

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Publications from Nebraska Network 21

Nebraska Network 21

November 1998

NN21 Food Systems Inventory

Nebraska Network 21

Follow this and additional works at: <https://digitalcommons.unl.edu/nn21publications>



Part of the [Education Policy Commons](#)

Network 21, Nebraska , "NN21 Food Systems Inventory" (1998). *Publications from Nebraska Network 21*. 18.

<https://digitalcommons.unl.edu/nn21publications/18>

This Article is brought to you for free and open access by the Nebraska Network 21 at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Publications from Nebraska Network 21 by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

NN21 Food Systems Inventory

(11/30/98)

"... meet the needs of the present without compromising the ability of future generations to meet their own needs."
The World Commission of Environment and Development, 1987

Table of Contents

- [Introduction to the Food Systems Inventory](#)
- [Area of Study/Community Profile](#)
- [Production](#)
- [Processing](#)
- [Distribution](#)
- [Consumption](#)
- [Waste Management](#)
- [Web Exercise](#)

Introduction

Food Systems Inventory

This questionnaire serves a guideline for gathering information that will produce a community inventory. First, you are asked to define your area of study, how many people live there and how many people are directly involved in food related activities. Then you are asked to gather information about the food system in your area. Important: please keep a record of your sources of information.

This questionnaire is organized according to five components of the food system: production, processing, distribution, consumption, and waste management.

Some of the information in each part relates to information in the other parts. The food that is available in your community, for example, will be a function of both production and distribution networks. The relationships between the parts show that the parts function together as a system.

Food Systems and Community

The inventory is a tool to help communities look for ways to become more sustainable; first, by identifying issues of concern, then by considering options. Options which are more sustainable are those that protect the natural environment while providing opportunity for economic growth and community development.

The food system is part of a larger context but it serves as a useful starting point for understanding sustainability issues. It will be helpful for students to learn about the concept of sustainability before conducting this inventory. When the inventory results are compiled they will be examined with the goal of creating a more sustainable community.

Communities of Learning

The inventory will be conducted by teachers and students in the School at the Center program who are learning through community involvement. The same inventory will be conducted in more than one community so that communities can share their experiences with others.

This Food Systems Inventory was developed by the NN21 Action Team for Sustainable Communities in collaboration with participating teachers of the School at the Center. Support for this project is provided by the Kellogg Foundation through the Nebraska Network 21, changing the way Nebraskans will learn in the 21st Century.

Area of Study:

Before an analysis of the food system can begin, an area needs to be determined which represents the local food system and its activities. This should include the town and surrounding area which relies on the community for food, supplies, and jobs.

For this project an area of study can be determined in a number of ways. One approach is to identify an ecological area such as a watershed. A second approach is to determine the socio-economic boundary by asking local residents to define the area beyond the city limits which they consider to be part of the community. A third approach is to select a political boundary such as a school district. You can use one or a combination of these ap-

proaches to determine your area of study. Establish a region which you feel is manageable.

1. Explain how the limits of your area of study were determined. _____

2. Using the established area of study, indicate the land area within the city limits. Indicate the land area of the surrounding area. _____

3. What is the population of your town? of the surrounding area? _____

4. Optional activity: Produce a map to compare the different ways your area could be defined. Indicate an ecological, socio-economic, and school district boundary of your region and include your area of study.

Community Profile:

1. Compile a list of jobs in your community which are involved in each part of the food system, including production, processing, distribution, consumption, and waste management.

2. What percent of the community's workforce is employed in agricultural food production? _____

3. What percent of the community's workforce is employed in jobs related to other areas of the food system, including processing, distribution, consumption, and waste management? _____

4. Optional activity: Draw a pie chart indicating jobs related to the food system as a percentage of all jobs in your area. Draw a second pie chart indicating the percentages of jobs within each part of the food system (production, processing, distribution, consumption, and waste management).

Production: Part I

List the information asked for in Part I on the form provided in Part II.

1. Determine the area's soil types and what potentially could grow in this soil.
2. Describe the climate of the area and indicate average annual precipitation. Determine what crops could grow in this climate.
3. Identify foods obtained by indigenous hunting and gathering societies as well as early agricultural activity (optional).
4. Compile a list of crops grown and farm animals raised in your area in the past 100 years.
5. List all foods which are currently grown or raised in the area of study and rank in order of greatest to least production.
6. Of the items indicated in number 5, list the techniques, chemicals and treatments typically used in their production. This information should include farm equipment, type of fertilizer, techniques such as irrigation, and inputs such as seeds and animal feed.
7. List factors which lead to crop failure in your area of study. Indicate the top three factors that are most problematic in the area.
8. Of current crop and animal production, identify innovative practices in your area. Innovative practices are farming techniques and food production which are outside the current norm such as organic farming or the raising of emu. Include the same information listed in number 6.

Recommended Resources:

Your local county extension agent can provide you with documents that may be helpful for this project. They include: past and current agriculture censuses, soil study data, and information regarding innovative practices and optional crops. Nebraska agriculture census information can also be found on the following web site: <http://govinfo.library.orst.edu/cgi-bin/ag-state?Nebraska>. Indigenous food information may be obtained through your local museum or historical society. You may also wish to interview parents, grandparents or other elderly community members and/or farmers to learn more information about historical production and innovative practices.

PrProduction: Part II

Area of study: _____

Soil types and climate: _____

Historical Production

List indigenous foods (optional)

List foods produced in past 100 years:

List all food produced or raised. Also list farming practices in the appropriate column.

<u>Current Production & Farming Practices</u>	<u>Innovative Production & Farming Practices</u>	<u>Optional Production</u>

Given the soil and climate conditions in your area, what other crops could be grown?

Food Processing Inventory: Part I

Identify all food processing operations in the area of study and answer questions in Part II for each.

1. List food processing operations which existed in the area of study in the past.

2. List all food processing operations currently located in the area of study.

Recommended Resources:

The information for Food Processing Part I and II can be gathered in a number of ways. Local residents and newspaper archives are a good resource for researching past food processing activities. Information about current operations may be obtained through letters, telephone calls, class speakers, or in or out of class interviews.

Food Processing Inventory: Part II

Select one or more food processing operations, past or present, in the area of study. If outside the area please explain. This worksheet may be used to organize an interview or a letter to obtain more specific information about the operation.

1. Name of company/address _____

2. Name of contact person/telephone no. _____

3. What products are produced? _____

4. Where do the major ingredients for these products come from? If local, what is the percentage? _____

5. How much energy and water are used in the food processing? _____

6. What are the by-products? _____

7. What waste is produced and how is it treated? _____

8. What is the final destination of the finished product? Is it local, statewide, regional, national, and/or international? _____

9. What mode(s) of transportation is used for shipment? _____

10. Are locally processed items distributed locally? If not, why? If so, what percentage? _____

11. Were there any special attributes which compelled the business to locate in your community? If so, what were they? _____

Please include additional questions of your own.

Distribution Networks: Part I

Identify places where food is available in your area of study. In Part II, research specific products in detail.

1. Compile a list of all places which serve or sell food in the area of study. This includes restaurants, grocers, farmers markets, specialty food stores (roadside stands, bakeries, butcher shops, health food stores), convenience stores, schools and other public facilities, food assistance programs, etc.

2. Of the restaurants identified in your area of study, indicate the following information.

Name of Restaurant	Local origin or Franchise	General description of the cuisine

4. Note the following information about the local grocery stores and specialty food stores (roadside stands, bakeries, butcher shops, health food stores, convenience stores, etc.) identified in the study area.

Name of the establishment	Local origin or Regional Corporation	General description of items available

* For large corporations, identify the location of the headquarters and describe the region served.

Recommended Resources:

This information may be obtained through letters, phones calls, or in or out of class interviews. For further information on distribution, you may speak to a local grocery.

Distribution Networks: Part II

Select a local restaurant or a packaged food item with the name and address of a producer/distributor outside your area. Write a letter, e-mail, or call to obtain more information.

Section A:

Name of company/address

Name of contact person/telephone no.

About the product:

1. What is the origin of the major ingredients?

2. Where was the product processed?

3. How was the product shipped to the consumer?

4. Calculate the total distance traveled from the source to the consumer. _____

Ask these questions about their general operations:

1. How many production/distribution centers does the company have and where are they located?

2. What is the company's largest market, that is, where do they ship the majority of their product for consumption?

3. What is the company's closest and most distant market area?

Section B:

1. Select a locally-grown food item (corn, cattle, etc.) and find out how it is sold and how it is distributed.

2. Select an item researched above and draw a map or diagram that depicts the distribution network.

Distribution Network: Part II Supplement

The purpose of this exercise is to understand the way food gets from its origin, where it is produced, to the consumer. In order to understand different distribution models, compare two food products that are similar, but may follow different distribution networks. For example, research the distribution of a chicken that can be purchased from a local farmer or producer and find the source and distribution

network of a chicken processed and sold on a national scale or by a fast food chain.

You will need a partner for this exercise. Each of you will research one product, use Distribution Networks: Part II, Section A to establish the distribution network of each item. In the space below, record differences in the production and distribution of the two related items you researched. For example, the locally raised chicken may have been grass-fed and antibiotic-free and it may go to special markets. The national brand chicken may have been raised in a large confinement operation and treated with antibiotics. Also note if you had difficulties obtaining information about the products.

The information gathered in this activity can be used to complete Distribution Networks: Part II, Section B.

Consumption: Part I

1. List all the foods your family purchased last week or in a typical week. If you wish, list all foods you can buy in your area of study.

2. Identify which of these items are seasonal:

summer	spring	winter	fall

3. What is your estimate of the percent of food produced locally or regionally?

comes from other regions? _____

comes from other countries? _____

Recommended Resources: Your local grocer(s), restaurant managers, and school lunch program coordinator(s) may be helpful in this research.



Consumption: Part II

Please answer the following questions and have a friend or family member fill out a copy of this form.

1. Where do you go to buy your food? _____

2. If you travel outside your community for food, what are the main reasons?

You may circle more than one: Price Selection Quality Other _____

3. Do you feel your community has an adequate food selection in terms of grocers, restaurants, and/or specialty food shops (bakery, butcher, etc.)?

YES NO

If you answered no, please specify what you would like to have. _____

4. Is a healthy diet important to you?

YES NO

5. Are you able to follow a healthy diet with the food selection available to you in your area?

YES NO.

If you have concerns about food quality, what are they? _____

7. If you have seasonal food preferences, what are they? _____

8. If you or anyone in your family has a garden, engages in home processing activities (canning or freezing), or raises animals for consumption how much does it contribute to your food supply?

very little moderately significantly

Please specify your family's activity(s). _____

9. In a typical week, how many meals and snacks do you prepare at home?

are prepared at school or other public facility? _____

are prepared at a restaurant? _____

10. What is the main source of your drinking water?

*tap *filtered tap domestic well bottled other _____

* What is the source of the municipal water supply?

11. If you have concerns about water quality, what are they?

Waste Management

1. Identify and list waste produced by the food system. Consider distribution and packaging of food, production, processing, and consumer waste.

2. What items go to landfill? _____

3. What items are recyclable? _____

4. What items can be composted? _____

5. What percentage of waste in your area goes to landfill? _____

is recycled? _____

is composted? _____

Sustainable Development: Website Exercise

The World Wide Web has a wealth of information on the concept of sustainability. Search the web for sites on sustainable development. Select three sites that you found useful in gaining a better understanding of sustainability.

1. Website name and address: _____

What do you like about this website? _____

Briefly explain what you learned from this website about sustainability. _____



2. Website name and address: _____

What do you like about this website? _____

Briefly explain what you learned from this website about sustainability. _____

3. Website name and address: _____

What do you like about this website? _____

Briefly explain what you learned from this website about sustainability. _____
