continue to rise. My concern with the 30 minute or 20 minute strategy is that we may miss the many apparently unpredictable shoppers who may swoop in to spend money so quickly that they go undetected. We don't know when they come so to assume that a 20 or 30-minute interval will capture them is a bit dicey.

Selected Resources:

SEED

<http://www.marketumbrella.org/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=134&cntnt01returnid=122>

Tools For Rapid Market Assessment- Oregon State University
extension.oregonstate.edu/catalog/pdf/sr/sr1088-e.pdf –

Farmers' Markets: Success, Failure, and Management Ecology by Garry Owen Stephenson

<http://www.cambriapress.com/cambriapress.cfm?template=4&bid=187>

Survey Monkey of FMC Indicators: This is an emerging evaluation resource that shows dozens of different data collection points that a market could use, depending on the project outcomes and audience. Please feel free to take the survey to help craft these indicators:

<https://www.surveymonkey.com/s/FR8HJ2P>

Mystery Shopper (PDF) from marketumbrella.org is attached separately. It is also available on their website with marketshare log in.



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Calculate Your SEED Study Sample Size

1. Prior to conducting your SEED study, you must first capture an average market attendance count. To do this, please refer to the Study Sheet named *Estimate Total Daily Shopper Attendance*. It will guide you to use one of two suggested methods.

2. Conduct a customer count using one of the two suggested methods. Not only will you input this number (N) into your online SEED study account, but you will use this number to calculate a sample size that yields a scientifically valid study.

3. Take your number of estimated daily shopper attendance at your market (N) and look for it in column A on this sheet. The number adjacent (n) in column B is the minimum sample size you must collect to conduct a scientifically valid study. For instance, if you estimate that 500 shoppers attend your market daily, then you must conduct 218 customer intercept surveys on the day you conduct your SEED study.

While you may never be asked to present the theory behind determining the sample size of your SEED study, please feel free to reference our calculations. We base our method upon the two formulas recommended in G. Kalton's *Introduction to Survey Sampling** for the calculating a minimum survey sample size:

$$n \geq z^2RV / D^2$$

or

$$n \geq [z^2P(1-P)] / D^2$$

n: minimum sample size

z: z-score corresponding to level of confidence with which it is desired to be sure that the true population lies within ± D percentage points of the sample estimate (for 95% confidence, z = 1.96)

RV: population relative variance

D: maximum tolerable error (default value = 5%)

P: expected population proportion (0.50 allows for most conservative estimate of n)

*Kalton, G *Introduction to Survey Sampling*. Newbury Park: Sage Publications, 1983.

| A | B |
|----------------------------|-----------------------|
| N=Total Number of Shoppers | n=Minimum Sample Size |
| 100 | 79 |
| 200 | 132 |
| 300 | 169 |
| 400 | 196 |
| 500 | 218 |
| 600 | 235 |
| 700 | 248 |
| 800 | 260 |
| 900 | 270 |
| 1,000 | 278 |
| 1,100 | 285 |
| 1,200 | 291 |
| 1,300 | 297 |
| 1,400 | 302 |
| 1,500 | 306 |
| 1,600 | 310 |
| 1,700 | 314 |
| 1,800 | 317 |
| 1,900 | 320 |
| 2,000 | 323 |
| 2,100 | 325 |
| 2,200 | 328 |
| 2,300 | 330 |
| 2,400 | 332 |
| 2,500 | 334 |
| 2,600 | 335 |
| 2,700 | 337 |
| 2,800 | 338 |
| 2,900 | 340 |
| 3,000 | 341 |
| 3,100 | 342 |
| 3,200 | 344 |
| 3,300 | 345 |
| 3,400 | 346 |
| 3,500 | 347 |
| 3,600 | 348 |
| 3,700 | 349 |
| 3,800 | 350 |
| 3,900 | 350 |
| 4,000 | 351 |
| 4,100 | 352 |
| 4,200 | 353 |
| 4,300 | 353 |
| 4,400 | 354 |
| 4,500 | 355 |
| 4,600 | 355 |
| 4,700 | 356 |
| 4,800 | 356 |
| 4,900 | 357 |
| 5,000 | 357 |

A**B**

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|----------------------------|-----------------------|
| 100 | 79 |
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| 800 | 260 |
| 900 | 270 |
| 1,000 | 278 |
| 1,100 | 285 |
| 1,200 | 291 |
| 1,300 | 297 |
| 1,400 | 302 |
| 1,500 | 306 |
| 1,600 | 310 |
| 1,700 | 314 |
| 1,800 | 317 |
| 1,900 | 320 |
| 2,000 | 323 |

Accuracy for Sample Sizes