

## Goose Blog Posts

### 1: Introduction to our SARE Grant, May 1, 2014

In 2013, the Gozzard City goose operation was formed, thanks to the excitement and passion of lead gozzard Wesley Bascom, and his friend, David Huck. Eventually, David's role in the project diminished, and I (Suzanne), began helping with some of the farm chores, and was part of all of the processing.

In December, feeling invigorated by the delicious taste of the geese we'd been eating, the three of us wrote a grant proposal for a study we hoped to do with funds from the Northeast Sustainable Agriculture Research and Education program (NE-SARE). The idea was to feed groups of geese in different ways, in order to learn how different regimens of grass and grain impacted feed conversion ratio, body weight, and flavor.

Although all three of us were new to writing grants, we put in lots and lots of hours, and ultimately, received the funding we'd requested!

When the geese are done brooding and go out onto pasture, we will separate them into groups, and feed each group differently. All three groups will have daily access to pasture. In addition, one group will get a particular amount of grain once per day, one will get that same amount of grain twice per day, and one will have access to all the grain they desire. We will weigh them each week, to track how they are growing on the different diets, and we will also weigh them after we slaughter them. Finally, in order to determine if the different

feeding regimens impact the meat, we will conduct a blind taste test of geese from the three different test groups.

I'm looking forward to that last part!

## 2: The Geese Arrive, May 5th, 2014

There are many things in life for which it is impossible to fully prepare: love, grief, major transitions, winter in Vermont. Recently, I learned that the arrival of 325, day-old goslings at one's home also qualifies. No matter how much you plan, organize, and build, you'll still be stymied by something.

Our geese are being brooded in a greenhouse, and on the morning of the day they arrived, a crew of us awoke at 5 a.m. to skin the building. We had planned for the structure to be completed days (or even weeks) earlier, but late frost, delays in the shipment of a necessary material, and minor bodily injuries, had held us back.

With our friends' helping hands, we made short work of the brooder. Wesley, Carly and David remained in Cabot to build waterers and feeding troughs, while Leah and I (Suzanne) dispatched to the Burlington Airport to pick up the birds, which were flying in from California.

As we pulled up in front of the airport, I imagined each member of the flock disembarking from the plane, toting little suitcases

with their wings, and waddling down the ramp towards me as I held up a sign reading, "Gozzard City." In truth, they were waiting behind the Delta desk. I could hear them peeping halfway across the terminal.

By 2 p.m., the baby birds -- packed in ventilated, hay-lined cardboard boxes -- were home. Gently, we plucked them from the boxes, and dipped each beak in the waterer to teach them how to drink. Then, we placed them on their feet, and watched them wobble around on their unsteady legs, discovering food, sand, the feeling of running, what it's like to nibble on a shoe, or a pair of jeans, or the webbing between a human's fingers.

The build-out of the brooder's interior wasn't completely finished, we hadn't made the fancy "nipple" waterer we'd been planning (and had defaulted to another style of watering vessel in the interim), but here we were, with a sturdy building, lots of chick feed, and the cutest collection of goslings we'd ever seen.

Even at that moment, on the first day of goose season 2014, we could look back on our choices and see things we would have done differently. Now, two weeks have gone by, and the birds are getting bigger and stronger every day. We've finished their fancy waterer, and taken them out on strolls. When our original stove turned out to be insufficiently sized to heat the brooder, we carted in a bigger one. After deciding their feed wasn't giving them all of the nutrients they needed -- Wesley noticed that some had shaky legs -- we began feeding them a supplement, and bringing them grass that we cut from the fields with a

scythe. They improved almost immediately.

Going from 130 birds last year to 320 this year means that we have a significant amount to learn. We will try things, fail, and adapt. At the end of the season, I expect that we will have gained a great deal of knowledge.

Yet, at this time next year, when our new geese arrive, I imagine we still won't feel ready, and will proceed to make a whole new set of mistakes. And the cycle will continue.

### 3. Taking the Geese Out For the First Time, May 13th 2014

At the end of their first week in the brooder, we took the geese out for a brief stroll. Not yet trained to follow our voices, they scattered around the barnyard, peeping and tugging at bits of grass. But after just a few minutes, the birds grew fatigued. Despite the availability of greens, most lay down on the ground, blinking sleepily. Soon, we cajoled them back into the greenhouse.

So much in their physiology has changed, since then. Their wings are longer, their adult feathers are coming in -- replacing the yellow fluff of babyhood -- their chests are curved and pronounced in a new way. Now, we can let them out to ramble, and they wander about the farm, mostly sticking together, munching on grass, clover and dandelion. Sometimes, for no

good reason, they run back towards the brooder in a pack -- usually when we're trying to build them a new waterer or adjust the platform scale Wesley constructed, and need them to remain outside.

We are brooding them for five weeks, but as we draw closer to the end of that time, the geese will spend more and more time outdoors, acclimatizing to changing temperatures, and seeking out most of their own nutrition. Now that their bodies are stronger and they have oily, protective feathers, we were able to take them outside after a hard rain and watch them play in mud puddles. It was a charming and absurd sight.

We didn't track metrics last year, so I can't know for sure, but this year's geese seem to be growing faster than our previous flock. Their brooder is bigger and better suited to geese than last year's version, and the nipple waterer has dramatically cut down on chore time (until it was up and running, we dragged out, cleaned and re-filled 5-gallon waterers three or four times per day).

There are always new things to consider and problems to solve -- and between a variety of projects, all of the gozzards are a bit overworked -- but when I watch the birds cavorting around in the pasture and splashing in the water, being a goose farmer feels pretty great.

- Suzanne

#### 4: Feather Picking Problems, June 2, 2014

As these geese got bigger, but were still not ready to live outside of their brooder (because they don't yet have a fully waterproof set of adult feathers), we began to notice some bad behavior. A few of the birds have been chasing the others around and tugging at their feathers.

Feather picking is usually caused by one of two things: lack of space – which we're pretty confident is not our problem, since the birds have lots of room – or a deficiency in nutrition. The goslings are getting a full-ration poultry diet, but since geese need somewhat different nutrients than chickens, it seems that there's supplementation needed.

And, given what they like to eat, the best thing we could think of to give them is greens. So, we took out our scythes. Now, each day, we bring the birds wheelbarrows full of grass, clover and dandelion, cut freshly from the fields.

After a couple days of this treatment, the feather picking seems to have diminished, but it's hard to tell, since we can only document what happens while we're observing them.

P.S. Note from later in the month...As soon as the birds were outside for a few days, the feather picking stopped completely.

## 5: The Means to Weigh, June 14, 2014

To meet the requirements of our SARE Grant, Wesley built a really awesome platform scale in the brooder. It allows us to weigh a bunch of geese at a time, so that we can track how much the way that we feed them impacts their size over time.

The scale is composed of plywood, with a little ramp that makes it easy for the geese to run up onto it. The weight is reported by means of a digital box hanging on the wall of the brooder, and it's accurate to within a pound – we know because we used it to weigh ourselves. It's also useful for tracking feed.

Each week, we herd the geese from their pasture to the brooder, and encourage them to walk onto the scale. Sometimes, this involves chasing them in circles for a while, but usually we manage pretty quickly. We count them when they're on the scale, too, and that's how we tell if we've lost any to predators.

Last year, we didn't do any weight tracking, so this is a great way for us to have better insights into how geese grow in general, and how our feeding is impacting our geese specifically.

## 6: Shade Structure, July 2, 2014

When geese will be out in the field during hot, sunny weather, it's important that they have sources of shade.

Last year, we built three large, heavy structures out of corrugated metal and wood, and had to drag them around the pastures. It wasn't a very efficient solution. It caused splinters and scrapes. And, we learned that if it the pricey shade cloth is anywhere close to beak level, the geese will chew on it, just as they do with all the synthetic materials we've seen them encounter (maybe someday, I'll tell you about how they stripped the wires out of one of our farm trucks!).

This year, we tried something a little different. We drilled and bolted together lengths of metal fence post, braced them, and put layers of shade cloth across the top. These structures proved much lighter, and although we had a little bit of trouble with one of them flipping over during a particularly strong windstorm, they've otherwise been sound. And, because the legs of the structures are taller than before, the geese couldn't nibble the shade cloth, so that was an added benefit.

Both Wesley and I love to make things more effective and efficient, so I imagine that next year, we'll find an even better method.

## 7: Special Cases, August 12, 2014

This year, we had a low rate of mortality in the brooder, and although we've lost a couple birds since to injuries sustained outdoors – mostly as a result of getting stuck in net fencing and panicking – for the most part, we've got a flock of very healthy



and robust birds.

But two of these geese aren't like the others. One of the birds has a skewed and twisted beak, which means that he has trouble eating, and his tongue is constantly exposed to the elements. The other, who we call Peeta, has an abnormally shaped body, with a chest that is concave where the other geese are convex, and legs that are wider apart than normal.

Interestingly enough, each of the birds has a very different place in the world. Skewbeak, perhaps to make up for his looks, is an aggressive bird. He pushes his way to the grain at feeding time, and is usually near the front of the pack when the birds are being herded. He's not as big as some of the other geese in his group, probably because it takes him longer to eat the same amount of food, but the bigger birds don't seem to push him around.

Peeta, on the other hand, tries to stay as far away from the other geese as possible, and gets bullied when he gets close. If we come to the pasture and notice that one goose has slipped outside of the fencing and is wandering around on the outskirts, doing his own thing, the likelihood is that as we get closer, we realize it's Peeta.

I'm not sure what causes one odd goose to have a fine relationship with its peers, and causes the other one to be shunned. And, since I can't ask them, I'll probably never know.

8: Field Grain, September 28, 2014

Today, we let the geese out onto a patch of rye, to see how they would handle the grain's seed heads in the field. The result was pretty perfect. At their full adult height they could easily reach the tender rye berries, and because the plants are tall, trampling didn't seem to be a problem. With other, shorter crops we'd noticed the geese knocking over and crushing plants that might otherwise have made good feed, but that didn't happen, here.

When they'd eaten through a patch of grain, we scythed down the stalks, and used them as bedding in the night houses.

Given the cost of tilling and planting, however, we suspect that growing all of the non-pasture feed for our birds is not a financially viable option. Although we operate on a vegetable farm, and have some level of integration with its operations, we are not in a position to rent land in order to plant large swaths of grains, and then run the geese through it.

If we were operating a diversified farm, and wanted to cycle fields through various types of cropping and use the geese as a plant processing/manure input, that might be a different story.

Nevertheless, there are reasons that this information is exciting. Equipment for harvesting and threshing grain is pricey, and so is storage, so knowing that the geese can do their own processing is certainly worthy of note.

9: Greedy Grain-Eating Geese, October 2, 2014

Over the last few weeks, I've noticed something that has

surprised me. The geese that get the smallest amount of grain are pretty pliable when we're herding them, and will generally go where human gozzards would like them to, while the geese that are given the most grain are more stubborn, and aren't particularly interested in doing what we ask of them.

As I mentioned in an earlier blog post, once per week we herd each group of geese from their field up to the brooder, and get them to run onto the platform scale for the weigh-in. Frankly, this is one of the most frustrating tasks we do. Even with two of us, herding each group up a hill and into a building and then asking squadrons to hop onto the scale, takes quite a long time. Since we need to weigh them before they've eaten anything, we usually do it before human breakfast, which doesn't help anything!

And, when we get to the group that is fattest and least eager to get out onto the grassy pasture hungry, they just don't obey. They run away, squonking, or they sit down in the middle of the road, or generally waddle in the slowest possible manner. We suspect that the ones that get less grain are a bit more hungry, and thus, are eager to get out to the pasture, or wherever it is that we are leading them, whereas the ones that have free-choice access to grain aren't in much of a hurry to do anything in particular, least of all, follow humans around.

10: The Roots of our Geese, October 7, 2014

A few days ago, we purchased a load of squash and root vegetable seconds, and took the apple pomace from some on-farm cider pressing, and attempted to feed them to the geese as part of their fattening rations.

Unfortunately, although the geese seem to be excited about many random things that don't qualify as food (they nibble at our clothing, shade cloth, plastic of all sorts), they did not seem particularly inclined to fatten themselves on these particular products.

In previous observations, we noticed that birds fed more grain are less interested in grass, and that the ones fed more grass are less interested in grain.

Perhaps, if we want to utilize a greater variety of feedstocks, we need to begin feeding them a broader diet earlier in their lives.

For now, because we're concerned about the salability of the final product, and are aware that the pasture loses feed value as temperatures drop, we will switch to feeding all of the geese free choice grain, in the hopes of fattening them as much as possible before slaughter.

11: Feather Windows, October 13, 2014

We're getting close to the feather-window for our geese. What's a feather-window? It's the time when a bird's quills are fairly easy to tug out, there are no new pin-feathers in the process of growing in. If you catch your flock in the feather-window,

plucking the birds can be a breeze (or at least, won't be too time consuming). If you miss it, it could add a significant number of minutes to the time it takes to process each bird.

Unfortunately, there's not widespread agreement on when those windows occur. Some sources say the first one happens at 9-10 weeks, and every six weeks thereafter, whereas others say that the best plucking is at 12 and 18 weeks.

So, our slaughter facility is ready to go, and we will check the birds regularly for the signs that they are ready to pluck. Once they are, we'll implement our slaughter plan, and carry out all of the processing for the year.

Because waterfowl feathers are difficult to remove, we go through a multi-stage process, of scalding, using a plucker, hand plucking, waxing, and finish plucking. Last year, getting a bird from the kill cone through the process and into a package took us 1.5 hours! The majority of that time was spent dealing with feathers. This year, with the help of some new equipment, we hope to get much faster. I'll write another post about that, when we get closer to the processing date.

## 12: Slaughter Equipment, October 20, 2014

The biggest challenge to making our goose operation financially viable isn't the cost of feed. And it's not the daily chores that we do to keep the birds fed and watered and on pasture. Nor is it losses from predation or other causes. After a whole summer of labor, the profitability of our company can be made or broken by

the few days we spend processing the birds.

If you read my post on feather windows, you know that waterfowl are sometimes easier or harder to pluck, depending on their molting cycle. If the birds are ready to go, plucking can be (almost) a breeze. If not, get ready to spend a very long time on each one.

And, as with any repetitive task that you'll be doing over hours and with multiple people, small inefficiencies add up.

Last year, it took us nearly an hour and a half to process each goose. If we pay our helpers \$15 an hour, that comes out to \$22.50 per goose. Given a 10-pound goose, that means that processing costs add \$2.25 per pound to the price!

Why did it take so long? A bunch of factors: inexperience; missing the feather window; uncomfortable working conditions (it was a very cold day); untrained staff; lack of good equipment.

This year, we decided to invest in some equipment that would help with the slaughter. We found some really old stuff on Craigslist for a few thousand dollars, bought it, and stashed it away until Wesley had time to work on it. The haul included a rotating Ashley scalding tank, a turkey plucker (which we outfitted with fingers that are made for waterfowl), tables, trays for holding organs, kill cones, and a variety of other things.

Finally, Wes put a great deal of thought into setting up our facility, and the two of us walked through the process, trying to find ways to tighten up the setup. In doing so, we considered how many (human) steps it would take to move birds through the different phases of the process, how we could employ hoses running hot and cold water in the most logical way, and how to make the process safe, comfortable for workers, and clean.

### 13: The Process of Processing, October 28, 2014

I am very excited to report that the equipment that Gozzard City bought for processing, the set-up of our facility, and perhaps some good training, allowed us to process much, much faster than last year.

As I've mentioned before, last year, it took us an hour and a half per goose, from killing them to putting them in bags. This year, with Wesley and me working alone, we were able to maintain a pace of about 30 minutes per goose. On other days, depending on the speed of the people working with us, we generally kept the pace under 40 minutes per bird.

Practically, that means that slaughter cost is adding much less to the final price of the bird, and that the process is easier on our bodies, too.

We go through a lot of steps to ensure that our birds are super clean and very high quality, and that means that there are many different phases in our processing process. We scaled, hand-pluck, use a mechanical plucker, wax, and finish pluck every single goose that comes through our facility.