Reducing food waste in agriculture settings: A guide for residents of Polk, Story, and surrounding counties

Cassandra Britt
chbritt@iastate.edu

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REDUCING FOOD WASTE IN AGRICULTURE SETTINGS

A Guide for Residents of Polk, Story, and Surrounding Counties
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![Figure 1](image1.jpg)

![Figure 2](image2.jpg)

![Figure 3](image3.jpg)
Statistics show that 40% of the food produced in the United States each year is either left to decompose in the field or taken to a landfill. This amount of waste equals approximately $165 billion discarded by Americans each year (Move for Hunger, 2018). According to the World Resources Institute, food waste is defined as "the discarding of food that is fit for consumption, either before or after it spoils" (Breewood, 2019, p. 4). Wasting food has many negative impacts on the environment. These negative impacts include the exhaustion of resources used to grow and process food, land cleared to grow food and erect buildings for processing, and methane emissions from food waste in landfills. Other negative effects of food waste include wasted money and unnecessary food insecurity among the nation. Research shows there are more than 42 million food insecure people living in the United States (Move for Hunger, 2018). This number could be significantly reduced by properly allocating excess food.

At the heart of food production are those in the agriculture industry, making them our first line of defense against food waste and food insecurity. Excess food in this industry not only includes the occasional overly bountiful crop yields and blemished crops, but also excess cooked food from venues participating in agritourism.

The agritourism sector of agriculture is unique in the way that it combines aspects of both agriculture and tourism. Some examples of businesses in this industry are wineries, apple orchards, pumpkin patches, and berry farms. Many of these businesses provide some form of interactive experience for customers involving food. This might include hosting events where meals are distributed or sold, having on-site bakeries, or running an on-site restaurant.

Due to the large quantities of food grown and distributed in the agriculture industry, it can be difficult to find a solution to food waste. However, small changes can lead to big impacts. This resource was developed to help those in the agriculture industry connect more easily with food donation organizations and find better alternatives to food waste. By working in conjunction with food donation organizations and practicing civic engagement, quality food that would have been sent to a landfill can instead help feed those who are hungry.

DONATION

One of the best ways to prevent food waste is through donation. There is a surplus of food in the United States, and if better utilized, it could reach those who are food insecure. Farmers and food donation organizations can work together to end hunger!

I’ve considered donating, but I don’t want to get in trouble. What if someone becomes ill and tries to take legal action against me?

GOOD SAMARITAN LAW

Many are worried that if they donate food, especially leftover cooked or baked food, they may be in legal trouble if a consumer becomes ill. Often times, the same misconception is thought in regards to donating home-grown food, such as seasonal produce. The good news is, the Good Samaritan Food Donation Act is in place to protect people who donate.

As stated by the Feeding America organization, the Federal Bill Emerson Good Samaritan Food Donation Act works in the following ways:

1. Protects you from liability when you donate to a non-profit organization.
2. Protects you from civil and criminal liability should the product donated in good faith later cause harm to the recipient.
3. Standardized donor liability exposure. You or your legal counsel do not need to investigate liability laws in 50 states.
4. Sets a floor of “gross negligence” or intentional misconduct for persons who donate grocery product. (Feeding America, 2019, para. 2)

More information about the Good Samaritan Food Donation Act can be found here: https://www.feedingamerica.org/about-us/partners/become-a-product-partner/food-partners
The State of Iowa offers the Farm to Food Donation Tax Credit Program as an incentive for farmers to donate excess food. According to the Iowa Department of Revenue (2019, para. 1), “farmers who donate self-produced food commodities to food banks and food pantries in an amount equaling the lesser of $5,000 or 15% of the value of the commodities donated during the tax year for which credit is claimed” will receive a **tax credit**. This credit can be applied to corporate income and individual income taxes.

**Components of the tax benefit:**

- The food organization to which food is donated must be registered for the Farm to Food Tax Credit Donation Program.
- Registered food organizations in Polk and Story counties include:
  - Food Bank of Iowa, Des Moines, IA, 515.867.2894
  - Des Moines Area Religious Council, Des Moines, IA, 515.282.2026
- Use the Donation Valuation Worksheet on the next page to value your donation.
- After making the donation, taxpayers will receive an authorized food organization receipt. All receipts from the year should be sent together and postmarked by January 15 of the year following when the donations were made.
- The value of the donation may be included as a charitable contribution on the federal tax return as well.
- For more information, please view the following website: [https://tax.iowa.gov/farm-food-donation-tax-credit](https://tax.iowa.gov/farm-food-donation-tax-credit)

(Iowa Department of Revenue, 2019)
WHERE CAN I DONATE FOOD IN POLK AND STORY COUNTIES?

The following pages are your guide to all the current food banks in Polk and Story counties.

Food banks listed with an (*) next to them are registered for the Farm to Food Donat ion Tax Credit. To receive credit when donating, please donate to these registered organizations.

It is a common misconception that cooked food cannot be donated, but there are organizations that can put your unserved leftovers to use. To donate unserved leftovers, call Central Iowa Shelter and Services at 515.284.5719.

For more information about each pantry, visit the website listed or call the pantry. It is often a good idea to call ahead to ensure the pantry is open and can accept any food items in question. Once connections are established between the pantry and yourself, it will be easier to donate regularly!

For additional food banks outside of Polk and Story counties, visit the website below and search for your area.
https://www.feedingamerica.org/find-your-local-foodbank

ANKENY
Impact Community Action Partnership
https://www.impactcap.org/
2701 SE Convenience Blvd, Suite 2
Ankeny, IA 50021
515.965.0433

CLIVE
Clive Community Services
http://clivecommunityservices.com/
2190 NW 62nd St, Suite A
Clive, IA 50325
515.257.8550

DES MOINES
Bidwell Riverside Center
https://www.bidwellriverside.org/
food-and-clothing-pantry
1203 Hartford Avenue, Des Moines, IA 50315
bidwell@bidwellriverside.org
515.244.6251

Caring Hands Eastview Food Pantry
http://www.eastviewcc.com /
4101 East 42nd Street, Des Moines, IA 50317
515.809.2356

Catholic Charities Outreach Center
www.catholiccharitiesdm.org/contact-us/
1815 Hubbell Ave, Des Moines, IA 50316
515.262.7290

Central Iowa Shelter and Services
https://centraliowashelter.org/
1420 Mulberry St, Des Moines, IA 50309
515.284.5719

* DMARC (Des Moines Area Religious Council)
https://www.dmarcunited.org/donate/food/fresh
1435 Mulberry St, Des Moines, IA 50309
info@dmarcunited.org
515.282.2026

* Food Bank of Iowa
https://www.foodbankiowa.org/
make-a-difference/donate-food
2220 E 17th St, Des Moines, IA 50316
eshearer@foodbankiowa.org
515.867.2894

Polk County Northside Food Pantry
https://www.polkcountyiowa.gov/cfys/services/polk-county-food-pantry-sites/
3010 6th Ave, Des Moines, IA 50313
515.286.2220

Polk County River Place Food Pantry
https://www.polkcountyiowa.gov/cfys/services/polk-county-food-pantry-sites/
2309 Euclid Ave, Des Moines, IA 50310
515.286.3695

Salvation Army Citadel (East)
1216 E 25th Ct, Des Moines, IA 50317
515.266.3156

Salvation Army Temple (West)
1330 6th Ave, Des Moines, IA 50314
515.282.3422

West Des Moines Human Services
139 6th St, West Des Moines, IA 50265
515.222.3660

JOHNSTON
Partnership Place
johnstonpartnership.org/home/closet_at_crown_point
5870 Merle Hay Rd, Suite D, Johnston, IA 50131
515.868.1357

URBANDALE
Urbandale Food Pantry
http://www.urbandalefoodpantry.org/
7611 Douglas Ave, Suite 34/35
Urbandale, IA 50322
515.251.6688

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Figure 6

Figure 7

Figure 8

THANK YOU FOR YOUR DONATION
### Food Pantries in Story County

** AMES **
- **Ames Calvary Methodist Church**
  - [Website](https://www.amescalvarymethodist.org/)
  - 1403 21st St, Ames, IA 50010
  - calvaryames@yahoo.com
  - 515.232.6329

- **Bethesda Community Food Pantry**
  - [Website](https://www.bethesdaames.org/food-pantry/)
  - 1517 Northwestern Ave, Ames, IA 50010
  - 515.232.6256

- **Food at First**
  - [Website](https://foodatfirst.wordpress.com/)
  - 611 Clark Ave, Ames, IA 50010
  - patty@foodatfirst.com
  - 515.232.6256

** CAMBRIDGE **
- **Cambridge Food Pantry**
  - 215 2nd St, Cambridge, IA 50046
  - 515.383.4392

** HUXLEY **
- **Fjeldberg Lutheran Church**
  - [Website](https://www.fjeldberglutheran.org/serve.html)
  - 209 N 2nd Ave, Huxley, IA 50124
  - fjeldberg@fjeldberglutheran.org
  - 515.597.2831

** MAXWELL **
- **Local Food Pantry**
  - [Website](https://www.iowahungersummit.org/en/the_iowa_hunger_directory/organizations_fighting_hunger/?action=detail&memberID=51688)
  - 221 Main Street, Maxwell, IA 50161
  - kjplunkett@hotmail.com
  - 515.387.8505

### Recipes and Preservation

Your donation can be better utilized when those who receive it are aware of how to prepare or preserve the food. Please share your favorite recipe made out of the donated food item or instructions on how to preserve the food.

#### Example: Cucumber Salad

**Name of Recipe:** Example: Cucumber Salad

**Ingredients:**
- 5 Cucumbers
- 2 1/2 cups Water
- 1 teaspoon Salt
- 1/2 cup Sugar
- 1/2 cup Vinegar

**Directions:**
- Peel the cucumbers and then slice thin. Soak in a solution of 2 cups water and a teaspoon of salt for 3 hours. Drain well. Then mix equal parts of sugar, vinegar, and water.
- Pour over drained cucumbers. Let this set for half a day before serving. This will keep for about a week.

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"If every one person donated 5 apples that were going to go to waste, that becomes a really big deal."
GLEANING

I would love to donate, but I don’t have much time.

Food organizations understand. Farmers are busy and do not always have time to bring excess food to a pantry to be donated. Luckily, this is where gleaning services come into play!

What is gleaning? Gleaning is “the act of collecting excess fresh foods from farms, gardens, farmers markets, grocers, restaurants, state/county fairs, or any other sources in order to provide it to those in need” (USDA, 2009, pg. 2). There are organizations you can contact if you need assistance in donating your food items. This could mean helping to harvest any remaining edible produce in the field that would otherwise be left behind or picking up secondhand produce that did not meet aesthetic standards but is still edible. Gleaning services are typically performed by volunteers who are passionate about food rescue. This service is free to the donor.

Eat Greater Des Moines is a great resource to contact for help with gleaning efforts in and around the Des Moines area.

Contact them here:
Eat Greater Des Moines
https://www.eatgreaterdesmoines.org/contact/
501 SW 7th Street, Suite G2, Des Moines, IA 50309
515.207.8908
aalvarez@eatgreaterdesmoines.org

The Society of Saint Andrew (SoSA) is a national gleaning organization. SoSA does not have a regional office in Iowa, however, if you have enough unused, unsold, or leftover produce to fill an entire truckload, they will assist you with your donation. In the event of a smaller donation, SoSA will do their best to coordinate a gleaning effort with their Iowa-based volunteers. If volunteers are not available, SoSA will work to connect you with other local resources.

Contact them here:
Society of Saint Andrew
https://endhunger.org/donate-crops/
800.333.4597
Info@EndHunger.org

“\(\text{We go to farms, get fresh food and bring it back to people in our community, give it to our elderly, daycares, our soup kitchens, etc. We make sure that nothing gets wasted and people eat local, fresh food. That just seems like a better world to me.}\)”

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**RECIPE AND PRESERVATION**

Your donation can be better utilized when those who receive it are aware of how to prepare or preserve the food. Please share your favorite recipe made out of the donated food item or instructions on how to preserve the food.

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Coordinating a gleaning effort does not mean you have to call upon an organization. Gleaning efforts can be organized with the help of friends and family or an organization to which you already belong.

1. Plan a post-harvest party with friends and family!
   - This can be a fun way to get together with friends and family for a good cause. If you have remaining edible produce that will not make it to market, invite friends and family over to help glean! Friends and family can help pick the remaining produce, keep what they would like, and donate the rest. Not only could this be a fun event, but this will allow you more control over who is allowed into your fields by inviting those that you already know and trust.

2. Reach out to an organization to which you and your family already belong, such as a church parish or kid's teams/clubs.
   - Your church parish may be more than willing to organize a group of volunteers to help glean your fields, especially if the parish runs their own food pantry to which the produce could be donated.
   - Your children's clubs and teams may also be promising volunteers! Gleaning would be a great volunteer activity for a local 4-H club or for members of your children's sports teams looking to gain silver service hours.

A helpful resource for both farmers and volunteers to read pre-glean can be found here: https://www.usda.gov/sites/default/files/documents/usda_gleaning_toolkit.pdf

Check out the resources below for additional assistance with food rescue. Many organizations can use food in various forms, whether that be fresh produce, hot or cold dishes leftover from an event, or bakery goods. As long as the food has been properly taken care of and is still safe to eat, there are organizations that will happily assist in rescuing the food.

**Chowbank App**

This app can be downloaded onto any smart device. The app allows those with excess food to pair with organizations that need it. After pairing with an organization that needs your food, the app will give you the organization's contact information and location so you can discuss whether the donation will be dropped off or if it needs to be picked up.

**4 Steps to Using Chowbank:**

1. Download the FREE Chowbank app from the app store on any smart device.
2. Connect with an organization who needs your food donation.
3. Indicate whether the food needs to be picked up at your location or if you are able to drop it off.
4. Donation complete! You've helped to feed those who are food insecure AND kept food from going to the landfill!

**For additional assistance with food rescue:**

Eat Greater Des Moines
https://www.eatgreaterdesmoines.org/contact/
501 SW 7th Street, Suite G2, Des Moines, IA 50309
515.207.8908
aalvarez@eatgreaterdesmoines.org
Inevitably, all food cannot be saved through donation. Fortunately, there are alternative options to save food scraps from the landfill, such as composting and feeding animals.

1. Composting

- Composting is a smart way to keep inedible food out of the landfill. Composting recycles organic materials and produces nutrients for soil, which helps plants grow.
- What can be composted?
  - Fruit scraps
  - Vegetable scraps
  - Grains (bread, cereal, pasta, etc.)
  - Tea bags (no staple)
  - Coffee grounds and filters
  - Eggshells
  - Nutshells
  - Leaves
  - Plant trimmings
- Gather waste in an outdoor compost bin. Bins can be purchased or handmade.
- It takes about four to six months for the compost to be ready for use. The compost should be dark brown and smell like soil. Once compost is ready, it can be used as fertilizer for lawn, gardens, and planting trees.

(Bay Area Recycling for Charities, 2019)

2. Animal Feed

- Some food products can be used as animal feed. If you have livestock, check to see what food scraps could be beneficially incorporated into the livestock’s diet.
- Pulps of some foods may be sold or donated to other farmers. For example, worms will eat some fruit pulps, and grape pulp can be mixed with cattle feed.
- If you know someone local who might benefit from your food scraps, reaching out to them may save your scraps from the landfill! If you have food scraps, but do not know of anyone who could use them, a Facebook post or newspaper ad may be a good way to advertise your leftovers.

"It's important to feed humans first, and if you can't, then it can go to compost or animals."

According to the Iowa Department of Natural Resources, “Iowans threw away an estimated 556,000 tons of food in 2017 - 20 percent of the garbage in landfills” (Kennedy, 2019, para. 4).
METHODOLOGY

Permission was obtained from the Institutional Review Board to conduct this research. A total of 13 interviews were conducted to gather information for this toolkit. The interviews were held in person and over the phone. Of the 13 interviews, six were with farmers and seven were with food donation organizations. Of the farmers interviewed, three were male and three were female. Of the food organization employees interviewed, one was male and six were female. The length of the interviews spanned from 9 to 50 minutes, with an average interview time of 24 minutes. Farmers were asked how they currently reduce food waste and what forms of information would be helpful in supporting them to increase food waste reduction efforts. Food organizations were asked how they currently raise awareness about their program and what form of services they could offer to farmers interested in donating. The main themes were derived from the interviews and became the focal points for the toolkit.

ACKNOWLEDGMENTS

I would like to thank those that made contributions to this project. First, I would like to thank my committee members, Dr. Eric D. Olson, Dr. Eunha Jeong, and Dr. Linda Niehm, for their guidance and advice throughout the process of creating this toolkit. A special thank you also goes to Dr. Chin-Hsun Tsai for acting as a substitute committee member at my defense and providing valuable feedback towards the project. Second, I would like to thank food donation organizations and farmers in the agriculture industry that agreed to be interviewed for this project. Their knowledge in this area was priceless. Third, thank you to Courtney Long, Iowa State University Extension and Outreach Program Coordinator, for her help and guidance. Lastly, I would like to thank my family and friends who supported me throughout this project. To everyone mentioned, I truly appreciate all the support, guidance, and contributions made.

REFERENCES


