



Stakeholder Perspectives: Uncovering Barriers and Benefits to Grain Bag Recycling in Nebraska

Plastic Grain Bag Recycling | Producer Perceptions Report



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Prepared for Nebraska Recycling Council
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DISCLAIMER FOR CONFIDENTIALITY

Research participants' comments and any identifying information has been excluded from these research findings in accordance with The Research Participant Consent Form and Non-Disclosure Agreement for this project (included in Appendix E and Appendix F, respectively).

Table of Contents

Executive Summary	3
Introduction	4
Research Overview	5
Research Methodology	5
Research Objectives	5
Research Approach	5
Research Findings	7
Grain Bag Users: Participant Profiles	7
Benefits to Grain Bag Recycling in Nebraska	9
Barriers to Grain Bag Recycling in Nebraska	14
Key Implications and Discussion	19
Next Steps	21
Appendices	23
Appendix A: Pre-Interview Online Survey Protocol	23
Appendix B: Interview Protocol	30
Appendix C: Interview Rubric	40
Appendix D: Grain Bag Preparation Procedures for Collection Sites	53
Appendix E: Research Participant Consent Form	55
Appendix F: Non-Disclosure Agreement	Error! Bookmark not defined.

Executive Summary

The Nebraska Recycling Council seeks to establish an in-state grain bag recycling program to divert ag plastics from landfills and reduce the potential for pollutants in the air, soil, and water that can result from other disposal methods for this product¹. The in-state grain bag recycling program necessitates engagement from grain bag dealers, collection site operators, recycling product (used plastic grain bags) processors (referred to herein as the “end-user”), and agricultural producers (referred to herein as “producers”). As the primary consumers of grain bags, producers are key stakeholders and have a significant role in the viability and sustained success of the recycling program.

This research report, made possible by a grant from the Nebraska Environmental Trust, aims to compile insights regarding the motivations for and barriers to producers participating in grain bag recycling. Research findings serve to ground truth, clarify, and provide greater understanding of producers' potential for engagement in grain bag recycling through a detailed analysis of their perceptions of the activity.

This report discusses the following findings:

- Characterization of research participants and demographics
- Benefits to recycling grain bags as perceived by producers
- Barriers to recycling grain bags as perceived by producers

From these findings, the following implications are noted for priority consideration when designing strategies that effectively engage producers in grain bag recycling:

- Recycling grain bags would be a new activity for the majority of producers and require them to make several related decisions to implement the behavior on their operations. These decisions include where and how to store bags and where and how to drop off bags for recycling or whom to partner with to ensure bags are collected. Because of producers' busy schedules and existing time demands, strategies should minimize the burden of grain bag recycling decisions by making them logistically feasible and simple to implement.
- Grain bag recycling feasibility and sustainability will be strengthened if the costs (monetary and non-monetary) to producers of recycling bags are at least equal if not lower than current costs for sending the grain bags to the landfill.
- There is a general interest among producers to recycle grain bags; however, their grain bag storage practices post-usage, location vis-a-vis collection points and landfills, and property configuration with respect to which parcel the bags are used in impacts their willingness to recycle grain bags currently or in the near future. Because of this it is important to provide easy and time-efficient drop off opportunities for grain bag collection in regionally centralized locations.

¹ Nebraska Recycling Council Nebraska Environmental Trust Grain Bag Recycling Project funding application

- Strategies for overcoming geographic and cost constraints to recycling may benefit from incentives to encourage grain bag recycling adoption. Incentives that encourage cooperative behavior, such as pooling bag stocks with other producers, may strengthen inter-producer relationships for sustained grain bag recycling. Other incentives could encourage participation in grain bag recycling at regular annual collection times.
- Identified “community connectors” such as grain bag dealers may be engaged to facilitate grain bag drop-offs or collection within their producer networks. Likewise, there may be opportunities to engage the community connectors in informal ways to influence recycling producers by using their institutional knowledge to advise on programmatic strategies or disseminate information.

Introduction

The use of plastic grain bags is increasing in Nebraska as costs to construct permanent grain storage options, like grain bins, increase. As farming operations cover wider geographical ranges, plastic grain bags provide producers a low-maintenance, single-season solution for storing large amounts of grain on-site until the time of sale.

Although these grain bags are a practical, cost-effective storage solution, they create significant plastic waste. Typically made of polyethylene, these bags average 9 feet wide and 200 feet long and can create thousands of pounds of on-site waste for producers. Predominate grain bag waste disposal options are landfilling, burning, and burying the plastic material after use. The Nebraska Recycling Council aims to establish the United States’ first year-round grain bag recycling collection system² as a more environmentally beneficial alternative to these disposal methods.

The Nebraska Recycling Council is working with end-user Firststar Recycling, based in Omaha, Nebraska, on a program to create a hub and spoke system of public grain bag collection sites across Nebraska to gather and process the plastic grain bag waste into other materials, including plastic lumber. One of the program’s goals is to increase grain bag recycling by reducing barriers and promoting benefits to engaging in this activity in Nebraska. This report summarizes the outcomes of research undertaken to uncover those benefits and barriers from the perspective of Nebraska producers. **This report presents the research methods and approaches, followed by a summary of the findings of the barriers and benefits to grain bag recycling that were uncovered, and concludes with a discussion of the key implications of the findings, which may be carried forward in program strategy selection and implementation activities.**

² Ibid.

Research Overview

Research Methodology

For this study, qualitative research was informed by Community Based Social Marketing (CBSM). A guiding principle of CBSM is its focus on a specific and unique behavior one wishes to elicit. The grain bag recycling program seeks to establish a successful grain bag recycling market in Nebraska. Thus, a key, desired behavioral outcome is for producers to recycle grain bags in lieu of other disposal methods.

Purposeful sampling was employed to identify producers (known herein also as “participants” while referring to research activities) for engagement in guided conversation-style interviews to understand their perceptions of the benefits and barriers associated with the desired behavior of recycling grain bags.

Research participants were selected from the grain bag recycling program consortium’s network, having been identified as individuals with the knowledge and experience to offer in-depth insights to achieve research objectives. Interviews were designed to gather insights that allow for the characterization of the grain bag recycling process from the perspective of producers, rather than quantifying responses to questions. This approach allowed the interviewer to request elaboration on responses, ask follow-up questions, and further explore producers’ feedback to uncover perceived barriers and benefits to grain bag recycling. Interviews were analyzed for emergent themes. The findings of this analysis are reported below. Personally identifiable information has been redacted from this report.

Research Objectives

The following research objectives were identified as they are related to benefits and barriers to producers participating in grain bag recycling in Nebraska:

1. to understand participant (producers) operations and potential grain bag recycling motivations, and
2. to identify and characterize barriers to recycling plastic grain bags.

Research Approach

The research took a two-step approach for the purpose of identifying barriers and benefits to grain bag recycling, beginning with an online survey followed by individual interviews with producers conducted over video conference.

Interview participants were intended to meet the following criteria: 1. would have the potential to participate in the program once launched based on existing relationships with consortium

members, 2. have current and past experience with making waste-management decisions on their operations, and 3. are using or have used plastic grain bags. Seven producers were selected as potential research participants, and six were interviewed. To help participants feel comfortable sharing personal experiences and opinions on grain bag recycling, researchers' engagement with producers was designed to limit time commitments, emphasize confidentiality, make surveys and forms available from mobile devices, and adopt a casual, jargon-free tone on communications, to the extent possible.

The survey and consent form were distributed to participants prior to their participation in the interview. Survey responses provided an understanding of producers farming operations; plastic grain bag use, storage, and disposal practices; and general recycling behaviors. Survey responses also were used to classify respondents as "recyclers" or "skeptics (about recycling)" prior to the interview and informed the questions asked during the interview to best elicit information about each participant's perceived benefits and the barriers with respect to recycling grain bags.

One-hour interviews were conducted by a team of two interviewers with each participant. Questions in the interviews were designed to be open-ended and included additional prompts to encourage sharing by participants. Questions were crafted to not bias participant responses, either by leading them to answer or making them feel that there is a correct answer. The questions avoid making assumptions about the intrinsic value placed by the interviewee on recycling, positive or negative experiences with recycling, and motivations for recycling or not recycling.

Appendix A and Appendix B provide a description of the protocol that was followed by the research team for the survey and interviews, respectively. Appendix C contains the interview documents identifying the questions that the interviewees were asked. Interviews were conducted in the first and second week of March 2022.

During the course of interviews, recurring themes regarding barriers and benefits to recycling emerged. For example, regardless of current bag disposal behavior, none of the interview participants were fundamentally opposed to recycling plastic grain bags. In fact, one producer who currently burns grain bags noted that he would be willing to recycle them if there was a viable alternative to do so, preferably in-state. It was concluded that producer interviews were sufficient, in part, because the research team began to hear repetitive insights from participants and the potential for gathering new or divergent perspectives to inform recommendations regarding producer participation was low. It is understood that additional stakeholders and subsets of producer groups could be interviewed at a later date for further insights, including small-scale producers or silage bag users.

Research Findings

Research findings include a description of the study participants and an in-depth discussion of findings regarding the benefits and barriers to producers recycling plastic grain bags.

Grain Bag Users: Participant Profiles

Table 1 presents information about the participant base collected from participant survey responses. This data was used to understand a baseline of recycling behaviors that informed the selection of interview questions most applicable to each participant's profile to best assess barriers and benefits. The participants who were interviewed are predominantly row crop producers, manage operations that are mid- to large size (more than 1,500 acres), and predominantly grow corn, soybean, wheat, cover crops, dry beans, and/or sugar beets. The number of years that the producers have been farming ranges from 9 years to 40 years.

Table 1: Grain Bag Recycling Research Participant Features

Participant	State Regional Location	Farm Size (Sm, Mid, Lrg)	Years Farming	Crops	Grain Bag Use Annually	Grain Bag Source	Recycles Grain Bags? (Y/N)	Recycles Other Materials on Operation (Y/N)
1	Midwest	Large	10	Corn, Soybean	Yes	Local	Yes	Yes
2	Midwest	Large	20	Corn, Soybean	Yes	Local	Yes	Yes
3	Midwest	Large	10	Corn, Soybean	Yes	Local	Yes	Yes
4	Midwest	Large	10	Corn, Soybean	Yes	Local	Yes	Yes
5	Midwest	Large	10	Corn, Soybean	Yes	Local	Yes	Yes
6	Midwest	Large	10	Corn, Soybean	Yes	Local	Yes	Yes

Regardless of whether someone was a recycler or skeptical about recycling, all participants were willing to openly discuss the procedures they followed to manage and dispose of grain bags post use, including associated operational decision-making variables. For example, one producer in our data set who did not recycle was not hesitant about noting that he burned bags.

Most of the producers who were interviewed both own and lease land. This feature has impacted the configuration of their operations on the landscape and means that, for some, their leased and owned parcels are situated at different locations. Such fragmented land ownership and management has consequences for the cost feasibility of installing expensive, permanent grain bins that require upfront costs (including steel expense and payable taxes) that far exceed costs of grain bags and grain bag equipment. Some producers have realized further cost savings by building their own bagging and rolling equipment. Plastic grain bags offer an alternative to grain bins and feature easier installation, greater placement flexibility, and therefore, convenience for storing grain safely on different parcels. These features have influenced some producers to use plastic grain bags for storage. For example, one participant said,

[REDACTED]

Most of the participants interviewed indicated that they plan to use a similar number of grain bags as they currently use or to increase the use of grain bags for storage in the future and feel that grain bag usage is on the rise in the state. The trend in increasing grain bag usage is important because feasibility of an in-state grain bag recycling operation is contingent upon there being a sufficient supply of bags. As stated previously, producers who use grain bags already have made upfront investments in equipment used to fill, empty, and roll up grain bags for storage and transportation (to landfill, recycling facility, or pick up point). These capital investments signal their willingness to continuously use the bags long-term. To this point, it should be noted that participants typically buy grain bags from an independent commercial dealer or from a fellow producer in their area. [REDACTED]

As presented in Figure 1, out of the five producers who responded to the survey, all but one currently participates in recycling of either grain bags or other material(s) on their operation. One participant did not provide a response to the survey but indicated during the interview that he intends to recycle grain bags once the amount of grain bags used on his operation has reached a critical amount such that it is cost effective for him to load and transport them to a recycling facility post-usage. Figure 1 captures statements regarding motivations and deterrents to recycling grain bags and other materials that participants selected from a menu of options as being relevant to their recycling decisions. These statements likely correlate to grain bag recycling motivations and deterrents and provided foundational insights for identifying potential barriers and benefits to grain bag recycling during interviews.

Figure 1: Existing Recycling Motivations and Deterrents*

MOTIVATIONS TO RECYCLE:

- “ It protects the environment.”
- “ It is the right thing to do.”
- “ It is good for current and future residents of my community.”
- “ It gives me personal satisfaction.”
- “ It is an easier way to deal with my waste than disposing of it at the landfill.”
- “ It provides me with additional income [through financial incentives].”

REASONS TO NOT RECYCLE:

- “ Recycling does not provide me with an income stream.”
- “ I don’t have proper information to be able to recycle.”
- “ It is too costly for my operation to recycle.”

**All statements pertaining to reasons to not recycle were selected by a single research participant.*

Following is a detailed discussion of the benefits and barriers to recycling grain bags that were uncovered in the interviews. This discussion provides insights to inform the development of strategies that will effectively support and encourage producers to recycle more plastic grain bags.

Benefits to Grain Bag Recycling in Nebraska

Participant survey responses and interviews suggest that producers are motivated to recycle grain bags. Research indicated producers predominately already engage in recycling behaviors and are motivated in general to recycle, even if not currently recycling grain bags in particular.

Specifically, producers are interested in grain bag recycling because **it is the responsible thing to do given the plastic’s potential to be repurposed for other materials**. Thus, one participant said,

[REDACTED]

Likewise, another producer said that recycling is the best option to prevent wastage of good quality plastic,

[REDACTED]

Another producer who is a user and dealer of grain bags indicated that recycling them **helps retain the value of the product in an alternative form, closing the loop**, so to speak, while also being good for the environment. He said,

[REDACTED]

Producers also mentioned that recycling was “the right thing to do” and that **recycling created a sense of intrinsic satisfaction**. One producer said,

[REDACTED]

Neighbors and community members can influence recycling behavior to the degree that producers are motivated by **being perceived by others as having a clean, well-maintained operation** and farm site. Plastic grain bag waste is seen as an eyesore when left to sit onsite where it can degrade, collect debris, and attract rodents.

To a point that goes hand in hand with reputational benefits, producers indicated that their motivation for recycling is high **because it reduces negative environmental impacts from alternative disposal methods of landfilling or burning**. Burning also was identified as having the potential to contribute to reputational harm for producers among their neighbors and others. One participant noted with respect to burning bags that,

[REDACTED]

Producers are also willing to recycle grain bags if it **provides an additional revenue stream or reduces costs of production overall**. Thus, a participant who recycles bags said,

[REDACTED]

Another remarked,

[REDACTED]

And yet, another said,

[REDACTED]

In some cases, to deal with this nuisance of excessive plastic waste, producers repurpose and reuse the bags or sell them to others for alternative uses. For example, one participant said,


[REDACTED]

However, such behavior does not appear to be common and would seem to only impact a small portion of total bags used. Another person said,

[REDACTED]

Table 2: Benefits to Grain Bag Recycling

Benefits to Grain Bag Recycling	In their own words ...
<div></div> <div>Protect the environment and nature</div>	<div>[REDACTED]</div>
<div></div> <div>Retains value of product in alternative form</div>	<div>[REDACTED]</div>
<div></div> <div>Maintain a clean community</div>	<div>[REDACTED]</div>

 <p>Investment in future generations</p>	
 <p>Right thing to do Intrinsic satisfaction</p>	
 <p>Potential for financial gain</p>	

In addition to direct benefits of grain bag recycling, research uncovered notable circumstances that have bearing on the benefits of recycling but are not benefits in and of themselves.

First, **grain bag recycling can be influenced by social norms**. For example, one producer indicated that they began using, and recycling, grain bags after observing their neighbor do so. Because of the upfront cost of getting bag filling and rolling equipment, the producer also coordinated with their neighbor to implement grain bag use on their operations before investing in the equipment needed to utilize the bags. In their own words,



It is important to note that **distance to the recycling facility plays a key role** in influencing recycling rates and to some extent continual use of these bags. One farmer who currently recycles grain bags noted that there is a cost calculation when selecting the disposal method for his grain bags. Although this producer is recycling his grain bags by transporting them to a nearby recycling facility, his bag disposal behavior could change to not recycling if his current recycling facility were to close or no longer accept grain bags and traveling further to recycle became cost prohibitive compared with other disposal costs such as landfill costs.

Table 2 presents quotes from participants that further support key benefits to recycling grain bags.

Barriers to Grain Bag Recycling in Nebraska

Research findings demonstrate the existing motivations to recycle plastic grain bags in Nebraska; however, barriers remain to grain bag recycling in the state. These barriers are chiefly associated with logistical and operational-level concerns.

A producer noted that the **inability to find recycling facilities in-state that will accept grain bags** has significantly impacted his willingness to recycle. He attempted to find recycling locations on the internet and gave up when he was not able to find an in-state option. In his own words,

[REDACTED]

The single most significant barrier to recycling is that **there are few recycling facilities proximate to producers' operations**. One producer noted,

[REDACTED]

This finding is also supported by the fact that grain bag recycling significantly improved in an area where bag sale and collection is facilitated from a central location via a dealer/producer.

[REDACTED]

[REDACTED]

Producers shared mixed responses regarding how far they are willing to drive to a collection site. One participant indicated that because of market consolidation they are now having to drive much further to elevators. Driving burdens could be minimized if producers are able to coordinate collection and driving so that multiple people share the transportation responsibility. However, it is also to be noted that producers' willingness to coordinate and collaborate activities pertaining to their operations is a function of factors outside of the scope of grain bag recycling and those factors are not constrained to recycling decisions.

Research revealed that activities that align with existing operations (i.e. transportation routes, seasonality, normal routines) reduce the perception **that recycling grain bags is inconvenient, or a hindrance, to routine operations**. The barrier is associated with an unfamiliarity with doing a new task. Although producers have time, they will want to feel incorporating grain bag recycling into operations is worth the time.

These findings suggest that if grain bag recycling is to be grown in the state beyond the existing reach of hubs, in general and specifically in areas where there is not a dealer or entity that collects used bags for transport to an end-user, a bag pick-up service could be an effective way to galvanize recycling, especially since producers do not have to devote resources to transport the bags to another site. Thus, one person noted,

[REDACTED]

Having said that, producers are not averse to dropping off grain bags at collection sites especially if that activity is centralized and simple to implement. The same producer said,

[REDACTED]

One producer who does not recycle bags alluded to the tire recycling program in their area whereby they take used tires to a pre-ordained spot during the county fair. They indicated that this type of program could be leveraged as a means to activate recycling. This insight is notable because this producer indicated they do not currently recycle. In previous years, they have burnt bags, which per their own admission is not a preferred mode of disposal.

Burning is also practiced when there is no landfill nearby; with no other options for disposal, bags pile up on the property and the pile becomes visually unappealing and a nesting ground for rodents and other organisms. This behavior once again points to collection point infrastructure and logistics as key indicators influencing bag disposal practices, as well as a **lack of knowledge regarding where and how to recycle grain bags.**

One participant noted,

[REDACTED]

Another said,

[REDACTED]

Interviews also sought to understand the degree to which requirements for preparing grain bags for recycling might hinder their recycling. Post usage grain bags should ideally be scraped of all grain, cleaned, and rolled up into a bale so that they can be recycling-ready.³

End-users need to ensure that the rolled-up bags have minimal grain inside and are dry as possible, as residual moisture and grain can be malodorous to the recycling process. Interestingly, **there was a difference in the degree to which producers were willing to prepare the bags for recycling.** This difference in the willingness to prepare the bags appears in the extent to which they are willing to clean the grain out of the bags prior to rolling them up. One producer indicated that they would make sure that they took all grain out as they did not want to leave grain in the bags since they considered it to be lost revenue. On the other hand, another producer was willing to incur this revenue loss and leave residual grain in the bags since effectively removing all grain from the bags is an intensive activity even when mechanized. Many producers alluded to the fact that the more you “touch” the bags, the more they fall apart and become unwieldy to roll, bind, bail, store and transport.

Given this, it is important to convey to producers not only explicit guidelines regarding all the steps to follow to prepare the bags for recycling and storage (depending upon whether delivery to the recycling site will occur through pick up or drop off and when it will take place) but also the consequences, or what they will lose, for not following the steps properly. Leveraging loss aversion can be a valuable tool for inspiring behavior change. Such explicit information dissemination could make producers view themselves as partners in the recycling exercise and increase their accountability regarding getting the job done well, ultimately maximizing the

³ Grain Bag Preparation Procedures for Collection Sites - Firststar Fiber (Appendix D)


quantity of bags that are recycled and doing so cost-effectively from the end-user's perspective. Any guidelines provided should also keep in mind the practicality and costs, either monetary or non-monetary, to the producer to adhere to them.





Lastly, **financial costs other than those associated with preparing bags for recycling came up as a barrier for recycling**. Most producers who use bags have already made upfront investments in equipment used to fill, empty, and roll up grain bags for storage and transportation (to landfill or recycling facility or pick up point). These capital investments can amount to tens of thousands of dollars and signal their willingness to continuously use the bags and effectively prepare them for disposal. However, whether the bags will be recycled or not post emptying and “roll-up” depends on many factors. Absent a bag pick-up service and/or a recycling site close to their operations, producers will have to reallocate farm labor, capital (vehicles to haul bags), and time away from other activities for bag drop off, which might incur a financial cost. One producer notes,


[REDACTED]

As expected, producers are less willing to divert resources from an operational activity that contributes to income generation.

Table 3: Barriers to Grain Bag Recycling

Barriers to Grain Bag Recycling	In their own words ...
 <p>Operation not proximate to recycling facility</p>	<p>[REDACTED]</p>

 <p>Lack of knowledge regarding where and how to recycle grain bags</p>	<p>[REDACTED]</p>
 <p>Lack of grain bag recycling program/location</p>	<p>[REDACTED]</p>
 <p>Compliance with cleaning and preparation requirements</p>	<p>[REDACTED]</p>
 <p>Financial costs</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>

	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
 <p>Inconvenience</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>

This assessment of the current state of grain bag recycling in Nebraska and producers' varied motivations and deterrents to participating in the behavior provides significant insights for future grain bag recycling success as discussed in detail in the next section.

Key Implications and Discussion

Producers' responses as described in this report provide a vibrant picture of grain bag usage in Nebraska, with key implications for establishing successful grain bag recycling in the state that are outlined in the following discussion.

In general, producers do not have community, culturally, or personally driven aversions to recycling. Most producers see the environmental advantages of recycling grain bags as opposed to other disposal methods as discussed in the research findings on the benefits of grain bag recycling. Because producers are not fundamentally averse to grain bag recycling, initiating their participation in the activity requires **making the process easy and familiar** for them. This includes **providing producers with ample information** about the **how and what** of grain bag recycling preparation (cleaning) and storage (options and suggestions for where to store with directives for both inside and outside locations), **the where** regarding location of drop-off hubs/collection pick-ups, and **the when** involving identifying the times and events for bag drop-off and pick up. Doing so, will reduce mental resources they would have to dedicate to

identify how to implement this new activity on their operations. In summary, providing easily accessible and clear instructional information will allow producers to feel better prepared and motivated to take the steps necessary to adopt this recycling behavior.

If producers do not recycle grain bags, it is chiefly because of monetary and non-monetary costs of doing so. **Therefore, success of grain bag recycling will depend on the monetary and non-monetary costs of the practice to producers and how these costs compare to current disposal practices.** Monetary costs to the producer include equipment, time, and labor to prepare grain bags for recycling, transportation costs to deliver grain bags to a recycling collection site or landfill, storage costs, landfill fees, time, and labor. Non-monetary costs include cleanliness issues, reputational and relational impacts, and mental resources. For example, landfilling grain bags incurs costs to the producer. In that sense, any grain bag recycling program is likely to be feasible and sustainable if producers' costs (monetary and non-monetary) of recycling bags are at least equal if not lower than costs to take the grain bags to the landfill. In fact, two producers interviewed who were not recycling the bags indicated that they would be willing to recycle if it was cost competitive (equal or lower) or, even more so, if they received monetary incentive. One person noted,

[REDACTED]

It is important to note that although burning bags is a costless (monetary) disposal method for the producer as opposed to sending bags to the landfill, which involves a fee, owing to the environmental harm and reputational harm suffered with neighbors witnessing the burn, this free disposal method, although practiced, is not preferred by producers. In fact one producer noted that he and others like him who burn the bags are aware that this is not the best disposal option, but in the absence of information about alternative disposal methods (such as recycling), they continue to burn the bags post usage.

Easy and time-efficient drop off of grain bags, coordinated through hub-centric collection services at regionally centralized locations across the state, is important for promoting grain bag recycling. **Likewise, proximity to a collection hub is a prime indicator of grain bag recycling behavior.** In other words, producers who already recycle do so because of their proximity to a recycling facility and, conversely, those who are not recycling do not do so because of lack of proximity to a recycling facility. It is noteworthy that proximity in itself is not easy to quantify. Due to agricultural consolidation producers are driving further to transport their grain (to elevators) and get inputs (as noted by a participant). This seems to suggest that "proximity" is relative to the producer's existing logistical operations, such that what is

considered a “reasonable” driving distance by one producer may not be considered so by another producer. That said, in order to maximize the total amount of bags collected for recycling, the closer a producer is to a collection site, the better. Additionally, barriers to recycling due to proximity may be mitigated by expanding hub and spoke models to include key stakeholders such as centralized producers or dealer/producers who could offer a wider radius for collection or provide regional pickup options. Likewise, scheduling periodic drop-off events where producers can haul their bags in conjunction with other operational activities (grain delivery, seasonal community activities, etc.) could address geographical proximity barriers.

With a hub and spoke recycling model, incentives may be of benefit to attract producers located further away from grain bag recycling collection sites such as **peer-level incentives** that encourage neighboring producers who use grain bags to pool their used grain bags and haul them to a recycling collection site. Doing so could reward community-level cooperative behavior and serve to foster and strengthen inter-producer relationships for sustained grain bag recycling. In addition, **incentives could be considered at strategic times during the growing season** when producers have had a chance to sell the grain and have a stockpile of bags on their property that are ready for disposal. This encourages timely preparation and consolidation of grain bag recycling regular annual “collection” times.

Here it is important to remember that some producers who currently landfill or burn their bags **may require a cost savings or the convenience of a facilitated pick-up option**. Thus, a successful recycling operation will require deliberating on whether they want to follow the hub-establishment strategy, a pick-up strategy, or a combination of both. Since producers are busy, having bag collection from their operation seems to be the best option as that is one less activity that producers will have to do.

“Community connectors” have an ability to influence recycling behavior and enhance the establishment of a statewide recycling program through expansion of bag collection reach and information dissemination. Grain bag dealers, as point-of-sale contacts to the producer, and especially dealers who are also producers, are ideal community connectors due to their knowledge of the locations of grain bag users and established relationship of trust with producers. Dealers could be incentivized through monetary and non-monetary means to facilitate grain bag drop-offs or collection (as the case might be). In addition, they also could be engaged to use their institutional knowledge to advise on ideal hub locations and disseminate information about grain bag recycling to producers who are using bags but not recycling them.

Next Steps

During the course of interviews, it became evident that some producers have livestock on their operations and that plastic bags can be used to store silage for animals. The presence of livestock on the property indicates a potential other source of used plastic agricultural bags for recycling.

The grain bag recycling program consortium conducted light research into plastic silage bags. The Nebraska Recycling Council contacted four distributors of plastic agricultural bags to inquire about plastic silage bag usage. Each noted that most producers who also have livestock utilize bunkers rather than silage bags for their feed. In addition, the consortium's discussions with those who use plastic grain bags and silage bags on their operations found that there is an interest in alternative disposal options for silage bags beyond the landfill or burning.

Initial outreach indicates that plastic silage bags represent a smaller source for plastic bag recycling than grain bags; however, additional research could be conducted to learn more about increasing recycling of this product in tandem with grain bag recycling. Silage bags are notably dirtier and are more difficult to prepare for recycling as they are not as easily rolled or neatly stored as plastic grain bags.

NRC intends to conduct additional research with three other grain bag recycling stakeholder groups (grain bag dealers, grain bag collection sites, and end-user). It is recommended that results of that outreach be considered in tandem with this report.

Appendices

Appendix A: Pre-Interview Online Survey Protocol

Plastic Grain Bag Recycling Pre-Interview Online Survey Protocol

Survey Intent

Responses to this survey will build understanding of the audience for plastic grain bag recycling marketing. Questions are designed to gather information on stakeholders' farming operations; plastic grain bag use, storage, and disposal; and general recycling behaviors and will be used to classify respondents as Recyclers or Skeptics prior to the virtual interview. Survey responses may be used to inform in-person interview questions.

Survey Administration

The survey will be administered digitally via Google Forms to confirmed video conference interview participants. The goal is a 100% response rate to gather demographic, plastic grain bag usage, recycling practices, insights to inform education and outreach strategies.

Invitation to Participate

Participants will be invited to participate in the interview (and pre-interview online survey) by email or text message. These messages will be sent from the respective reference partners, NRC or Firststar, as an initial invitation to the interview process.

Thank you for your willingness to participate in an interview to share your perceptions of plastic grain bag recycling.

To help us get to know you and understand more about your preferences and needs as a potential plastic grain bag recycler, we invite you to participate in a pre-interview online survey. This survey will only take about 15 - 20 minutes to complete, and your answers will be kept confidential.

Please click the link below to complete the survey from your computer or mobile device:

<link>

Should you have any comments or questions, please feel free to contact <name> at <contact information>.

Thank you again for your time. Your input is valuable and appreciated.

Survey Opening Statement

On behalf of the Nebraska Recycling Council (NRC), Carson+Co Global (CCG) is conducting interviews with stakeholders across Nebraska regarding recycling attitudes and behaviors, specifically in regard to plastic grain bags.

The following survey is intended to help provide background information on your general farming operations and recycling practices prior to your interview. While all questions are not mandatory, please try to complete them to the best of your ability and be as accurate as possible. Your responses are confidential to the Nebraska Recycling Council, Carson+Co Global, and Firststar. All information provided in the interview will be stored securely and participant names will not be linked with public comments, research findings, or reports.

Thank you for your time to complete this survey. Your input is valuable and appreciated.

Table 1. Key Outcomes During the pre-interview surveys and one-on-one interview sessions, information on the following aspects of the program should be collected:

Outcome	Applicable Questions
1. Understand participant operations and potential grain bag recycling motivations.	S1, S2, S3, S4, S5, I1, I5, I6, I7, I8, I9, I10
2. Identification and characterization of barriers to recycling in general and plastic grain bags in particular.	S5, I3, I5, I6, I7, I8, I10
3. Identification and characterization of benefits to recycling plastic grain bags within Nebraska.	S5, I2, I4, I5, I6, I7, I8, I10
4. Participant-sourced strategies regarding levers and information sources, that can be utilized to increase uptake of plastic grain bag recycling by those using them in Nebraska.	I9, I10, I11, I12

Table 2: Table showing all **pre-interview questions** with survey structure: answer format, instructions, answer options.

Primary Question	Answer Format (fill -in-the-blank, multiple-choice, Y/N, etc.)	Instructions	Answer Options
Section 1: Getting to Know the Producer and Operation (<u>Pre-interview questions</u>)			
1. How many years have you been farming?	Fill in the blank	<i>Please fill in the blank with the number of years you have been farming.</i>	
2. What type of crops did you grow in 2021?	Multiple-choice ranges with other category to populate	<i>Please check all that apply.</i>	<ul style="list-style-type: none"> • Continuous Corn • Corn Soybean • Corn/Corn/Soybean • Wheat • Corn/Wheat • Corn/Cover-crops. • Please specify • Other. Please specify: <hr/> <hr/>
3. What was the approximate size of your operation in 2021? This should include land you own and rent from others.	Multiple Choice	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • 0 - 200 acres • 201 - 500 acres • 501 -1000 acres • 1001 - 1500 acres • More than 1500 acres

4. Do you use plastic grain bags to store your grain?	Multiple Choice	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • Yes • No • Sometimes
<i>Additional Prompts:</i>			
A. Do you use them every growing season?	Multiple Choice	<i>Please select one of the following.</i>	<ul style="list-style-type: none"> • Yes • No • Periodically
B. Approximately what quantity of plastic grain bags do you use per growing season? Please try to be as accurate as possible.	Fill in the blank.	<i>Please fill in the blank with the quantity of plastic grain bags you use on average per growing season.</i>	
C. In the next 5 years, do you anticipate using more, less or the	Multiple Choice	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • More • Less • About the same

same amount of plastic grain bags every growing season, like you do now?			
D. How do you acquire your plastic grain bags?	Multiple Choice	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • Directly from a private company • From a salesperson • From another producer
E. Do you want to or currently recycle your plastic grain bags?	Multiple Choice	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • Yes, I currently recycle my grain bag • No but, I would like to recycle my grain bags if I could • No, I do not, nor do I wish to, recycle my grain bags
Section 2: Current and Past Recycling Behavior (<u>Pre-interview questions</u>)			
5. Are any recycling activities currently conducted on your operation?	Multiple Choice:	<i>Please select one of the following:</i>	<ul style="list-style-type: none"> • Yes • No
<i>If respondent answers “yes,” to question 6, they will receive the following questions:</i>			
A. What is	Fill in the blank	<i>Please list all types of</i>	

recycled?		<i>materials that are recycled on your operation.</i>	
B. Are there financial incentives involved?	Multiple Choice	<i>Please select Yes or No.</i>	<ul style="list-style-type: none"> • Yes • No
C. Does someone collect the items to be recycled?	Multiple Choice	<i>Please select all that apply.</i>	<ul style="list-style-type: none"> • Yes • No, I drop them off.
D. What is your motivation to recycle?	Multiple Choice	<i>Please check all that apply.</i>	<ul style="list-style-type: none"> • It provides me with additional income • It gives me personal satisfaction • It is good for my current and future residents of my community • It protects the environment • It is an easier way to deal with my waste than disposing of it at the landfill. • It is the right thing to do • Other, please specify
<i>If respondent answers, "no," to question 5, they will receive the following question:</i>			
E. What is the reason(s) for not recycling?	Multiple Choice	<i>Please check all that apply.</i>	<ul style="list-style-type: none"> • It is too costly for my operation to recycle • Recycling does not provide me with an income stream • I don't have enough time to recycle • I don't have proper information to be able to recycle

			<ul style="list-style-type: none"> • I don't generate a lot of recyclable waste • I don't have workforce on my operation to help with recycling • I don't believe in recycling • Other, please specify
<p><i>All respondents, regardless of answer to question 5, receive the following question:</i></p>			
<p>F. Please provide any additional information that would help us better understand your current recycling practices.</p>	Fill in the blank		Fill in the blank

Appendix B: Interview Protocol

Grain Bag Recycling Project Interview Protocol

Date:

Time:

Location:

Attendees:

[FIRST LAST], Title

Verify Contact Database Information

[FIRST LAST], Interviewer

Carson + Co Global

+1 (202) 803-1985

carsoncoglobal.com

GDrive Hyperlink to Participant's folder:

Purpose of this interview

On behalf of the Nebraska Recycling Council (NRC), Carson+Co Global (CCG) is conducting interviews with stakeholders across Nebraska regarding recycling attitudes and behaviors, specifically in regard to plastic grain bags.

Materials: Zoom meeting and recording function, Loom recording function, back-up printouts of questions, invitation letter, copy of signed consent documentation.

Interview Format

Phone/Video Conference Interviews

We will carry out phone/video conference interviews depending upon interviewees' preference. This will allow us to solicit feedback about producers' recycling decisions regarding their plastic grain bags, and specifically, the barriers and benefits they perceive to preparing and taking their plastic grain bags to a drop-off site for recycling. The interviews will be recorded and transcribed for reporting and are not expected to last more than an hour. Interviews will be scheduled in advance, targeted to occur between November 2021 and January 2022, and taking into consideration the busy harvest and holiday season for producers and other stakeholders.

Protocol to Follow During Interview

1. Know the Questionnaire. Make sure you have reviewed the questions and additional prompts and are familiar with the "skip pattern," depending upon who you are interviewing and possible response items. Read the questionnaire aloud a few times so you are comfortable with how you will ask questions.

2. Review which INTERVIEW GROUP (Group 1 or 2) was determined in the Pre-Interview Survey. Either Question 10 (Group 1) or 11 (Group 2) will be applied based on whether a person has been identified as a “Recycler” or a “Skeptic”.
3. Welcome the interviewee and thank them for their time and participation. Introduce yourself and state the purpose of the interview:
 - *We are here today to better understand the barriers and benefits to producers to recycling plastic grain bags. This information will be helpful to the Nebraska Recycling Council, who is leading the project, in shaping initiatives that will support producers in recycling plastic grain bags in Nebraska.*
 - *Carson and Co Global is supporting these efforts by conducting interviews on their behalf.*
 - *The interview will not last more than 1 hour. We will start with some “housekeeping” and then begin the interview.*
4. **Read the following Confidentiality script:**
 - *First, we wanted to confirm you received and have signed the consent document prior to this interview? Great. As stated in the consent form, we will be recording the interview and all responses are confidential to Carson+Co Global, NRC. and Firststar. Participant names and any other identifying information will be redacted from all research findings shared with the consortium. All information provided in the interview will be stored securely and participant names will not be linked with public comments, research findings, or reports unless written permission is granted by the participant.*
5. **Read the following Interview Code of Conduct script:**
 - *We'll now share our interview code of conduct, which is also included in your signed consent form. The interviews will be conducted with mutual respect as a priority. In an effort to deeply understand the barriers and benefits to recycling plastic grain bags, we will ask open ended questions and request you to share your honest opinions, experiences, and recommendations. There are no right or wrong answers. If any question is unclear, please request that it be restated in a different way. The goal of these interviews is to gather a detailed description of the factors that influence recycling behavior in general and, for the case of plastic grain bags, identify points of intervention and strategies which can be utilized to influence adoption. ^{SEP}We appreciate your time today to help gather valuable information about the potential for the development of a grain bag recycling program.*
6. Indicate that questions are organized into three different sections, and that you will inform the interviewee when starting a new section. Finally, reiterate that the questions are to get to know more about the interviewee’s operation and their recycling behaviors and attitudes. Remind that the interview should take no more than one hour to complete.

7. Start the interview. Refer to [Table 2](#).
8. While going through questions refer to the [Key Outcomes](#) section at the end of this document and check off items once information is captured.
9. Once all Key Data Outcomes have been completed, say:
Thank You, (reinforce the value of their inputs). As we work to deepen our understanding of the barriers to recycling grain bags and the benefits of having an in-state solution for Nebraska farmers, we are looking to identify others with valuable insights like yourself. Are there any individuals who you could refer us to for consideration as we seek to interview more people? If so, we welcome you to share their name and contact information. Conversely, if you would like to connect with them first or consider this further, we will send an email to you in the coming days and invite you to respond to it with any recommendations you may have.

Last but not least, we wanted to share a tentative timeline with you regarding the launch of grain bag recycling in Nebraska. At this point in time, Firststar anticipates it will begin accepting grain bags this summer (June). Hearing that you are interested in receiving more information about grain bag recycling (if applicable per participant responses), we will keep connected with you regarding updates.

Thank you again for your time and valuable insights. We appreciate you sharing your opinions and experiences to help strengthen grain bag recycling services for Nebraska.

Follow-Up

Send thank you and follow-up with any clarifications via email within one week of the interview.

Table 1. Key Outcomes

During the pre-interview surveys and one-on-one interview sessions, information on the following aspects of the program should be collected:

Outcome	Applicable Questions
1. Understand participant operations and potential grain bag recycling motivations.	S1, S2, S3, S4, S5, I1, I5, I6, I7, I8, I9, I10
2. Identification and characterization of barriers to recycling in general and plastic grain bags in particular.	S5, I3, I5, I6, I7, I8, I10
3. Identification and characterization of benefits to recycling plastic grain bags within Nebraska.	S5, I2, I4, I5, I6, I7, I8, I10

4. Participant-sourced strategies regarding levers and information sources, that can be utilized to increase uptake of plastic grain bag recycling by those using them in Nebraska.	I9, I10, I11, I12
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Table 2. Table showing all one-on-one interview questions with associated prompts, purposes, and outcomes.

Primary Interview Question	Sub-Questions/Prompts	Topic: Question Purpose (<i>not shared with interviewee</i>) and other Notes	Outcome
Use and Disposal of plastic grain bags, barriers and benefits to plastic grain bag recycling			
1. Can you please tell us about how you use plastic grain bags in your operation?		Obtain information about grain bag purpose. <i>We shall try to select interviewees who currently use grain bags but may or may not recycle them.</i>	O1
<p style="text-align: center;">STOP</p> <p style="text-align: center;"><i>QUESTION 3 WILL BE UTILIZED ONLY FOR GROUP 1 (RECYCLERS) (DETERMINED BY PRE-INTERVIEW SURVEY.)</i></p>			
2. Group 1 (Recyclers): If you are motivated to recycle plastic grain bags or are currently doing so, can you please share the factors that influence your decision to do so?	Some people cite recycling as a way to enhance their operation's reputation in their community. To what extent do you identify with this statement? To what extent would you say recycling processes of other operations like yours influence your recycling processes?	Obtain information on general drivers of recycling. Some or all of these reasons will be relevant for plastic grain bags as well.	O3

	<p>To what extent does the impact of recycling on the environment influence your own decision to recycle grain bags?</p> <p>To what extent does recycling present you with an additional revenue stream?</p> <p>Some operators recycle because their employees appreciate it. To what extent does this statement resonate with you and your motivation for recycling?</p> <p>To what extent do your peers' opinions or actions matter when recycling grain bags or considering doing so?</p> <p>To what extent does ease of recycling / access to a recycling facility influence your decision to recycle?</p> <p>What other reasons do you recycle?</p>		
<p style="text-align: center;">STOP</p> <p style="text-align: center;">QUESTIONS 4 & 5 WILL BE UTILIZED <i>ONLY FOR GROUP 2 (SKEPTICS)</i> <i>(DETERMINED BY PRE-INTERVIEW SURVEY.)</i></p>			
<p>3. Group 2 (Skeptics) : If your interest in recycling plastic grain bags is low, can you please share with us some of the reasons for</p>	<p>To what extent is the cost of subscribing to a recycling pickup service a factor in your recycling decision?</p> <p>Is there a recycling facility near your operation where you can drop off the bags?</p>	<p>Obtain information on the barriers to recycling. This question is ESSENTIAL for this project so additional prompts have to be used to get people to provide information especially if they don't</p>	O2

<p>your low interest for recycling the plastic grain bags?</p>	<ul style="list-style-type: none"> • Where? <p>To what extent are constraints on employee time that can be devoted to preparing plastic grain bags for recycling a factor in your decision not to recycle?</p> <p>To what extent does your unfamiliarity with recycling plastic grain bags contribute to you not recycling your plastic grain bags?</p> <p>Some people cite recycling as a way to enhance their operation's reputation in the community. To what extent do you identify with this statement?</p> <p>Some people don't recycle because recycling interferes with their current waste disposal practices overall. Do you identify with this statement?</p> <p>What are other factors that motivate your decisions related to recycling?</p>	<p>share readily. If they don't give a concrete answer, begin asking the prompt questions.</p>	
<p>4. Can you please tell us what factors would positively influence your decision to recycle plastic grain bags in the future?</p>	<p>To what extent would having a recycling drop-off facility nearby influence your recycling practices?</p> <p>How important is the role of plastic grain bag pickup service in influencing your decision to recycle?</p>	<p>This question will help identify strategies for promoting recycling. This question is essential for this project so additional prompts have to be used to get people to provide information especially if they don't share readily. If they don't give a concrete</p>	<p>O3</p>

	<p>How important are your peers' opinions or actions about recycling to your decision to consider recycling plastic grain bags?</p> <p>To what extent would the option to work with nearby producers like yourself to jointly recycle the plastic grain bags influence your decision?</p> <p>To what extent would the opportunity to lower total recycling costs influence your decision?</p> <p>If someone reimbursed you for the time and money spent in dropping off plastic grain bags at a drop off site, how would that influence your decision to recycle?</p> <p>What other factors could influence your recycling decisions?</p>	answer, begin asking the prompt questions.	
<p style="text-align: center;">STOP</p> <p style="text-align: center;"><i>THE FOLLOWING QUESTIONS WILL BE POSED TO ALL INTERVIEWEES, REGARDLESS OF GROUP</i></p>			
<p style="text-align: center;">Knowledge of Local Recycling Options, Motivations to Utilize Options</p>			
5. How would having an in-state option to recycle your plastic grain bags in the future impact	If it doesn't motivate you, why?	Obtain information about motivations to recycle in the light of new options that will make recycling an in-state option.	<p>For Skeptics: O1, O2,</p> <p>For Recyclers: O1, O3</p>

your grain bag disposal decisions?			
6. How would knowing that the recycled materials from plastic grain bags will be used to make products in Nebraska factories and will be consumed by fellow Nebraskans, impact your recycling decisions?	If it doesn't motivate you, why?	Obtain information about motivations to recycle in the light of proximity of manufacturing and type of product being manufactured (plastic lumber).	For Skeptics: O1, O2, For Recyclers: O1, O3
7. What do you do with the bags once you are done using them?	<p>How do you dispose of them?</p> <ul style="list-style-type: none"> • Store it temporarily? <ul style="list-style-type: none"> ○ If you store them, can you please tell us where you store them and how? • Send it to the landfill? • Does the manufacturer or other organization collect them? • Burn or bury? • Do you recycle them? • Other? <p>From what entities have you received guidance on disposal of your grain bags?</p>	Understand current waste management/disposal behavior.	For Skeptics: O1, O2, For Recyclers: O1, O3
8. What activities are you willing to	Could you clean the outside and the inside of the bags	Obtain information about whether producers are	O1, O2, O3

complete to ready your grain bags for recycling?	<p>of excess grain, field debris, and mud?</p> <p>Do you have access to equipment to bail the bags, or ability to do so without the baling equipment?</p> <p>Could you store them in a dry/clean area?</p> <p>Could you personally transport them to a collection center?</p> <p>What is the maximum distance you would be willing to travel to recycle plastic grain bags?</p> <p>Do you have sufficient labor force and access to equipment to ready the plastic grain bags for recycling?</p>	<p>willing to do upfront work to recycle the bags. If they say no, this will be identified as a barrier to recycling grain bags. Obtain information about on-farm resources to get a sense of whether the operation has sufficient ability to collect, clean, and prepare plastic grain bags for recycling.</p> <p><i>If there is less labor or inability to access equipment, recycling may be hard to operationalize even if the producer is interested. However, it is possible that a producer recycles even with limited resources. This is because there are multiple motivations to recycle.</i></p>	
Information Sources and Preferred Marketing Modus for Program			
9. What are the main sources for information that you regularly use for your farming operations?	<p>What websites, periodicals, mailings, farm groups, extension offices, agencies are most useful to you?</p> <p>What do you read/refer to on a regular basis?</p> <p>Which sources do you most count on for information regarding grain bags specifically?</p>	Obtain information about what sources of information are currently used by producers.	O1, O4
10. Would you like more information regarding plastic	If the answer to this question is "No," then ask	Gauge producers' interest in recycling plastic grain bags regardless of	O1, O2, O3, O4

grain bag recycling?	<p>what is the reason they don't want the information.</p> <p>Then thank the interviewee and be done with the interview.</p>	whether they currently recycle or not.	
11. If you would like to learn more about grain bag recycling, what would be the most useful modes for receiving information?	<p>Would you like the information in the form of:</p> <ul style="list-style-type: none"> • Online newsletter • Mailed-in newsletter • Information session(s) at local library or other suitable location • Virtual learning sessions • Educational videos • Educational resources • Best practices guide • Social media • Website • Community and sector news sources (i.e local radio, television, billboards) • Recycling dropoff site signage • Other 	<p>Responses to this question will inform respondent-sourced strategies about how to provide information on grain bag recycling options.</p> <p>Interviewees are expected to provide some responses.</p> <p>Once they are done, the interviewer should probe further about other options that are relevant and make sense for the interviewee.</p>	O4
12. Who would you like to get this information from?	<p>Would you like information from</p> <ul style="list-style-type: none"> • Nebraska Recycling Council • Local Co-op • Plastic Grain Bag Manufacturer • Peers/fellow farmers • ASCS county office outreach • Other source 	Obtain insights about trusted information sources as well as producer awareness regarding the existence of NRC, Firststar, and other key players in the plastic grain bag market.	O4

	<ul style="list-style-type: none">• Source does not matter as long as the source is credible		
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Appendix C: Interview Rubric

Interviewee Selection Criteria

A total of 15 non-gender specific interviewees will be interviewed in two to three phases. Ideally we would like to interview producers who 1.) are located proximate to potential plastic grain bag collection points and/or recycling facilities, 2.) have current and past experience with making waste-management decisions on their operations, and 3.) are using or have used plastic grain bags, with the exception of interviewees in phase three (see following section).

All individuals interviewed for this project will be asked to provide signed consent prior to the interview. These consent documents will be recorded and retained by CCG for three years and provided to NRC for their record keeping.

Proposed Sequence for Conducting Interviews

In the first phase, we will interview five to six producers who are expected to have high motivation to recycle plastic grain bags, considered as “Recyclers”. These interviewees will be selected from rosters provided by the NRC and Firstar and must be using grain bags regularly in their operations. In the second phase, we will interview five to six producers who use grain bags but are not interested in recycling the grain bags. This group is considered “Skeptics.”

Third phase interviews may be conducted as needed, pending results from the first two phases, with three additional interviewees depending upon the themes unearthed during the first two rounds of interviews. These may be two to three producers who don’t use plastic grain bags but may be recycling other materials on their operation or other stakeholders such as grain bag manufacturers who might provide additional value to the interview process. These last three interviewees can be identified and accessed through references from the first two rounds of interviews or from NRC and Firstar databases.

Pre-Interview Survey Protocol

The Pre-Interview Survey Protocol document serves as a guide to the interview team on how to implement the invitation to participate in the interview and conduct the pre-interview online survey. The survey protocol will include questions that will provide crucial backgrounding information and allow the interview team to make a general assessment regarding which producers are Recyclers and which are Skeptics. This information will be used for determining how to proceed in terms of the sequence of interviews.

The link for the pre-interview online survey will be emailed to the selected producers in an “Invitation to Participate” that will be sent by the respective referral partner. Once the interviewee has selected the link, they will be taken to a landing page where a Survey Opening Statement will appear, outlining intent and confidentiality parameters for the online survey. From

there, the respondents will click through to **16 questions**, which will each lie on a separate page. Once a response is provided, they can hit submit, and move to the next question.

The pre-interview survey should not take more than **15 - 20 minutes** to ensure a 100% response rate. Information about this duration will be shared with interviewees in the Invitation to Participate. All information recorded during interviews will be stored in secure files maintained by CCG, will be used for project purposes only, and will not be shared with non-project related entities.

One-on-One Interview Protocol

The Interview Protocol document serves as a guide to the interviewer during the interview process. It summarizes the various steps of the interview process. The interview protocol will include a verbal consent from interviewee, in addition to the written consent that they will have signed prior to the interview. This step is to ensure that the interviewee is aware of the voluntary nature of their participation and that all responses recorded will be kept confidential and anonymous (i.e. participants will not be named in research findings or reports).

The interviews will be conducted over video conferencing platforms such as Zoom, recorded with back-up software such as Loom, and will be transcribed and subsequently used for development of a ***barrier and benefits to plastic grain bag recycling report and strategy selection report***. These reports will provide a detailed description of the factors that influence recycling behavior in general and, for the case of plastic grain bags, identify points of intervention and strategies that can be utilized to influence adoption. Each interview should ideally not last for longer than 1 hour to ensure that quality of responses are maintained. Information about this duration will be shared with interviewees when seeking their participation in the listening sessions. All information recorded during interviews will be stored in secure files maintained by CCG.

Interview Questions Prior Review

Interviewees will be provided the opportunity to review the questions that will be posed to them during the interview. This is to ensure that there are no surprises and that interviewees are well prepared to answer all questions. Questions will be provided without additional prompts, as these might bias the interviewees to respond one way or another. This step is optional. If some or all interviewees are not interested in viewing questions in advance, then the questions will not be provided.

Question Development

Questions for the pre-interview online survey are designed to obtain information about interviewees and classify them into Recyclers and Skeptics, which in turn will guide interview scheduling and progress. All questions are included in [Table 1](#) below.

Questions in the one-on-one interviews are designed to be open-ended, with additional prompts to encourage sharing by participants. Yes/No questions are avoided unless associated with a prompt. The interview table ([Table 2](#)) below is an organizational tool to organize primary interview questions, their purposes and with prompts (to encourage additional discussion) and purposes. The first column shows the questions themselves as they will approximately be asked. The second column will house additional prompts and potential related conversations for each connected to the primary question. The third column defines the topic and question purpose for each question. This will help to ensure that topics are covered appropriately and will also help distinguish critical questions. We have attempted to craft questions that will not bias participant responses, either by leading them to answer a certain way or to make them feel that there is a correct answer. The last column contains the Project Outcome associated with that Question. A list of all key outcomes for the interviews are included in [Table 3](#) below.

The questions avoid making assumptions about:

- The intrinsic value placed by the interviewee on recycling
- Positive or negative experiences with recycling
- Motivations for recycling or not recycling

Table 1. Table showing all pre-interview survey questions with format, purposes, and outcomes.

Survey Question/ Sub-Question	Question Format	Topic: Question Purpose (<i>not shared with interviewee</i>) and other Notes	Outcome
Getting to Know the Producer and Operation (<u>Pre-interview Survey</u>)			
1. How many years have you been farming?	Fill in the blank	Getting to know the interviewee better.	O1
2. What type of crops did you grow in 2021?	Multiple Choice ranges with other category to populate	Getting to know the interviewee better. Obtain information about farm type should recycling decisions vary depending upon crops grown.	O1
3. What was the approximate size of your operation in 2021? This should	Multiple Choice	Getting to know the interviewee better. Obtain information about farm	O1

include land you own and rent from others.		size will provide useful information about potential quantities of grain bag product	
<p>4. Do you use plastic grain bags to store your grain?</p> <p>Additional Prompts:</p> <p>A. Do you use them every growing season?</p> <p>B. Approximately what quantity of plastic grain bags do you use per growing season? Please try to be as accurate as possible.</p> <p>C. In the next 5 years, do you anticipate using more, less or the same amount of plastic grain bags every growing season, like you do now?</p> <p>D. How do you acquire your plastic grain</p>	<p>Multiple Choice</p> <p>Multiple Choice</p> <p>Fill in the blank</p> <p>Multiple Choice</p> <p>Multiple Choice</p>	<p>These questions are a screening question to ascertain which of the following “Groups” the interviewee most likely identifies as belonging to:</p> <ul style="list-style-type: none"> • Group 1 = Using and recycling grain bags or other products • Group 2 = Using but not recycling or interested in recycling (skeptics) 	O1

bags?			
E. Do you want to or currently recycle your plastic grain bags?	Multiple Choice		
Current and Past Recycling Behavior (<u>Pre-interview Survey</u>)			
<p>5. Are any recycling activities currently conducted on your operation?</p> <p>If respondent answers "yes," to question 5, they will receive the following questions:</p> <p>A. What is recycled?</p> <p>B. Are there financial incentives involved?</p> <p>C. Does someone collect the items to be recycled</p> <p>D. What is your motivation to recycle?</p> <p>If respondent answers, "no," to question 5, they will receive the following question:</p> <p>E. What is the</p>	<p>Multiple Choice: Yes No</p> <p>Fill in the blank</p> <p>Multiple Choice</p> <p>Multiple Choice</p> <p>Multiple Choice</p> <p>Multiple Choice</p>	<p>Responses will give us information about current general recycling behaviors if any.</p>	<p>For Skeptics: O1, O2,</p> <p>For Recyclers: O1, O3</p>

<p>reason(s) for not recycling?</p> <p>All respondents, regardless of answer to question 5, receive the following question:</p> <p>F. Please provide any additional information that would help us better understand your current recycling practices.</p>	Fill in the Blank		
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Table 2. Table showing all one-on-one interview questions with associated prompts, purposes, and outcomes.

Primary Interview Question	Sub-Questions/Prompts	Topic: Question Purpose (<i>not shared with interviewee</i>) and other Notes	Outcome
Use and Disposal of plastic grain bags, barriers and benefits to plastic grain bag recycling			
1. Can you please tell us about how you use plastic grain bags in your operation?		<p>Obtain information about grain bag purpose.</p> <p><i>We shall try to select interviewees who currently use grain bags but may or may not recycle them.</i></p>	O1
<p style="text-align: center;">STOP</p> <p style="text-align: center;"><i>QUESTION 3 WILL BE UTILIZED ONLY FOR GROUP 1 (RECYCLERS) (DETERMINED BY PRE-INTERVIEW SURVEY.)</i></p>			
2. Group 1 (Recyclers): If	Some people cite recycling as a way to enhance their	Obtain information on general drivers of	O3

<p>you are motivated to recycle plastic grain bags or are currently doing so, can you please share the factors that influence your decision to do so?</p>	<p>operation's reputation in their community. To what extent do you identify with this statement?</p> <p>To what extent would you say recycling processes of other operations like yours influence your recycling processes?</p> <p>To what extent does the impact of recycling on the environment influence your own decision to recycle grain bags?</p> <p>To what extent does recycling present you with an additional revenue stream?</p> <p>Some operators recycle because their employees appreciate it. To what extent does this statement resonate with you and your motivation for recycling?</p> <p>To what extent do your peers' opinions or actions matter when recycling grain bags or considering doing so?</p> <p>To what extent does ease of recycling / access to a recycling facility influence your decision to recycle?</p> <p>What other reasons do you recycle?</p>	<p>recycling. Some or all of these reasons will be relevant for plastic grain bags as well.</p>	
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<p style="text-align: center;">STOP</p> <p style="text-align: center;">QUESTIONS 4 & 5 WILL BE UTILIZED ONLY FOR GROUP 2 (SKEPTICS) (DETERMINED BY PRE-INTERVIEW SURVEY.)</p>			
<p>3. Group 2 (Skeptics) : If your interest in recycling plastic grain bags is low, can you please share with us some of the reasons for your low interest for recycling the plastic grain bags?</p>	<p>To what extent is the cost of subscribing to a recycling pickup service a factor in your recycling decision?</p> <p>Is there a recycling facility near your operation where you can drop off the bags?</p> <ul style="list-style-type: none"> Where? <p>To what extent are constraints on employee time that can be devoted to preparing plastic grain bags for recycling a factor in your decision not to recycle?</p> <p>To what extent does your unfamiliarity with recycling plastic grain bags contribute to you not recycling your plastic grain bags?</p> <p>Some people cite recycling as a way to enhance their operation's reputation in the community. To what extent do you identify with this statement?</p> <p>Some people don't recycle because recycling interferes with their current waste disposal practices overall. Do you identify with this statement?</p>	<p>Obtain information on the barriers to recycling. This question is ESSENTIAL for this project so additional prompts have to be used to get people to provide information especially if they don't share readily. If they don't give a concrete answer, begin asking the prompt questions.</p>	<p>O2</p>

	What are other factors that motivate your decisions related to recycling?		
4. Can you please tell us what factors would positively influence your decision to recycle plastic grain bags in the future?	<p>To what extent would having a recycling drop-off facility nearby influence your recycling practices?</p> <p>How important is the role of plastic grain bag pickup service in influencing your decision to recycle?</p> <p>How important are your peers' opinions or actions about recycling to your decision to consider recycling plastic grain bags?</p> <p>To what extent would the option to work with nearby producers like yourself to jointly recycle the plastic grain bags influence your decision?</p> <p>To what extent would the opportunity to lower total recycling costs influence your decision?</p> <p>If someone reimbursed you for the time and money spent in dropping off plastic grain bags at a drop off site, how would that influence your decision to recycle?</p> <p>What other factors could influence your recycling decisions?</p>	This question will help identify strategies for promoting recycling. This question is essential for this project so additional prompts have to be used to get people to provide information especially if they don't share readily. If they don't give a concrete answer, begin asking the prompt questions.	O3

<p style="text-align: center;">STOP</p> <p style="text-align: center;"><i>THE FOLLOWING QUESTIONS WILL BE POSED TO ALL INTERVIEWEES, REGARDLESS OF GROUP</i></p>			
<p style="text-align: center;">Knowledge of Local Recycling Options, Motivations to Utilize Options</p>			
5. How would having an in-state option to recycle your plastic grain bags in the future impact your grain bag disposal decisions?	If it doesn't motivate you, why?	Obtain information about motivations to recycle in the light of new options that will make recycling an in-state option.	For Skeptics: O1, O2, For Recyclers: O1, O3
6. How would knowing that the recycled materials from plastic grain bags will be used to make products in Nebraska factories and will be consumed by fellow Nebraskans, impact your recycling decisions?	If it doesn't motivate you, why?	Obtain information about motivations to recycle in the light of proximity of manufacturing and type of product being manufactured (plastic lumber).	For Skeptics: O1, O2, For Recyclers: O1, O3
7. What do you do with the bags once you are done using them?	<p>How do you dispose of them?</p> <ul style="list-style-type: none"> ● Store it temporarily? <ul style="list-style-type: none"> ○ If you store them, can you please tell us where you store them and how? ● Send it to the landfill? 	Understand current waste management/disposal behavior.	For Skeptics: O1, O2, For Recyclers: O1, O3

	<ul style="list-style-type: none"> Does the manufacturer or other organization collect them? Burn or bury? Do you recycle them? Other? <p>From what entities have you received guidance on disposal of your grain bags?</p>		
8. What activities are you willing to complete to ready your grain bags for recycling?	<p>Could you clean the outside and the inside of the bags of excess grain, field debris, and mud?</p> <p>Do you have access to equipment to bail the bags, or ability to do so without the baling equipment?</p> <p>Could you store them in a dry/clean area?</p> <p>Could you personally transport them to a collection center?</p> <p>What is the maximum distance you would be willing to travel to recycle plastic grain bags?</p> <p>Do you have sufficient labor force and access to equipment to ready the plastic grain bags for recycling?</p>	<p>Obtain information about whether producers are willing to do upfront work to recycle the bags. If they say no, this will be identified as a barrier to recycling grain bags. Obtain information about on-farm resources to get a sense of whether the operation has sufficient ability to collect, clean, and prepare plastic grain bags for recycling.</p> <p><i>If there is less labor or inability to access equipment, recycling may be hard to operationalize even if the producer is interested. However, it is possible that a producer recycles even with limited resources. This is because there are multiple motivations to recycle.</i></p>	O1, O2, O3
Information Sources and Preferred Marketing Modus for Program			

9. What are the main sources for information that you regularly use for your farming operations?	<p>What websites, periodicals, mailings, farm groups, extension offices, agencies are most useful to you?</p> <p>What do you read/refer to on a regular basis?</p> <p>Which sources do you most count on for information regarding grain bags specifically?</p>	Obtain information about what sources of information are currently used by producers.	O1, O4
10. Would you like more information regarding plastic grain bag recycling?	<p>If the answer to this question is “No,” then ask what is the reason they don’t want the information.</p> <p>Then thank the interviewee and be done with the interview.</p>	Gauge producers’ interest in recycling plastic grain bags regardless of whether they currently recycle or not.	O1, O2, O3, O4
11. If you would like to learn more about grain bag recycling, what would be the most useful modes for receiving information?	<p>Would you like the information in the form of:</p> <ul style="list-style-type: none"> • Online newsletter • Mailed-in newsletter • Information session(s) at local library or other suitable location • Virtual learning sessions • Educational videos • Educational resources • Best practices guide • Social media • Website • Community and sector news sources (i.e local radio, television, billboards) 	<p>Responses to this question will inform respondent-sourced strategies about how to provide information on grain bag recycling options.</p> <p>Interviewees are expected to provide some responses.</p> <p>Once they are done, the interviewer should probe further about other options that are relevant and make sense for the interviewee.</p>	O4

	<ul style="list-style-type: none"> • Recycling dropoff site signage • Other 		
12. Who would you like to get this information from?	<p>Would you like information from</p> <ul style="list-style-type: none"> • Nebraska Recycling Council • Local Co-op • Plastic Grain Bag Manufacturer • Peers/fellow farmers • ASCS county office outreach • Other source • Source does not matter as long as the source is credible 	Obtain insights about trusted information sources as well as producer awareness regarding the existence of NRC, Firststar, and other key players in the plastic grain bag market.	O4

Table 3. Key Outcomes

During the pre-interview surveys and one-on-one interview sessions, information on the following aspects of the program should be collected:

Outcome	Applicable Questions
1. Understand participant operations and potential grain bag recycling motivations.	S1, S2, S3, S4, S5, I1, I5, I6, I7, I8, I9, I10
2. Identification and characterization of barriers to recycling in general and plastic grain bags in particular.	S5, I3, I5, I6, I7, I8, I10
3. Identification and characterization of benefits to recycling plastic grain bags within Nebraska.	S5, I2, I4, I5, I6, I7, I8, I10
4. Participant-sourced strategies regarding levers and information sources, that can be utilized to increase uptake of plastic grain bag recycling by those using them in Nebraska.	I9, I10, I11, I12

Appendix D: Grain Bag Preparation Procedures for Collection Sites

GRAIN BAG PREPARATION PROCEDURES FOR COLLECTION SITES

These procedures apply to all users of grain storage bags (farms or businesses) that wish to participate in the Nebraska Recycling Council's collection program to keep these plastics out of our environment:

1. Remove all grain from bag and roll the bag into a tight bale. Also remove loose dirt/rocks from bag.
2. Tie the bags with a minimal amount of twine.
3. If a collection point is capable of baling the rolled bags, up to three bags may be included in a bale. A negotiable processing fee may be available for reimbursement for baling.
4. Upon receiving a minimum of 42,000 lbs. of rolled/baled grain bags at a collection site, contact Firststar Fiber to arrange pickup. If a collection point has other materials that are of interest to Firststar, combo loads will be considered.
5. Firststar will coordinate the pickup date/time with the collection site. When the truck arrives onsite there must be provisions to load the 42,000 lbs. of collected grain bag rolls/bales on the trailer. (e.g. a skid steer and mobile loading dock).
6. Loader should stack the bags tightly floor to ceiling for the entire length of the trailer, or whatever it takes to achieve 42,000 lbs. of material on the trailer. Material must be loaded in a manner that allows for safe unloading. Firststar Fiber will provide loading recommendations upon request.
7. Trucks should be loaded within 2 hours of arriving for their scheduled appointment.
8. The staging lot should be large enough to easily accommodate the maneuvering of the tractor/trailer, the material to be loaded, and the loading equipment (approximately an acre). The lot should either be paved or heavily graveled so minor weather changes won't negatively affect truck access and loading.
9. Staging lots should be in areas with easy interstate access and be easy for truck drivers to locate.
10. Trailers used for pickup will be enclosed 53' dry van trailers.

Please note the following:

The minimum acceptable load weight of material is 42,000 lbs.

Firststar Fiber does not pay for loading, material, loading equipment, etc. We arrange and cover the freight cost only.

The truck drivers will not assist in loading and will not be responsible to instruct on loading methods.

Firststar will not pick up partial loads or arrange for multiple stops to fill a trailer.

These guidelines must be strictly followed for this program to be succeed. Any failure to follow these guidelines will result in a reevaluation of service.

Appendix E: Research Participant Consent Form

Research Participant Consent Form

Purpose of Research: The purpose of this research is to understand benefits and barriers to plastic grain bag recycling in Nebraska with the aim to inform the development of a viable market for plastic grain bag recycling in Nebraska. You must be **19** years of age or older and involved in the decision making for the managing waste products on your operation to participate in this research. Carson+Co Global is conducting this research on behalf of the Nebraska Recycling Council in partnership with Firststar. The principal investigator will be a senior researcher, Simanti Banerjee, from Carson + Co Global. She will be leading interviews with assistance from other individuals from the project Consortium.

Code of Conduct: Carson+Co Global is an equal opportunity employer. Carson+Co Global does not discriminate on the basis of race, color, national origin, ethnic background, religion, gender, gender identity, sexual orientation, national origin, age, or disability. The interviews will be conducted with mutual respect as a priority. In an effort to deeply understand the barriers and benefits to recycling plastic grain bags, we will ask open ended questions and request you to share your honest opinions, experiences, and recommendations. There are no right or wrong answers. If any question is unclear, please request that it be restated in a different way. The goal of these interviews is to gather a detailed description of the factors that influence recycling behavior in general and, for the case of plastic grain bags, identify points of intervention and strategies that can be utilized to influence adoption. We appreciate your time to help gather valuable information about the potential for the development of a grain bag recycling program.

Specific Procedures to be Used: Should you choose to participate in this research, you would be asked to participate in a brief pre-interview survey and an interview that focus on your perceptions and thoughts related to use of and recycling plastic grain bags. Interviews will be video and/or audio recorded for note taking purposes. You may be asked to share documents related to your comments. These might include copies of a report you reference, photographs you have taken that relate to the discussion topic, etc. Providing this information is entirely voluntary.

Duration of Participation: The pre-interview survey will require about 10 minutes to complete. The interview (completed via videoconference or teleconference) will take about 60 minutes to complete. These lengths may be shorter or longer depending on your experiences and input.

Risks: There are no known risks or discomfort associated with this research.

Benefits: By participating in this research, you will have the opportunity to share your experience and knowledge as a decision-making representative for your operation. You will contribute to understanding recycling challenges and needs facing plastic grain bag users.

Freedom to Withdraw: Participation in this study is voluntary. You can refuse to participate or withdraw at any time without harming your relationship with the researchers or in any other way receive a penalty or loss of benefits to which you are otherwise entitled.

Confidentiality: If you consent to have your interview video and/or audio recorded, your interview will be recorded and/or transcribed for note taking purposes. Interview notes and records may be provided to the Nebraska Recycling Council, Firststar, and Carson+Co Global (the "Consortium") and will remain confidential to the Consortium. The results will be used by the Consortium to inform strategies to strengthen plastic grain bag recycling. In these strategies, the Consortium will not make any reference to specific individuals or companies, unless prior approval is given. So long as Carson+Co Global maintains copies of the information you provide, including the consent forms, Carson+Co Global will store the information on a password-protected computer and recommend to partners Nebraska Recycling Council and Firststar to store the information on a password-protected computer.

Opportunity to Ask Questions: You may ask any questions about this research at any time during your interview(s) or by contacting Casey Hoins (casey@carsoncoglobal.com) from Carson + Co Global or Haley Nolde (director@nrcne.org) from the Nebraska Recycling Council.

Consent, Right to Receive a Copy: You are voluntarily making a decision whether or not to participate in this research study. Your signature signifies that you have decided to participate having read and understood the information presented. *You will be given a copy of this form to keep.*

Consent for Interviews to be Video and/or Audio Recorded: I understand that if I am interviewed, the interview will be recorded for note taking purposes and that the recording files will be saved for a period of up to five years.

Please check one:

☐ I agree ☐ I do not agree

Signature of Participant: _____

Name of Participant (Please Print): _____

City/County (Please Print):

Date: _____

Name and Contact Information of Investigators

Simanti Banerjee, Senior Researcher, Carson+Co Global, simanti@carsoncoglobal.com

Haley Nolde, Director, Nebraska Recycling Council, director@nrcne.org

Casey Hoins, Senior Account Manager, Carson+Co Global, casey@carsoncoglobal.com

Jamie Carson, CEO, Carson+Co Global, jamie@carsoncoglobal.com

Elizabeth Hutchison, COO, Carson+Co Global, elizabeth@carsoncoglobal.com

Appendix F: Non-Disclosure Agreement

MUTUAL CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENT

Page 1 of 4, Signatures on Page 4

Related to contract work with: Nebraska Recycling Council for the research project "Nebraska Grain Bag Recycling"

THIS MUTUAL CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENT (the "Agreement") is made as of **Month Day**, 2022, (the "Effective Date") by and between C.C. Global Inc. (dba Carson+Co Global) ("Company") and (Name) _____,

(Title) _____
("Employee").

1. PURPOSE. This Agreement is being executed in connection with discussions and other exchanges of information for contracted services provided by the Company for Nebraska Recycling Council, in which representatives of the parties have had or will have for various business and organizational research purposes, including, without limitation: (a) evaluating working on, or partaking in confidential research interviews, (b) overhearing discussions as it relates to the research interviews and participant information, and (c) disclosures in the course of a business relationship between the parties that are not covered by another written agreement protecting the confidentiality of disclosures of confidential information. This Agreement is intended to allow both parties to have open discussions while affording protection against unauthorized disclosure or use of Confidential Information (as defined below).

2. CONFIDENTIAL INFORMATION. Each party understands and agrees that during the term of this Agreement it may be furnished with or otherwise have access to non-public information that the other party considers to be of a confidential, proprietary, or trade secret nature, including but not limited to information about Company's work with the Nebraska Recycling Council, research interview participant names, organization names, and facts, details, and statements made during the research interviews, whether known from participation in, reading the notes of, or otherwise generally being made aware of the details by internal communication channels or confidential conversations.

Following is the confidentiality agreement included in Nebraska Recycling Council Nebraska

Grain Bag Recycling project research interview consent forms:

Confidentiality: If you consent to have your interview video and/or audio recorded, your interview will be recorded for note taking purposes. Interview notes and records may be provided to the Nebraska Recycling Council, Firststar, and Carson + Co Global (the "Consortium") and will remain confidential to the Consortium. The results will be used by the Consortium to inform strategies to strengthen plastic grain bag recycling. In these strategies, the Consortium will not make any reference to specific individuals or companies, unless prior approval is given. So long as Carson+Co Global maintains copies of the information you provide, including the consent forms, Carson+Co Global will store the information on a password-protected computer and recommend to partners Nebraska Recycling Council and Firststar to store the information on a password-protected computer.

3. NON-CONFIDENTIAL INFORMATION.

Notwithstanding Section 2, Confidential Information of a party shall not include information that the party seeking non-applicability can show by competent proof: (a) is, as of the time of its disclosure or thereafter becomes part of the public domain through a source other than the receiving party, without violation of this Agreement; (b) can be demonstrated to be (x) rightfully known to the receiving party as of the time of its disclosure or (y) independently developed by the receiving party; (c) is subsequently learned independently from a third party not under a confidentiality obligation to the disclosing party; or (d) is required to be disclosed pursuant to a duly authorized subpoena, court order, or government authority, in which event the party subject to same shall provide prompt written notice to the other party prior to such disclosure so that such party may seek a protective order or other appropriate remedy.

4. OBLIGATION. Each party agrees to secure and protect the Confidential Information of the other party in a manner consistent with maintaining the other party's rights therein, using at least as great a degree

of care as it uses to maintain the confidentiality of its own confidential information of a similar nature or importance, but in no event using less than reasonable efforts. Neither party will sell, transfer, publish, disclose, or otherwise use or make available any portion of the Confidential Information of the other party to third parties or Company staff, except to those of its directors, officers, employees, or attorneys who clearly have a need-to-know the same in furtherance of the specific purposes of this Agreement and as expressly authorized in this Agreement. Disclosure of any confidential information must not be given without the express written consent of the Company Chief Executive Officer. All such disclosures shall be subject to all of the terms and conditions of this Agreement, and the party making such disclosures shall be fully responsible for ensuring the compliance of all such parties with the terms and conditions of this Agreement. Nothing in this Agreement shall be deemed to obligate either party to disclose any Confidential Information to the other, or to accept any Confidential Information from the other. In addition, nothing in this Agreement shall be deemed to commit or bind either party to enter into any other contractual or other relationship, or to purchase any goods or services of the other party.

5. OWNERSHIP AND TERMINATION. The receiving party agrees that all Confidential Information of the disclosing party (and derivatives thereof) is and at all times shall be the exclusive property of the disclosing party, to be used by the receiving party only during the term of this Agreement, for the specific purposes expressly authorized by this Agreement. No license under any patent, trademark, copyright or any other worldwide intellectual property or proprietary rights laws is either granted or implied by the disclosure or provision of any Confidential Information. All rights are reserved. Upon the termination or expiration of this Agreement, or at the request of the disclosing party at any time, the receiving party promptly shall destroy all of its copies of such Confidential Information or return the same to disclosing party (in accordance with the disclosing party's instructions), and shall, upon request, certify in writing its compliance with the terms of this provision. After such destruction or delivery, the receiving party shall not use or retain any copies thereof.

ALL CONFIDENTIAL INFORMATION IS PROVIDED "AS IS" WITH ALL FAULTS, AND NEITHER PARTY SHALL HAVE ANY LIABILITY FOR THE OTHER PARTY'S USE OR RELIANCE THEREON. NO EXPRESS, IMPLIED, STATUTORY OR OTHER REPRESENTATIONS OR WARRANTIES ARE MADE, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NONINFRINGEMENT OR NON-

MISAPPROPRIATION OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY, CUSTOM, TRADE, QUIET ENJOYMENT, ACCURACY OF INFORMATIONAL CONTENT, OR SYSTEM INTEGRATION.

6. TERM. The term of this Agreement shall be for a period of time in which the Employee is employed at the Company, and commencing on the Effective Date, unless sooner terminated upon written notice by one party to the other. The confidentiality obligations for Confidential Information constituting trade secrets (as determined under applicable law) shall survive the termination or expiration of this Agreement for as long as such Confidential Information remains a trade secret. The confidentiality obligations for all non-trade secret Confidential Information shall continue for a period of three (3) years following termination or expiration of this Agreement.

7. MISCELLANEOUS. This Agreement constitutes the entire agreement between the parties hereto concerning the subject matter hereof and supersedes any prior or contemporaneous agreements concerning the subject matter hereof. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and any invalid or unenforceable provision shall be deemed to be amended to the minimum extent necessary to render it enforceable under applicable law while retaining to the maximum extent possible the intent and economic benefit of the original provision consistent with applicable law. No delay or omission by a party in exercising any right under this Agreement constitutes a waiver of that or any other right. This Agreement is governed by and will be construed in accordance with the laws of the State of Nebraska, without regard to conflicts of law principles.

Sole and exclusive jurisdiction for any dispute under this Agreement shall be the appropriate federal or state courts in Nebraska. Each party acknowledges that its breach of this Agreement may cause irreparable injury to the other party and that the other party may seek and obtain injunctive and other equitable relief against such breach. No amendment or modification of this Agreement shall be valid or binding on the parties unless made in a mutually executed writing. All notices under this Agreement shall be in writing and sent to the address listed herein (or to such different address as may be designated by a party by written notice to the other party), and shall be deemed to have delivered (a) on the date personally delivered (or upon refusal of delivery); (b) three (3) days following the date mailed, when mailed postage prepaid by certified mail with

return receipt requested; or (c) when sent via facsimile with confirmation of receipt. All notices to COMPANY shall be sent to the attention of Chief Executive Officer, unless COMPANY indicates otherwise. This Agreement may be executed in multiple counterparts, all of which taken together shall constitute a single instrument. This Agreement may

be delivered by facsimile. This Agreement is personal to the parties and may not be assigned or otherwise transferred by either party without the prior written consent of the other party; this Agreement shall be binding upon each party's successors and permitted assigns. This Section and Section 5 also shall survive termination or expiration of this Agreement.

SIGNATURE PAGE

IN WITNESS WHEREOF, the parties hereto, acting through their respective duly authorized representatives, have executed this Agreement as of the Effective Date and agree to be legally bound by all terms and conditions contained herein.

Company: Carson+Co Global

Signature:

Printed Name: Jamie Carson, CEO

Address: 2124 Y Street, A14, Lincoln, NE 68503

Date:

Company:

Signature:

Printed Name: _____

Address:

Date: