



IDEAS FROM THE FARM: VERMONT GROWERS' INSIGHTS ON REDUCING FOOD LOSS



A SALVATION FARMS REPORT
DECEMBER 2018

Contents

GROWERS’ IDEAS FOR REDUCING FOOD LOSS 2

GROWER INTERVIEWS 4

FINDINGS 6

1. Expand Markets6

Institutions that cook7

Value-added processors8

Willing to sell below market price 10

Public education 11

2. Strengthen the Donation System 13

Gleaning 15

3. Improve planning..... 18

NEXT STEPS 20

ACKNOWLEDGEMENTS 23

REFERENCES 24

APPENDIX A. INTERVIEW GUIDE..... 25

GROWERS' IDEAS FOR REDUCING FOOD LOSS

ReFED estimates that 10 million tons of food are lost on farms in the U.S. annually, equivalent to a financial loss of \$15 billion¹. In Vermont, it is estimated that approximately 14 million pounds are lost simply on vegetable and berry farms each year². In recent years, a number of reports and guidelines have emerged on how to best reduce this food loss, although few have included growers' own perspectives on how to do so. This report contributes to the important state- and national-level conversations on food loss by presenting twenty-four growers' perspectives on how best to reduce the amount of fresh produce lost on Vermont farms.

To begin, Vermont vegetable, berry, and fruit growers are very interested in finding **new markets** for their surplus produce. Some growers already access these markets, such as selling their surplus to

restaurants, schools, and other institutions that are willing and able to minimally process and cook the produce. Others sell select surplus produce to value-added processors, such as beer-makers, cider-makers, jam-makers, and juicers. Overall, there is interest in expanding these markets to be able to sell more of a product and/or begin to sell a product. Vermont growers are also willing to sell their surplus produce at lower prices to these to-be-developed markets, although are wary of inadvertently impacting their 'firsts' prices in the market.

WHAT IS "FOOD LOSS"?

For this report, we define "food loss" as wholesome produce intended for human consumption that is either (1) not harvested, or (2) harvested, but neither sold nor donated. There are many reasons why wholesome produce may not be harvested, sold, or donated. One is that the wholesome produce grown is cosmetically blemished, and therefore doesn't meet buyer or consumer standards. These are often referred to as "seconds"; we will refer to these as such in this report, too. Other reasons that wholesome produce may not be harvested, sold, or donated include the cost being too high to do so, labor not being available, or a market not being identified. Some of this produce may be "seconds", and some may be "firsts" – i.e. produce that meets buyer or consumer cosmetic standards. For this report, we will refer to all food lost as "surplus produce".

A helpful categorization of food loss is adapted from Dr. Lisa K. Johnson, who defines unharvested produce as either *marketable*, *edible*, or *unfit*. As she explains, "Marketable produce...meets the current buyer specifications for quality and appearance, but growers are unable to harvest due to inadequate labor or cost. Edible produce is nutritious and safe to eat but has cosmetic deficiencies that do not meet quality standards, such as being off-size, misshapen, blemished, or discolored. Unfit produce is damaged, decayed or over-mature and unsuitable for human consumption" (No Food Left Behind, 2018). These categories prove equally helpful when discussing produce that is lost by not being sold or donated, as well. *For more, refer to Johnson et al 2018.*

¹ ReFED. "A roadmap to reduce US food waste by 20 Percent." (2016).

² Neff, Roni A., et al. "Salvageable food losses from Vermont farms." *Journal of Agriculture, Food Systems, and Community Development* 8.2 (2018): 1-34.

A number of growers point to the tension between growing good, local products and consumer and buyer desire for certain quality standards and cosmetically perfect produce. While a number of growers don't believe that public perception can change, others are interested in **public education campaigns** to increase local consumption of seconds, in addition to local produce more generally.

Vermont growers also discuss in detail the current landscape of donations in the state. Many emphasize the often unaccounted for costs associated with donating produce and highlight key recommendations to **strengthen the donation system**. For example, growers recommend more assistance in picking up and transporting produce to donation recipients. The federal enhanced tax deduction for food donations, which was enacted in 2015, has not been received by growers as a sufficient incentive to donate more produce.

Gleaning operations throughout the state – where volunteers visit farms to pick unharvested produce and/or transport harvested surplus produce – are taken advantage of by a number of growers interviewed. Both growers who have and haven't worked with gleaners identified a series of ways in which this volunteer assistance could be improved, thereby capturing more produce and facilitating more donations. This includes increasing gleaners ability to mobilize in very short time windows to reflect their own harvesting schedule and/or commit to visiting the farm at regular intervals.

Several growers noted that certain **growing techniques**, including the common practice of planting more than is needed in order to ensure that orders can be filled, are key areas where food loss can be reduced. However, further research is needed to understand which of these practices are common, and if/how much they contribute to food loss.

We present growers' insights in the report below. As noted in a recent World Wildlife Fund report, "...growers must be involved in defining solutions and actionable next steps"³. The following report presents these essential voices, furthering the ongoing conversation on how Vermont can best approach reducing food loss on farms.



³ No Food Left Behind, Part 1: Underutilized Produce Ripe for Alternative Markets. World Wildlife Fund.

GROWER INTERVIEWS

Twenty-four growers from around Vermont were interviewed in January 2017. They represented Addison County (2 farms), Bennington County (2), Caledonia county (2), Chittenden County (2), Grand Isle County (1), Lamoille County (2), Orange County (2), Orleans County (2), Rutland County (3), Washington County (2), and Windham County (2). No growers were interviewed from Essex or Franklin Counties. Eighteen out of the 24 farms grew vegetables, 17 out of the 24 farms grew berries, and 11 out of the 24 farms grew fruit.

Ten students from Middlebury College were trained in interview methods and then conducted phone interviews with growers using a semi-structure interview questionnaire (see Appendix A). They also transcribed their interviews, which were then verified in a secondary transcript review. The interview transcripts were analyzed in Dedoose qualitative analysis software between September and October 2018 using a two-round content analysis method by Elana Dean, evaluation/research consultant to Salvation Farms. The findings from this report are based on this qualitative analysis.

Through the analysis, we identified main themes that emerged from the interviews. In this report, we discuss these main themes and illustrate them by presenting some excerpts from the grower interviews. It is important to note that the excerpts included in this report are only a sample of relevant excerpts; meaning, we don't present all excerpts from interviews that are relevant to a specific point.

It is also important to note that this report only reflects the views and perspectives of a small group of growers in Vermont, and is not a representative sample of all Vermont growers. Thus, while we can learn from these growers' insights, it is important that we do not over-generalize the findings from this report, but rather use them as a launching pad for further discussion and planning.

LITERATURE REVIEW

A number of recent reports have showcased growers' insights into food loss on farms. This has included growers' estimations of the quantity of food loss on farms, as well as identification of common reasons for food loss⁴. Other reports have presented growers' perspectives on the key barriers they face in harvesting and selling seconds, more specifically. For example, in a series of interviews conducted with growers from North Carolina, growers highlighted how the "Lack of value-added produce opportunities besides fresh market; very high quality standards; economics of harvesting off-grade produce [do] not make sense; overripe produce is unusable; and, justification for harvesting off-grade produce when there's another planting coming in behind" all contribute to the equation⁵. In a different study which surveyed 138 growers from Minnesota, they discussed that the "lack of an attractive market, lack of

⁴ Berkenkamp, JoAnne and Terry Nennich. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Report Number 2: Interview findings with Minnesota Produce Growers, 2015. Neff, Roni A., et al. "Salvageable food losses from Vermont farms." *Journal of Agriculture, Food Systems, and Community Development* 8.2 (2018): 1-34.

⁵ No Food Left Behind: Underutilized Produce Ripe for Alternative Markets. March 2, 2018. Summary Report of Conference held at Santa Clara University. World Wildlife Fund, Santa Clara University Food and Agribusiness Institute, and Global Knowledge Initiative.

labor availability at harvest, cost of labor, and being too busy with other farming activities at harvest time” were significant barriers to selling cosmetically imperfect seconds⁶. Indeed, “The lack of an attractive market was identified as the top barrier to generating a return from growers’ imperfects”⁷. These growers’ perspectives mirror ReFED’s assessment of the reasons for food loss on farms: “Food loss starts at the production level. Low market prices and high labor costs often make it uneconomical for growers to harvest all that they produce. Strict cosmetic standards result in insufficient demand for imperfect-looking produce (i.e. oversized zucchinis or bent carrots). Despite gleaning and farm-to-food-bank efforts to recover this unharvested food, the vast majority is left in the fields to be tilled under”⁸.

There has been little published, however, presenting growers’ own ideas on how best to reduce food loss. *The Beyond Beauty* report series, which includes findings from a survey and interviews of farmers in Minnesota, is one that has done so. In this report, one main idea that growers have advocated for is to generate a viable seconds market. This study reported that over 80% of growers surveyed in Minnesota indicated that “they are either moderately or very interested in finding additional markets for their imperfect fruits and vegetables”⁹. This is also ReFED’s key recommended action to growers, who push for growers to “collaborate with food businesses to further develop a secondary market for Imperfect Produce [and] leverage Value-Added Processing, both on farms and through partner organizations, to turn excess produce into soups or shelf-stable products”¹⁰.

One issue in developing such a market is the variability in the amount of seconds that are grown each year. Growers have raised a number of other concerns as to the viability of a seconds market, including their perception “that commercial buyers’ expectations for cosmetic appearance have risen over the past 10-15 years”, matching consumers’ high demands for ‘perfect’ produce¹¹. In addition, *Beyond Beauty* describes growers’ concern in correctly pricing seconds. As highlighted, “Maintaining price and volume for #1 [produce] is paramount for growers”¹². Growers in this study were enthusiastic about selling seconds, although wary of it putting a downward pressure on their firsts prices by making more produce available on the market or by shifting demand away from firsts to seconds.



⁶ Berkenkamp, JoAnne and Terry Nennich. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Report Number 1: Survey Results from Minnesota Produce Growers, 2015.

⁷ Berkenkamp, JoAnne. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Summary of Findings, 2016.

⁸ ReFED. "A roadmap to reduce US food waste by 20 Percent." (2016).

⁹ Berkenkamp, JoAnne. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Summary of Findings, 2016.

¹⁰ Berkenkamp, JoAnne. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Summary of Findings, 2016.

¹¹ Berkenkamp, JoAnne and Terry Nennich. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Report Number 2: Interview findings with Minnesota Produce Growers, 2015.

¹² Berkenkamp, JoAnne. *Beyond Beauty: The Opportunities and Challenges of Cosmetically Imperfect Produce*. PowerPoint presentation part of National Good Food Network Webinar, October 22, 2015.

FINDINGS

1. Expand Markets

First and foremost, most growers interviewed say that in order to reduce the amount of produce that remains uneaten on farms it would be best to find more markets at which to sell their surplus produce, often seconds. One grower from Addison County remarked, “what farmers need is to get a decent price for our food. We don’t need more systems where we’re figuring out how to give away more food.”

Growers identified special challenges in trying to find new markets, particularly for seconds. The growers interviewed did not share a unified view on whether selling cosmetically imperfect produce had a market among consumers. One grower from Bennington County noted that “For blemished vegetables, currently there is not a consumer interest in blemished food.” Other growers, like this one from Orleans County, however, were more optimistic that seconds are marketable:

One thing that we are exploring is actually packaging and selling some of those blemished or ugly vegetables. There is a market out there. There are some folks who understand that this is the same produce. It just looks a little bit different.

Indeed, many growers expressed interest in finding these markets, whether, as this grower noted, the produce is processed or sold directly as is:

Well ideally, you know, since we’re in it to profit...I’d like to see some sort of seconds market whether it be processed and sold that way or creating a retail channel, you know, similar to Europe where people are a little more receptive of seconds and blemished goods. – Washington County grower

As this grower from Windham County illustrated, a value-added processor who would be able to absorb surplus produce to extend its shelf life would be of great value:

I have occasionally seen situations where yeah- I've got some extra arugula and the restaurants don't want it and the CSA members are going to go nuts if I'm going to give them any more arugula. Yeah, so occasionally- I know that situation and yeah- I don't get into that situation often but it does happen. I guess I would say, yeah, if there's someone who's willing to process things, make something out of it, like arugula pesto or whatever, that would be great.

Many growers discussed how they are already accessing some of these markets, including selling seconds or surplus produce to institutions that cook the produce, and to value-added processors. They also discussed the limitations of what they could sell at present, and expressed interest in expanding these markets moving forward.

Institutions that cook

Growers are often able to sell seconds of produce to restaurants, schools, hospitals, and prisons, among other institutions, that process and cook the produce. As one grower from Caledonia shared:

[O]ne of the things with the market for the hospital with lettuce, they don't have a problem taking smaller lettuce, so I sell them lettuce that I couldn't - I wouldn't normally sell to at the farmers' market or wholesale so on some things depending on the crop they will take what I would consider to be a second or something that I might not even harvest.

Another grower from Rutland County echoed the benefit of this match, this time with schools:

[We sell to] six individual schools. They're all through the same food service organization. But- and so, they're very happy- we give- we try to do as reasonably priced vegetables for the schools as possible. And so, for example, they're more than happy to take tomatoes that are blemished in some way because they're gonna just crush 'em up and use them in their tomato sauce. So, I think schools, institutions, hospitals, those places that are gonna be preparing those foods are a really great market for that- for farmers to be able to sell if they're... not interested in giving it away, or if they need to be able to sell them. You can sell them at a reduced price and then they can get into the bellies of people that also need them.

While seemingly a convenient match, since it is unpredictable what, when, or how much of a batch of seconds there will be, it inevitably is a lot of work for the grower to shop around for a buyer. Due to the lower price that seconds produce commands, it is a cost-benefit calculation that doesn't necessarily work to the growers' benefit, such as articulated by this grower from Orange County:

Restaurants can sometimes be an outlet for blemished stuff just because they're chopping it up and processing it so they're not necessarily using it for—as long as it tastes good, they don't necessarily need it to be perfect looking. But, I mean, so we don't always—it's a tough, you know, it takes a lot of extra effort, and so I think that's often where the disconnect is, is when it takes extra effort to sell something that's blemished or second-quality or third-quality even, but we're getting a lesser price for it so it's really hard sometimes to justify that extra marketing effort to find, you know, connect to people.

One response to the special marketing needed is the creation and use of an online marketplace clearinghouse. A grower in Windham County has sometimes taken part in one of these, although as they note below, even posting and preparing the produce isn't necessarily worth their time for the eventual price:

So there's a local market that we sell through, it's an online sort of clearinghouse, I don't know what the right word is, but it's a website that institutions can use to buy locally sourced produce. So we can list our produce on that website, people at the hospital or the school or whoever can order through that and then twice a week, there's a pick up at the farm and we can sell wholesale

and sometimes people sell like seconds, especially pretty stable seconds, like I dunno there's- you'll see things on there like potatoes that are pretty old and have a- are starting to sprout a little bit or things that are- and so that's a place that you can sell, if you presumably selling really cheap. We haven't done a lot of that, mostly because the volume on it is pretty low and so it's often feels a little futile to, to go through the process of picking, and washing, and storing, and then listing it on the website in hopes of selling something that probably won't actually sell...

It often seems most promising to sell surplus produce to institutions that are able to process and cook the produce. This, however, is often limited to how much labor the purchasing site is able to invest to process the produce before it is usable. For example, as this grower from Caledonia County noted:

The other component of it is, can we say to the hospital ok I've got small carrots, will they take them - they won't because of the labor issue, but on the other hand, I sell to the hospital and they love having small potatoes because it's not a labor issue because they have used those for breakfast potatoes, instead of needing to cut everything up. The carrots a lot of times they want to have bigger carrots because of what they're doing with it. It's a tough situation. I tried to get rid of some of my really small beets to them and some of them were too small but then the ones that were bigger than golf ball sizes which is still pretty small, they were actually okay for their roasting. Again, and part of it is the relationship and how creative they can be in institutions. It becomes - it's a labor issue.

Therefore, sometimes a buyer will need to spend too much time or too many resources to process produce. In the example below, a grower from Chittenden County notes how kale seconds, for one, are too time intensive for both a restaurant to want to buy, despite the low price:

Or you know, kale has a lot of cosmetic damage from insects. We don't sell that at all because it's been my experience that, for a chef or a restaurant to- to use those products it takes them way more time, and they have way more waste, so they just- they just don't want it. And if we could- if we could sell, you know, extra little value from those kinds of things, we'd love to do it. It does- it does cost us time and money though, to- to pick those crops, package them up, and deliver them to the food shelf. So, we will end up leaving a lot of that stuff in the field.

As this grower pointed out, when seconds need too much processing time, sometimes it isn't worth it for the buyer; consequently, it isn't worth it for the grower to spend their time picking, washing, and packaging them for a buyer or a donation recipient site.

Value-added processors

Many growers interviewed are able to make or sell surplus produce to value-added processors, such as selling carrots for juice, apples for cider, or tomatoes for tomato sauce. Sometimes growers process the produce themselves, such as this Addison County apple grower who reported having little food loss due to the ability to sell seconds apples:

So we're... actually not someone that has significant waste. So drop apples can be used, if they're fermented, for hard cider... And our sweet cider mill absorbs any blemished fruit... So each apple seems to have a home, whether it's first home is fresh apples and then it gets diverted to another home, or whether right from the get-go it's got a processing product in mind... So we just hide all the sins of our growing and- and... try to add- recoup the value.

One Lamoille County grower is able to sell their black current seconds wholesale to wine-makers and beer-makers, where blemishes aren't an issue. A few growers who grow carrots noted the strong market for selling seconds carrots to juicers. One grower from Chittenden County remarked that "it's very easy to find a market for blemished carrots." A grower from Windsor County elaborated on this:

So, for example, the past two years we, we have now a market for any carrots that we can harvest for the most part. We're selling the seconds and juicing carrots those now, and that's a carrot that is, we would say 80% viable, so we might have damaged—some wire worms out in the field, for example. So, you know what we do is we make kind of a judgement call out in the field pre-wash, and we then will, as we're sorting—so during a full harvest we're picking out some carrots that we know are not going into our, our prime carrot bag, and when we're washing and sorting we're setting those aside for seconds, and we do now have a market for those for people who or juicing them or restaurants that are working with us to then—they will clean them up but we sell them at a, you know a significantly discounted rate. So say with that, same with oversized beets now we do that with those, but that's really the only two things that we harvest and can sell like that. So it's not, it's not a lot.

As this grower noted, echoed by other growers, there are definitely not seconds markets for every type of produce. Growers characterize some types of produce as easier ones to sell as seconds to value-added processors, and others that are harder. A few growers do their own on-farm processing to sell as well, such as this grower from Orleans County who included processed product in their CSA shares:

Actually, and another thing that we do with some of those not-quite-perfect vegetables is that we do process them for our on-farm sales. I should I should have mentioned that, that we do do some processing, like squash we'll turn into a squash puree, our extra tomatoes we'll we turn into sauce, and then we use those for our CSA program.

All of the above said, several growers interviewed were doubtful that spending the time harvesting, packaging, possibly storing, and transporting seconds would ever make financial sense. As this berry grower from Bennington County shared:

I think that for berries, there could be jam makers depending on the degree [of berry decay], but I think that they're not willing to pay enough to really make it worth the very high cost of labor. What they would pay for blemished fruit I think would be pretty limited.

For the growers already selling to value-added processors, the price is sufficient to motivate them to do the work to sell their seconds or other surplus produce; however, the point made here is important to

discuss further. For growers to learn whether this new market would be worthwhile for them, more work needs to be done to determine and communicate prices. In the next section, we discuss how many growers interviewed were open to selling their surplus produce at a lower price than their firsts.

Willing to sell below market price

Many of the growers interviewed said that they would sell their surplus produce at below market prices, with certain qualifications. For example, as this grower from Bennington County said, this would be the case for some – but not all – of their crops:

It would probably depend on how labor intensive of a crop it is. That margin would probably vary by crop, because some things like fruit for example- very labor intensive. Very expensive to grow berries and so you know just to break even that would be a different rate than something else.

For some types of crops, such as green beans, the lower price seconds would be sold for could never quite justify the costs of harvesting, cleaning, potentially storing, and transporting:

And it has to make some sense, of course... I'm tryin' to think of real labor intensive things. I'm gonna use green beans... But what I say to the school is, 'I'm probably not going to sell you green beans, because they're very labor intensive to pick. And so for me to pick them for you, and then to sell them at fifty cents a pound doesn't make any sense...it costs me more to pick them than it does for the price that you're able to pay. If you're paying really low prices.

– Rutland County grower

Another grower from Rutland County discussed how the time of season may make it feasible or not to invest the time in harvesting and selling a surplus product that will be sold at a lower price. As they explained:

[T]hat would have to be a timing factor. So if we have a marginal crop that's not that great, but we're offered some money for it, it's like, 'well, I could do that or I could continue picking what crops we do have that we still get full value.' But that's just a balancing act of do we have enough people to do the work...That's up and down all summer long...Depends just what else is happenin'.

This seems to reflect a broader lesson from growers that it is hard to make generalizations for an entire season, and that some practices make sense depending on what else is happening in the fields. And, this is often unpredictable. Sometimes, though, it makes sense to sell surplus produce at half price, as this grower from Lamoille County discussed:

I would say sometimes we'll cut it down 50% if we can just move it and get it out of the barn, but at least cover the cost of the labor of just moving it to, or getting it to wherever we need it to go. Yeah, absolutely. I would say, I've seen [a farmer] take a \$40 bag of carrots and charge \$20 for

them, so I would say that's about what we do. We also, people that are juicing, or big juice companies we'll cut the price pretty low for that, and a lot of it has to do with just getting it out of the coolers cause we have great state-of-the-art stuff, but eventually that product's gonna go bad, so a little bit of money is better than nothing.

Another grower from Windham County also said they were willing to sell some of their surplus at half price to customers, although also noted that they usually followed other farms for setting prices.

A big concern raised by a number of growers was the chance of glutting the market and therefore lowering the prices on firsts produce. As one grower from Orange County brought up, where the surplus produce was going to be sold was very important to know so as to avoid lowering the price of a crop overall:

[I]t depends where it's going. I'm not gonna glut the market and screw other farmers, that's one thing that I've always learned that's not a good thing to do. Farmers can be really stupid about that, they'll see that they have too much of something then they'll just dump it on the market it's called. And that's not a good thing for farmers in general to do.

This grower from Chittenden County echoed this concern, noting how growers are already confronted with pressures to lower prices and is unsure how introducing lower priced produce would affect overall prices in the market:

[F]armers try- always trying to as hard as they can to not have extra produce that they don't know where it will- it will go where there is a market...[I]t would be awesome to have some market for that stuff, but if you lower the price, it's a problem for the rest of your marketplace because you know, you're always struggling to try to raise your price a little, and letting them go backward is a bad news.

The issue of how to sell more produce in Vermont at lower prices without affecting firsts sales warrants additional discussion and clarification.

Public education

Many of the growers interviewed were frustrated by the high cosmetic standards, often considered unrealistic, that consumers have and buyers adhere to. As this grower from Washington County expressed:

I think it's a USDA standards issue. So when you go and look at the USDA standards for what constitutes Grade A, it's ridiculous, it's antiquated, it's, you know, it's pesticide dependent... it's this perfectionist piece. You know, I don't think we should be selling products that is, that has hot spots or that is, you know, on its way out, but there are just so many other defects that are just absurd. So I think that that is one big holdup, and you know, the other thing is, yes, is reeducating

the public that, you know, just because it has a nick out of it doesn't mean it's bad, or just because the orange has some brown skin doesn't mean it's bad. It's just this whole perfection piece that we accept in the United States in the last...I wanna say 30 years.

A number noted the need for more public education to increase local consumption of seconds. A few noted the efforts that they currently make in trying to educate their customers, including this grower from Rutland County who had a clever campaign:

And then the other thing I would say about that is we try really hard to teach people that something doesn't have to be perfect in order for it to be delicious. And so the joke at our- with our customers is 'do you wanna eat like a farmer?' And if you eat like a farmer, that means you eat something that's not perfect looking. And people are very willing to do that, whether- you know, sometimes we'll sell things as seconds. But for the most part, people will say, 'oh yeah, there's a little spot on that, no problem. I'm going to eat it today anyway.' So I think there's also a matter of teaching people that vegetables- you can't have organic, local, fresh picked and perfect. There's gonna be something- sometimes that's not gonna be as beautiful as the picture in the, the flyer.

A Caledonia County grower expanded on this idea that more should be taught about how the less cosmetically perfect, often the more nutritional a crop is:

I think as a culture we've come to expect...this like visually perfect and while I think they taste the same and nutritionally, nutritionally there may be even more nutritional value in some of the things that are not absolutely perfect to look at that are better that way because of the way they've been grown. And, and I think that's part of the - that's the biggest part of the problem is that expectation that everything has to be perfect.

Other growers were clear that they don't think that public education is either the grower's job, nor a good use of energy, such as this Addison County grower:

I don't envision [a secondary market for seconds] at all. I run from it and I change the form of the product so I don't have to educate and I don't have to create markets. We just default to the value added processed product and cause we're so exhausted and realized that the educational process of promoting blemished fruit in the marketplace is not gonna be successful or a good use of our energy.

As this grower from Chittenden County brought up, too, the price of a Vermont crop – in general - is often higher than the California crop, perhaps shifting the consumer campaign to the importance of buying local:

But, you know, there's only so many people that are buying organic vegetables. So, the folks raising organic vegetables, need a wider market, which is why I am selling into a cooperative [that sells] down the east coast, into the New York and Boston markets. So either more people need to buy from all the farmers growing all the good food, and stop buying California produce,

and being more committed to buying something from Vermont. But sometimes the- I guess the price is, that's what's not helping the market for us.

Since seconds can be priced lower, this grower brought up an interesting idea that perhaps there is a new market for produce in Vermont should consumers embrace seconds. Seconds could possibly be at a more similar price-point to out-of-state produce.

CSA MODEL

For a number of growers who sell CSAs, surplus produce rarely poses a large problem. For example, as this farm from Windham County explained:

[B]ecause my farm is a traditional CSA where if we have a lot of cucumbers, the members get a lot of cucumbers, I mean they can discard them and then other members can take them, but it's not like they have the opportunity to choose, like that's part of their share that week, it's more like what we have is what's in your share and you can take it or not take it, but if you don't take it, the other members will...I would say there's probably a lot less food waste on my farm than most farms because of the traditional CSA method...

Another grower from Rutland County who used to have a CSA program, and no longer does, echoed this idea. Indeed, at present they have to work more with a gleaning organization to help offload their surplus produce:

Okay, so the reason we probably use [gleaning] more now than we did in the past is that, just from a business decision...we are no longer doing on-farm CSA share pickups. And so when we did farm shares, we would not use the [gleaning organization] as often because we would say to share members, 'here's a freebie pile.' But now that we're not doin' that anymore, we don't have freebie pile for shares, and so we just use [the gleaning organization].

While these growers noted how the CSA model allows for a built-in valve for surplus produce, they don't discuss the lack of additional payment for the extra product. The benefit noted seems to be simply the ease with which to direct the extras.

2. Strengthen the Donation System

Most growers were interested in the idea of selling their surplus produce as a way of reducing food loss because it was simultaneously helping growers' bottom lines – a win-win situation. In addition, growers

also discussed how they donate and continue to envision donating their surplus produce in order to address food insecurity in Vermont, which also simultaneously helps to reduce food loss – a different type of a win-win situation, one that - for many - doesn't necessarily positively impact their financial bottom line in a measurable way. And indeed, most growers interviewed regularly or occasionally donate produce to food shelves, food pantries, the Vermont Foodbank, meal programs, and other community initiatives.

Most growers want to see the good food they grow eaten by people; and, if they can't sell it, find donating as a satisfying alternative. That donating produce also reduces food loss is seen as an incidental positive outcome. As this grower from Orange County shared,

The market leftovers are usually very high quality, and often times it's a lot of leafy greens, so they were just picked the day before, but if I don't sell them at market then I don't have another market for them... so they go to donation right away before they've, you know, gotten of lesser quality...I can donate things that are of, you know, not marketable quality otherwise, but that are...still a lot of good food, you know, so I don't like to see it go to waste.

Because donations are not generally part of a farm's economic model, any additional help that a donation site can provide is seen as helpful. A number of growers said that when transportation is provided to pick up and deliver donations, it encourages them to donate more produce at more frequent intervals. As this grower from Windham County remarked:

Well pickups are always huge for us, cause we don't- we don't generally deliver food otherwise, so every- everybody comes to us, so we can deliver food obviously but it's a pain in the [bottom] and it tends to- it tends to make or break our decisions to do things, especially when there's not money involved. So- so anytime anybody can come get it from us, it makes a giant- it makes a huge difference.

Other growers also noted how donation sites' storage limitations – matched by their own storage limitations – reduced the amount of produce they were able to donate. This limitation was noted in Salvation Farms' *Fresh Produce Needs Across Vermont* report, released in October 2016, where donation sites from across the state were surveyed. As this grower from Rutland County illustrated:

And so they- I said, 'if you have a place to store these'- and they only need to be stored in like a thirty five degree root cellar, they'll last a month- 'if you have a place to store them, I'll cut a hundred and fifty, two hundred and fifty, whatever you need, brussel sprout stalks and give them to you. If you can store them, you can you can have 'em.' And they had no place to store them. And I think it was the [organization's] coolers were down or maybe they don't have access to those or whatever. So that- those ended up -getting wasted. And that was just a shame, cause you know there were probably another two hundred and fifty or three hundred stalks of brussels sprouts out there. So those were wasted because nobody had a place to store them.

A few growers said they were also interested in donating more of their seconds, specifically, but were not clear if sites were interested in that type of produce. A grower from Windham County shared that,

“[I]f I knew people would actually want it I would take that little bit of time and little bit of effort and little bit of money to- to donate it. But oftentimes we just don’t because it feels like, I don’t want to be offensive by dropping off half rotten tomatoes.” Better communication between donation sites and growers would be needed in these cases to determine what kinds of produce are acceptable. Overall, the point being that there are potentially more opportunities for donations should transportation and communication be bolstered, as most growers already donate and are interested in continuing to do so.

LOSS? WHAT LOSS?

A number of growers emphasized that even when produce doesn’t make it to be sold, donated, or eaten by the growers themselves, it is definitely not “lost”. Many repurpose the produce into animal feed. As one grower from Orleans County noted “Yes, so obviously food for people first. But if there's - the truck isn't going until Thursday and it's there on Monday and on Wednesday it's bad...it goes to the pigs.” A large number of respondents discussed tilling under the crops if they didn’t leave the field, but no one characterized this as a “loss”. As a grower from Rutland County articulated:

I don't think that when crops are not picked they're necessarily wasted, because they get tilled back into the soil, and they build the soil. So it's not like it's goin' in the trash to landfill. It's going back into the soil. So had we tilled in that spinach, that woulda been good for the soil. Of course, better that that spinach get eaten by people who need it, but I, I guess I somewhat challenge the concept that if it's not picked, it's necessarily wasted. It's just used in a different way.

This is echoed by many, including this grower from Windham County, who also notes that tilling the crops into the land often also makes economic sense:

[L]eaving a crop of broccoli that got a little sun-scalded in the field to just get plowed under is actually adding a fair amount of organic matter and nutrition back into the field that we're not paying for and so on top of the sort of economics of pulling food out of the field, the time it takes to cut it and wash it and pack it then distribute it is also the reality that there's some at least nominal benefit or marginal benefit to leaving it there.

Gleaning

Many of the growers interviewed also work with gleaners on their farms, some regularly and some irregularly. A number of gleaning organizations conduct both field gleaning and manage pickups of donations that the growers harvested themselves. The ability to engage volunteers, as opposed to having to rely on paid labor, enables the growers to donate much more food than they otherwise would, and move much more of their surplus produce off of their fields than they otherwise would. As a grower from Rutland County explained:

Either we don't have a market for them, or they're not really perfect, or they have some damage beyond what the farmer eats. And so [the gleaning organization] is just on the ready. You can call 'em up and say, 'hey, I got a box of forty pounds of peppers, do you want 'em?' 'Yup.' 'Okay, you wanna come tomorrow and pick 'em up?' 'Yup.' And then, then that's it. It's like this miracle. They disappear from the farm. I don't need to think about them anymore. I know they go good places, but I don't have to bring them to those good places. I don't have to figure that out.

While the Rutland County grower had a relationship with a gleaning organization where they were able to mobilize them in a short time window, a number of growers noted that they don't have this but see it as a necessary element of a successful gleaning operation. Due to the nature of harvesting most produce, growers need gleaners to be able to come to the farms quickly before they rot. However, growers themselves most often don't know what will be ready to harvest until right beforehand. One grower from Bennington County explained that they have "been very challenged to find people who are willing to glean at the moment in time - the very small window in time, when the food is available to be gleaned." A number of growers noted that some gleaning operations necessitate planning more ahead of time than they are able to do, such as this grower from Windham County:

[T]here's gleaners around here, but you usually have to...plan with the gleaners many days ahead of time and often times, just cause, I don't know, we don't have our [stuff] together as well as maybe we should, we don't really know that a crop-- by the time we get out to pick a crop and we realize that it is sort of maybe seconds, or Grade B, or something that we're not necessarily have a good market for, it— one of the reasons that is often the case is that it's getting old and usually to wait three or four or five days to have it picked, it's, even at the point the gleaners might not want it. You know what I mean? It's just such a small picking window.

The consensus among growers interviewed is that being able to have gleaners mobilize on a short timeline would result in capturing more produce, as this grower from Windham County shared:

[I]f we could call somebody up at five o'clock and say, "I've got a bunch of stuff," and they could be there at 5 o'clock the next day, that would- like that's what makes it work well because that's the nature of... that's how I manage, so I take a walk at the end of the day and I see what needs to be done and the next day we do it, not like three days down the road. And it's- it's really hard to- I can understand how that's really challenging but it's, that how things work in a vegetable field.

Alternatively, other growers proposed having gleaners come on a regular schedule, thereby cutting out most communication necessary, which during the harvesting months adds one more thing onto grower's plates. This grower from Orange County discussed how this type of regular visit works well for them, and how they can always find something for the gleaners to harvest:

I just know from my own experience that if you have to make the phone call...to the organization and try to set up the gleaning, we are so busy as farmers trying to do everything else you just don't make phone calls easily. Whereas if you just know they're showing up it's like some days I

even forget their coming and at the last minute I remember 'oh yeah, they're here!' And then you run out there and find something, but usually I have it already marked out ahead of time.

This would necessitate gleaners visiting farms on a regular schedule and being open to whatever the farm has to give. A different grower from Orange County, who doesn't currently work with gleaners, noted how a regular visit would be advantageous:

But if we had some kind of a regular schedule, I think it would be, you know, in the height of the season we're just, we're crunching through so much food here that it would be easy to, like, find a bed of arugula that we're done harvesting but that there's still plenty of good arugula out there and if volunteers wanted to come and harvest it, I think that would, we'd be totally willing to, you know, to work that out with a group of volunteers.

With gleaning, as with donations overall, one grower from Rutland County noted how framing it as a benefit to growers is a positive way to encourage more growers to take part in it:

[F]or a while, [the gleaning organization] was touting [themselves] as a hunger, food access project, and it is. There's no doubt about it. It absolutely is. But then...they kind of started looking at it as a service to farmers too. And it- that dynamic really helped a lot, because there were a couple of farms that started participating, I think because they said, 'we can help you.' As opposed to 'oh, this is a feel-good thing, you're helping people.'

Donating surplus produce is indeed a way to reduce food loss on farms, and a system that a number of growers already actively take part in. Although, as this grower from Washington County emphasized: "you know the ultimate goal of farming is to sell the product, not to give it away to gleaners." In order to maximize gleaning, and donations overall, from growers, it is necessary to shape it into a service to help growers in the effort to reach more eaters and educate more consumers.

FEDERAL ENHANCED TAX DEDUCTION FOR FOOD DONATIONS

In December 2015, the Federal Enhanced Tax Deduction for Food Donations was permanently extended to all business types, including farms of all sizes. At the time of these interviews, almost all of the growers said they were not planning on taking part in this enhanced tax deduction for their 2016 taxes, their second year of eligibility. When asked about this, a number simply said they hadn't been aware of the tax deduction or their accountant hadn't told them about it.

A number of growers didn't think that they donated enough produce to make it profitable – thereby adding more work to their plate in preparing the tax form without enough of a payoff. As this grower from Caledonia County said, "if I had...tons and tons of something or crates and crates of something then that would be a different story but...just because of the size that I am I'm not in that category." A number of others weren't sure that the scale of their farms, and the donations that came from them, would make the deduction worthwhile.

Others, who had heard of the enhanced tax deduction, felt that it was a good idea but that it might not be worth the effort of tracking donations and filling out the forms. For example, this grower from Bennington County notes:

Cause often these are days when we're working from about six in the morning until ten at night and kind of making sure that we have the paperwork flow back and forth that we can tuck in the file for tax time- it just hasn't happened for us. But it was really nice to see that addressed in tax laws.

One grower from Orange County, however, shared how at least one of their donation sites tracked their donations for them, highlighting a possibly good idea for others to help out growers:

But [the] organization that we work with, this year for the first time, so they, they actually tracked by weight the amount of produce that we donated. And they're, they said they were gonna send us kind of a summary of that for this, you know for tax reasons. So I, I mean I'm glad to see that that's an option for us. And, and I, but yeah we've yet to sort of see that play out. So I don't know how, if it will have any effects but I think it's a good incentive for sure. You know, just to know that there's some... It's a, yeah, it's another way to put a value on the donations instead of it just being a total loss.

The big takeaway from growers, however, was that at the time of the interview, most either were not preparing to take part in the tax deduction or were not sure if they were going to. The payoff of the extra tracking and work wasn't clear to most. Importantly, a number of growers noted that the tax deduction was not an incentive to them to donate. As this grower from Caledonia County said, "Quite honestly it doesn't make a difference to me. I do it anyway. I donate a lot...the tax credit is not a motivation for me."

3. Improve planning

A number of growers interviewed discussed that they thought food loss on farms could also be greatly reduced through a series of better crop management practices. For example, as one grower from Washington County described:

The reason that we have crops that don't make the cut is not labor it's, it's a management thing, you know you have something that didn't get weeded or something that didn't get sprayed on time, or you know irrigation wasn't quite enough...

Another grower, from Addison County, echoed this idea that when best farming practice isn't followed, more food loss occurs:

But, if you have sowed your potatoes properly, you're not gonna get a lot of [problems]. So, the number one thing to prevent, food- I guess what you would call food loss, is good farming techniques.

A few growers discussed the timing of when crops are planted as an important contributor to food loss. A grower from Rutland County shared how practices such as planting certain crops at certain points in the season can result in more product hitting the market than there is demand, and how this is predictable at this point:

Yeah, well the first thing I would say is farmers- we all need to get better at figuring out- we all know that mid-season zucchini is probably not going to sell real great, because everybody and everybody's neighbor has way more zucchini than they need. And so, I think that as farmers, we bear some responsibility to say- we might need to think a little bit differently about what we plant and when we plant it. I mean, it's not always possible, because sometimes the market changes. One year, dandelion greens are a real hot commodity, because they've been in the New York Times magazine a couple of times. And then, they're not. So you can't always know, but- so I think we do bear some responsibility of saying, 'how do we make some decisions.'

Other growers shared how they are extremely conscious of when they plant their crops, particularly with regards to ensuring that they are well set up to harvest them when they are likely to be ready. This grower from Lamoille County discusses how this leads them to not plant more of a crop that they could likely sell because it would be difficult for them to harvest, given the calendar for the rest of their crops:

[W]e have things timed, so we grow apples on the farm and we grow elderberry... and [other] things. Those are harvested at different times than the black currents and the gooseberries and stuff like that, so we couldn't—you know we're not putting in any more black currents, even though we could probably sell 'em, because that would be too crazy in the picking season and we probably wouldn't be able to pick 'em. So we, we've kind of expanded the different, you know, fruits that we have to the level that we can harvest them and not necessarily beyond that. You know...some people 'We're just gonna put in a big field of this and worry about harvesting it later' that's not our, that's not our strategy.

As most growers explained, farming is unpredictable, what with the weather, pests, market cycles, and other factors. This unpredictability combined with the need for growers to fill orders makes planting more crops that will likely – and often do – result in surplus produce, as necessity. This grower from Orange County clarified this point here:

Well, you always are gonna grow more than what you can sell, I mean that's just by definition you have to do that. Because you need to, well, okay most of us grow for direct markets, either to a stand or directly to restaurants or stores. Those people expect a steady consistent supply of produce, so in order to ensure that, you're gonna grow extra. Plus depending upon the weather, crops and moisture and sun and light all that temperature, crops will tend to come in together sometimes or gap, if you follow what I'm saying. It's a very, like for instance we do 14 plantings of broccoli. But at some point, and they're usually spread about a week to ten days apart. But unless

you did an absolute, even if you did a degree day kind of analysis, which we do a little bit of, and plan it based upon degree days, you can't guess what the future's gonna bring. And as a result, eventually somewhere along the line you'll get two, three, four, crops coming in at the same time, which means you'll probably have a glut, too much of it. So that's where the gleaners come in because you're not gonna keep a workforce on hand to pick a whole lot of stuff that you can't sell... you're just always gonna have some extra, and you wanna have some extra cause you don't wanna have that pressure on you to be able, you don't want to turn to a customer and say 'I'm sorry I don't have it this week for ya'.

While growers discussed a series of ways in which certain management and planning techniques would reduce food loss, this doesn't diminish the good reasons growers sometimes don't or can't do them at present within the current system.



NEXT STEPS

Based on the perspectives and insights outlined above, we identify seven key recommendations for reducing food loss on farms. In order to **increase sales of surplus produce**, we recommend increased marketing – particularly of seconds - to institutions such as restaurants and schools, and to value-added processors, who may be able and interested in purchasing and processing seconds for a lower price. We recommend a targeted **public education campaign** around Vermont to educate consumers on the various ways wholesome produce can look, and how to eat seconds, and the benefits of local produce. We also recommend **more discussion and attention be placed on the prices attached to surplus produce**, tracking the effect of introducing more of these products into the market on growers' bottom lines. All three of these recommendations are intended both for growers and the various supporting institutions and organizations.

Since donation has been a key system in capturing food loss, and growers so willing to take part in it, we also recommend strengthening certain elements of the system to lessen the costs growers incur. To this end, we recommend **support of transportation to help in pickup and transfer of donated produce from farms, as well as support additional storage among donation sites**. In order to strengthen the gleaning operations, we recommend gleaning organizations and farms to coordinate with one-another well-ahead of the season on a mobilization response strategy: either one in which gleaners mobilize in a short time window, or one in which gleaners visit farms on a regular basis. Finally, we recommend that additional research involving growers is conducted to identify which **planting, growing, and harvesting practices** are difficult to maintain and that lead to substantive food loss. Should widespread practices amenable to change be identified that lead to systemic food loss, these would be important areas to focus resources on for improvement.

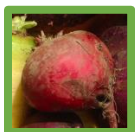
In summary, we recommend the following **seven actions to respond to food loss in Vermont** based on the findings from this report:



Increase marketing of seconds to restaurants, public institutions, and value-added processors



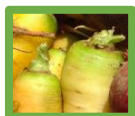
Launch a public campaign around Vermont to educate consumers on the various ways wholesome produce can look, how to eat seconds, and the benefits of local produce



Facilitate open discussion and support research tracking surplus produce prices and the effect of introducing more of these products into the market on growers' bottom lines



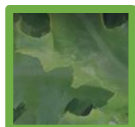
Invest in supply chain infrastructure to support market development and expansion



Increase transportation assistance to help in pickup and transfer of donated produce from farms and invest in storage at donation receiving sites



Encourage gleaning organizations and farms to coordinate well ahead of harvesting season on a mobilization response strategy: either one in which gleaners mobilize in a short time window, or one in which gleaners visit farms on a regular basis



Conduct future research to identify which planting, growing, and harvesting practices are difficult to maintain and that lead to substantive food loss

While important recommendations have been issued by a number of leading food policy organizations, government institutions, and other centers on how to capture food loss on farms, we are enthusiastic about capturing and operationalizing the ideas raised by these twenty-four Vermont growers. Their particular knowledge of Vermont's landscape, environment, and systems makes their perspectives and insights the needed base from which to take action.

ACKNOWLEDGEMENTS

Thank you to the following Middlebury College students who took part in the 2017 Winter Term course “Food Loss in Vermont”: Thomas Wentworth, Perri Silverhart, Ross Liftman, Junya Iwata, Gabriel Antonucci, Tricia Nelsen, Doug Wilson, Lea LeGardeur, Katie Reuther, and Meghan Colwell.

Thank you to Leigh Prezkop, Program Officer at the World Wildlife Fund, and Dr. Lisa K. Johnson, Senior Research Scholar in the Horticultural Science Department at the Center for Environmental Farming Systems at North Carolina State University for their insightful comments on a draft of this report.

We are grateful to the 24 individual growers who were interviewed for this report from around Vermont. Your generosity of time and insights were invaluable.



REFERENCES

- Berkenkamp, JoAnne. *Beyond Beauty: The Opportunities and Challenges of Cosmetically Imperfect Produce*. PowerPoint presentation part of National Good Food Network Webinar, October 22, 2015.
- Berkenkamp, JoAnne. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Summary of Findings, 2016.
- Berkenkamp, JoAnne and Terry Nennich. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Report Number 1: Survey Results from Minnesota Produce Growers, 2015.
- Berkenkamp, JoAnne and Terry Nennich. *Beyond beauty: The opportunities and challenges of cosmetically imperfect produce*. Report Number 2: Interview findings with Minnesota Produce Growers, 2015.
- Johnson, Lisa K., et al. "Field measurement in vegetable crops indicates need for reevaluation of on-farm food loss estimates in North America." *Agricultural Systems* 167 (2018): 136-142.
- Johnson, Lisa K., et al. "Estimating on-farm food loss at the field level: A methodology and applied case study on a North Carolina farm." *Resources, Conservation and Recycling* 137 (2018): 243-250.
- Left-Out: An Investigation of the Causes & Quantities of Crop Shrink. Natural Resources Defense Council. December 12, 2012.
<https://www.nrdc.org/resources/left-out-investigation-causes-quantities-crop-shrink>
- Neff, Roni A., et al. "Salvageable food losses from Vermont farms." *Journal of Agriculture, Food Systems, and Community Development* 8.2 (2018): 1-34.
- No Food Left Behind, Part 1: Underutilized Produce Ripe for Alternative Markets. World Wildlife Fund.
- No Food Left Behind: Underutilized Produce Ripe for Alternative Markets. March 2, 2018. Summary Report of Conference held at Santa Clara University. World Wildlife Fund, Santa Clara University Food and Agribusiness Institute, and Global Knowledge Initiative.
- Snow, Theresa and Elana Dean. Salvation Farms. "Fresh Produce Needs Across Vermont." (2016).
- ReFED. "A roadmap to reduce US food waste by 20 Percent." (2016).

APPENDIX A. INTERVIEW GUIDE

CAPTURING FOOD LOSS IN VERMONT: GROWERS' PERSPECTIVES INTERVIEW GUIDE

Introduction

Hello, my name is _____ and I am a student at Middlebury College. I am calling you as part of a project I am doing for my class called "Food Loss in Vermont". You may have received an email I sent to you on [date]. We are partnering with the gleaning non-profit Salvation Farms to speak with vegetable, fruit, and berry growers around Vermont to collect ideas on how to reduce food loss. In other words, what are growers' ideas for how we can reduce the amount of wholesome produce – that is intended for human consumption - that ends up not being sold, not being donated, or maybe not even being harvested. Salvation Farms will be using these ideas to guide and frame future conversations on how to go about capturing food loss in Vermont.

To that end, I would like to ask you about your ideas for capturing food loss. Would you be willing to speak with me now for 15 to 20 minutes?

YES →

Wonderful, thank you so much.

So you know, we will not be using your name or your farm's name to identify you in any report, and no files will be kept linking your interview with your name or farm's name. We will be attributing any quotes from your interview as "Grower from County X".

May I record this interview?

YES → Thank you. To note, after I transcribe this interview, I will be deleting this audio.

NO → Okay, I will be taking notes as we speak then.

If you want to contact me after this interview, you can reach me at _____@middlebury.edu.

Before we start, do you have any questions for me?

NO →

May I call you back at a more convenient time?

YES → *Schedule a specific date and time. Confirm the best phone number.*

NO → Thank you for your time and have a great day!

Farm Type

Do you sell vegetables from your farm?

Do you sell fruits from your farm?

Do you sell berries from your farm?

Capturing Food Loss

Main questions	Additional questions	Probes
<p>In a recent report by Salvation Farms, many growers said that they did not pick or sell some of their produce due to it being cosmetically blemished. What do you think growers need in order to move more cosmetically blemished produce?</p>	<p>What would enable <i>you</i> to sell more of this produce?</p> <p>Do you currently know of markets that purchase cosmetically blemished produce?</p> <p>Do you currently minimally process cosmetically blemished produce?</p>	
<p>In the same Salvation Farms report, many growers said that they did not pick all of their produce due to a lack of affordable or available labor. What kind of labor force would be needed to enable growers to pick more of their produce?</p>	<p>Would this be full-time labor? Part-time labor? Intermittent labor?</p> <p>Would you be able to schedule ahead of time how much labor you would need?</p> <p>What is a reasonable rate for farm labor? Does this fluctuate?</p> <p>Do gleaners meet this need for <i>you</i> now? If not, what would need to change so that they could?</p>	<p>Can you expand a little on this?</p> <p>Tell me more about...</p> <p>Can you give me an example of that?</p> <p>What did you mean when you said...</p>
<p>In the report, growers also said that they sometimes didn't pick or sell produce due to low market demand for that specific crop at harvest time. What kinds of systems and support would be helpful to move these excess crops off of the fields or off of growers' hands?</p>	<p>What would enable you to sell more of this produce?</p> <p>What would enable you to donate some/more of this produce?</p>	
<p>What are your thoughts on the federally enhanced tax credit that encourages growers to donate produce to charities?</p>	<p>Will you take advantage of this tax credit in your 2016 taxes?</p> <p>If not, why not?</p> <p>Would you be interested in alternative compensation for donating excess produce to charities? What kind?</p>	

<p>Would you be willing to sell <i>your</i> excess produce – that you aren't picking or selling now - below its normal, wholesale rate?</p>	<p>Is there a percent of your normal, wholesale rate at which you would be willing to sell your excess produce?</p> <p>What else would you need to make selling this produce worth your while?</p>	
<p>What other systems or supports would <i>you</i> be interested in to move excess wholesome produce off your fields or off your hands?</p>		

Conclusion

Those are all of the questions I have for you today. Do you have anything else you would like to share regarding what else growers would need to reduce food loss?

Thank you so much for your participation, we greatly appreciate your time and perspective. If you have any follow up questions or comments, feel free to reach out to me at _____@middlebury.edu.

Have a great day!

