Sustainable Farm-to-Hospital Toolkit

Using Written Protocols to Guide Direct Procurement of Food From Sustainable Farmers, Producers

WHY ADOPT A FARM-TO-HOSPITAL SUSTAINABLE FOOD PURCHASING PROTOCOL?

Hospitals are encouraged to adopt one or more farm-to-hospital sustainable food sourcing protocols for the following reasons:

- To assure hospital administrators and other interested parties that the foods purchased directly from one or more sustainable farmers/producers came from "approved sources" in compliance with voluntary food service implementation of Hazard Analysis and Critical Control Points (HAACP) principles, designed to reduce food safety risks[1,2,3]
- To provide sustainable farmers/producers with the same information on hospital requirements and preferences and increase transparency
- To provide a simple, less onerous way to assure that foods purchased directly from one or more sustainable farmers/producers are as safe, if not safer, than similar foods purchased via a distributor
- To formalize goals, procedures and requirements related to purchase of foods directly from one or more sustainable farmers/producers
- To mainstream hospital procurement of food directly from sustainable farmers/producers
- To address the general food safety concerns that arise when serving both healthy and immune-compromised people
- To engender consumer confidence

FIVE STEPS TO DEVELOPING A PURCHASING PROTOCOL

Step 1

Review the next section containing information on the important components of a purchasing protocol and the sample protocols provided. Then, use the information provided to develop one or more draft protocols for the hospital.

Step 2

Share the draft protocol with key food service staff, including but not limited to those involved in menu planning, placing orders and supervising kitchen staff. Be sure to engage any staff member who has past experience in wholesale purchase of products from farmers/producers.

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Step 3

Use the draft protocol(s) as a guide for identifying, conducting outreach and interviewing potential sustainable farmer/producer partners. Learn what is currently achievable and what may have to change in the short term.

Step 4

Tweak as necessary to create balance between what the hospital requires and what farmers/producers can achieve in the short-term, while communicating longer-term preferences. If necessary, gain approval of the revised draft protocol, before making purchases. If no higher approval is necessary, it is still a good idea to share the steps that food service is taking to buy food directly from sustainable farmers/producers.

Step 5

Use the hospitals new purchasing protocol to establish and maintain relationships with sustainable farmers/producers as needed and on an on going basis.

NOTE: This document is primarily for hospitals that manage food service operations in-house. If a hospital has hired a food service contractor to manage one or more portions of their food service operations, and the food service contractor prohibits purchase of food items directly from sustainable farmers/producers, and/or has prohibitive requirements in place, hospitals should consider adopting their own protocol and regaining the flexibility needed to purchase food from farmers/producers that meet the hospitals' protocol.

IMPORTANT COMPONENTS OF A PURCHASING PROTOCOL

Hospital name and purpose of protocol

List the name of hospital and location or other identifying information if more than one hospital in the area shares the same name. In addition, describe briefly the purpose of the protocol, i.e., the type(s) of products sought.

Distance preferences/ requirements

Indicate whether the hospital prefers or requires that sustainable farmers/producers be located within a specific geographic area, such as the city, county or state where the hospital is located or within a specified mileage range. Ideally, this section and the sustainability/preferences section of a hospital's protocol would be informed by a hospital's overall food policy or vision and sustainable procurement goals. However, a hospital can always start with a draft or test version of a protocol and use lessons learned to inform policy and goal development.

NOTE: Be sure to consider whether there are sufficient sustainable farmers/producers located within the preferred or required range.

Payment method and timing preferences/requirements

Indicate whether the hospital prefers or requires that sustainable farmers/producers accept certain types of payment, such as, credit card, check or electronic transfer.

NOTE: Not all farmers and producers are set up to accept credit card payments. Hospitals should also indicate the timeframe in which the sustainable farmer/producer can expect to be paid, such as within 30 days of invoice receipt.

Contact for additional information

List contact information for a hospital staff person who can answer farmer/producer questions and questions from other hospital staff. Though more than one hospital staff person can and should probably be involved in the development and review of the protocol, at least one person should be responsible for using it to interview and screen potential sustainable farmer/producer partners.

Sustainability preferences/ requirements

Indicate whether the hospital prefers or requires that farmers avoid or use certain practices, and if certification/audits of claims related to these practices are required. For instance, a hospital can require that farmers/producers interested in selling them produce use integrated pest management practices and prefer that they not use of synthetic pesticides, herbicides or fungicides and be able to demonstrate compliance, or that farmers/producers interested in selling them beef avoid use of antibiotics or added hormones and prefer that the beef cattle are also USDA Grassfed.

NOTE: It can be challenging to ascertain whether a farmer/producer is using practices that would be considered sustainable for the products they produce without a certifier to back up their claims. However, in some cases it just does not make sense for a farmer/producer to go to put the time and money into third party audits, even when, for instance, the practices they follow meet and exceed USDA organic standards. In these cases, the hospital will need to rely on the word of the farmers/producers and what can be seen when conducting site visits. See below.

Pricing preferences/requirements

Indicate the type of pricing the hospital prefers or requires (wholesale, by the pound, etc.), and whether delivery cost should be included in the product price or separate.

USDA Grade or other preferences/requirements

Indicate whether the hospital prefers or requires certain USDA product grades, such as Grade 1 or Grade 2 produce, Prime, Choice or Select for beef, etc., and whether pasteurization or other processing practices are required.

Pack size preferences/requirements

Indicate whether the hospital prefers or requires products to be packed in a certain way, e.g., standard box, loose pack, bulk, etc.

Product labeling preferences/requirements

Indicate whether the hospital prefers or requires the name of the farm or farmer/producer cooperative/collaborative on the product, product packaging and/or purchasing documents.

Safe food handling preferences/requirements

Training

Indicate whether the hospital has any preferences or requirements as to whether a sustainable farmer/producer and their workers have had training in on-farm food safety practices, such as USDA Good Agricultural Practices (GAPs) for produce. Though participation may vary throughout the North Central SARE region, of the 22 farmers/producers and farmer cooperatives who completed IATP's 2012 and 2013 SARE project farmer/producer surveys and are interested in selling whole and/or pre-processed produce to hospitals 40.9 percent (9/22) stated that they had completed a USDA GAPs training program.

NOTE: This percentage is likely to increase considerably once the new produce regulations associated with the December 2012 passage of the Food Safety and Modernization Act are official. In addition, USDA GAPs training is inexpensive and increasingly available via on-line webinars. In the meantime, hospitals that do not wish to limit their purchases from sustainable farmers/producers in this way, could just ask sustainable farmers/producers to disclose whether they have completed a USDA GAPs training program, and provide a copy of the certificate for the hospital to keep on file.

Written plan

Indicate whether the hospital prefers or requires farmers/producers to have a written food safety plan for their farm. Currently, a hospital may find that many sustainable farmers/producers who operate smaller-scale farms or operations do not have written food safety plans, in part because they may not have been asked to provide them previously. Of the 32 farmers/producers who completed IATP's 2012 and 2013 SARE project farmer/producer surveys and are interested in selling products to hospitals, 50.0 percent (16/32) stated that they have a written food safety plan. Since it is important for your hospital to feel confident in the produce it is purchasing, it is recommended that sustainable farmers/producers be asked to provide the hospital with at least a short written description of how they ensure food safety on their farm/operation.

Certification

Indicate whether the hospital prefers or requires sustainable farmers/producers to self-certify compliance with USDA Good Agricultural Practices (GAPs) or be audited/certified to be in compliance through the USDA audit program or to a comparable standard by another third party. These certifications apply to fresh produce.

NOTE: Of the farmers/producers and farmer co-operatives who completed IATP's 2012 and 2013 SARE project farmer/producer surveys and are interested in selling fresh produce to hospitals 18.2 percent (4/22) had completed a USDA GAPs self-audit and 18.2 percent (4/22) of these had obtained third party GAPs certification).

Produce pre-processing

Indicate whether the hospital prefers or requires produce to be pre-processed or arrive with limited processing. Note: Of the farmers/producers who completed the IATP 2012 and 2013 SARE project surveys and are interested in selling their produce to hospitals, most engage in only limited processing including sorting or trimming (e.g., topping carrots or husking corn) as part of the harvesting process, or washing (e.g., to start the cooling process or to remove extraneous soil and debris). Those who were interested in selling processed produce items such as cider, said their products were processed in an inspected and approved retail kitchen or processing facility.

Meat and poultry processing

Indicate whether the hospital prefers or requires that meat and poultry products be processed in a state-inspected or federally-inspected facility. If your hospital will be buying from a sustainable farmer/producer or group of farmers/producers in another state, the products will need to be processed in a USDA-inspected facility. Meat and poultry products purchased from farmers/producers located within your state will typically only need to be processed in a state-inspected facility, but you should always consult with your state department of health to determine what is required for your state.

Farm visits preferences/requirements

Indicate whether and how frequently someone from the hospital will conduct a site visit of the farm. If the hospital plans to buy fresh produce from a sustainable farmer/producer who does not have GAPs or equivalent third party certification, it is recommended that a hospital food service representative visit the farm at least once during the growing season to assure that at least some basic practices are in place, such as hand washing stations for farm workers. Consider contacting the department of agriculture or department of health to see if they have any recommendations for conducting site visits.

Farm visits can also be used to have the farmer/producer provide additional details on pesticide use and storage, use of fertilizers and storage, manure management, antibiotics and hormone use, etc. This can be helpful when a farmer uses organic practices, but lacks third party certification. However, when a sustainable farmer/producer does comply with one or more eco-label standards, farm visits can help hospital food service staff to learn first-hand about the different production methods used by these farmers.

Delivery preferences/requirements

Indicate whether the hospital has specific delivery-related preferences or requirements to maintain product quality and enhance shelf life. For instance, a hospital may want to prefer that cooled produce register above 41 degrees upon delivery or that cartons and carriers used to transport products be clean and sanitary at all times.

NOTE: Many smaller farms cannot afford a refrigerated truck for deliveries. Only 35 percent (11/31) farmers/producers not selling shelf-stable products, such as milled grains, deliver their products in a refrigerated truck. Among the remaining farmers/producers, those who sell meat use coolers and ice or cold packs, and those who sell produce use a mix of pre-cooling of product before delivery and using air conditioned vehicles or coolers to transport over short distances.

Insurance preferences/requirements

Indicate whether your hospital prefers or requires that sustainable farmers/producers have certain types and amounts of insurance coverage. For instance, whether your hospital prefers or requires that sustainable farmers/producers carry product liability insurance.

NOTE: Some sustainable farmers/producers do not carry this type of insurance, but based on farmer/producer surveys conducted for the IATP SARE project "*Connecting Sustainable Farmers to Emerging Health Care Markets*," most of the farmers/producers interested in selling to hospitals carried at least a $1 million dollar policy and many carried $2 million or more. Only three farmer/producers interested in selling to hospitals did not carry product liability insurance. Thus, hospitals could likely require that sustainable farmers/producers provide proof that they carry at least a $1 million policy without barring too many farmers/producers from selling to them. Hospitals that do not wish to limit their purchases from sustainable farmers/producers in this way, could just ask sustainable farmers/producers to disclose whether they typically carry product liability insurance and the amount of coverage, and be clear that it is for informational purposes only. Hospitals should also consider asking for a copy of the certificate of coverage to keep on file.

Product recall, reporting and return preferences/requirements

Indicate preferences or requirements related to product recall, reporting of issues or returns.

NOTE: Though many large-scale farms may carry recall insurance, nearly 80 percent of the sustainable farmers/producers who expressed interest in selling to hospitals via the IATP SARE project surveys do not carry recall insurance.

Communication preferences/ requirements

Indicate the hospital's preference for providing and receiving feedback on how the relationship is working, both what is working well and what could be improved. Per the IATP SARE project 2013 survey results, 67 percent of farmers/producers consider open communication between themselves and their hospital customers to be "very important."

NOTE: This is not typically included in a purchasing protocol, but should be. Hospitals should also discuss the ways in which they intend to maintain the identity of the farmer/producer as the product source via patient, cafeteria and catering menus or other labeling mechanisms as well as interest in having the farmer/producer attend an occasional event to market products, provide pictures of the farm, etc.

SAMPLE PROTOCOLS

The attached sample protocols can be used alone as part of broader process, such as through a request for information (RFI) or request for proposal (RFP), to determine the interest of one or more sustainable farmers/producers in selling the specified types of food directly to a hospital or health system. For examples of how this has been done, see the school-related resources listed below. The protocols can also serve as the basis for a written purchasing agreement.

ADDITIONAL RESOURCES

The document was informed by a review of the following resources:

- Chartwells Request for Information (chicken raised without antibiotics)
  www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsChikRFI-jan14.pdf
- Chartwells Request for Information (local produce)
  www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsProdRFI-Jan9c.pdf
- Greenway Insurance Group and Clinics Local Sourcing Protocol
  http://danedocs.countyofdane.com/webdocs/pdf/plandev/ifm/sample_template.pdf
- Institutional Buyers 101 Fact Sheet
  www.ifmwi.org/documents/pdf/Institutional_Buyers_101_0.pdf
- Local Produce Procurement Guide for VA NFS 10-09 (unpublished)
- Minneapolis Public Schools Culinary and Nutrition Services Request for Information (local produce)
  http://nutritionservices.mpls.k12.mn.us/uploads/mps_f2s_request_for_information-application.pdf
- On-Farm Food Safety Information for Food Service Personnel, Minnesota Department of Health and University of Minnesota
  www1.extension.umn.edu/food/farm-to-school/docs/farm-food-safety-questions.pdf
- Wisconsin Farm to School: Toolkit for School Nutrition Directors (section on produce bid process)
  www.cias.wisc.edu/wp-content/uploads/2011/09/4-locate-and-purchase-local-foods.pdf

ENDNOTES

1. Managing Food Safety: A Manual for the Voluntary Use of HACCP Principles for Operators of Food Service and Retail Establishments. US FDA (2008) http://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006811.htm (accessed July 22,2013).
2. HACCP-Based Standard Operating Procedures (SOPs). National Food Service Management Institute and United States Department of Agriculture (2005), http://sop.nfsmi.org/HACCPBasedSOPs.php (accessed July 22, 2013).
3. HAACP-based SOPs: Receiving deliveries (Sample SOP), http://sop.nfsmi.org/HACCPBasedSOPs/ReceivingDeliveries.pdf (accessed July 22, 2013).

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Sample

[NAME OF HOSPITAL]'S PROTOCOL FOR PURCHASING PRODUCE DIRECTLY FROM SUSTAINABLE FARMERS, PRODUCERS

Whenever possible, [name of hospital] is committed to purchasing fruits, vegetables and herbs directly from one or more sustainable farmers/producers or groups of sustainable farmers/producers. Farms should be located within a 250-mile radius, and the closer to our hospital the better. In addition to the mile preference, our produce-specific sustainability preferences are listed in the table below.

[Name of hospital] food service staff should determine the ability of farmers/producers to meet the needs, preferences, and requirements outlined in the table below, before initial purchase. In addition, farmers/producers must be willing to accept payment by check or credit card. When paid by check farmers/producers can expect payment within 30 days of receipt of their invoice. Credit card payments are made upon receipt of their invoice. A bill of lading or detailed invoice should be provided upon delivery to the hospital.

Questions about this protocol or exceptions should be directed to: [insert contact name, title, phone and email address]

Needs, Preferences and Requirements	
Sustainability	Produce must be grown using integrated pest management practices and without use of genetically engineered seed, chemical/synthetic fertilizers, sewage sludge, or raw manure. May prefer produce that is Certified Naturally Grown, Food Alliance Certified, Food Justice Certified, Non-GMO Project Verified, Protected Harvest, Salmon Safe, or Certified Organic, if available.
Pricing	Will pay wholesale market prices at a minimum. Prefer cost of delivery be included in price. Also prefer pricing by the pound.
USDA Grade	US #1 preferred, US#2 may be acceptable with prior notice
Packaging	All produce must be packed and prepared under sanitary conditions and in accordance with good commercial practice. No pack size requirements. Preference for pack sizes will vary by type of produce.
Product labeling	Name of farmer/producer or group of farmers/producers must be listed on purchasing documents (order forms, invoices, etc.). Prefer clear identification on product and/or product packaging as well.
Food safety training	Require proof of training in USDA good agricultural practices (GAPs) or state-based equivalent and keep a copy on file
Written food safety plan	Farmers/producers required to provide a written description of how they ensure food safety on their farm. Prefer at least a two-page written plan that outlines their worker hygiene standards, food handling guidelines, washing/packing/cooling procedures, pest control measures, trace back procedure, etc. and keep a copy on file.
GAPs Certification	No GAPs certification required. Prefer USDA GAPs/GHP certification or third party equivalent.
Farm visits	A hospital food service representative must conduct an on-site visit to the farm at least once during the growing season, if the farm does not have GAPs or equivalent third party certification.
Processing	Produce must be processed in a state-approved kitchen or processing facility.
Delivery	Produce must be properly cooled upon harvest and cold chain maintained from farm to hospital door, as recommended per type of produce to maximize retention of nutrient value and enhance shelf life. Prefer that cooled produce register above 41 degrees upon delivery. Cartons and carriers used to transport products must be clean and sanitary at all times.
Product liability insurance	None required. Prefer $1 million policy coverage.
Product recall, reporting and return	Farmers/producers must provide a written copy of their product recall and return procedures. Also, hospital reserves the right to refuse deliveries of produce if produce is not cooled to proper temperature, see above, is encrusted with field dirt and/or plant materials, insects or rodents are found within packaging or packaging is torn, dirty or suspect to tampering.
Communication	Hospital will make time to provide farmer/producer with feedback, both positive and negative, on both product and service.

Sample

[NAME OF HOSPITAL]'S PROTOCOL FOR PURCHASING MEAT AND POULTRY DIRECTLY FROM SUSTAINABLE FARMERS, PRODUCERS

Whenever possible [name of hospital] is committed to purchasing beef, bison, chicken, turkey and/or pork products directly from one or more sustainable farmers/producers or groups of sustainable farmers/producers. Farms should be located within a 250-mile radius, and the closer to our hospital the better. In addition to the mile preference, our produce-specific sustainability preferences are listed in the table below.

[Name of hospital] food service staff should determine the ability of farmers/producers to meet the needs, preferences, and requirements outlined in the table below, before initial purchase. . In addition, farmers/producers must be willing to accept payment by check or credit card. When paid by check farmers/producers can expect payment within 30 days of receipt of their invoice. Credit card payments are made upon receipt of their invoice. A bill of lading or detailed invoice should be provided upon delivery to the hospital.

Questions about this protocol or exceptions should be directed to: [insert contact name, title, phone and email address]

Needs, Preferences and Requirements	
Sustainability	Beef, bison and lamb must raised without antibiotics or added hormones. Poultry must be raised without antibiotics. May prefer meat and poultry that is American Grassfed Certified, Animal Welfare Approved, Certified Humane Raised & Handled, Certified Naturally Grown, Certified Organic, Food Alliance Certified, Food Justice Certified, Salmon Safe, USDA Grassfed, USDA Process Verified Grassfed, or USDA Process Verified Never Ever 3, if available.
Pricing	Will pay wholesale market prices at a minimum. Prefer cost of delivery be included in price. Also prefer pricing by the pound.
USDA Grade	USDA Prime, Choice or Select
Packaging	No pack size requirements. Preference for pack sizes will vary by type of produce.
Product labeling	Name of farmer/producer or group of farmers/producers must be listed on purchasing documents (order forms, invoices, etc.). Prefer clear identification on product and/or product packaging as well.
Processing	Meat/poultry must be processed in a state-inspected or USDA inspected facility depending on whether the products cross state lines to be sold.
Delivery	A temperatures must be maintained during transport of products.
Product liability insurance	Require $1 million policy coverage.
Product recall, reporting and return	Farmers/producers must provide a written copy of their product recall and return procedures, a description of who is responsible for the animals/product at each step of the process, and information on any food borne illness issues they have dealt with in the last year including the present.
Farm visits	A hospital food service representative must conduct an on-site visit to the farm at least once during the growing season.
Communication	Hospital will make time to provide farmer/producer with feedback, both positive and negative, on both product and service.

Food- and Beverage-Related Eco-labels/Label Claims

THIRD-PARTY CERTIFIED ECOLABELS

Certification	Logo	Brief description	Availability of certified items by food service categories
American Grassfed		■ Developed by the American Grassfed Association. ■ Verified by an independent, third-party, on-farm audit by Auditors from Animal Welfare Approved. ■ Standards incorporate the attributes of open pasture, animal welfare, no antibiotics, no hormones and the production of nutritious and healthy meats; recognize that the U.S. is geographically and climatically diverse and that grassfed production without any supplementation may not be feasible in some regions of the country; did not exist when Green Guide for Health Care (GGHC) Food Service (FS) Credit 3 was published, but places meaningful limits on antibiotic and hormone use so is included here. ■ More information and a list of certified producers can be found at www.american-grassfed.org.	■ Beef ■ Dairy (fluid milk, cheese) ■ Specialty meats (bison, goat, lamb)

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Certification	Logo	Brief description	Availability of certified items by food service categories
Animal Welfare Approved		■ Developed by the Animal Welfare Institute. ■ Verified by Animal Welfare Institute auditors. ■ Standards prohibit the sub-therapeutic and/or nontherapeutic use of antibiotics, or any other medicines, to control or prevent disease or promote growth (including sulfa drugs or ionophores); require animals to be raised on range or pasture; prohibit dual production (i.e., raising animals under both an industrialized, factory-farm system as well as an alternative, higher-welfare system); include high standards for animal welfare. ■ More information and a list of certified producers can be found at www.animal-welfareapproved.org.	■ Beef ■ Dairy (fluid milk, cheese) ■ Eggs (shell) ■ Pork ■ Poultry (chicken, duck, goose, turkey) ■ Specialty meats (bison, goat, lamb, rabbit)
Aquaculture Stewardship Council Certified		■ Developed by the Aquaculture Stewardship Council (ASC). The ASC was founded in 2010 by the World Wildlife Fund (WWF) and IDH (Dutch Sustainable Trade Initiative) to manage the global standards for responsible aquaculture. The standards are developed by the Aquaculture Dialogues, a program of roundtables initiated and coordinated by WWF. ■ Verified by Accreditation Services International (ASI). ■ The ASC standards are based on seven principles and require: ● Comprehensive legal compliance ● Conservation of natural habitat and biodiversity ● Conservation of water resources ● Conservation of species diversity and wild population through prevention of escapes, e.g., the tilapia standard prohibits the use of transgenic manipulation ● Use of feed and other inputs that are sourced responsibly ● Good animal health, e.g., tilapia standard prohibits prophylactic use of antibiotics ● Social responsibility for workers and communities impacted by farming (e.g. no child labor, health and safety of workers, freedom of association, community relations) ■ Standards have been developed and continue to be developed for a wide variety of fish species; eight standards, covering twelve species have been formulated. Standards for abalone, bivalves, pangasius, tilapia and salmon have been finalized; to date only pangasius and tilapia farms have been certified; did not exist when GGHC FS Credit 3 was published. ■ More information and a list of certified fish farms can be found at www.asc-aqua.org.	■ Seafood (farmed fish-pangasius and tilapia)

Certification	Logo	Brief description	Availability of certified items by food service categories
Bird Friendly		■ Developed by the Smithsonian Migratory Bird Center (SMBC). ■ Verified by USDA Organic inspectors who are approved by the SMBC. ■ Standard requires use of shade management practices in organic coffee production; only available for products that are also USDA Organic. ■ More information and product availability can be found at http://nationalzoo.si.edu/scbi/migratorybirds/coffee/.	Beverages (coffee)
Certified Humane Raised & Handled	* Meets the Humane Farm Animal Care Program standards, which include nutritious diet without antibiotics, or hormones, animals raised with shelter, resting areas, sufficient space and the ability to engage in natural behaviors.	■ Developed by a committee of animal scientists and veterinarians with expertise in farm animal and animal welfare issues. ■ Verified by inspectors contracted through Humane Farm Animal Care; specifically inspectors are university professors in animal sciences or veterinarians who are species specific. Three types of inspectors: on-farm, slaughter and traceability. ■ Standards assure that animals have ample fresh water and a healthy diet without added antibiotics, hormones or animal by-products; require that animals be allowed to engage in their natural behaviors, have sufficient space and shelter, and be handled gently to limit stress; assure producer compliance with local, state and federal environmental standards; assure processor compliance with the American Meat Institute Standards for slaughtering farm animals, a higher standard than the Federal Humane Slaughter Act. ■ More information and a list of certified producers can be found at www.certified-humane.com.	■ Beef ■ Dairy (fluid milk, cheese) ■ Eggs (processed, shell) ■ Pork ■ Poultry (chicken, turkey) ■ Specialty meats (lamb, goat, young dairy beef)

Certification	Logo	Brief description	Availability of certified items by food service categories
Certified Naturally Grown		■ Developed by Certified Naturally Grown (CNG), based on the USDA National Organic Program rules. ■ Verified by volunteer peer inspectors, preferably other CNG farmers. ■ Standards are highest ideals of organic farming, and prohibit use of synthetic fertilizers and pesticides and GE seeds; did not exist when GGHC FS Credit 3 was published but a significant number of farms use this eco-label so it has been included here. ■ This is not a 3rd Party certified eco-label. CNG's approach is called a Participatory Guarantee System. These programs are designed to minimize paperwork and certification fees and employ a peer-inspection process built on local networks. They're typically a better fit for small-scale producers who sell locally. ■ More information and can be found at www.naturallygrown.org.	■ Beef ■ Dairy ■ Eggs ■ Grocery (grains, honey, maple syrup) ■ Pork ■ Poultry ■ Produce (fruits, vegetables) ■ Specialty meats (lamb)
Fair for Life/For Life		■ Developed by Institute for Marketecology (IMO). ■ Verified by third-party certification. ■ Standards are for social accountability and fair trade in agricultural, manufacturing and trading operations; are designed to complement existing fair trade certification systems; did not exist when GGHC FS Credit 3 was published. ■ More information can be found at www.fairforlife.net.	■ Beverages (cocoa, coffee, tea, wine) ■ Grocery (chocolate, grains, honey, nuts, oils, spices, sugar) ■ Produce (fruits, herbs, vegetables) ■ Seafood (shellfish)
Fairtrade International		■ Developed by Fairtrade International (FLO). ■ Verified by FLO-CERT, which is a separate company owned by Fairtrade International. FLO-CERT is certified by International Standardization Organization (ISO) 65, the leading, internationally recognized quality norm for bodies operating a product certification system. ■ Standards ensure that farmers in developing nations receive a fair price for their product, and have direct trade relations with buyers and access to credit; encourage sustainable farming practices such as limiting use of pesticides; discourage the use of child labor; require products to be grown by small-scale, democratically organized producers. ■ More information can be found at www.fairtrade.net.	■ Beverages (cocoa, coffee, juices, tea) ■ Grocery (imported chocolate, beans, cane sugar , grains, honey) ■ Produce (imported fruit, herbs)

Certification	Logo	Brief description	Availability of certified items by food service categories
Fair Trade USA		■ Developed by Fair Trade USA (formerly TransFair USA, no longer affiliated with Fairtrade International). ■ Verified by third-party certification; Fair Trade USA audits and certifies transactions between U.S. companies and their international suppliers. ■ Standards require democratic and transparent decision making; prohibit child labor; ensure health and safety measures are established in order to avoid work-related injuries; require pre-determined community development premiums for every sale. ■ More information can be found at www.fairtradeusa.org.	■ Beverages (cocoa, coffee, tea) ■ Grocery (imported chocolate, beans, cane sugar , grains, nuts) ■ Produce (imported fruit)
Food Alliance Certified		■ Developed by Food Alliance. ■ Verified by a third-party site inspection. ■ Standards prohibit use of hormones or nontherapeutic antibiotics; prohibit use of genetically modified crops or livestock; encourage continuous reductions in pesticide use; seek to ensure safe and fair working conditions, healthy and humane care for livestock, conservation of soil and water resources, and protection and enhancement of wildlife habitat. ■ More information can be found at www.foodalliance.org.	■ Beef ■ Dairy (fluid milk, cheese) ■ Eggs (shell) ■ Grocery (grains, legumes, nuts, oil) ■ Produce (fruits, herbs, vegetables) ■ Pork ■ Poultry ■ Specialty meats (lamb)
Food Justice Certified		■ Developed by the Agricultural Justice Project (AJP). ■ Verified by AJP approved third-party certifiers. For operations with hired labor, inspections are in collaboration with worker organizations. ■ Standards ensure fair treatment of workers, fair pricing for farmers and fair business practices; set a high-bar social justice standard for farms, processors and retailers; are designed for all agricultural production systems, fiber and cosmetics as well as food; did not exist when GGHC FS Credit 3 was published. ■ More resources can be found at www.agriculturaljusticeproject.org.	■ Beef ■ Grocery (beans, grains) ■ Produce ■ Specialty meats (bison)

Certification	Logo	Brief description	Availability of certified items by food service categories
Marine Stewardship Council Certified		■ Developed by Marine Stewardship Council (MSC). ■ Verified by third-party certifiers. ASI manages the accreditation of certifiers. ■ Standards assure buyers that products come from a well-managed fishery and have not contributed to overfishing; include three principles: ● The condition of the fish stocks (examines if there are enough fish to ensure that the fishery is sustainable). ● The impact of the fishery on the marine environment (examines the effect that fishing has on the immediate marine environment including other nontarget fish species, marine mammals and seabirds). ● The fishery management systems (evaluates the rules and procedures that are in place, as well as how they are implemented, to maintain a sustainable fishery and to ensure that the impact on the marine environment is minimized). ■ More information can be found at www.msc.org.	■ Seafood (wild caught fish and shellfish)
Non-GMO Project Verified		■ Developed by Non-GMO Project (formed by The Natural Grocery Company and the Big Carrot Natural Food Market), working with the Global ID Group for scientific foundation. ■ Verified by third-party certifier through on-site inspection; can be combined with a USDA Organic inspection. ■ Standards developed to test product ingredients for presence of genetically modified organisms (GMOs); do not allow more than 0.9 percent GMO; require traceability, segregation and testing at critical control points; not included in GGHC FS Credit 3, but supported by Health Care Without Harm's (HCWH) Healthy Food in Health Care (HFHC) team. ■ More information and a list of verified products can be found at www.nongmoproject.org.	■ Beef ■ Beverages (juices, tea, wine) ■ Dairy ■ Eggs ■ Grocery (dry, refrigerated and frozen, grains, honey, snacks) ■ Pork ■ Poultry (chicken, turkey) ■ Processed meats ■ Produce (fruits, vegetables, herbs) ■ Seafood (wild-caught fin fish)

Certification	Logo	Brief description	Availability of certified items by food service categories
Protected Harvest	Protected Harvest Certified Sustainable	■ Developed by a collaborative process which starts with possible standards being proposed by farmers, processors and those who work on the ground, which are then peer-reviewed by the scientific community and finally approved by the environmentalists on the Protected Harvest board. ■ Verified by an audit and on-site inspection through a third-party certifier. ■ Standards are unique to the specific crop (grapes for wine, citrus fruit, stonefruit, potatoes, etc.) and region by generally encouraging ecologically-based practices in nine different management categories (field scouting, information sources, pest management decisions, field management decisions, weed management, insect management, disease management, soil and water quality and storage management); to qualify for certification, growers must stay below an established total number of "Toxicity Units" per acre and avoid use of certain high-risk pesticides. ■ Other types of vegetable and field crops may be certified by Protected Harvest in the future. ■ More information can be found at www.protectedharvest.org.	■ Beverages (wine) ■ Produce (fruits, vegetables)
Protected Harvest	WISCONSIN HEALTHY GROWN POTATOES Good for you, good for the environment. www.healthygrown.com	■ Developed by Wisconsin Eco-Potato (established by the Wisconsin Potato and Vegetable Growers Association, University of Wisconsin-Madison, the International Crane Foundation, WWF and the Defenders of Wildlife). ■ Verified by third-party certifiers through Protected Harvest. ■ Standards seek to reduce pesticide use; restore natural ecosystems; support native plants and animals. ■ More information can be found at: http://wisconsinpotatoes.com/sustainable-potatoes and www.healthygrown.com.	■ Produce (potatoes)
Rainforest Alliance Certified	RAINFOREST ALLIANCE CERTIFIED EST 1987	■ Developed by Sustainable Agriculture Network. ■ Verified by third-party certification. All personnel responsible for audit design, evaluation and certification/verification/validation decisions are under the purview of the RA-Cert Division. ■ Standards ensure that on certified farms, rainforest is conserved, workers are treated fairly, soil and water quality are not compromised, waste is managed efficiently, chemical use is dramatically reduced and relations with surrounding communities are strong. ■ More information can be found at www.rainforest-alliance.org.	■ Beverages (cocoa, coffee, tea) ■ Grocery (chocolate, nuts) ■ Produce (imported fruit)

Certification	Logo	Brief description	Availability of certified items by food service categories
Salmon-Safe		■ Developed by Salmon-Safe. ■ Verified by independent experts. ■ Standards aim to recognize farm and other land use operations that contribute to restoring stream eco-system health in important native salmon fisheries of the Pacific Northwest; certify the use of agricultural practices that promote healthy streams and wetlands, including chemical management, erosion control, water use and proper animal farming. ■ More information can be found at www.salmonsafe.org.	■ Beef ■ Beverages (wine) ■ Dairy (fluid milk) ■ Eggs (shell) ■ Grocery (dry, refrigerated and frozen, including nutritional supplements and enteral feeding products) ■ Produce (fruits, vegetables) ■ Specialty meats (lamb)
USDA Organic		■ Developed by USDA National Organic Program. ■ Verified by third-party certifiers. ■ Standards prohibit the use of synthetic fertilizers, chemicals or sewage sludge; do not allow organic foods to be genetically modified or irradiated; ensure organic meat and poultry are fed only organically grown feed (without any animal byproducts) and cannot be treated with hormones or antibiotics. ■ Label specifics: ● Certified Organic—a product must contain 95 to 100 percent organic ingredients. ● Made with Organic Ingredients—products which contain more than 70 percent, but less than 94 percent organic ingredients. ● Organic ingredients can be listed on the packaging of products that are not entirely organic. ■ More information can be found at www.ams.usda.gov/NOP/indexNet.htm.	■ Beef ■ Beverages (coffee, juice, tea, wine) ■ Dairy (fluid milk, cheese, cultured, ice cream, etc.) ■ Eggs (shell) ■ Grocery (dry, refrigerated and frozen, including nutritional supplements and enteral feeding products) ■ Meat substitutes ■ Produce (fruits, herbs, vegetables) ■ Pork ■ Poultry (chicken, turkey) ■ Processed meats ■ Specialty meats (bison. lamb)

Certification	Logo	Brief description	Availability of certified items by food service categories
USDA Process Verified		Verification program ■ Developed by USDA, using the International Organization for Standardization's ISO 9000 series standards. ■ Verified by USDA. ■ Standards assure customers of a company's ability to provide consistent quality products or services; some specific examples include "Grassfed" and "Never Ever 3" listed below. ■ Official Listing of Approved USDA Process Verified Programs: ○ Livestock and Seed ○ Poultry ■ More information can be found at www.ams.usda.gov/AMSv1.0/processverified.	
		Grassfed ■ Verified by USDA; USDA Process Verified logo must be on label. ■ Standards are for meat products derived from ruminant animals, e.g. beef cattle, dairy cattle and lamb; verify that animals were fed a diet of grass and/or forage throughout its lifetime, with the exception of milk consumed prior to weaning; prohibits feeding of grain or grain by-products; requires animals to have continuous access to pasture during the growing season (last frost in spring to first frost in fall); does not address use of hormones or antibiotics.	■ Beef ■ Dairy ■ Specialty meats (lamb)
		Never Ever 3 (NE3) ■ Verified by USDA; USDA Process Verified logo must be on label. ■ Standards require no antibiotics be administered (whether through feed, water or by injection) from birth to slaughter; prohibit growth hormones (including natural hormones, synthetic hormones, estrus suppressants, beta agonists or other synthetic growth promotants) from birth to slaughter; do not allow mammalian and avian byproducts in feed; did not exist when GGHC FS Credit 3 was published. ■ More information can be found at www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5066028.	■ Beef ■ Dairy ■ Pork ■ Poultry* ■ Specialty meats (bison, lamb) *At this time no poultry producers were found to have gone through verification for Never Ever 3.

USDA/FDA Approved Label Claims

Label claim	Sample label	Description	Availability of labeled items by food service categories
Raised without antibiotics		■ Regulated by USDA's Food Safety and Inspection Service (FSIS). ■ No antibiotics are allowed to be administered to the animal at any point during its life, including vaccinations and pre-hatch injections. If an animal becomes sick and requires treatment, it is supposed to be segregated from other animals and sold as a conventional meat product. ■ Similar claims may include: ● No antibiotics added ● No antibiotics administered ■ More information can be found at www.fsis.usda.gov/Fact_Sheets/Meat_&_Poultry_Labeling_Terms/index.asp#17.	■ Beef, veal ■ Pork ■ Poultry ■ Specialty meats (lamb)
Raised without added hormones		■ Regulated by USDA's FSIS. ■ No added hormones were given to the animal at any point during its life. Most meaningful when used on beef or lamb products since the use of added hormones is prohibited in poultry and pork production. ■ Similar claims may include: ● No hormones added ■ More information can be found at www.fsis.usda.gov/Fact_Sheets/Meat_&_Poultry_Labeling_Terms/index.asp#15.	■ Beef, veal ■ Specialty meats (lamb)
rBGH/rBST-free		■ Regulated by the Food and Drug Administration (FDA). ■ The product was produced without use of the artificial growth hormones recombinant bovine growth hormone (rGBH) or recombinant bovine somatotropin (rBST). ■ Similar claims may include: ● Our farmers pledge not to use rBGH or rBST. ● Our farmers pledge not to use artificial growth hormones. ● Milk used in dairy products comes from cows not treated with rBGH/rBST. ■ More information can be found at www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/FoodLabelingNutrition/ucm059036.htm.	■ Dairy (fluid milk, cheese, cultured, other-ice cream)

Label claim	Sample label	Description	Availability of labeled items by food service categories
No genetically engineered ingredients		■ Regulated by FDA. ■ The product was made with ingredients that were not derived from genetically engineered/modified (GE/GM) organisms. The types of commercially grown GE foods will change over time. ■ Similar claims may include: ● GM- or GE-free ● We do not use ingredients that were produced using biotechnology ■ More information can be found at www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/FoodLabelingNutrition/ucm059098.htm.	■ Beverages (juice, soda or other beverages that contain corn, soy, canola or their derivatives) ■ Grocery (processed foods that contain sugar beets, corn, soy, canola or their derivatives) ■ Produce (papaya, yellow summer squash, zucchini)
USDA Grass (forage) fed		■ Regulated by USDA's Agricultural Marketing Service (AMS). ■ Meat products derived from ruminant animals, e.g. beef cattle, dairy cattle and lamb, may be approved to carry the USDA "grassfed" label claim if the animal was fed a diet of grass and/or forage throughout its lifetime, with the exception of milk consumed prior to weaning. Animals cannot be fed grain or grain by-products and must have continuous access to pasture during the growing season (last frost in spring to first frost in fall). Use of hormones or antibiotics is not addressed. Verification for this label claim is voluntary, thus the stand alone claim is only for marketing and is less meaningful than if it is accompanied by the "Process Verified" label (see "USDA Process Verified - Grassfed" on Eco-label chart). ■ Similar claims may include: ● 100 percent Grassfed ■ More information can be found at: http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateN&navID=GrassFedMarketingClaimStandards&rightNav1=GrassFedMarketingClaimStandards&topNav=&leftNav=GradingCertificationandVerfication&page=GrassFedMarketingClaims&resultType=.	■ Beef, veal ■ Dairy (butter, cheese, fluid milk, yogurt) ■ Specialty meats (lamb)

Eco-label Applicability By Food Service Category

Category	Products	American Grassfed	Animal Welfare Approved	Bird Friendly	Certified Humane Raised & Handled	Certified Naturally Grown	Fair Trade Certified	Food Alliance Certified	Marine Stewardship Council	Non-GMO Project Verified	Protected Harvest	Rainforest Alliance Certified	Salmon Safe	USDA Organic	USDA Process Verified Never Ever[3]	USDA Process Verified Grassfed
Beef	Beef	X	X		X	X		X		X		X	X	X	X	X
	Veal/young dairy beef	X			X											
Beverage	Cocoa						X			X		X		X		
	Coffee			X			X					X		X		
	Tea						X			X		X		X		
	Fruit juices									X		X	X	X		
	Wine						X			X	X		X	X		
Dairy & Eggs	Cheese	X	X		X	X		X		X				X		
	Cultured	X				X				X				X		
	Eggs				X	X		X		X			X	X		
	Fluid milk	X	X		X	X		X		X			X	X		

Eco-label Applicability By Food Service Category

Category	Products	American Grassfed	Animal Welfare Approved	Bird Friendly	Certified Humane Raised & Handled	Certified Naturally Grown	Fair Trade Certified	Food Alliance Certified	Marine Stewardship Council	Non-GMO Project Verified	Protected Harvest	Rainforest Alliance Certified	Salmon Safe	USDA Organic	USDA Process Verified Never Ever[3]	USDA Process Verified Grassfed
Grocery	Breads									X				X		
	Canned fruit									X				X		
	Canned vegetables									X				X		
	Canned legumes									X				X		
	Cereals									X				X		
	Chocolate						X			X		X		X		
	Flours									X				X		
	Frozen entrees									X				X		
	Frozen fruit									X				X		
	Frozen vegetables									X				X		
	Grains					X	X	X		X				X		
	Honey					X	X			X				X		
	Legumes						X			X				X		
	Maple syrup					X				X						
	Nuts						X	X		X				X		
	Oils						X	X		X		X		X		
	Pasta									X				X		
Grocery	Snacks									X				X		
	Sugar (cane)						X			X				X		
Pork	Pork		X		X			X		X				X		
Poultry	Chicken		X		X	X				X				X		
	Duck		X			X								X		
	Goose		X			X								X		
	Turkey		X		X	X		X		X				X		

Eco-label Applicability By Food Service Category

Category	Products	American Grassfed	Animal Welfare Approved	Bird Friendly	Certified Humane Raised & Handled	Certified Naturally Grown	Fair Trade Certified	Food Alliance Certified	Marine Stewardship Council	Non-GMO Project Verified	Protected Harvest	Rainforest Alliance Certified	Salmon Safe	USDA Organic	USDA Process Verified Never Ever[3]	USDA Process Verified Grassfed
Processed meats	Bacon				X					X				X		
	Hot dogs	X			X					X				X		
	Luncheon meats													X		
Produce	Fruit (domestic)					X	X	X		X	X	X	X	X		
	Fruit (imported)									X				X		
	Herbs					X				X				X		
	Vegetables (domestic)					X		X		X	X		X	X		
	Vegetables (imported)									X				X		
Seafood	Wild-caught fin fish								X	X						
	Wild-caught shellfish								X							
	Farm-raised fin fish															
	Farm-raised shellfish							X								
Specialty meats	Bison	X	X		X	X										
	Goat	X	X		X	X										
	Lamb	X	X		X	X		X					X	X		
	Rabbit															

This publication is part of the IATP Sustainable Farm to Hospital Toolkit—a product of the North Central Region Sustainable Agriculture Research and Education-funded project *Connecting Sustainable Farmers to Emerging Health Care Markets*.

The document is based in part on the Green Guide for Health Care (GGHC) *Food Service Credit Toolkit Credit 3 Tracking Sheet*—"Terms Sheet: Food Certifications and Label Claims," but has been updated by Marie Kulick, Earth Wise Communications with assistance from Emily Barker, IATP, and expanded to include additional eco-labels.

Financial Strategies for Incorporating Sustainable Food into a Hospital's Budget

1. DO NOT ASSUME THAT SUSTAINABLE FOOD IS ALWAYS MORE EXPENSIVE

Buying local, sustainably produced food and beverages may cause an increase in a hospital's food and beverage expenditures, but according to two recent Health Care Without Harm (HCWH) surveys, this is not a forgone conclusion. The 2013 HCWH Healthy Food in Health Care (HFHC) survey found that among surveyed hospitals who are working to increase their use of local and sustainably produced foods, 57.9 percent (33 of 57 respondents) found that costs increased, but 36.8 percent (21 of 57 respondents) saw no change in their budget.[1] Interestingly these numbers have improved since HCWH's 2011 HFHC survey when 65.8 percent reported increased costs and only 26 percent reported no change, and some even reported decreases in overall food and beverage expenditures (8.2 percent).[2]

The same is true when comparing pricing of local, sustainable items to conventional items on a product-to-product basis. Local, sustainable food and beverage items are often priced higher than conventional counterparts, but this is not always the case. For instance, during a 2010 project conducted by the Institute for Agriculture and Trade Policy (IATP), at least one hospital found that most of the time the prices charged for local produce, including apples, purchased via their distributor, in this case Bix Produce, were less than non-local options (exceptions were tomatoes and Honey crisp apples). At the time, Duane Pfleiger, vice president at Bix Produce, confirmed that this was usually the case, especially at the height of the season. Also, while many hospitals have found that the price per pound for local, sustainable meats can be two to five times higher than conventional meats, others have paid only slightly higher prices per pound or even less per pound, and in some cases significantly less.[3,4]

2. WHEN PRICES ARE HIGHER OFFSET OR MINIMIZE THEM

- **REDUCE SPENDING ON OTHER ITEMS:** Thirty-one percent (18 of 58) respondents to the 2013 HFHC survey and 29.7 percent (22 of 74) respondents to the 2011 HFHC survey reduced spending on other items as a way to offset costs of local and sustainable food and beverages. Two specific ways to achieve this include:
    - Reducing or eliminating use of frying oil- Many hospitals have eliminated use of deep fat fryers and frying oils in order to promote a more heart healthy diet. In addition, since 90 percent of the U.S. commercial rapeseed (canola) crop is produced from genetically engineered (GE) seeds or plants, hospitals can

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significantly reduce use of GE-food stuffs by eliminating the use of these oils.

- Reducing or eliminating use of paper tray liners-St. Luke's Hospital in Duluth, Minn. has saved $16,600 a year since eliminating the use of tray liners.5 Instead of using tray liners, they started using non-skid trays. Though the cost of the non-skid trays is about double the cost of the other trays, the non-skid trays easily last twice as long per Mark Branovan, St. Luke's director of hospitality services.[6]

- **FOCUS ON FOOD WASTE REDUCTION:** Seventy-six percent (44 of 58) respondents to the 2013 HFHC survey and 67.6 percent (50 of 74) respondents to the 2011 HFHC survey used food waste reduction as a cost containing strategy.

- **COMMIT TO PURCHASE OF SPECIFIC VOLUMES:** Twenty one percent (12 of 58) of respondents to the 2013 HFHC survey and 16.2 percent (12 of 74) respondents to the 2011 HFHC survey used this strategy to contain costs associated with procuring local and sustainable food and beverages.

- **STREAMLINE INVENTORY:** Forty percent (23 of 58) of respondents to the 2013 HFHC survey and 39.2 percent (29 of 74) respondents to the 2011 HFHC survey decreased use of convenience items, eliminated less popular items, and used other methods of streamlining their inventory to contain costs.

- **BUY DIRECTLY FROM SUSTAINABLE FARMERS/ PRODUCERS:** By dealing directly with the farmer/ producer, hospitals can sometimes obtain better pricing than they would for the same or similar products purchased via a mainline distributor, but this will depend on a variety of factors including but not limited to the mark-up charged by distributors, the farmer or producer's delivery costs, volumes purchased, and growing methods used. Thirty-one percent (18 of 58) respondents to the 2013 HFHC survey and 41.9 percent (31 of 74) respondents to the 2011 HFHC survey purchased products directly from farmers as a cost containing strategy.

    - Additional savings may be achieved if a hospital commits to purchasing a specific volume, especially of products for which production success and availability is more predictable and less weather dependent, e.g., beef, chicken, dairy, farmed fish, pork and turkey.

    - Have farmers tell you when they have surplus you can buy and/or when they have seconds that can be used in soups, stews, salads and other food items where the look of a product does not matter as much.

- **REDUCE SPENDING ON MEAT:** Many hospitals have found that by reducing the amount of conventional meat and poultry purchased annually, they can use the savings to purchase and serve potentially higher-priced products made from animals raised using more sustainable methods, such as chicken raised without antibiotics or grassfed beef. These changes can also help to reduce a hospital's food system related climate impacts. To reduce meat expenditures, hospitals have reduced portion sizes, increased use of vegetarian options, and implemented other strategies outlined in the HCWH Balanced Menus Initiative. Through the Balanced Menus Initiative hospitals commit to achieving a 20 percent reduction in meat and poultry purchases from their baseline, and then to invest the cost savings in sustainable meat options. Hospitals may also be able to manage local, sustainable meat and poultry product pricing by choosing less expensive cuts and parts, buying beef and pork by the whole, half or quarter, and having whole animals from local, sustainable producers custom-processed.

- **STAY UP-TO-DATE ON PRICE CHANGES:** As in retail markets there are always going to be times when local, sustainable items are sold at reduced prices. Usually this happens when some player in the food chain—farmer, manufacturer, etc.— ends up with excess inventory that it needs or wants to move quickly. Most food and beverage items have a limited shelf life, very limited in the case of fresh foods that will spoil. These are good times to buy extra if you know you can use it, freeze it or otherwise preserve it for a time when you cannot get these products at such a good price, or at all, such as local, sustainable strawberries in January. For an example of how this latter strategy has been working in school kitchens see the IATP report *Frozen Local: Strategies for Freezing Locally Grown Produce for the K-12 Marketplace*. Non-local, USDA Organic and other third-party certified produce will be most affordable during peak season in the state or country of origin. In most cases, the state of origin will be California. Organic foods also reportedly go on-sale around Earth Day in April.[7] This, if

true, might make it easier to feature organic food for a day or a week around Earth Day.

How farmers determine pricing for health care markets

Taken from responses to the IATP 2012 SARE project survey of local farmers and producers:

- Same pricing as restaurants, hotels, etc. and include shipping costs
- Same pricing as other high-volume institutional accounts (K-12, colleges, corporate)
- Based on profit point, regional prices for similar product and what the market will bear
- Average of prices charged by other farmers who sell wholesale; sometimes influenced by need to move product
- Negotiation with buyer
- Negotiate the best price possible while selling the product we need to sell
- Institution/restaurant price is "discounted" since no middleman/distributor
- Prices determined by the board of the buyer-grower group
- Pricing generally determined by wholesale buyers, and similar to prices for produce coming out of California or Florida
- USDA vegetable pricing terminal
- Sells through Organic Valley, so they determine price.
- Health care facilities are NOT wholesale customers. They are direct retail customers that are buying foodservice products from a farmer that only sells to distributors

- **ADJUST PRICES IN RETAIL SETTINGS:** Some hospitals, including 69 percent (40 of 58 respondents) respondents to the 2013 HFHC survey and 67.6 percent (50 of 74 respondents) to the 2011 HFHC survey, adjusted pricing as needed on food and beverage items and meal offerings in cafeterias and vending areas to accommodate use of higher priced local, sustainable items.
    - Numerous studies have now demonstrated that consumers, regardless of the setting—farmers' market, supermarket, restaurant or hospital cafeteria—and, regardless of age, income or family status, will pay more for local, sustainable food.[8,9,10,11,12]
    - Though consumers will pay more for USDA Organic food and meats raised without antibiotics and added hormones (in the case of beef, bison and lamb), they will pay the greatest increases for food identified as local, in part because they also attribute locally produced food with certain sustainability related attributes such as improving the carbon footprint, increasing natural and organic production, and supporting the local economy. Similarly, 77.5 percent of IATP SARE project food service survey respondents are willing to pay more for meals made with local, sustainable ingredients; some up to 30 percent more.
    - Consumers need to know that a product is local or sustainable to exercise this preference, thus local and sustainable items need to be clearly identified at point-of-sale. Whenever possible, signage, menus, etc., should include the name of the farm/producer, the city and state where located and third party certifications such as USDA Organic. Ongoing education and marketing is also helpful to building support. Though time consuming, try to keep track of how cafeteria and vending patrons respond to pricing changes per product. Collection of even the most basic information—dates, types of changes, observations, and patrons comments—could be helpful when the time comes to justify a particular expense. Thirty-eight percent (22 of 58) of respondents to the 2013 HFHC survey and 47.3 percent (35 of 74) of respondents to the 2011 HFHC survey were sure to explain their reasons for increased pricing on local or sustainable items to cafeteria patrons.
    - Allow cafeteria and vending customers to choose whether to pay more by selling local, sustainable food and beverage items and meals side by side with conventionally produced options. This approach could also be used to determine how easy it would be to switch an entire product line to local, sustainable and increase prices. For instance, all other things being equal, if most customers were willing to pay extra for Fair Trade Certified coffee when offered side by side with the conventional coffee option, it would likely be easier to eliminate the conventional item without much fuss. Hospitals can also engage patrons via surveys, new product selection, tastings, and meet-the-farmer events.

We believe the shorter the food chain, the better the food....It's important that the things we provide we can feel are wholesome, and devoid of anything that might cause harm to the body. So we take no shortcuts. For example, we make all our salads from scratch; no additives, no preservatives, no transfats, no hydrogenated oils...It's an investment, if patients eat better, they'll feel better and leave the hospital quicker.[13]

Zach Erickson
Director of Nutrition Services
Fauquier Hospital
May 2012

3. ADJUST THE HOSPITAL'S BUDGET TO BETTER REFLECT PRIORITIES

At their most basic, budgets reflect an institution's priorities. A hospital's food and beverage expenditures, not including labor costs, often make up a tiny percentage of their overall expenses for non-medical supplies. Ideally, hospital and health system administrators would consider the full benefits of providing truly healthy meal options to patients, staff and visitors, and base their food budgets on what it takes to accomplish this. Under this scenario, quality, nutrition and the potential human and ecological health impacts of certain agricultural and food production practices will be prioritized over price and budgets will be

Price versus full cost

While keeping food costs low may appear to be a money saving strategy in the short run for hospitals, the price of a food or beverage item is only one among many factors that determines the full cost, both internal and external, of a hospital's purchase.

Full cost=internal cost + external costs

COMPONENTS OF INTERNAL COSTS

- Price of food item including delivery charges and rebates
- Labor (placing orders, preparation, delivery)
- Time (meetings with distributors, distributor reps)
- Use of energy and water
- Equipment (coolers, freezers)
- Waste (expired foods, prep and plate waste)
- Waste disposal (food and packaging)
- Maintenance/service cost
- Occupational health cost (sick days, protective equipment)
- Patient health (malnutrition, hospital derived food borne illness and/or antibiotic resistant infections)
- Potential liability cost (foodborne illness from purchase of contaminated product and/or improper cooking and handling)

Externalized costs

- Human health
  - Obesity, diabetes, etc.
  - Exposure to pesticides and chemicals
  - Micro-organism
    - Bacterial and viral outbreaks in food
    - Antibiotic resistance
- Environmental health
  - Damage to water quality
    - Pesticides, nitrates and phosphates in drinking water
    - Eutrophication, loss of aquatic species
  - Damage to air quality
    - Emissions of methane, ammonia, nitrous oxide and carbon dioxide
  - Damage to soil quality
    - Erosion of fertile soils
    - Loss of organic matter and carbon dioxide
  - Damage to biodiversity and landscape
    - Loss of wildlife habitat and biodiversity
    - Bee colony and pollination losses
    - Increased risk of flooding and loss of water storage
  - Climate impacts
- Socioeconomic
  - De-population of rural communities
  - Loss of mid-sized farms and consolidation of farmland
  - Poor labor conditions and wages for farm and processing plant workers
  - Easier access to unhealthy foods than healthier options because of federal subsidies for corn, soy and other sweetener, oil and animal feed crops instead of fruits, vegetables, nuts, etc.
- Animal health and welfare

increased as necessary. Some hospital administrators have increased the food service budgets for their hospitals once they have seen the positive benefits that can accrue from making these changes, such as increased patient satisfaction and improved community profile, but hospital food service staff can make changes faster and more strategically when they know in advance that they can spend more for local, sustainable food. For instance, 26 percent (15/58) of 2013 HFHC survey respondents and 23.0 percent (17/74) of 2011 HFHC survey respondents increased their budget to accommodate higher prices.

> Staff, patients and lots of students who come by just to eat—eating healthy and local is just important to everyone now. Everyone wants to know where their food is coming from. Last week we had a salad with spinach and salmon we had smoked in-house. Three separate people came up to tell me how good it was. And there was a patient who told us that our food is better than any restaurant in Burlington. When we started this, we had just hospital food. But now we've really got something to be proud of.[14]
>
> Richard Jarmusz
> Executive chef
> Fletcher Allen Health Care
> January 2012

SUMMARY

Local, sustainable food and beverage products may be priced higher than conventional counterparts, but, in some instances, may also be lower. While it is important for hospitals to consider the full cost of a food or beverage item and not just the price, there are enough ways to accommodate, minimize and offset the purchase of higher priced local, sustainable items that over time and with good planning, price alone should not limit a hospital's ability to meet and exceed any local, sustainable food and beverage procurement goals. It is also important to acknowledge that there is no parity between a conventionally produced apple and a local, sustainably produced apple and it may be beneficial in the long run for hospitals to increase food service budgets and enable staff to prioritize quality, nutrition and the potential human and ecological health impacts of certain agricultural and food production practices over price when warranted.

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Written by Marie Kulick, Earth Wise Communications

ENDNOTES

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Sustainable Farm-to-Hospital Toolkit

The Health-Based Rationale for Hospital Purchase of Sustainable Food

HEALTH-BASED MISSION

Increasingly clinicians who work in hospitals and leading health systems and institutions have been encouraging the leaders and staff at U.S. hospitals to broaden their health-based missions to become role models focused on prevention and community health in addition to providing medical care.

Clinician engagement

Many medical professionals believe that supporting sustainable food systems through hospital purchase of local and sustainably produced foods is a key strategy for promoting and achieving overall improvements in individual and community health. Since 2007, the following professional groups have adopted resolutions that recognize the unique role that hospitals and health practitioners can play in support of sustainable food systems:

- California Medical Association (CMA) (2007)[1]
- American Public Health Association (APHA) (2007)[2]
- American Nurses Association (ANA) (2008)[3]
- Minnesota Academy of Family Practitioners (MAFP) (2008)[4]
- American Medical Association (AMA) (2009)[5]

For instance, the ANA resolution "encourages health care institutions to institute food preference policies to purchase and serve nutritional foods grown according to organic or other methods that support and emphasize sustainable food purchasing, local food systems, renewable resources, ecological diversity, and fair labor practices,"[6] and the stated objective of the AMA Sustainable Food resolution is "to address how medical schools, hospitals, and other health care facilities can model and encourage healthy eating in a manner that supports environmentally sustainable agricultural and food system practices."[7]

In 2007, the Academy for Nutrition and Dietetics (AND) [formerly the American Dietetic Association (ADA)] adopted a position statement "to encourage environmentally responsible practices that conserve natural resources, minimize the quantity of waste generated, and support the ecological sustainability of the food system."[8] This position statement includes information, resources, and specific action-oriented strategies to guide dietitians and technicians in food decision making and professional practice.[9]

Action-oriented strategies for dietitians in food management include the purchase of foods produced with fewer agricultural inputs (e.g., certified organic, grass-fed, or range-fed meats, pastured poultry), purchase of foods direct from local growers (i.e., farm-to-institution) and reduced reliance on imported foods.[10] Since most dietitians work in hospitals, nursing homes and other health care institutions

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and many of these sustainably raised foods are more expensive than conventionally produced food, support from hospital management will likely be needed for dietitians to implement these procurement focused strategies.

In August 2012, staff at the Division of Nutrition, Physical Activity and Obesity (DNPAO) at the Centers for Disease Control and Prevention (CDC) convened a meeting of healthy hospital researchers and practitioners to discuss the ways in which hospitals can be role models in work site wellness with respect to healthy food and beverage access and promotion among other things.[11] The panel's full recommendations are presented in a report entitled "Healthy Hospital Choices." The food specific recommendations are as follows:

- Hospitals and public health practitioners can collaborate to establish healthy food/beverage standards and measures addressing employee, community and environmental health for hospital venues.
- Hospitals can support food and beverage environmental change strategies (e.g., access, pricing, product placement and menu labeling strategies).
- Public health practitioners can help develop a publicly available healthy food and beverage environment scan toolkit.

Also in 2010, the AND, ANA, American Planning Association (APA) and APHA developed and endorsed a set of shared food system principles to "support socially, economically, and ecologically sustainable food systems that promote health—the current and future health of individuals, communities, and the natural environment."[12] In the *Principles of a Healthy, Sustainable Food System,* the authors agree on a shared definition of a healthy, sustainable food system around the key themes of health, sustainability, resilience, fairness, economics, and transparency (see below). The coalition partners plan to coordinate with other health, nutrition, and planning-related organizations to advocate for improved food systems.[13]

Principles of a Healthy, Sustainable Food System

Definition of a healthy, sustainable food system:

Health promoting

- Supports the physical and mental health of all farmers, workers, and eaters
- Accounts for the public health impacts across the entire lifecycle of how food is produced, processed, packaged, labeled, distributed, marketed, consumed and disposed

Sustainable

- Conserves, protects, and regenerates natural resources, landscapes, and biodiversity
- Meets our current food and nutrition needs without compromising the ability of the system to meet the needs of future generations

Resilient

- Thrives in the face of challenges, such as unpredictable climate, increased pest resistance, and declining, increasingly expensive water and energy supplies

Diverse in

- Size and scale: includes a diverse range of food production, transformation, distribution, marketing, consumption, and disposal practices, occurring at diverse scales, from local and regional to national and global
- Geography: considers geographic differences in natural resources, climate, customs, and heritage
- Culture: appreciates and supports a diversity of cultures, socio-demographics, and lifestyles
- Choice: provides a variety of health-promoting food choices for all

Fair

- Supports fair and just communities and conditions for all farmers, workers, and eaters
- Provides equitable physical access to affordable food that is health promoting and culturally appropriate

Economically balanced

- Provides economic opportunities that are balanced across geographic regions of the country and at different scales of activity, from local to global, for a diverse range of food system stakeholders
- Affords farmers and workers in all sectors of the system a living wage

Transparent

- Provides opportunities for farmers, workers, and eaters to gain the knowledge necessary to understand how food is produced, transformed, distributed, marketed, consumed and disposed
- Empowers farmers, workers and eaters to actively participate in decision making in all sectors of the system.

Hospital models for healthy food

More than 450 hospitals, health systems and long-term care facilities (at least 8 percent of U.S. registered hospitals) across 37 states and the District of Columbia have already committed to purchasing more local, sustainable food by signing the Health Care Without Harm (HCWH) Healthy Food in Health Care (HFHC) Pledge and/or are participating in the Healthy Hospital Initiative (HHI) Healthy Food Challenge.

Pledge signatories have committed to taking the following steps:

- Work with local farmers, community-based organizations and food suppliers to increase the availability of locally sourced food.
- Encourage our vendors and/or food management companies to supply us with food that is, among other attributes, produced without synthetic pesticides and hormones or antibiotics given to animals in the absence of diagnosed disease and which supports farmer health and welfare, and ecologically protective and restorative agriculture.
- Increase our offering of fruit and vegetables, nutritionally dense and minimally processed, unrefined foods and reduce unhealthy (trans and saturated) fats and sweetened foods.
- Implement a stepwise program to identify and adopt sustainable food procurement. Begin where fewer barriers exist and immediate steps can be taken.
- Communicate to our group purchasing organizations (GPO) our interest in foods that are identified as local and/or third-party certified.
- Educate and communicate within our system and to our patients and community about our nutritious, socially just and ecological sustainable food healthy food practices and procedures.
- Minimize or beneficially reuse food waste and support the use of food packaging and products which are ecologically protective.
- Develop a program to promote and source from producers and processors which uphold the dignity of family, farmers, workers and their communities and support sustainable and humane agriculture systems.[14]

Participants in the HHI Healthy Food Challenge must have signed the HFHC Pledge or formally adopted a sustainable food policy and commit to achieving one or more of the following:

- Decrease amount of meat purchased by 20 percent within three years from baseline.
- Increase the percentage of healthy beverage purchases by 20 percent of total beverage purchases annually over baseline year OR achieve healthy beverage purchases of 80 percent of total beverage purchases for use throughout the hospital (patient, retail, vending and catering) within three years.
- Increase the percentage of local and/or sustainable food purchases by 20 percent annually over baseline year OR achieve local and/or sustainable food purchases of 15 percent of total food dollar purchases, within three years.[15]

PATIENT SATISFACTION

A patient's hospital food experience can influence a hospital's Press Ganey and other patient satisfaction scores, including the new Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). While the HCAHPS survey does not include food specific questions, according to FoodService Director's 2012 Hospital Census Report "a patient's experience with food greatly affects certain categories, such as the overall hospital experience."[16] As of October 2012, patient satisfaction scores have become even more important, because they will be factored into how much Medicare and Medicaid reimbursement hospitals receive.[17,18]

Serving more local, sustainable foods to patients can have a positive impact on patient satisfaction. In 2006, prior to creating their Plow to Plate® initiative and making changes such as using fresh, local ingredients whenever possible, New Milford (Conn.) Hospital had low Press Ganey scores for their inpatient food service—in the 30th percentile nationally.[19] As of 2012, New Milford Hospital's Press Ganey scores for dining services ranked in the high nineties.[20]

FOOD SERVICE EMPLOYEE SATISFACTION

Hospitals have also reported improvement in satisfaction among food service employees after starting to serve more fresh, local, sustainable foods. For instance Pam Oldham, co-director of food and nutrition services for Mercy Medical in Cedar Rapids, Iowa, reported that, despite some initial challenges due to additional food prep instead of opening packages, cafeteria patrons noticed employee efforts and "employees felt proud of what they were producing."[21]

POSITIVE IMAGE

There are now many examples of hospitals getting positive local, national and sometimes even international press attention for providing fresh, local, sustainable food to patients and staff as well as attracting more business from their local communities due to these improvements. Some recent examples include:

- 9 Hospitals With Food That's Worth Eating, The Daily Meal (December 2012)[22]
- The Ins and Outs of Hospital Food, Gloucester Times (September 2012)[23]
- Watertown Regional hospital chef is starting from scratch, JSOnline Milwaukee-Wisconsin Journal Sentinel (August 2012)[24]
- Sustainable nutrition services offered at Hudson Hospital, Hudson Star-Observer (June 2012)[25]
- Hospital Food So Fresh, Even The Healthy Come To Dine, The Salt (May 2012)[26]

Hospitals and hospital food service staff, especially chefs, are also receiving recognition and awards for this work. For example:

- New Milford Hospital (Conn.) received a 2009 Spirit of Planetree Award in the "Nutritional and Nurturing Aspects of Food" category, the Glynwood Center Harvest Award for "Good Food for Health" in 2010 and a 2012 Gold Level Connecticut Quality Innovation Award (CQIA) Innovation Prize for its success at building and sustaining a healthy dining experience for its patients, employees and the community.
- Holly Emmons, food service manager at Union Hospital (Md.) won a Smart, Green and Growing Buy Local Agricultural Challenge Award from Maryland's governor in 2011.
- Fletcher Allen Health Care (Vt.) won a HFHC Sustainable Food Procurement Award in 2011 and 2013.
- John Muir Medical Center (Concord, Calif.) won two HFHC awards in 2011, a Sustainable Food Procurement Award and a Food Climate Health Connection Award.

"New Milford Hospital's award recognizes its healthful culinary achievements following a six-year journey that has helped the community hospital achieve patient satisfaction scores among the nation's best for overall meals and quality of food.

Specifically among its inpatient population, the hospital reached the 98th percentile nationally for overall meal satisfaction (up from 51 percent) and currently ranks in the 99th percentile for quality of food throughout the United States (compared to the previous 38 percent).

Additionally, the hospital has continually increased satisfaction among staff, physicians and local community members who visit its café, generating a 25 percent increase in sales between 2009 and 2011.

"Food is central to our community's health and well-being. When our patients and employees had concerns years ago, we decided to make food service a top priority," stated Deborah Weymouth, senior vice president and executive director, in a news release. "We committed to develop a culture rooted in the belief that a healthful, sustainable food system and exceptional customer service are integral to the patient experience."[27]

MARKET SHIFTING POTENTIAL

Hospitals spend a significant amount of money each year to produce food and beverage items for their food service operations—patient food, retail (cafeterias, cafes, etc.) and catering. Since most hospitals currently spend very little, if any, of this money on sustainably produced food, local or otherwise, dedicating even a small portion of every hospital's annual food purchases to sourcing local, sustainable food, can positively affect human and environmental health and contribute to the economic health of the communities in which the food is produced, especially when hospital dollars are used to purchase directly from small and mid-scale farmers in their community.[28,29,30] See the IATP report *Connecting Sustainable Farmers to Hospitals—A Hospital-Focused Report* for more on the health care market for sustainable foods.

FOOD- AND FOOD SYSTEM-RELATED HEALTH IMPACTS

Overview

Food-related health effects can be immediate or longer term. Food allergies can be life-threatening and ingestion of food-borne or waterborne pathogens sickens millions of people and results in thousands of deaths each year in the U.S.[31] The way food is produced, processed, packaged, delivered and purchased can also negatively impact the health and well-being of individual farmers and farm workers, meat handlers, and communities downwind and downstream. Illnesses also may result from long-term dietary exposure to one, some or many of a wide variety of heavy metals and synthetic chemicals commonly used in food production, processing and packaging. Chronic diseases, such as heart disease, cancer and diabetes, also often food-related, account for 75 percent of U.S. health spending.[32] Like Type-2 diabetes and many forms of cancer and heart disease, most food- and food system-related illnesses are preventable.

Low prices, convenience, and product uniformity have been the primary benefits of the portion of the U.S. food system, commonly referred to as "conventional" agricultural. Menu planning and food budgets of all U.S. hospitals reflect these benefits.

But industrial scale food production is based on a range of often unhealthy and unsustainable practices that result in costs not reflected in these low prices—contaminated crops, meat and animal waste; degraded air, water and soil quality; increased greenhouse gas emissions; declining health and inferior nutrition; and increased and unnecessary on and off-farm exposure to chemical toxicants, antibiotic-resistant bacteria, and exogenous hormones, all of which may contribute to otherwise preventable illness and disease.

Four strains of antibiotic-resistant salmonella sicken meat eaters in 2011

April 2011. Twelve people were sickened in 10 states and three hospitalized by Jennie-O Turkey Store turkey burgers contaminated with Salmonella Hadar; 54,960 pounds of turkey burgers were recalled.

August 2011. Salmonella Heidelberg sickened 136 people in 34 states and one death was reported; 36 million pounds of ground turkey were recalled by Cargill Meat Solutions.

November 2011. Chicken livers tainted with Salmonella Heidelberg sickened 179 people in six states; Schreiber Processing Corp. recalls chicken livers.

December 2011. Twenty people from seven states were infected with Salmonella Typhimurium, including seven who were hospitalized; Hannaford, a Scarborough, Maine-based grocery chain, recalled an undetermined amount of fresh ground beef products.[33,34]

These costs are primarily borne by farmers, their families and employees, processing plant workers, natural resources and rural communities downwind and downstream, and secondarily by consumers and the global community.

The industrialization of agricultural methods also has contributed to crop and food animal production being highly concentrated in various parts of the country, with less and less agricultural diversity found regionally and locally. This geographical concentration in production leads to regional concentration of agriculturally-related waste products, air and water pollutants.[35,36,37] It has also made long-distance transportation of food items routine, whether by ship, tractor-trailer or plane, contributing to air quality issues and greenhouse gas concentrations that further threaten human and ecological health.

Going from a diverse agricultural landscape with lots of small and mid-scale farms producing a heterogeneous mix of crops and food animals to a small number of very large farms growing significant amounts of one or two types of crops or food animals has also made food animals and crops more vulnerable to disease, led to significant loss of soil, and resulted in thousands of mid-scale farms going out of business in Minnesota, Wisconsin, and rural communities throughout the U.S. According to the Census of Agriculture, there were 2.2 million farms in the U.S. in 2007, and of these farms, 125,000 produced 75 percent of the value of U.S. agricultural production; most earned a million or more in sales.[38] As farms have gone out of business so have processing facilities, with many of the remaining facilities dedicated to serving the very large-scale producers or being owned outright by multi-national conglomerates.

The demise of these farms has been a boon for land speculators who have begun to buy up U.S. farm land as a hedge against the predicted effects of climate change. Thus, industrial-scale food production, which is highly fossil-fuel dependent, has contributed to climate change overall and the transfer of U.S. agricultural lands from farmers to investors who then rent the land to new farmers.

Climate change is predicted to have varying effects on the agricultural landscape, some areas of the world may benefit while other previously thriving agricultural communities may suffer. By the end of the century, it is predicted that

summers in the Upper Midwest may be comparable to those in present-day Texas and Oklahoma.[39] Heavy rainfall events are expected to be two to three times more frequent than in the past, causing increased flooding.[40] More water shortages and periods of drought are also predicted as a consequence of increased evaporation from warmer summers. While effects will vary across the U.S., it is clear that industrial-scale food production has made U.S. food production increasingly vulnerable to both flooding and drought, while decreasing the resilience of the overall food system and inhibiting our capacity to adapt.

Fortunately, use of sustainable agricultural methods, such as those used in organic farming, can lead to beneficial improvements in soil and water quality and rural community economics;[41] reduced energy consumption, atmospheric greenhouse gas concentrations and build resilience to extreme weather events associated with climate change,[42] as well as reduce unnecessary exposure to potentially harmful substances; and in some instances, has been shown to enhance the nutritional quality of certain foods, such as milk and beef.[43] Buying products from small and mid-scale producers can help to re-diversify U.S. agricultural production, especially in the Upper Midwest, and to keep more of hospital's food dollars in the local economy and circulating longer than they do when they go to larger-scale farms here or elsewhere.[44,45,46]

Antibiotics

Status quo

Antibiotics are administered for nontherapeutic purposes in large-scale farming operations where beef cattle, chickens, hogs, turkeys and farmed fish and shellfish[47] are raised in crowded, stressful and often unsanitary conditions. The U.S. Food and Drug Administration (FDA) has established withdrawal periods to help ensure that no residues are left in the meat prior to slaughter, but residues are not the most concerning public health issue. More concerning is that the enormous, routine, and largely unnecessary addition of antibiotics to animal feed spurs the formation and spread of bacterial resistance from the farm to human populations.

"According to the [FDA], 80% of all antimicrobials sold in this country—nearly 30 million pounds per year—are used in food animals. Ninety percent of those are added to animal feed or their drinking water at nontherapeutic dosages for what are nontherapeutic purposes, such as promoting growth. The overuse of antibiotics is a primary driver in the formation and spread of antibiotic resistance. The extensive use of antibiotics in animal feed, therefore, promotes resistance, resulting in the spread of more drug-resistant bacteria on meat, in waterways and among farmers and veterinarians.

There is both a human and financial toll to antibiotic overuse. In the [U.S.] alone, an estimated 900,000 cases of antibiotic-resistant infection occur annually; methicillin-resistant Staphylococcus aureus [MRSA] alone is responsible for 18,650 deaths and 94,000 cases of infection. Antibiotic-resistant infection also results in longer hospitalizations, which cost the U.S. health care system $20 billion a year. Lost productivity and other societal costs add another $35 billion to the annual cost."[48]

"More resistant infections mean more patients now receive antibiotics previously held in reserve that may be less potent or convenient, or inherently more toxic—like vancomycin."[49]

Company policies on antibiotics use, when they exist, can be vague and difficult for the lay person to decipher. A few examples are included below. Most indicate that they comply with legally mandated withdraw periods before slaughter and otherwise follow the law, but little else. Others indicate that antibiotics likely are being used routinely to compensate for poor husbandry conditions—prevent disease or transmission of disease (and possibly given to promote growth even though that is not their stated purpose)—and not just to treat sick animals.

- **PILGRIM'S PRIDE**—"We use antibiotics only as instructed by our federally accredited and licensed poultry veterinarians. The antibiotics are used in strict accordance with FDA and USDA guidelines, leaving our products free of harmful residues—a fact verified by on-site USDA sampling."[50]

- **HORMEL FOOD CORPORATION**—"Licensed veterinarians prescribe only approved medications and dosage levels to properly treat, control and prevent illness in animals. All medications are regulated by the FDA, which evaluates any potential negative effects on human health and the environment and any impact on resistance."[51]

- **TYSON**—"FDA-approved antibiotics and antimicrobials may sometimes be used by Tyson Foods for the well-being of our chickens"[52]

Methicillin-resistant Staphylococcus aureus (MRSA) cases at two large-scale poultry operations

July 2008

"At least 8 employees from the Pilgrim's Pride Hatchery are on a leave of absence right now. Several of them confirmed to Today's THV they have a form of community acquired or CA-MRSA....employee[s] have been sick on and off for about a year....'Everyone in the hatchery has had it, but none of their family members has had this and that tells you right there it's at the hatchery....' Vickie Smith says. Smith is speaking on behalf of friends who are currently employed at the Batesville Pilgrim's Pride hatchery. Together she says all three of them have had CA-MRSA 23-times. Smith adds, 'They complain about the pain. If they bump it they almost cry because it's so painful and they say it feels like their heart is beating with the mosquito like sore.' 'There are 32 people in the building and thirty have had it multiple times.' This employee wants to remain anonymous. He says he had CA-MRSA in February and April. He continues, 'You go in everyday and you don't know if you're going to get to work the next day. There have been people take off five weeks at a time and that's five weeks without any income.' Pilgrim's Pride spokesperson Ray Atkinson says, 'We discovered the first cases a year ago. Since then we've added hand washing stations and sterilized suits for employees. Unfortunately, we're continuing to see a number of cases and we've hired experts in MRSA research and we're cleaning the facility weekly.'"[53]

August 2009

"About two years ago, dozens of workers at a large chicken hatchery in Arkansas began experiencing mysterious skin rashes, with painful lumps scattered over their hands, arms and legs. 'They hurt real bad,' says Joyce Long, 47, a 30-year veteran of the hatchery, where until recently, workers handled eggs and chicks with bare hands. 'When we went to the doctor and got cultured, he told us we had the worst kind of sickness—a superbug.' Its name, she learned, was MRSA, or methicillin-resistant Staphylococcus aureus....

Soon, co-workers at the nearby processing plant, where each day hundreds of thousands of chicken carcasses are prepped for sale, began finding the lumps. Dean Reeves, an 11-year plant employee, went to emergency room with an excruciating bump on her thigh that she thought was a spider bite. It wasn't: She, too, had contracted MRSA. Since November 2007, Reeves, 50, and her husband, Bill, 46, who also works at the processing facility, have experienced relapses every single month. Even the safety glasses, gloves, and smocks workers wear—along with additional cleaning of the plant's equipment instituted by its owner—aren't enough to protect them from the pathogen, says Bill. 'We work so fast we often stick ourselves with scissors or knives, and get blood slung on us from head to foot,' he explains. When a large swelling appeared over one of his eyes, he was told he might go blind; if the MRSA infection progressed to his brain, he'd die."[54]

The alternative

Farmers who use organic or other sustainable production methods generally eschew the routine use of antibiotics. Instead, animals are given more space, are allowed to express their natural behaviors; waste is less concentrated, less contaminated, and removed more frequently from housing; and sick animals are sequestered, treated and often sold separately. Some farmers are audited annually by an independent, third-party organization to assure consumers that they have engaged in these and other similar practices. Farms that pass audits are allowed to use the applicable certification program's logo/eco-label when marketing their products. The following eco-labels demonstrate that meaningful limits have been placed on the use of antibiotics in meat and poultry: American Grassfed Certified, Animal Welfare Approved, Certified Humane Raised & Handled, Food Alliance Certified, USDA Organic, and USDA Process Verified Never Ever 3. The new Aquaculture Stewardship Council (ASC) Certified label can be used to verify that antibiotics were not used for prophylactic purposes in farmed fish.

In the absence of one of these third-party eco-labels, hospitals can use the following USDA-allowed label claims to identify meat and poultry products that were produced without use of antibiotics—"Raised Without Antibiotics" and "No Antibiotics Added." Since producers making these claims are not subject to an independent audit, they are not as reliable as the eco-labels listed above, but companies tend to watch closely what their competitors say, and report what they believe to be false claims.

When purchasing directly from a farm that has not sought approval to carry one of the above-listed eco-labels, hospitals should ask the farmer or rancher if they give their animals antibiotics, if yes, what for and how often. Many farmers now have websites where they will list this type of information. Someone from the hospital can also visit the farm, if deemed necessary; ask to see records of any antibiotics given to treat illness in the current flock or herd and/or to be shown any bags or containers the feed is delivered in to assure that they do not contain antibiotics.

Further Reading

Antibiotics, Animal Agriculture and MRSA: A New Threat, www.iatp.org/files/421_2_107139.pdf.

Buying Better Chicken: A Resource to buying chicken Raised without Antibiotics and Arsenic for Schools, Hospitals and Other Purchasers, www.iatp.org/files/Buying%20Better%20Chicken042011.pdf.

No Time to Lose: Science Supporting Public Health Action to Reduce Antibiotic Overuse in Food Animal, www.iatp.org/documents/no-time-to-lose.

Our Unhealthy Food System: Why physicians' voices are critically needed, www.minnesotamedicine.com/PastIssues/December2012/ourunhealthyfoodsystem.aspx.

Chemical toxicants

Status quo

Many types of chemicals factor into conventional agricultural production. Some are used intentionally to speed growth in food animals, kill pests and weeds, and boost crop yields, while others are used to manufacture synthetic fertilizer. These chemicals are also found in human and animal waste-based fertilizers, including both sewage sludge and manure from cattle, hog, and poultry concentrated animal feeding operations (CAFOs), which can be laden with antibiotics and arsenic.

Pesticides

As of 2007, the latest year for which there is data, it was estimated that 684 million pounds of conventional pesticide active ingredients were used in U.S. agriculture.[55] This represented 80 percent of the 857 million pounds of pesticides used for all purposes in that year. Agricultural pesticides have been linked to a range of chronic health effects including cancer, neurologic and endocrine (hormone) system disorders, birth defects and other chronic diseases.

FARM WORKERS AND RURAL FAMILIES

Though more attention is often paid to the health impacts of eating foods containing pesticides residues, farmers and farm workers have the greatest exposure to pesticides and face greater pesticide-related health threats, including both acute poisonings and long-term health effects such as cancer and Parkinson's Disease.[56,57] They are often the ones to mix or apply pesticides. They plant, weed, prune, harvest and process crops, and they often live in or near treated fields. They may also expose their family members by inadvertently carrying pesticides home from the field on their clothing and skin.[58]

FETUSES AND CHILDREN

Fetuses and children are especially vulnerable to the acute and chronic health effects of pesticides. Fetal exposure can lead to birth defects, developmental delays and autism. The children of farmers and farm workers can be exposed to agricultural pesticides brought home on the clothes and shoes of their parents, in household dust and in drinking contaminated water and food. Also, as many as 500,000 children work as hired labor in fields and orchards.[60]

For children not living in rural communities, food is a significant source of exposure to high toxicity organochlorines, such as dichlorodiphenyltrichloroethane (DDT), a banned insecticide that still persists in the environment, and organophosphate insecticides including chlorpyrifos and methyl parathion.[61] The average American child between the ages of six and eleven carries unacceptable levels of both chlorpyrifos and methyl parathion.[62] Both are neurotoxins and suspected endocrine disruptors.[63,64]

Between seven and nine million pounds of chlorpyrifos were used to treat crops in 2007, making it the most commonly used conventional insecticide active ingredient in U.S. agriculture.[65] In California, where the greatest data on agricultural use of pesticides has been collected, chlorpyrifos is used on almost every type of produce including: nuts, vegetables such as broccoli, cabbage and cauliflower, fruits such as citrus, grapes for wine, table and raisins and strawberries, beans and wheat.[66] In 2009, the highest volumes were applied to almonds, walnuts, oranges, grapes and broccoli.[67] The highest volumes of methyl parathion were applied to walnuts, potatoes, onions, leaf lettuce and dried beans.[68]

Concerns about the role of pesticides in causing both acute and chronic health effects in children led the American Academy of Pediatrics (AAP) to adopt a position statement in 2012 on pesticide exposure in children. In it they encouraged pediatricians to advocate for increased use of integrated pest management (IPM) practices and for government to adopt policies to encourage farmers to use IPM.[69] Through IPM pest damage is managed by the most economical means, and with the least possible hazard to people, property and the environment.[70]

ALL AMERICANS

Most Americans are exposed to multiple agricultural pesticides through consumption of contaminated food. The USDA conducts routine nationwide testing of washed ready-to-eat produce, beef, grains, milk, pork, poultry and water.[71] Funding level usually determines the number of commodities tested each year. As of 2005, funding only allowed for testing of 20 agricultural commodities.[72] The

Food workers among the most affected

Of the 20 million workers employed throughout the U.S. food chain, nearly 3 million are involved in producing the raw products (growing, raising and harvesting) and another 1.3 million are engaged in processing. The remainder is involved in distribution, retail and service. Most of the 20 million are front-line workers. These and the other illuminating statistics that follow are based largely on the results of a survey of more than 600 food chain workers, nearly half of whom worked on farms and in processing plants, and are reported in *The Hands that Feed Us*, published in 2012.[59]

Key survey results for farm workers:

- 54 percent reported being exposed to toxic chemicals and another 10 percent did not know if they had been exposed.
- 16 percent reported being asked by their employers to do something that would put themselves at risk, including working in the rain, working in the dark, working in sub-freezing temperatures, jumping over ditches, spraying without proper training and picking during or right after spraying.
- 23 percent reported that there were 10 to 20 minors in their workplace, ages 12-17.

Key survey results for processing plant workers:

- 65 percent reported experiencing injuries or illnesses on the job, and among those workers, the most frequently reported injuries were: cuts (37.8 percent of injured processing workers), repetitive motion injuries (34.6 percent), slips and falls (26.8 percent), and back injuries (25.2 percent).
- Processing plant workers are often exposed to extreme cold temperatures intended to preserve food safety, but which result in regular illness.

Key survey results all food workers:

- More than 86 percent of workers surveyed reported earning low or poverty wages.
- Food system workers use food stamps at double the rate of the rest of the U.S. workforce.
- Due to a lack of sick days provided by employers, more than half (53 percent) of the workers surveyed reported picking, processing, selling, cooking and serving food while sick, an average of at least three days per year.
- Due to a lack of employer-provided health benefits, more than one third of all workers surveyed (34.8 percent) report using the emergency room for primary health care. In addition, 80 percent of these workers are unable to pay for such care.

Environmental Working Group (EWG) reviews this data to develop its list of the foods most commonly contaminated with pesticides. In their latest review, conducted in 2012 EWG found that 68 percent of tested food samples had detectable pesticide residues after they had been washed or peeled.[73] Though DDT has not been used since 1972, 99 percent of Americans have tested positive for DDT degradants; 93 percent for metabolites of chlorpyrifos.[74] These are just two of the many active pesticide ingredients found by USDA and FDA scientists in produce.

Nearly half of fresh fruit, two-thirds of canned fruit and approximately one-third of fruit juice consumed in the U.S. are imported.[75] According to The Organic Center, on average, pesticide risks are over three times higher for imported produce than produce grown in the U.S.[76] More information on the types of pesticide residues found on food and their documented health effects can be found on the Pesticide Action Network website, www.panna.org.

NATURAL RESOURCES

The environmental impacts of agricultural pesticide use include:

- Soil contamination
- Water and air pollution
- Loss of biodiversity and elimination of key species (e.g., bees)
- Pest resistance, resulting in the need for increased application of pesticides or formulation of alternate pesticides

No scrubbing to safety

Though washing and peeling produce before eating may help to reduce pesticide exposure, they do not remove all residues or other contaminants such as those found in sewage sludge. Residues from many pesticides could still be found on produce samples that government scientists washed and peeled prior to testing. Also, some pesticides, as well as some contaminants in sewage sludge (see below) are taken up by a plant's roots and distributed throughout the plant, so no amount of washing will remove them. According to Pesticide Action Network, at least one analysis has shown that "systemic insecticides account for about 60 percent of dietary risk in domestic crops. Included in this class of pesticides are genetically engineered crops like Bt corn, which express an endotoxin that is likewise impossible to wash off. The average ear of U.S.-grown corn likely has three different systemic insecticides coursing through its tissue."[77]

Arsenic-based feed additives and pesticides

Until very recently arsenic compounds were widely used in poultry and approved for use in hog feed. While initially approved to help control parasites, for decades arsenicals have been added to feed to speed weight gain and to create the appearance of a healthier color. In her blog "Food for Thought," Carole Morrison, veteran contract chicken farmer for an international corporation writes, "Mostly unknown to the outside world, arsenic is a routine feed additive for industrially produced chickens no matter if cocci [bacteria] is present or not or diagnosed by a veterinarian…"[78]

In December 2009, IATP and the Center for Food Safety (CFS) requested via a formal Citizen Petition (FDA-2009-P-0594) that FDA among other steps "immediately suspend the approval of all new animal drug applications (NADAs) for arsenic-containing compounds used as feed additives for food animals." FDA responded in June 2010 by saying that it needed more time to study the issue.

In 2011, following the completion of an FDA study that detected inorganic arsenic at higher levels in the livers of chickens treated with 3-Nitro than untreated chickens, Alpharma, the maker of 3-Nitro (also known roxarsone) agreed to suspend sale of its product.[79] Prior to this suspension roxarsone was the most commonly used arsenic feed additive in the U.S.[80]

In 2012, Maryland became the first state to ban the sale or use of any chicken feed containing roxarsone. The law went into effect in January 2013, but it only affects the sale or use of one type of arsenical used in one type of animal—chicken (ranking 33rd in the nation, Maryland does not have a lot of commercial hog production)[81]. The Maryland law also contains a provision that would lift the ban if, after studying the issue, the FDA finds the product is safe to use in poultry.[82,83] According to the Baltimore Sun, no timeline for review has been established.

Then, in May 2013, attorneys at CFS filed a lawsuit on behalf of CFS, IATP and seven other U.S. food safety, agriculture, public health, and environmental groups to compel FDA to respond to the groups' three year-old petition. See more at http://www.iatp.org/documents/fda-ignores-toxic-arsenic-in-animal-feed. In September 2013, after receiving letters from the FDA requesting additional information about the presence of arsenic in animal tissue, two other major feed manufacturers announced they would withdraw their arsenical products from the market. Zoetis requested that the FDA withdraw approval of roxarsone and carbarsone on September 19, and Fleming Laboratories, Inc. requested that FDA withdrawal approval of arsanilic acid on September 26. See more at http://www.iatp.org/blog/201310/big-win-to-eliminate-toxic-arsenic-in-meat.

Unfortunately, FDA recently denied the CFS and IATP request to withdrawal approval of nitarsone—the last major arsenic-containing compound still used as a feed additive for food animals, pending consideration of additional information that FDA expects to be available at the end of the first quarter of 2014.

Arsenic use in food animals is a concern because it results in arsenic residues in meat, as well as arsenic contamination of manure, agricultural lands and water supplies.

> Inorganic arsenic causes cancer. Adult cancers may form decades after in-womb exposure to arsenic because it re-programs some genes responsible for proper hormone function. Recent research shows arsenic affects at least 187 different genes, about a quarter of which impact how estrogen or other steroid hormones work in the body. Arsenic now appears to also interfere with thyroid function, essential for normal brain development as well as adult function. Researchers see arsenic-related hormone effects even at exposures below 1parts per billion (ppb), or more than 10 times lower than the legal limit for arsenic in drinking water…[84]

Not long after the first arsenic-based additive was approved for use in poultry and swine feed, the extensive use of lead-arsenate insecticides on fruit trees, especially on apple orchards, was winding down and eventually banned in the U.S. in the 1980s.[85] However, since heavy metals persist in the environment, residues still contaminate soils wherever apples were grown between the 1890's and the 1950's, including Wisconsin and Minnesota. According to the Wisconsin Department of Health Services the longer a property was an orchard, the higher the soil pesticide concentration.[86] Crops produced from soils contaminated from previous treatment with lead-arsenate or naturally occurring arsenate may contain these contaminants. Many other countries also used lead-arsenate insecticides including China, which was still allowing use until at least the year 2000.[87] According to the Consumer Reports, China is now the world's major exporter of apple juice concentrate and provided two-thirds of the U.S. apple juice supply as recently as 2011.[88]

Sewage sludge, also known as biosolids

Since the early 1990's, when ocean dumping of sewage was banned, sewage sludge, the semi-solid to solid matter left over following municipal wastewater treatment, has been rebranded as "biosolids" and used as fertilizer by farmers, ranchers and landscape contractors. Sewage sludge is also used for home use under a variety of brand names, e.g., Milorganite® made from Milwaukee's treated sewage. Sewage sludge commonly contains nutrient-rich fecal matter along with bacteria, viruses, parasites, heavy metals, pharmaceuticals and other chemical contaminants—many known to cause health effects.

Though legal, the benefits touted by municipalities and states across the U.S., the use of sewage sludge as fertilizer for food production increases the risk of exposure to sludge contaminants and their associated health effects for consumers and people in the vicinity of application sites. For more than two decades, this latter claim has been hotly debated in rural communities where sewage sludge is spread, but a new study published in Environmental Health Perspectives on March 12, 2013, found that sewage sludge may be causing illness in people up to a mile from where the sludge is spread on land.[89]

The study involved residents from North Carolina, South Carolina and Virginia who live near fields where sludge is applied as a soil amendment. Epidemiology researchers from the Gillings School of Global Public Health at The University of North Carolina in Chapel Hill conducted the study in which more than half of the participants reported acute symptoms such as burning eyes, diarrhea, nausea and vomiting after sludge had been applied to nearby fields. According to the press release, people who live near fields sprayed with waste from industrial swine operations have reported similar symptoms.

Because some of these contaminants are highly persistent, repeated applications of sewage sludge to the same piece of land can increase soil contaminant levels and possibly food contaminant levels for centuries to come. When used for agricultural purposes the sludge can be applied to land used to raise crops for both human and animal consumption or it may be applied to pastureland used to graze cattle, sheep, goats, etc. Use of sewage sludge-based fertilizer is prohibited in production of organic food.

Off-farm toxicants

Also, though not discussed here, between the farm and final purchase of food and beverage items, other chemicals such as food dyes and preservatives are often added, some of which have been shown to have deleterious effects. Chemicals can also leach from food packaging. For more information on the incidence and health effects of these chemicals, see the "Further Reading" list in this section.

The alternative

Farmers who use organic or other sustainable production methods, such as integrated pest management (IPM), generally avoid use of arsenic-based and synthetic pesticides and sewage sludge. While IPM takes a least toxic approach, pesticides may still be used as a last resort. In contrast, certified organic food production applies many of the same concepts as IPM but limits the use of pesticides to those that are produced from natural sources, as opposed to synthetic chemicals.

In addition to the USDA Organic standards, the standards for several other third-party certified eco-labels place meaningful limits on the use of pesticides in crop production and/or on and around food animals, in feed and to grow feed crops including: American Grassfed Certified, Animal Welfare Approved, Certified Humane Raised & Handled, Certified Naturally Grown, Fair Trade USA, Fairtrade International, Food Alliance Certified, Protected Harvest, Rainforest Alliance Certified, Salmon Safe and Wisconsin Healthy Grown Potatoes.

There is currently no meaningful USDA or FDA allowed label claim related to agricultural use of pesticides. Many small-and mid-scale farms essentially follow organic standards without seeking certification, but farmers should be asked to describe their approach to insect, rodent, mold and weed management as applicable to their operations. Also, though not a third-party certification, a growing number of farmers are becoming peer-certified to meet a new standard called "Certified Naturally Grown."

Further Reading

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Driving Down Pesticide Risks, www.organic-center.org/reportfiles/DRIfinal11-1[1].pdf

Fields of Poison 2002 California Farmworkers and Pesticides, www.panna.org/sites/default/files/FieldsOfPoison.pdf

Feeding Arsenic to Poultry: Is this Good Medicine? www.noharm.org/lib/downloads/food/Feeding_Arsenic_to_Poultry.pdf

The Hands that Feed Us: Challenges and Opportunities for Workers along the Food Chain, www.foodchainworkers.org/wp-content/uploads/2012/06/Hands-That-Feed-Us-Report.pdf

Not So Sweet: Missing Mercury and High Fructose Corn Syrup, www.iatp.org/files/421_2_105026.pdf

Organic Essentials: A comprehensive guide for identifying safe and nutritious food, www.organic-center.org/reportfiles/TOC_PocketGuide_2011.pdf

Potential Health Impacts of Certain Persistent and Other Chemicals Detected in Sludge, www.iatp.org/files/421_2_104204.pdf

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Smart Guide to Food Dyes: Buying Foods That Can Help Learning, www.iatp.org/files/421_2_105204.pdf

Smart Guide on Sludge Use in Food Production, www.iatp.org/files/421_2_104203.pdf

Smart Plastics Guide: Healthier Food Uses of Plastics, www.iatp.org/files/421_2_102202.pdf

2012 Shopper's Guide to Pesticides in Produce, www.ewg.org/foodnews

Still Poisoning the Well: Atrazine Continues to Contaminate Surface Water and Drinking Water in the United States, www.nrdc.org/health/atrazine/files/atrazine10.pdf

What's on my food? www.whatsonmyfood.org/index.jsp

Hormones

Exogenous hormones–those originating outside the body–are approved for use in cattle and sheep raised for meat production to speed up growth, in dairy cattle to boost milk production[90] and in fish-farming to spur reproduction.[91] It is illegal to use hormones in poultry and hog production.

Status quo

Beef

Hormones routinely given to U.S. beef cattle to spur faster growth end up in the meat, and ultimately, our bodies. The Food and Drug Administration (FDA) banned one synthetic estrogen, DES, as an animal growth promoter in 1979. But at least three natural steroids and three synthetic surrogates remain in widespread use as growth hormones by U.S. and Canadian beef cattle producers. One of them, trenbolone acetate, is thought to have 8–10 times greater anabolic activity than testosterone. A 2004 congressional investigation also revealed that the U.S. veal industry had been giving trenbolone implants to more than 90 percent of veal calves; an illegal practice the industry admitted had been commonplace for decades.

Though illegal in Europe since 1988, the U.S. government's position is that hormone residues in beef from adult cattle pose no threat to human health. This safety presumption, however, rests mostly on outdated research concerning the ability of estrogen (estradiol) to mutate genes. The latest research suggests instead that harm from early life exposure to hormones and hormone-disrupting chemicals could stem not from their ability to change the genes, but rather their ability to change the crucial protein environment surrounding the genes called the epigenome. It is this protein environment that determines, in part, at which points in one's life particular genes will be turned on and off. By changing this environment, hormone exposure early in life may basically re-program the body's resilience, reproduction and metabolism later in life...[92]

Dairy cattle

rBGH (recombinant bovine growth hormone, also known as rBST) is a genetically engineered growth hormone injected into dairy cows to increase milk production. rBGH is unnecessary to produce milk. Though declared "safe" by the FDA, food safety officials in many other countries—including Canada, Japan, Australia, New Zealand and all 25 nations of the European Union—have refused to approve its use. Concerns with use of rBGH revolve around its known adverse impacts on dairy cows (including increased mastitis infections needing antibiotic use) and the potential harm to humans. Increased antibiotic use in food animals contributes to antibiotic resistance transmitted to humans. rBGH use also increases levels of a hormonal growth factor called IGF-1 in cows and

in cow's milk. Increased IGF-1 levels in humans have been implicated in higher rates of colon, breast and prostate cancer. As yet, the science is insufficient to assure the safety of drinking milk from cows given rBGH because it is unknown whether doing so will also increase IGF-1 levels in the human bloodstream.[93]

Aquaculture

In captivity, most fish do not reproduce successfully. Fish hatchery operators inject hormones into male and female fish so that they breed. Chorionic gonadotropin, a human hormone, can be injected into fish destined for human consumption. Luteinizing hormone releasing hormone (LHRH) can also be used to induce spawning, but while the offspring can go to market, the parent fish cannot. When humans use chorionic gonadotropin as a fertility drug (or for other uses), it can increase the risk of multiple pregnancy, premature puberty, and ovarian enlargement and cysts. The highest legal cumulative dose of chorionic gonadotropin in fish destined for human consumption is 25 ml. However, FDA does not test fish for residues of the hormone, nor does it take any other regulatory action to enforce this limit.[94]

The alternative

Farmers who use organic or other sustainable production methods generally eschew the routine use of added hormones.

Verification of claims via an audit by an independent third party is currently the best way to know if a beef, bison, or dairy product supplier is placing meaningful restrictions on hormone use. The standards for the following eco-labels prohibit use of synthetic hormones, including rBGH/rBST in dairy cattle, in addition to placing meaningful restrictions on antibiotic use as noted above: American Grassfed Certified, Animal Welfare Approved, Certified Humane Raised & Handled, Food Alliance Certified, USDA Organic and USDA Process Verified Never Ever 3. The applicable eco-label should be present on product packaging.

In the absence of one of these third-party eco-labels, hospitals should look for beef, veal and sheep (lamb) products labeled "No hormones added" and dairy products labeled as produced without rBGH/rBST.

When purchasing directly from a farm, ask the farmer or rancher if they administer hormones when raising their beef, bison, or dairy cattle. Many farmers now have websites where they will list this type of information.

Further Reading

IATP Smart Guide: Hormones in the Food System, www.iatp.org/files/421_2_106678.pdf%20

IATP Smart Guide to Minnesota Dairy Without rBGH, www.iatp.org/files/421_2_105184.pdf

HCWH Purchasing Guide to Sourcing Dairy Products Produced Without rBGH, www.noharm.org/lib/downloads/food/Purchasing_Non-rBGH_Dairy.pdf

HCWH Position Statement on rBGH, www.noharm.org/lib/downloads/food/HCWH_Position_on_rBGH.pdf

Genetic engineering

Status quo

As of December 2011, it is estimated that 95 percent of the U.S. commercial sugar beet crop, 94 percent of the U.S. commercial soybean crop, 90 percent of the U.S. commercial rapeseed (canola) crop, 88 percent of the U.S. commercial corn crop, most of the papaya grown in Hawaii and 25,000 acres of zucchini and yellow summer squash (~45,000 acres were planted in squash, all varieties, in 201295) were produced from genetically engineered (GE) seeds or plants.[96]

Common food ingredients that may also have been derived from these or other GE crops include: amino acids, aspartame, ascorbic acid, sodium ascorbate, vitamin C, citric acid, sodium citrate, ethanol, flavorings ("natural" and "artificial"), high-fructose corn syrup, hydrolyzed vegetable protein, lactic acid, maltodextrins, molasses, monosodium glutamate, sucrose, textured vegetable protein (TVP), xanthan gum, vitamins and yeast products.[97] These ingredients are commonly found in multi-ingredient processed food items, most of which fall into the Grocery category, but also in juice, drink mixes, sodas, processed eggs, flavored milk and most other dairy products including many ice cream products. In addition, most conventionally raised beef and dairy cattle, chickens (laying hens and broilers), turkeys and hogs are fed a diet containing GE corn and/or GE soy beans.

No GE food animals are in commercial production, though FDA is currently deciding whether to approve a genetically engineered variety of salmon (AquAdvantage® Salmon) developed by AquaBounty Technologies.[98] This biotechnology company is also working to develop similar varieties of tilapia and trout.[99] The corporate office of AquaBounty Technologies is in Massachusetts. Aqua Bounty Farms is on Prince Edward Island in Canada.

According to HCWH, GE-related health concerns include allergies, antibiotic resistance and toxins, especially for hospital patients who may be more vulnerable to possible problems from GE crops than the general public.[100] Also, studies have shown that weeds have developed resistance to herbicides used with GE corn and soybeans and have led farmers to use higher application rates of and/or more toxic herbicides.[101] For instance, widespread use of genetically engineered Roundup Ready soybeans and corn and the herbicide glyphosate (brand name Roundup) has led to increased use of atrazine, 2,4-D and other leading herbicides on glyphosate-resistant weeds.[102]

The alternative

Farmers who use organic or other sustainable production methods generally avoid use of GE crops and animals.[103] In addition to USDA Organic standards, which prohibit the use of GE crops and livestock, the following eco-labels can be used to identify foods produced without GE ingredients: ASC Certified, Certified Naturally Grown, Food Alliance Certified and Non-GMO Project Verified. In the absence of one of these eco-labels, hospitals should look for foods, mainly processed foods or beverages, carrying the following statement: "No genetically engineered ingredients." Before purchasing yellow squash and zucchini from a local farm consider asking whether they use GE seeds. Some mid to larger-scale diversified farms grow crops for a variety of markets including wholesale, so it is possible that they may be using GE seeds.

Further Reading

Cereal Crimes: How "Natural" Claims Deceive Consumers and Undermine the Organic Label—A Look Down the Cereal and Granola Aisle, www.cornucopia.org/cereal-scorecard/docs/Cornucopia_Cereal_Report.pdf

HCWH Position Statement on Genetically Engineered Food, www.noharm.org/lib/downloads/food/Genetic_Engineered_Food_Stmnt.pdf

HCWH Purchaser's Guide to Sourcing Food Without Genetically Engineered Ingredients, www.noharm.org/lib/downloads/food/Purchasing_Non-GMO_Food.pdf

Scrambled Eggs Separating Factory Farm Egg Production from Authentic Organic Agriculture, www.cornucopia.org/egg-report/scrambledeggs.pdf

Concentration of production and market share

Industrialization of agricultural methods has also contributed to crop and food animal production being highly concentrated in certain parts of the country. This geographical concentration in production leads to regional concentration of agriculturally related air and water pollutants, such that some communities are disproportionately affected. Tables 1.1 and 1.2 contain information on the top producing states for food animals and crops.

Table 1.1—Regional Concentration of Eggs, Milk and Food Animal Production

Food animal	Top producing states in 2007
Cattle and calves	>50 percent of total sales from five states—Tex., Kan., Neb., Iowa and Colo.[104]
Milk and other dairy products	>50 percent of total sales from five states—Calif., Wis., N.Y., Pa. and Idaho[105]
Pork	>50 percent of total sales from three states—Iowa, N.C. and Minn.[106]
Poultry and egg production (combined)	>50 percent of total sales from six states—Ga., N.C., Ark., Ala., Miss. and Tex.[107]
Broilers (chickens for meat)	The top five broiler-producing states are Ga., Ark., Ala., Miss., and N.C.[108]
Chicken eggs	The top five egg-producing states are Iowa, Ohio, Pa., Ind., and Tex.[109]
Turkeys	The top five turkey-producing states are Minn., N.C., Missouri, Ark., and Virginia[110]

Table 1.2—Regional Concentration of Crop Production

Crop	Top producing states in 2007
Fruits, nuts and berries	89 percent of total sales from six states—Calif. (59.4 percent), Fla., Wash., Ore., Mich. and N.Y.[111]
Grains, oilseeds and pulse crops	49 percent of total sales from five states—Ill., Iowa, Neb., Minn. and Ind.[112]
Vegetables, potatoes and melons	Top five states in acres harvested for fresh market—Calif., Fl., Idaho, Ariz. and Ga. (Calif. alone accounted for 30 percent)[113] Top five states in acres harvested for processing—Calif., Wash., Wis., Minn. and Idaho[114]

Further Reading

Identifying Our Climate Foodprint: Assessing and Reducing the Global Warming Impacts of Food and Agriculture in the U.S., www.iatp.org/files/258_2_105667.pdf

The Changing Climate for Food and Agriculture: A Literature Review, www.iatp.org/files/451_2_104516.pdf

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Sustainable Farm-to-Hospital Toolkit

Local, Sustainable Products Carried by Distributors Serving Minnesota and Western Wisconsin

A=Raised without antibiotics
F= Food Alliance Certified[1]
G=100 percent grass fed
H=No hormones added
O=USDA Organic[2,3]
N=Certified Naturally Grown[4]
R=Produced without use of recombinant bovine growth hormone (rBGH)

MAINLINE DISTRIBUTORS

Company	Sysco Minnesota	US Foods
Warehouse location	Mounds View, Minn.	Plymouth, Minn.
Distribution range	Minnesota, western Wisconsin	Minnesota, eastern North Dakota, eastern South Dakota
Definition of local	No specific definition, but generally Minnesota and boarding states	Within 500 miles
Types of products purchased (when available) from local, sustainable farmers/producers and distributed **Note: See names of specific Minnesota and western Wisconsin farmers/ producers below**	■ Cheese ■ Cider ■ Maple syrup ■ Pork ■ Produce, including but not limited to: ■ Apples ■ Beans ■ Eggplant ■ Peppers ■ Potatoes ■ Squash	■ Produce, including but not limited to: ■ Green beans ■ Lettuce ■ Mushrooms ■ Peppers ■ Potatoes ■ Sweet corn ■ Tomatoes ■ Zucchini
For more information	syscomn.com/farmers.htm	usfoods.com
Anderson Maple Syrup[5] Cumberland, Wis. Maple syrup	X	X

INSTITUTE FOR **AGRICULTURE** AND **TRADE POLICY**
2105 First Avenue South Minneapolis, Minnesota 55404 USA **iatp.org**
December 2013

Company	Sysco Minnesota	US Foods
Axdahl Farms (F) Stillwater, Minn. Produce		X
Bushel Boy Owatonna, Minn. Tomatoes	X	
Costa Farm & Greenhouse Mahtomedi, Minn. Produce		X
Ed Field & Sons Andover, Minn. Vegetables		X
Forest Mushrooms St. Joseph, Minn. Mushrooms		X
Jack and the Green Sprouts (O) River Falls, Wis. Sprouts		X
Nuto Farms (F) Rice Lake, Wis. Russet potatoes	X	
Pahl Farms (P) Apple Valley, Minn. Strawberries, vegetables	X	
Pepin Heights Orchard[6] Lake City, Minn. Apples, cider	X	X
Riverside Farms Elk River, Minn. Vegetables		X
Russet Potato Farm Bancroft, Wis. Potatoes, onions		X
Svihel Farms, Inc. (F) Foley, Minn. Vegetables	X	
Vine Valley Farms Stewart, Minn. Vegetables		X
Waterworks/Rob's Gourmet Greens Hollandale, Minn. Lettuce, herbs		X

REGIONAL/SPECIALTY DISTRIBUTORS

Company	Appert's Foodservice	Bix Produce Company	Co-op Partners Warehouse7	Upper Lakes Food Inc.
Warehouse location	St. Cloud, Minn.	St. Paul, Minn.	St. Paul, Minn.	Cloquet, Minn., Northfield, Minn.
Distribution range	Upper Midwest	Minnesota, western Wisconsin, northern Iowa, eastern North Dakota	Upper Midwest	Upper Midwest
Definition of local	Grown in Minnesota or within a 150-mile radius of St. Cloud.	No specific definition, but primarily Minnesota or Wisconsin grown or produced	Minnesota and boarding states; price list indicates state in which product is grown	Undetermined
Types of products purchased (when available) from local, sustainable farmers/producers and distributed **Note: See names of specific Minnesota and western Wisconsin farmers/ producers below**	■ Fresh produce (some pre-cut) ■ Cabbage ■ Cucumbers ■ Green beans ■ Peppers ■ Potatoes ■ Tomatoes ■ Winter squash ■ Zucchini	■ Cheese ■ Fresh produce (pre-cuts, many blends) including but not limited to: ■ Apples ■ Herbs ■ Melons ■ Mushrooms ■ Peppers ■ Potatoes ■ Squash ■ Tomatoes ■ Maple syrup	■ Butter ■ Cheese ■ Eggs ■ Fresh produce, including but not limited to: ■ Apples ■ Berries ■ Broccoli ■ Carrots ■ Kale ■ Squash ■ Sweet corn ■ Tomatoes ■ Frozen produce ■ Corn ■ Peas ■ Milk ■ Oil (camelina)	■ Fresh produce including ■ Lettuce ■ Sprouts ■ Tomatoes
For more information	apperts.com	bixproduce.com	cooppartners.coop	upperlakesfoodsinc.com
Anderson Maple Syrup Cumberland, Wis. Maple Syrup		X		
Axdahl Farms (F) Stillwater, Minn. Produce		X		
Big River Farms (O) Marine on St. Croix, Minn. Vegetables, herbs			X	
Bushel Boy Owatonna, Minn. Tomatoes		X		
Cedar Summit Farm (O,R) New Prague, Minn. Fluid milk, drinkable yogurt			X (via drop-ship)[8]	
Costa Farm & Greenhouse Mahtomedi, Minn. Produce		X		
Crystal Ball Farms (O,R) Osceola, Wis. Fluid milk			X (via drop-ship)	
Donnay Dairy (O) Kimball, Minn. Goat cheese		X	X	

Company	Appert's Foodservice	Bix Produce Company	Co-op Partners Warehouse7	Upper Lakes Food Inc.
Driftless Organics (O) Soldiers Grove, Wis. Beef, produce, sunflower oil			X (via drop-ship)	
Ed Field & Sons Andover, Minn. Vegetables		X		
Eichten's Hidden Acres Center City, Minn. Cheese (R9)		X	X	
Featherstone Farm (O) Rushford, Minn. Produce			X (via drop-ship)	
Ferndale Market (A)[10] Cannon Falls, Minn. Turkey				X
Forest Mushrooms St. Joseph, Minn. Mushrooms		X	X (via drop-ship)	
Future Farm Food and Fuel Baldwin, Wis. Lettuce		X		
Gardens of Eagan (O) Northfield, Minn. Produce			X	
Hoch Orchard (O) La Crescent, Minn. Tree fruits, berries			X (via drop-ship)	
Jack and the Green Sprouts River Falls, Wis. Sprouts		X		
Joe Zywiec Vegetable Farm Cottage Grove, Minn.		X		
Kadejan Poultry (A) Glenwood, Minn. Poultry			X (via drop-ship)	
Larry Schultz Owatonna, Minn. Eggs, poultry			X (via drop-ship)	
Morning Star Farm Cokato, Minn. Cheese			X	
Nagel Produce Arlington, Minn. Produce		X		
Nordic Creamery[11] **(N,R)** Westby, Wis. Butter, cheese			X	
Pahl Farms (F) Apple Valley, Minn. Strawberries, vegetables		X		
PastureLand Belleville, Wis. Yogurt			X (via drop-ship)	
Pastures-A-Plenty Co & Farm (F) Kerkhoven, Minn. Pork			X (via drop-ship)	

Company	Appert's Foodservice	Bix Produce Company	Co-op Partners Warehouse7	Upper Lakes Food Inc.
Pepin Heights Orchard Lake City, Minn. Apples, cider		X		
Poplar Hill Dairy (A,H) Scandia, Minn. Pasteurized goat milk, goat cheese				
Riverside Farms Elk River, Minn. Vegetables		X		
River Valley Sprouts (O) Houston, Minn. Sprouts		X	X	
Songs Mushroom Farm Gays Mills, Wis. Mushrooms		X		
Southeast Minnesota Food Network Beef, bison, cheese, eggs, honey, lamb, pork, poultry, produce, wild rice			X (via drop-ship)	
Svihel Farms, Inc. (F) Foley, Minn. Vegetables	X	X		X
Thousand Hills Cattle Company (A,G,H)[12] Cannon Falls, Minn. Beef			X (via drop-ship)	
Vine Valley Farms Stewart, Minn. Vegetables		X		X
Waterworks/Rob's Gourmet Greens Hollandale, Minn. Lettuce, herbs		X		
Wescott Orchard[13] Elgin, Minn. Produce		X		X
Wild Country Maple Syrup (O) Lutsen, Minn. Maple syrup			X (via drop shipment)	

OTHER DISTRIBUTORS

Bergin Fruit & Nut Company (berginnut.com), based in St. Paul, Minn., sells fruit purchased from Wescott Orchard, see endnote 4.

H. Brooks (hbrooks.com): located in New Brighton, Minn., does not sell directly to institutions, but many growers who completed the IATP SARE project farmer/producer surveys sell to H. Brooks, which in turn sells to institutional suppliers.

Reinhart Foodservice (rfsdelivers.com): The La Crosse, Wis. distribution center carries Fifth Season Cooperative products, most of which are foods produced by local, sustainable farmers/producers. For more information visit the Co-op's website at http://fifthseason.coop/ or download the August 2013 Buyers Newsletter, which contains the Fifth Season 2013 Product List with Reinhart product codes, http://fifthseason.coop/wp-content/uploads/2013/08/FSC-Buyers-newsletter-August-2013-1.pdf.

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Developed by Marie Kulick, Earth Wise Communications, with assistance from Emily Barker, IATP.

ENDNOTES

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5. Per a phone conversation between Emily Barker (IATP) and a representative from Anderson Maple Syrup on May 1, 2013, the syrup used to make their products is all from US producers, primarily from Minnesota, Wisconsin, Ohio and New York. The syrup is typically comingled to create their products for retail sale, and thus would generally not meet the GGHC FS Credit 3 definition of local. However, for larger, bulk purchases, they will do custom state-produced orders, where all of the syrup would be from a desired state, which would meet the local definition. These orders must specifically be requested by the purchaser.

6. Pepin Heights' apples are usually comingled with apples from other orchards before sale under the Pepin Heights label.

7. Per their Fall/Winter 2012 Product Catalog, Co-op Partners Warehouse (CPW) "works with several regional producers to deliver their product on our trucks." This "drop-ship" method allows additional local producers to sell their product direct to buyers, aggregate orders and have it delivered via CPW. For a list of current Producer Direct Partners, contact CPW.

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9 Per phone conversation between Marie Kulick, Earth Wise Communications and Tammy Stephens, office manager for Eichtens Hidden Acres LLC on October 8, 2013, all of Eichten's natural cheeses are made on their farm from fresh cow's milk. They do not use GMO-rennet and the milk is produced from cows not given added hormones or rBGH.

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13. Per a phone conversation between Emily Barker (IATP) and a representative from Wescott on February 26, 2013, they have their own orchards in Minnesota, Washington, and Chile. In season, they do local production, but fill in from elsewhere during the remainder of the year. Buyers should confirm with Wescott to verify if current produce is local.

Iowa, Minnesota and Western Wisconsin Sustainable Farmers, Producers Interested in Selling to Hospitals

This directory includes individual and groups of Iowa, Minnesota, and Wisconsin sustainable farmers/producers who indicated via an IATP SARE project farmer/producer survey that they are interested currently in selling to hospitals and were willing to have their information shared.

This directory is not all-inclusive, as there may be additional farmers/producers in Minnesota and Wisconsin who would be interested in selling to hospitals but did not participate in our survey. To find other producers who may be interested in selling to wholesale customers in Iowa see the Iowa Buy Fresh Buy Local Directory (www.iowafreshfood.com/uploads/PDF_File_61325466.pdf), in Minnesota see the Minnesota Grown Wholesale Database (www3.mda.state.mn.us/whlsale) or in Wisconsin see the Farm Fresh Atlas™ 2013 Western Wisconsin Local Food Directory (www.wifarmfresh.org).

FARMER/PRODUCER CONTACT INFORMATION BY STATE

NOTE: An asterisk "*" indicates that the products sold under the farm/business name/label come from multiple sustainable farmers/producers, but each farmer's/producer's products are packaged separately. A double asterisk "**" indicates that products from more than one farm are usually or always co-mingled before sale under the farm/business name/label.

Iowa

Farm/business	Location	Contact name	Contact information	Products	Delivery radius	Interested in food service farm visits
Grass Run Farm, Inc.**	Dorchester, Iowa	Kristine Jepsen	(563) 277-0052 kristine@grassrunfarms.com www.grassrunfarms.com	Beef	Depends on volume	Yes

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2105 First Avenue South Minneapolis, Minnesota 55404 USA **iatp.org**
December 2013

Minnesota

Farm/business	Location	Contact name	Contact information	Products	Delivery radius	Interested in food service farm visits
Big River Farms*	Marine on St. Croix, Minn.	Glen Hill	(651) 433-3676 glenhill@mnfoodassociation.org www.mnfoodassociation.org	Produce	40-50 miles	Yes
Carlson's Orchard	Annandale, Minn.	Dale Carlson	(320) 274-8699 carlson.orchard@gmail.com	Produce	Depends on quantity	No
Community Table Cooperatives**	St. Paul, Minn.	Collie Graddick	(612) 961-8262 collie@communitytable.coop www.communitytable.coop	Beef, Chicken, Fish, Produce	100 miles	Yes
Costa Farm & Greenhouse	White Bear Lake, Minn.	Karin Costa	(651) 429-8184 rkcosta@usfamily.com www.costafarm.com	Produce	40 miles	Yes
Ferndale Market	Cannon Falls, Minn.	John Peterson	(507) 263-4556 john@ferndalemarketonline.com www.ferndalemarketonline.com	Turkey	100 miles, also contracts freight for high-volume orders through Coop Partners Warehouse	Yes
Garden Fresh Farms	Maplewood, Minn.	Dave Roeser	(612) 886-6631 droeser@gardenfreshfarms.com gardenfreshfarms.com	Produce, Fish	20 miles	Yes
Good Earth Mill & Grains	Good Thunder, Minn.	Rachel Hollerich	(507) 380-5281 rachel@goodearthmill.com www.goodearthmill.com	Produce, Pork		No
Hulgan House Heritage Farms	Montgomery, Minn.	Doreen Devoy-Hulgan	(507) 779-6627 doreen.devoy@gmail.com	Chicken, Eggs, Pork, Produce, Specialty Poultry, Turkey	50 miles	Yes
Laughing Loon Farm LLC	Northfield, Minn.	Dayna Burtness	(612) 812-1923 dayna@laughingloonfarm.com www.facebook.com/LaughingLoonFarm	Produce	Depends on order size	Yes
Muddy Feet Farm	Minnetrista, Minn.	Stephanie Stillman	(763) 242-3604 farmerstillman@gmail.com muddyfeetfarm.org	Produce	20 miles	Yes
Paradise Valley Buffalo Ranch	Bagley, Minn.	Duane Hayes	(218) 694-2290 hayesbuf@gvtel.com www.bisonisbetter.com	Bison	60 miles	No
Pepin Heights Orchards, Inc.**	Roseville, Minn.	Timothy Byrne	(651) 398-5503 tim@pepinheights.com www.pepinheights.com	Produce	75 miles	Yes
Prairie Pride Farm of MN, LLC	Mankato, Minn.	Dawn Hubmer	(507) 245-3117 dawnhubmer@gmail.com www.prairiepridepork.com	Chicken, Pork	50 miles	No
Prairies Past Produce	Pipestone, Minn.	Lisa Smith	(507) 825-3845 lisasmith@nobleswildblue.com	Produce		Yes
River Valley Sprouts	Houston, Minn.	Laurie LeGrande	(507) 896-3602 llegrande1@gmail.com	Produce	170 miles	No
Rolling Hills Traeger Ranch	Avon, Minn.	Christina Traeger	(320) 293-2995 britishwhitebeef@gmail.com lovebritishwhites.com	Beef, Chicken, Pork	35-100 miles, depends on product	No
Sunrise Flour Mill**	North Branch, Minn.	Martha (Marty) Glanville	(651) 674-8050 marty@sunriseflourmill.com www.sunriseflourmill.com	Grains (miller)	Depends on order size	Yes

Farm/business	Location	Contact name	Contact information	Products	Delivery radius	Interested in food service farm visits
Way of Life Gardens, LLC	Wells, Minn.	Deborah Mertens	(507) 317-5453 dmwlg2010@gmail.com	Produce	120 miles, maybe	Not at this time

Wisconsin

Farm/business	Location	Contact name	Contact information	Products	Delivery radius	Interested in food service farm visits
Bullfrog's Eat My Fish Farm	Menomonie, Wis.	Herby Radmann	(715) 664-8775 bullfrog@eatmyfish.com www.eatmyfish.com	Fish	25 miles, regional—Wis. and Minn.	No
Buvala Farm LLC	Pepin, Wis.	Matthew Buvala	(715) 495-7927 matthewbuvala@gmail.com	Chicken, Eggs	60 miles	Yes
Castle Rock Organic Dairy	Osseo, Wis.	Carla Kostka				
Cedar Hill Greenhouse & Farm	River Falls, Wis.	Betty Lindahl	(715) 426-1831 cedarhillgreenhouse@comcast.net www.cedarhillfarmandgreenhouse.com	Produce	15 miles	No
Circle K Orchard	Beldenville, Wis.	Wilson Mills	(715) 821-7799 wilsonmills@hughes.net www.circle-k-orchard.com	Produce	50 miles	Yes
LoFam Farm	Chippewa Falls, Wis.	Gary Loew	(715) 288-6704	Beef, Dairy, Eggs, Pork, Produce	Depends on product, on-farm up to 20 miles	Yes
Threshing Table Farm	Star Prairie, Wis.	Jody Lenz	(715) 248-7205 threshingtablefarm@frontiernet.net www.threshingtablefarm.org	Produce	20 miles	Yes

This publication is part of the IATP Sustainable Farm to Hospital Toolkit—a product of the North Central Region Sustainable Agriculture Research and Education-funded project *Connecting Sustainable Farmers to Emerging Health Care Markets*.

Developed by Marie Kulick, Earth Wise Communications with assistance from Emily Barker, IATP

Sustainable Farm-to-Hospital Toolkit

Online Resources for Hospitals Interested in Connecting to Sustainable Farmers, Producers

HEALTH-RELATED FOOD SYSTEM ISSUES

Antibiotics

- Antibiotics, Animal Agriculture and MRSA: A New Threat
  http://www.iatp.org/files/421_2_107139.pdf
- No Time to Lose: Science Supporting Public Health Action to Reduce Antibiotic Overuse in Food Animal
  http://www.iatp.org/documents/no-time-to-lose

Chemical toxicants

- Driving Down Pesticide Risks
  http://www.organic-center.org/reportfiles/DRIfinal11-1[1].pdf
- Feeding Arsenic to Poultry: Is this Good Medicine?
  http://www.noharm.org/lib/downloads/food/Feeding_Arsenic_to_Poultry.pdf
- Mercury and High Fructose Corn Syrup: Frequently Asked Questions
  http://www.iatp.org/files/421_2_105091.pdf
- Not So Sweet: Missing Mercury and High Fructose Corn Syrup
  http://www.iatp.org/files/421_2_105026.pdf
- Potential Health Impacts of Certain Persistent and Other Chemicals Detected in Sludge
  http://www.iatp.org/files/421_2_104204.pdf
- Smart Guide on Sludge Use in Food Production
  http://www.iatp.org/files/421_2_104203.pdf
- Smart Plastics Guide: Healthier Food Uses of Plastics
  http://www.iatp.org/files/421_2_102202.pdf
- What's on my food?
  http://www.whatsonmyfood.org/index.jsp

Climate impacts

- The Changing Climate for Food and Agriculture: A Literature Review
  http://www.iatp.org/files/451_2_104516.pdf
- Identifying Our Climate Foodprint: Assessing and Reducing the Global Warming Impacts of Food and Agriculture in the U.S.
  http://www.iatp.org/files/258_2_105667.pdf

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Hormones

- Position Statement on rBGH
  http://www.noharm.org/lib/downloads/food/HCWH_Position_on_rBGH.pdf

- rBGH (rBST)-Free Yogurt Nutrient Comparison Chart
  http://www.psr.org/chapters/oregon/safe-food/yogurt-comparisons.xls (spreadsheet download)

- Smart Guide: Hormones in the Food System
  http://www.iatp.org/files/421_2_106678.pdf

Genetic engineering

- Position Statement on Genetically Engineered Food
  http://www.noharm.org/lib/downloads/food/Genetic_Engineered_Food_Stmnt.pdf

Food worker safety

- The Hands that Feed Us: Challenges and Opportunities for Workers along the Food Chain
  http://foodchainworkers.org/wp-content/uploads/2012/06/Hands-That-Feed-Us-Report.pdf

POLICY ADOPTION AND DEVELOPMENT

Hospitals

- Healthy Food in Health Care: A Pledge for Fresh, Local, Sustainable Food
  http://www.noharm.org/lib/downloads/food/Healthy_Food_in_Health_Care.pdf

- Health and Sustainability Guidelines for Federal Concessions and Vending Operations
  http://www.cdc.gov/chronicdisease/resources/guidelines/food-service-guidelines.htm

- Healthy Hospital Choices—Promoting Healthy Hospital Food, Physical Activity, Breastfeeding and Lactation Support and Tobacco-Free Choices: Recommendations and Approaches from an Expert Panel
  http://www.cdc.gov/nccdphp/dnpao/hwi/docs/HealthyHospBkWeb.pdf

- Healthy Hospital Initiative Healthy Food Challenge
  http://healthierhospitals.org

Health professionals

- American Academy of Pediatrics, "Pesticide Exposure in Children"
  http://pediatrics.aappublications.org/content/early/2012/11/21/peds.2012-2757

- American Dietetic Association, "Food and Nutrition Professionals Can Implement Practices to Conserve Natural Resources and Support Ecological Sustainability"
  http://www.eatright.org/About/Content.aspx?id=8360

- American Dietetic Association, American Nurses Association, American Planning Association and American Public Health Association, "Principles of a Healthy, Sustainable Food System"
  http://www.planning.org/nationalcenters/health/pdf/HealthySustainableFoodSystemsPrinciples.pdf

- American Medical Association, "Report 8 of the Council on Science and Public Health: Sustainable Food"
  http://www.ama-assn.org/resources/doc/csaph/csaph-rep8-a09.pdf

- American Nurses Association , "2008 House of Delegates: Resolution Healthy Food in Health Care"
  http://www.nursingworld.org/MainMenuCategories/WorkplaceSafety/Environmental-Health/PolicyIssues/HealthyFoodinHealthCare.pdf

- American Public Health Association, "Toward a Healthy, Sustainable Food System"
  http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1361

- California Medical Association, "2007 House of Delegates: Resolution 705-07, Improving Health through Sustainable Food Purchasing"
  http://www.noharm.org/lib/downloads/food/CMA_Resolution_Sust_Food_Purch.pdf

- Minnesota Academy of Family Practitioners, "2008 House of Delegates Report: Improving Health through Sustainable Food Purchasing"
  http://www.mafp.org/2008hodreport.asp

Category-specific

Beverages (non-dairy)

- Hydrate for Health: A Call for Healthy Beverages in Health Care
  http://www.noharm.org/lib/downloads/food/Hydrate_For_Health.pdf

- Purchaser's Guide to Sourcing Sustainable Coffee and Tea
  http://www.noharm.org/lib/downloads/food/Sourcing_Sustainable_Coffee_Tea.pdf

Fruits, herbs and vegetables

- 2012 Shopper's Guide to Pesticides in Produce
  http://www.ewg.org/foodnews/

- Frozen Local: Strategies for Freezing Locally Grown Produce for the K-12 Marketplace
  http://www.iatp.org/files/2012_12_11_FreezingReport_JB_web.pdf

- A Seasonal Look at Fresh Produce (Minnesota)
  http://www.mda.state.mn.us/~/media/Files/food/minnesotagrown/producecalendar.ashx

- Seasonal Availability of Wisconsin Fruits and Vegetables
  http://www.cias.wisc.edu/foodservtools/2-Get-started/wisconsin-produce-calendar.pdf

- Serving Locally Grown Produce in Food Facilities (Minnesota)
  http://www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_288774.pdf

- Smart Produce Guide: Safer, sustainable produce for healthy children
  http://www.iatp.org/files/421_2_102204.pdf

Dairy (including eggs)

- A Purchasing Guide to Sourcing Dairy Products Produced Without rBGH
  http://www.noharm.org/lib/downloads/food/Purchasing_Non-rBGH_Dairy.pdf

- Institutional Guide for rBGH-Free Yogurt Companies
  http://www.psr.org/chapters/oregon/safe-food/recombinant-bovine-growth.html

- Nationwide rBGH- (rBST-) Free Cheese Contacts
  http://www.psr.org/chapters/oregon/assets/pdfs/r-bgh-free-cheese-chart.pdf

- rBGH- (rBST)-Free Dairy Processors: Top 100 List (as of 9/15/10)
  http://www.psr.org/chapters/oregon/assets/pdfs/top-100-rbgh-free-dairies.pdf

- Scrambled Eggs: Separating Factory Farm Egg Production from Authentic Organic Agriculture
  http://www.cornucopia.org/egg-report/scrambledeggs.pdf

- Smart Guide to Minnesota Dairy Without rBGH
  http://www.iatp.org/files/421_2_105184.pdf

Grocery

- Cereal Crimes
  http://cornucopia.org/cereal-scorecard/docs/Cornucopia_Cereal_Report.pdf

- Smart Guide to Food Dyes: Buying Foods That Can Help Learning
  http://www.iatp.org/files/421_2_105204.pdf

- Purchaser's Guide to Sourcing Food Without Genetically Engineered Ingredients
  http://www.noharm.org/lib/downloads/food/Purchasing_Non-GMO_Food.pdf

Meat, poultry and seafood

- Approved Sources of Meat and Poultry for Food Facilities (Minnesota)
  http://www.mda.state.mn.us/licensing/inspections/~/media/Files/food/foodsafety/meatpoultry.ashx

- Buying Better Chicken: A Resource to buying chicken Raised without Antibiotics and Arsenic for Schools, Hospitals and Other Purchasers
  http://www.iatp.org/files/Buying%20Better%20Chicken042011.pdf

- Health Care's Commitment to Sustainable Meat Procurement Four Case Studies

http://www.noharm.org/lib/downloads/food/HC_Commitment_Sustainable_Meat_Procurement.pdf

- Purchaser's Guide to Sourcing Sustainable Poultry
  http://www.noharm.org/lib/downloads/food/Purchas_Sustainable_Poultry.pdf

- Sale of Home or Farm Raised Poultry (Minnesota)
  http://www.mda.state.mn.us/licensing/inspections/~/media/Files/food/foodsafety/poultrysales.ashx

- Seafood Watch Buyer's Guide January 2013
  http://www.montereybayaquarium.org/cr/cr_seafoodwatch/content/media/MBA_SeafoodWatch_Jan2013_BuyersGuide.pdf

- Seafood Watch January 2013 Culinary Chart of Alternatives
  http://www.montereybayaquarium.org/cr/cr_seafoodwatch/content/media/MBA_SeafoodWatch_ChartofAlternatives_Jan2013.pdf

- Smart Seafood Guide 2012
  http://documents.foodandwaterwatch.org/doc/SeafoodCard2012.pdf

- The Super Green List: Connecting Human and Ocean Health
  http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_health.aspx

Multi-category

- Pride of the Prairie Buy Fresh Buy Local Foods Guide
  http://localfoods.umn.edu/bfblpotp/localfoodsguide

- Buying Local Food for Food Service in Minnesot
  http://www.mnproject.org/pdf/Guide%20to%20Buying%20Local.pdf

- Smart Meat and Dairy Guide for Parents and Children: Safer, sustainable food for healthy children and a healthier environment
  http://www.iatp.org/files/421_2_102203.pdf

Contractors and group purchasing organizations

- Strategies to Increase Sustainable Food Options via GPO and Distributors (HCWH, 2011)
  http://www.noharm.org/lib/downloads/food/Sustainable_Food_and_GPOs.pdf

- Integrating Sustainability Requirements Into Health Care Food Service Contracting (HCWH, 2011)
  http://www.noharm.org/lib/downloads/food/Integrating_Sustainability_Food_Service.pdf

Examples of contracting documents

- Minneapolis Public Schools Culinary and Nutrition Services Request for Information (local produce)
  http://nutritionservices.mpls.k12.mn.us/uploads/mps_f2s_request_for_information-application.pdf

- Chartwells Request for Information (chicken raised without antibiotics)
  www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsChikRFI-jan14.pdf

- Chartwells Request for Information (local produce)
  www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsProdRFI-Jan9c.pdf

- School Food Focus Request for Information from Farmers, Processors, and Distributors to Supply Locally Grown Fresh and Frozen Fruits and Vegetables (2013), for a copy of the document and related appendices contact Kymm Mutch at kmutch@schoolfoodfocus.org.

- Wisconsin Farm to School: Toolkit for School Nutrition Directors (section on produce bid process)
  www.cias.wisc.edu/wp-content/uploads/2011/09/4-locate-and-purchase-local-foods.pdf

Finding sustainable farmers/producers

By certification (products grown in the U.S.)

- American Grassfed
  http://www.americangrassfed.org/producer-profiles/producer-members-by-state/

- Animal Welfare Approved
  http://www.animalwelfareapproved.org/product-search/
- Certified Humane Raised & Handled
  http://www.certifiedhumane.org/index.php?page=producers-products
- Certified Naturally Grown
  http://www.naturallygrown.org/farm-list.html
- Food Alliance
  http://foodalliance.org/files/FoodAllianceCertified-Products2012.pdf
- Food Justice Certified
  http://www.agriculturaljusticeproject.org/ajpclientspage.html
- Non-GMO Project Verified
  http://www.nongmoproject.org/find-non-gmo/search-participating-products/
- Protected Harvest
  http://www.protectedharvest.org/?page_id=68
- Salmon Safe
  http://www.salmonsafe.org/livewell/wine-list
- USDA Organic
  http://apps.ams.usda.gov/nop/
  - Directory of Minnesota Organic Farms
    http://www.mda.state.mn.us/food/organic/directory.aspx
  - Wisconsin Organic Farm & Business Directory
    http://datcp.wi.gov/uploads/Farms/pdf/2011OrganicDirectory.pdf
  - North Dakota Organic Advisory Board
    http://www.ndorganics.nd.gov/
  - South Dakota Organic and Sustainable Farms Directory
    http://www.farmerspal.com/organic-farms/region/south-dakota/page/1/
  - Iowa Organic Producers Directory
    http://www.idalsdata.org/iowadata/organics.cfm
  - Nebraska Organic and Sustainable Farms Directory
    http://www.farmerspal.com/organic-farms/region/nebraska/page/1/
  - Certified Organic Producers in Kansas
    http://www.ksda.gov/kansas_agriculture/content/153/cid/1157
  - Missouri Organic and Sustainable Farms Directory
    http://www.farmerspal.com/organic-farms/region/missouri/
  - Ohio Good Earth Guide to Organic and Ecological Farms, Gardens, and Related Businesses
    http://www.oeffa.org/countymap.php
  - Indiana Organic and Sustainable Farms Directory
    http://www.farmerspal.com/organic-farms/region/indiana/page/1/
  - Guide to Michigan's Organic and Ecologically Sustainable Growers and Farms
    http://www.moffa.net/farm-guide.html

Farmer auctions

Illinois

- Arthur produce auction
  http://www.brightdsl.net/~fwo/other_auctions/IL.html

Indiana

- Wayne County produce auction
  http://in.marketmaker.uiuc.edu/business/38178-wayne-county-produce-auction-llc
- Adams county produce auction
  http://www.adamsflowerproduce.com/
- Wakarusa produce auction
  http://wakarusaproduceauction.com/

Iowa

- Elma produce auction
  http://cedarvalleyproduceauction.com/
- Frytown produce auction
  http://www.yoderauctionservice.com/yoderauctionproduce.htm
- Southern Iowa produce auction
  http://www.southerniowaproduce.com/

- Lamoni produce auction
  http://www.lamoniproduceauction.com/

Missouri

- Produce auctions
  http://agebb.missouri.edu/hort/auction/

Ohio

- Produce auctions
  http://www.brightdsl.net/~fwo/other_auctions/OH.html

- Homerville Wholesale Produce Auction
  http://www.homerproduceauction.com/

Wisconsin

- Produce auctions
  http://www.ifmwi.org/auctions.aspx

Food hubs

- Regional Food Hub Resource Guide, http://ngfn.org/resources/ngfn-database/knowledge/FoodHubResourceGuide.pdf

- USDA Working List of Food Hubs
  http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5091437

Producer directories

Nationwide:

- USDA Know Your Farmer, Know Your Food
  http://www.usda.gov/wps/portal/usda/usdahome?navid=KNOWYOURFARMER

- GRACE Eat Well Guide
  http://www.eatwellguide.org/i.php?pd=Home

- Local Harvest
  http://www.localharvest.org/

North central region

ILLINOIS:

- Buy Fresh Buy Local Central Illinois
  http://sfc.smallfarmcentral.com/dynamic_content/uploadfiles/101/2012_BFBL_Directory_reduced.pdf

- Local Foods Directory – Northern Illinois, summer 2013
  http://web.extension.illinois.edu/jsw/downloads/49261.pdf

INDIANA:

- A Local Food Directory for Richmond
  http://www.copeenvironmental.org/assets/Richmond_Local_Food_Directory.pdf

- Index of Locally Grown Food in Bloomington
  http://www.bloomingtononline.net/directory/category/Locally-Grown-Food/108#.Ui9NOsZONnE

- Indiana Locally Grown Food
  http://eatlocalgrown.com/directory/tag/state/indiana/

IOWA:

- Buy Fresh Buy Local Directory for Black Hawk and Neighboring Counties
  http://www.uni.edu/ceee/sites/default/files/LocalFoods/localfoodguide-2013.pdf

- Iowa Buy Fresh Buy Local Directory
  http://www.iowafreshfood.com/uploads/PDF_File_61325466.pdf

- Where Can I Buy Local? Internet Resource Guide
  http://www.localfoodsconnection.org/wp-content/uploads/2009/03/where-can-i-buy-local-food.pdf

KANSAS:

- Buy Fresh North Central Kansas
  http://www.buyfreshnck.com/services.html

MICHIGAN:

- Local First Farms and Producers
  http://www.localfirst.com/directory/category/farms_producers

- Taste the Local Difference – NW Michigan
  http://www.mlui.org/food-farming/projects/taste-the-local-difference/#.Ui9OXsZONnE

MINNESOTA:

- Minnesota Grown Wholesale Database
  http://www3.mda.state.mn.us/whlsale

MISSOURI:

- AgriMissouri
  http://agrimissouri.com/

- Eat Local! A Directory of Northeast Missouri Farmers
  http://www.foodcircles.missouri.edu/nemoeatlocal.pdf

- Kansas City Food Circle 2013 Directory
  http://www.kcfoodcircle.org/docs/KCFC-Directory.pdf

- Sourcing Local Food in Missouri Internet Resource
  http://mofarmtoschool.missouri.edu/files/Slide%2018-SourcingLocalFoodinMo.pdf

NEBRASKA:

- Buy Fresh Buy Local Nebraska
  http://food.unl.edu/c/document_library/get_file?uuid=4dea3564-c9f4-42c9-be45-631f462c0004&groupId=4089462&.pdf

- Nebraska Food and Meat Directory
  http://www.nda.nebraska.gov/publications/promotion/food_meat_directory.pdf

NORTH DAKOTA:

- North Dakota Local Foods Directory 2013
  http://www.nd.gov/ndda/files/resource/2013_Local_Foods_DirectoryWeb.pdf

OHIO:

- Ohio Proud Market Directory
  http://www.ohioproud.org/markets.php

- Our Ohio Buying Local Directory
  http://ourohio.org/food/buying-local

SOUTH DAKOTA:

- Dakota Rural Action's South Dakota Local Foods Directory
  http://sdlocalfood.org/

WISCONSIN:

- Farm Fresh Atlas™ 2012 Western Wisconsin Local Food Directory
  http://www.wifarmfresh.org/FFA2012_web.pdf

Food safety rules and regulations

- Bridging the GAPs: Strategies to Improve Produce Safety, Preserve Farm Diversity and Strengthen Local Food Systems
  http://www.iatp.org/files/258_2_106746.pdf

- Market Development, Licensing, Labeling and Regulation Requirements (Wisconsin)
  http://www.cias.wisc.edu/foodservtools/2-Get-started/licensing-labeling-and-regulation-requirements.pdf

- On-Farm Food Safety Information for Food Service Personnel
  http://www.extension.umn.edu/farm-to-school/docs/farm-food-safety-questions.pdf

- Organic Essentials: A comprehensive guide for identifying safe and nutritious food
  http://www.organic-center.org/reportfiles/TOC_PocketGuide_2011.pdf

Label guides

- Decoding Food Labels
  http://www.earthwatch2.org/sustainability/decoding%20labels.htm

- Food Eco-Labels: A Purchasing Guide
  http://www.noharm.org/lib/downloads/food/Food_Eco-Labels.pdf

- Greener Choices, Eco-labels
  http://www.greenerchoices.org/eco-labels

- Why Eat Organic
  http://swroc.cfans.umn.edu/prod/groups/cfans/@pub/@cfans/@swroc/documents/asset/cfans_asset_366337.pdf

Policies and procedures

- Guide to Developing a Sustainable Food Purchasing Policy
  http://www.sustainablefoodpolicy.org

- Sustainable Food Purchasing Guide
  http://www.yale.edu/sustainablefood/purchasing_guide_002.pdf.pdf

PREPARATION, PRESERVATION AND PROCESSING

- Balanced Menus Recipe Toolkit
  http://www.noharm.org/lib/downloads/food/Balanced_Menus_Recipe_Toolkit.pdf

- Existing Food Facilities Planning to Can Fresh Foods for Sale or Service (Minnesota)
  http://www.extension.umn.edu/farm-to-school/toolkit/sourcing-food/docs/canning-fact-sheet.pdf

- Existing Food Facilities Planning to Freeze, Dry or Otherwise Preserve Fresh Foods for Sale or Service (Minnesota)
  http://www.extension.umn.edu/farm-to-school/docs/FReezing-fact-sheet.pdf

- Fruit and Veggie Quantity Cookbook
  http://www.dhhs.nh.gov/dphs/nhp/documents/cookbook.pdf

- Menu – The Guide to Culinary Inspiration
  http://www.foodservicedirector.com/menu/home

- Now We're Cooking – A Collection of Simple Scratch Recipes Served in Minnesota Schools
  http://www.health.state.mn.us/schools/greattrays/pdfs/NowCooking.August22.pdf

- Oklahoma F2S Cooking, A Farm to School Cookbook
  http://www.kidchenexpedition.com/cookbook/

- Oregon Balanced Menus: A Collection of Regional Hospital Recipes
  http://www.psr.org/chapters/oregon/healthy-food-in-health-care/oregon-balanced-menus-recipe-1.pdf

- Recipes for Healthy Kids – Cookbook for Schools, Recipes for 50 to 100 Servings
  http://www.teamnutrition.usda.gov/Resources/r4hk_schools.html

- Recipes from the Healthy Kitchen
  http://www.avera.org/heart-hospital/healthy-kitchen-recipes/

- Recommended Kitchen Equipment for From-Scratch Cooking (Wisconsin)
  http://www.cias.wisc.edu/foodservtools/4-Incorporate-local-foods/recommended-kitchen-equipment-for-FRom-scratch-cooking.pdf

- Recommended Kitchen Equipment for Light Processing (Wisconsin)
  http://www.cias.wisc.edu/foodservtools/4-Incorporate-local-foods/recommended-kitchen-equipment-for-light-processing.pdf

- The National Health Service Recipe Book (pp. 28-47)
  http://www.hospitalcaterers.org/better-hospital-food/downloads/recipe_book.pdf

PROGRESS REPORTS

- Healthy Food, Healthy Hospitals, Healthy Communities-Stories of Health Care Leaders Bringing Fresher, Healthier Food Choices to Their Patients, Staff and Communities
  http://www.healthobservatory.org/library.cfm?refid=72927

- Menu of Change—Healthy Food in Health Care, A 2013 Program Report with Highlights, Awards and Survey Results
  http://www.noharm.org/lib/downloads/food/Menu_of_Change_2013.pdf

- Menu of Change Healthy Food in Health Care, A 2011 Program Report with Highlights, Awards and Survey Results
  http://www.noharm.org/lib/downloads/food/Menu_of_Change_2011.pdf

- Menu of Change—Healthy Food in Health Care, a 2008 Survey of Healthy Food in Health Care Pledge Hospitals
  http://www.healthyfoodinhealthcare.org/downloads/Menu_of_Change.pdf

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Developed by Marie Kulick, Earth Wise Communications, with assistance from Emily Barker, Catherine Reagan and Tara Ritter, IATP.

Sustainable Farm-to-Hospital Toolkit

Online Resources for Sustainable Farmers, Producers Interested in Selling to Hospitals

EXAMPLES OF CONTRACTING DOCUMENTS

- Minneapolis Public Schools Culinary and Nutrition Services Request for Information (local produce) http://nutritionservices.mpls.k12.mn.us/uploads/mps_f2s_request_for_information-application.pdf
- Chartwells Request for Information (chicken raised without antibiotics) www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsChikRFI-jan14.pdf
- Chartwells Request for Information (local produce) www.familyfarmed.org/wp-content/uploads/2013/01/ChartwellsProdRFI-Jan9c.pdf
- School Food Focus Request for Information from Farmers, Processors, and Distributors to Supply Locally Grown Fresh and Frozen Fruits and Vegetables (2013), for a copy of the document and related appendices contact Kymm Mutch at kmutch@schoolfoodfocus.org.
- Wisconsin Farm to School: Toolkit for School Nutrition Directors (section on produce bid process) www.cias.wisc.edu/wp-content/uploads/2011/09/4-locate-and-purchase-local-foods.pdf

FARM TO HOSPITAL CASE STUDIES AND PROGRESS REPORTS

- Health Care's Commitment to Sustainable Meat Procurement Four Case Studies http://www.noharm.org/lib/downloads/food/HC_Commitment_Sustainable_Meat_Procurement.pdf
- Healthy Food, Healthy Hospitals, Healthy Communities-Stories of Health Care Leaders Bringing Fresher, Healthier Food Choices to Their Patients, Staff and Communities http://www.healthobservatory.org/library.cfm?refid=72927
- Menu of Change—Healthy Food in Health Care, A 2013 Program Report with Highlights, Awards and Survey Results http://www.noharm.org/lib/downloads/food/Menu_of_Change_2013.pdf
- Menu of Change Healthy Food in Health Care, A 2011 Program Report with Highlights, Awards and Survey Results http://www.noharm.org/lib/downloads/food/Menu_of_Change_2011.pdf

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- Menu of Change—Healthy Food in Health Care, a 2008 Survey of Healthy Food in Health Care Pledge Hospitals
  http://www.healthyfoodinhealthcare.org/downloads/Menu_of_Change.pdf

FINDING HOSPITALS IN THE NORTH CENTRAL REGION

National

- American Hospital Directory
  http://www.ahd.com/

- U.S. Department of Veterans Affairs
  http://www.va.gov/directory/guide/allstate_flsh.asp?isflash=&dum=ALL

State-specific

- Illinois Hospital Association, IHA Member Directory
  http://www.ihatoday.org/hospital-directory.aspx

- Indiana Hospital Association, Indiana Hospitals,
  https://www.ihaconnect.org/Indiana-Hospitals/Pages/Indiana-Hospitals.aspx

- Iowa Hospital Association, Roster of Hospitals
  http://www.ihaonline.org/imis15/IHAOnline/Member_Directory/roster_of_hospitals.aspx

- Minnesota Hospital Association, Find a Minnesota Hospital
  http://www.mnhospitals.org/mn-hospitals/find-a-hospital

- Missouri Hospital Association, Locate a Hospital
  http://web.mhanet.com/about-us/mha-membership/locate-a-hospital/

- Nebraska Hospital Association, Nebraska Network Hospitals and Critical Access Hospitals
  http://www.nhanet.org/pdf/cah/Copy%20of%20Nebraska%20Network%20and%20Critical%20Access%20Hospital%202010-2011.pdf

- North Dakota Hospital Association, Member Directory
  http://www.ndha.org/?id=20

- Ohio Hospital Association, Member Hospitals
  http://www.ohanet.org/members/

- Wisconsin Hospital Association, Wisconsin Hospitals
  http://www.wha.org/wisconsin-hospitals.aspx

- Wisconsin Department of Health and Human Services, Wisconsin Health Care Provider Directories, Hospitals
  http://www.dhs.wisconsin.gov/bqaconsumer/healthcare/directories.htm

FOOD SAFETY RULES AND REGULATIONS

- Approved Sources of Meat and Poultry for Food Facilities (Minnesota)
  http://www.mda.state.mn.us/licensing/inspections/~/media/Files/food/foodsafety/meatpoultry.ashx
- Market Development, Licensing, Labeling and Regulation Requirements (Wisconsin)
  http://www.cias.wisc.edu/foodservtools/2-Get-started/licensing-labeling-and-regulation-requirements.pdf
- On-Farm Food Safety Information for Food Service Personnel
  http://www.extension.umn.edu/farm-to-school/docs/farm-food-safety-questions.pdf
- Sale of Home or Farm Raised Poultry (Minnesota)
  http://www.mda.state.mn.us/licensing/inspections/~/media/Files/food/foodsafety/poultrysales.ashx
- Serving Locally Grown Produce in Food Facilities (Minnesota)
  http://www.misa.umn.edu/prod/groups/cfans/@pub/@cfans/@misa/documents/asset/cfans_asset_288774.pdf

LISTS OF HOSPITALS COMMITTED TO HEALTHY FOOD IN HEALTH CARE PRINCIPLES

- Searchable list of hospitals that have signed up for the Healthy Hospital Initiative Healthy Food Challenge
  http://healthierhospitals.org/about-hhi/participating-hospitals
- Signatories to the Healthy Food in Health Care Pledge
  http://www.healthyfoodinhealthcare.org/signers.php?pid=36

POLICIES AND PROGRAMS THAT SUPPORT HOSPITAL PROCUREMENT OF SUSTAINABLE FOOD

Hospitals

- Health and Sustainability Guidelines for Federal Concessions and Vending Operations
  http://www.cdc.gov/chronicdisease/resources/guidelines/food-service-guidelines.htm
- Healthy Food in Health Care: A Pledge for Fresh, Local, Sustainable Food
  http://www.noharm.org/lib/downloads/food/Healthy_Food_in_Health_Care.pdf
- Healthy Hospital Choices—Promoting Healthy Hospital Food, Physical Activity, Breastfeeding and Lactation Support and Tobacco-Free Choices: Recommendations and Approaches from an Expert Panel
  http://www.cdc.gov/nccdphp/dnpao/hwi/docs/HealthyHospBkWeb.pdf
- Healthy Hospital Initiative Healthy Food Challenge
  http://healthierhospitals.org

Health professional association position statements

- American Academy of Pediatrics, "Pesticide Exposure in Children"
  http://pediatrics.aappublications.org/content/early/2012/11/21/peds.2012-2757
- American Dietetic Association, "Food and Nutrition Professionals Can Implement Practices to Conserve Natural Resources and Support Ecological Sustainability"
  http://www.eatright.org/About/Content.aspx?id=8360
- American Dietetic Association, American Nurses Association, American Planning Association and American Public Health Association, "Principles of a Healthy, Sustainable Food System"
  http://www.planning.org/nationalcenters/health/pdf/HealthySustainableFoodSystemsPrinciples.pdf

- American Medical Association, "Report 8 of the Council on Science and Public Health: Sustainable Food" http://www.ama-assn.org/resources/doc/csaph/csaph-rep8-a09.pdf

- American Nurses Association , "2008 House of Delegates: Resolution Healthy Food in Health Care" http://www.nursingworld.org/MainMenuCategories/WorkplaceSafety/Environmental-Health/PolicyIssues/HealthyFoodinHealthCare.pdf

- American Public Health Association, "Toward a Healthy, Sustainable Food System" http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1361

- California Medical Association, "2007 House of Delegates: Resolution 705-07, Improving Health through Sustainable Food Purchasing" http://www.noharm.org/lib/downloads/food/CMA_Resolution_Sust_Food_Purch.pdf

- Minnesota Academy of Family Practitioners, "2008 House of Delegates Report: Improving Health through Sustainable Food Purchasing" http://www.mafp.org/2008hodreport.asp

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Sustainable Farm-to-Hospital Toolkit

Seasonal Availability of Produce and Other Foods Produced in Minnesota and Wisconsin

Vegetable	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Apples												
Apple Cider												
Artichokes, Jerusalem												
Arugula												
Asparagus												
Barley												
Beef												
Beets												
Beet Greens												
Blackberries												
Bok Choy												
Broccoli												
Brussel Sprouts												
Buckwheat												
Butter												
Cabbage												
Carrots												
Cauliflower												
Celeriac												
Celery												
Chard												
Cheese												
Chicken												

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Vegetable	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Chokecherries												
Collards												
Corn Meal												
Cress (Greens)												
Cucumbers												
Currants												
Daikon												
Dandelion (Greens)												
Dried Herbs												
Duck												
Eggplant												
Eggs												
Endives												
Fennel												
Flax												
Garlic												
Garlic Greens												
Goat												
Gooseberries												
Green Beans												
Honey												
Horseradish												
Jams												
Jellies												
Kale												
Kohlrabi												
Lamb												
Leeks												
Lettuces												
Melons												
Mushrooms												
Mustard												
Oats												
Okra												
Onions												
Parsnips												
Peas												
Peppers												
Plums												
Popcorn												
Pork												
Potatoes												

Vegetable	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Pumpkins												
Purslane												
Radicchio												
Radishes												
Raspberries												
Rhubarb												
Rutabaga												
Rye												
Scallions												
Shallots												
Soybeans												
Spelt												
Spinach												
Sprouts												
Strawberries												
Squash, summer												
Squash, winter												
Sweet Corn												
Sweet Potatoes												
Tomatoes												
Turkey												
Turnips												
Wheat												
Zucchini												

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Sustainable Food Procurement: Working with Current Supply Chain Partners

Many hospitals prefer to purchase most, if not all, food and beverage items, including any sustainably produced items, via their current supply chain partners. In using this approach to support sustainable farmers/producers, hospitals will encounter opportunities and challenges.

KEY OPPORTUNITIES

- Most mainline distributors now carry a variety of USDA Organic food and beverage items and fluid milk and yogurt products produced without recombinant bovine growth hormone (rBGH)/recombinant bovine somatotropin (rBST) (see Table 1.1). They may also carry Marine Stewardship Council certified seafood items, and one or more lines of Fair Trade certified coffee, tea, cocoa and chocolate.
- Regional distributors, specialty distributors, and bread and dairy suppliers are also likely to carry some certified organic items and fluid milk produced without rBGH/rBST.
- Some distributors carry a limited supply of one or more types of food, e.g., produce, cheese and beef, grown/raised by sustainable farmers/producers local to their distribution centers.
- Upon request, distributors and suppliers will usually try to find sustainable products that meet the needs of one or more specific customers.
- Sometimes when a hospital finds a supplier they like whose products are not currently carried by their distributor, such as a company that sells chicken that was raised without antibiotics, their distributor will help to facilitate a relationship in order to keep the hospital's business.

Table 1.1 Excerpt from a list of USDA Organic products carried by one distributor

Description	Type	Vendor name
Tea bag organic pure green	Organic	Bigelow
Coffee Grnd Organic Decaf Serena	Organic	Starbucks
JUICE ORANGE PULPY	Organic	Organicville
MILK HOMO ORGANIC	Organic	Organicville
Milk Choc Low Fat 1 % Organic	Organic	Organicville
MILK NON FAT ORGANIC	Organic	Organicville
EGG SHELL BRN ORGANIC	Organic	Hillandale Iowa
Milk Soy Plain	Organic	White Wave
Milk Soy Vanilla Organic Kosher	Organic	Med Diet
YOGURT FRENCH VAN L/F ORGANIC	Organic	DOT FOODS

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Table 1.1 Excerpt from a list of USDA Organic products carried by one distributor

Description	Type	Vendor name
Yogurt Vanilla Low Fat Organic	Organic	Stoney Field Farms
Potato Fry Crinkle Cut	Organic	LAMB WESTON
Bagel 16 grain w/ seed organic	Organic	French Meadow
Pasta Fettuccine Organic	Organic	Med Diet
Pasta Spaghetti organic	Organic	Med Diet
ROLL CIABATTA SNDWCH HOGIE ORG	Organic	Richs Products
Sauce Soy Tamari No Wheat organic	Organic	Med Diet
Chicken CVP Thigh Bnls Skinless ORGANIC	Organic	Hain Pure Protein
Squash Acorn ORGANIC	Organic	organic
TOMATO CRUSHED ORGANIC	ORGANIC	GENERAL MILLS
CARROT ORGANIC BABY PEEL FRESH	Organic	BOLTHOUSE FARMS
LETTUCE SPRING MIX ORGANIC PLW	Organic	BSCC PRODUCE SALINA
Bar Granola choc chip organic	Organic	General Mills
Choc bar roseberry organic	Organic	European Imports

KEY CHALLENGES

- Other than USDA Organic items, major distributors sell and/or identify in catalogs and ordering systems very few, if any, other types of eco-labeled products. So unless hospitals purchase these certified items directly from farmers/producers or companies that sell these products, most hospitals will find it extremely difficult to purchase foods that are American Grassfed certified, Animal Welfare Approved, Certified Humane Raised & Handled, Fair Trade certified, Food Alliance Certified, Non-GMO Project Verified, etc.

- It can be even more challenging for hospitals to identify and purchase items appropriately identified as "raised without antibiotics," "raised without added hormones," "no genetically engineered ingredients," or "USDA Grassfed." Though many of these products have made it into mainstream markets, distributors do not always carry them or carry them only in certain markets. Even if distributors are carrying these products, hospitals still have to go out of their way to find them in catalogs.

- Some distributors and suppliers identify fluid milk, yogurt, and other dairy products produced without rBGH/rBST in on-line ordering systems, but these products seem to be inconsistently marked. For instance, produced without rBGH/rBST since August 2009, Yoplait yogurt products should be consistently marked as such in distributor catalogs, but they are not—some of these products are marked as "rBST-free" in ordering catalogs and some, though produced the same way, are not. This inconsistency makes it harder for hospitals to choose these products when ordering, to know which of their purchases are sustainable, and to have trust in the information provided by these distributors (see Table 1.2).

- While many distributors use the term "local" to describe products that they sell, distributor definitions of "local" often differ considerably from what most consumers think of as "local." Thus, use of this term, though intended to help customers identify and purchase "local" items, leads to further confusion. If a hospital does not pay attention to the difference in definitions, it will lead to misunderstanding about what they are actually buying. They can result in their erroneously giving a purchasing preference to a corporation, instead of the sustainable farmers/producers they intend to support (see Table 1.3). In addition, when distributors do actually carry products produced by local, sustainable farmers/producers and label them so they are easy for hospitals to order, these products may not be available in the form most readily used by hospitals, such as three- or four-ounce boneless, skinless chicken breasts and pre-processed fruits and vegetables.

- Since supporting many types of sustainable farmers is not always as easy as picking products out of an online catalog, a hospital's food service director, or other food service staff person could end up spending many extra hours working to increase their use of sustainable products through their current supply chain partners.

Table 1.2 Examples of Designated and Undesignated "rBGH-free" Products Purchased from a Distributor

Description	Label
MILK CHOC FF RBGH FREE	LOLORIG
MILK LO FAT 1% RBGH FREE	LOLORIG
MILK SKIM RBGH FREE	LOLORIG
MILK SKIM WHITE SELECT	KEMPS SELECT
MILK 1% WHITE SELECT PLST	KEMPS SELECT
KEMPS SEL CHOC 1% MILK	KEMPS SELECT

Table 1.2 Examples of Designated and Undesignated "rBGH-free" Products Purchased from a Distributor

Description	Label
YOGURT, STWBY BLNDED RBST FREE	YOPLAIT
YOGURT, BLBRY LIGHT RBST FREE	YOPLAIT
YOGURT, VNL LOW FAT POUCH RBST	YOPLAIT
YOGURT, STWBY GREEK FT/FR SS	YOPLAIT
YOGURT, BANA CRM PIE LIGHT	YOPLAIT
YOGURT, KEY LIME FT/FR SS CUP	YOPLAIT

Table 1.3 An Alphabetical Sample of Items Included in a Distributor Report of "Local" Products Purchased by a Minnesota Hospital

Product description	Grower/Producer
BEEF, STK FIL SRLN MRNTD WHSKY	J&B GROUP-ELLISON FOODSERVICE
BISCUIT, STHRN STYL EASY SPLIT	GENERAL MILLS INC
CANDY, COTN BAG	BARREL O FUN INC
CHEESE, CHEDR MILD SS REC IW	MONARCH FOODS
CHIP, SESD SPORT KTL	BARREL O FUN INC
CHIP, TORTLA CORN YLW RND	MONARCH FOODS
CORN DOG, CHIX BTRD .67 Z MINI	BRAKEBUSH BROTHERS INC
EGG, HARD CKD PLD WHL DRY PK	MICHAEL FOODS INC
ENHANCER, MSG PWDR PURE SHKR	MONARCH FOODS
FOOD COLORING, RED LIQ BTL	MONARCH FOODS
JUICE BASE, ORNG 100% 4.5:1	MONARCH FOODS
MIX, STFNG SESD TFF TRADL	DIAMOND CRYSTAL BRANDS
PUDDING POP, SWIRL LOW FAT FZN	WELLS ENTERPRISES INC
SALSA, MILD SHLF STABL PREM	COOKIES FOOD PRODUCTS
SAUCE, GRLC TFF PLST REF DBL	VENTURA FOODS LLC
SAUSAGE, TRKY LNK 1 Z SPCL	HORMEL FOODS CORPORATION
SPICE, CURRY PWDR PLST SHKR	MONARCH FOODS
TURKEY, BRST & THIGH RST SKON	JENNIE-O TURKEY STORE SALES LL

BENEFITS AND TRADEOFFS

As hospitals likely know, there are at least a few benefits to buying sustainable food items through their current supply chain partners. It can be a time saver with all orders placed at the same time. It can be convenient since sustainable and conventional products are delivered at the same time. Product pricing may be better. In addition, all purchases will count toward the overall percentage of products purchased through the supplier and thus can lead to further discounts. However, hospitals should be aware that there are several tradeoffs.

Hospitals may pay more

When buying USDA Organic and other products produced by sustainable farmers/producers via intermediaries, such as distributors, hospitals may end up paying more for these products than they would if purchased directly from the sustainable farmers/producers. How much more will depend on the mark-up added by distributors, cost of delivery via the farmer/producer, current supply and demand, and type of product, production methods, and other factors. However, if hospitals are not communicating with sustainable farmers/producers in their community, they will never know.

Support only the largest farms

Many distributors, especially the larger mainline distributors, have product liability, food safety, volume, and pricing requirements that only the largest farms and operations can meet. Thus, in relying only on distributors to obtain sustainable foods, a hospital may unknowingly bar many of the more modest scaled farms/operations in their community from selling to them.

Less benefit to local environment and economy

Most sustainable food and beverage items carried by distributors and suppliers consist of raw ingredients that originate far from the purchasing hospital. The farmers, farm workers, rural communities, and overall environment will benefit from purchase of these sustainable items, but an opportunity is lost to support the people, places, and natural resources closer to home.

NEXT STEPS

To increase purchase of sustainable foods via existing supply chain relationships, hospitals are encouraged to take the following steps.

Step 1

Meet with each of your current distributor/supplier sales representatives to learn the following:

- The types and brands of products they carry that are labeled as follows:
  - Aquaculture Stewardship Council certified (Pangasius and tilapia)*
  - Bird Friendly (coffee)
  - Certified Humane Raised & Handled (eggs)
  - Fairtrade/Fair Trade Certified (coffee, tea, cocoa, chocolate, bananas)
  - Food Alliance Certified (variety)
  - Marine Stewardship Council certified (wild-caught fish and shellfish)
  - Produced without use of rBGH/rBST (fluid milk and other milk-based dairy products)
  - Rainforest Alliance Certified (coffee, tea, cocoa, chocolate, produce)
  - Raised without added hormones (beef, veal, lamb)
  - Raised without antibiotics/No antibiotics administered (beef/bison, lamb, poultry, pork)
  - USDA Organic (variety)

  NOTE: List only includes eco-labels/label claims most likely tracked or highlighted in product descriptions by distributors/suppliers and the types of products most likely labeled as such now. Asterisked eco-label was not in existence when latest version of Green Guide for Health Care Food Service Credits published. For a detailed list of meaningful eco-labels and label claims see the IATP Sustainable Farm to Hospital Toolkit resource entitled "Food and Beverage-Related Eco-Labels/Label Claims."

- The methods they use to identify the above-listed items in ordering systems and any other information needed to facilitate order placement, e.g., one distributor labels USDA Organic products as "ORGNC" in product descriptions, another inserts "ORGANIC" in the product description and uses the term "sustainable" to identify Food Alliance Certified and other products. Some distributors and suppliers use the term "rBST-free" to identify products produced without use of rBGH/rBST in product descriptions.

  NOTE: Distributors make mistakes such as listing a non-dairy product as "rBST-free" or not identifying products as having a specific attribute, even if they do.

- How they identify food and beverage items produced by sustainable farmers/producers in your local area, and any other information they can provide to help determine whether their methods will assist or hinder your ability to buy and track purchases that meet your priorities.

  NOTE: Many distributors will identify products as "local," but their definitions often do not meet the Green Guide for Health Care (GGHC) Food Service Credit 3 definition of "local" and may not align with what your hospital considers to be "local", so it is important to get clarification on the definition used by your distributors and others suppliers. For instance, most of items that distributors identified as "local" in the reports it provided to the IATP SARE project collaborators in 2012 and 2013 were products manufactured by food companies that had processing facilities located within 250 miles of their distribution centers.

Step 2

If a distributor/supplier does not currently carry a desired eco-labeled product, such as Fairtrade coffee, or product that meets certain desirable criteria, such as chicken raised without antibiotics, ask the sales representative how they can help to meet the hospital's needs, and if known suggest names of products the hospital would be interested in purchasing.

Step 3

If a distributor/supplier's definition of local, sustainable aligns with your hospitals, take the following steps:

- Ask them to substitute local, sustainable produce for non-local produce items automatically when they are available. This can help your hospital to maximize purchase of local, sustainable produce based on what you typically order.

  NOTE: During peak season, local produce typically costs less than or equal to non-local items, so this should not result in your paying more for these items. If in doubt, consult your distributor or suppler.

- Ask the distributor to provide information about the typical window of availability for the local,

sustainable products they carry, such as how long produce items that store well—apples, potatoes, onions, or have longer growing seasons—cool season crops will be available and when, versus items that may only be available for a short time—fresh berries, asparagus and rhubarb.

- To increase purchase of local, sustainably grown produce not typically ordered through the distributor or products that a hospital may typically buy in frozen form, such as fresh berries, ask the distributor/supplier sales representative(s) to provide the hospital with advance notice, typically one week, of when local items will be coming in or running out. Also, keep chefs and other menu planners informed so they can adapt menus to reflect what is available, especially when items have a short window of availability.

- Keep a chart of the seasonal availability of foods grown/raised in your geographic area on hand and refer to it regularly. This will provide a general guide to what is available and when, remind procurement staff to keep an eye out for notices from the distributor, and pay attention to the availability of local, sustainable products, especially produce items that the hospital might not buy normally.

Remember that some cool season/more cold tolerant produce items are grown during the spring and fall, and others store well and may be available long after the typical growing season, so pay attention to what is available through your distributor throughout the year, not just in the summer months.

Step 4

If the distributor's or supplier's definition and labeling of local, sustainable products does not align with GGHC FS Credit 3 or the hospital's priorities, purchase food and beverages directly from individuals and groups of sustainable farmers/producers located nearby. In this way, hospitals can support sustainable farmers/producers far and near and large and small. See the IATP Sustainable Farm to Hospital Toolkit resource entitled "Ten Steps to Creating Mutually Beneficial Relationships with Local Farmers, Producers." Note: Per the 2013 IATP SARE project farmer/producer surveys, the majority of sustainable farmers/producers interested in selling products to hospitals (60.9 percent) do not currently work with distributors.

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Written by Marie Kulick, Earth Wise Communications

Ten Steps to Creating Mutually Beneficial Relationships with Local, Sustainable Farmers, Producers

I think that relationship is very important. When there is a good working relationship between the farmer and the person in charge of buying at the institution, it's much easier to work through 'Bumps' than if each is seen as a faceless business,
–Jody Lenz, Threshing Table Farm.

1. KNOW YOUR HOSPITAL'S LEVEL OF COMMITMENT

One advantage of buying produce, beef, turkey and more from a farmer or producer instead of buying through a distributor is that a hospital's food service staff, and perhaps other hospital staff, can meet the farmer(s) and develop a mutually beneficial relationship with them. In time, these staff can also help to develop models and methods for the other hospitals in their area or within their health system to use. However, when expectations are unmet on either side, the effects are felt much closer to home than when something does not work out with a product purchased via a distributor.

Thus, it is important for hospital food service staff to be clear about their administration's level of commitment, whatever it is, and communicate this information to any sustainable farmers/producers that the hospital is seeking to do business with in the community. Dollar value goals are important, but equally, if not more important, is a commitment to honor verbal as well as written agreements made with farmers and producers, and to the extent possible provide advance notice of any changes. Not doing this can lead to bad feelings that may linger for a long time.

NOTE: It is also important that administrators are aware of their hospital's procurement relationships with area farmers/producers and understand the effects of outsourcing food service management or making other decisions that can undermine an otherwise mutually beneficial arrangement.

2. PREPARE BEFORE REACHING OUT

Hospital food service staff should know what the answers are to the following questions before reaching out to local, sustainable farmers/producers:

- Will interested farmers/producers need to complete a formal application or bid process before the hospital can buy their products? If yes, what are the requirements?
- What is the hospital interested in buying?

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- How much of these products does the hospital buy each week, month or year?
- How frequently does the hospital order these products?
- What is the current price per pound (or other applicable volume)?
- How much does pricing for these products fluctuate during the year?
- If necessary to assure that local, sustainable farmers/producers get a fair price for their products, is the hospital willing to pay a premium for them? How much more might the hospital be willing to pay?
- Is the hospital open to working with local, sustainable farmers/producers who have not sold to hospitals before, understanding that there will likely be a learning curve, or is working with a farmer who has experience selling to hospitals or other institutions preferred?
- Is the hospital willing to buy from multiple farmers/producers, just a few or one?
- Is the hospital willing or able to make partial payment in advance, if necessary to achieve fixed pricing, protect the farmer in case of cancellation, etc.?

Track purchases weekly

If the volumes and types of products that the hospital buys varies much from week-to-week, month-to-month or season-to-season, it would be helpful to track how much of each product that might be bought from a local farmer or producer is used each week, month, or season of the year. Then use this information to predict the volume of product the hospital might need or want to buy from a local, sustainable farmer/producer and determine how far in advance they need to communicate this information and/or have a local source lined up. This type of information would also be helpful if the hospital ever decides to do a request for proposal (RFP) or request for information (RFI) similar to that of the Minneapolis School District, School Food FOCUS, or Chartwells for local, sustainable food items such as produce, chicken, beef, etc. For links to this documents, see the list of Additional Resources for Hospitals in the IATP Sustainable Farm-to-Hospital Toolkit.

Tracking can also help the farmer plan how much to produce and store, such as for onions or potatoes. Distributors should be able to provide these types of reports for the last 6 months to a year and going forward if requested in advance. Otherwise, maintain copies of invoices and/or enter the data into a tracking sheet.

Threshing Table vegetable delivery to Hudson Hospital.

3. DEVELOP A SUSTAINABLE FOOD PURCHASING PROTOCOL

Hospitals are encouraged to adopt a farm-to-hospital sustainable sourcing protocols for the following reasons:

- To assure hospital administrators and other interested parties that the foods purchased directly from one or more local, sustainable farmers/producers came from "approved sources" in compliance with voluntary food service implementation of Hazard Analysis and Critical Control Points (HAACP) principles, designed to reduce food safety risks[1,2,3]
- To provide local, sustainable farmers/producers with the same information on hospital requirements and preferences and increase transparency
- To provide a simple, less onerous way to assure that foods purchased directly from one or more local, sustainable farmers/or producers are as safe, if not safer, than similar foods purchased via a distributor
- To formalize goals, procedures and requirements related to purchase of foods or beverages from individual local, sustainable farmers and producers or groups of the same
- To mainstream hospital procurement of food directly from local, sustainable farmers/ producers
- To address the general food safety concerns that arise when serving both healthy and immune-compromised people
- To engender consumer confidence

When developing protocols, it is important for the hospital to keep in mind their reasons for creating connections with area farmers, and ensure that the protocols act as a bridge and not as a moat. "There is an important and unique connection between healthcare and local and sustainable food," said one SARE project health care collaborator. "In order to truly meet our mission to improve the lives of the communities we serve, we need to be a role model and provide healthy food options to our patients."

For more on the important components of a purchasing protocol and sample protocols, see the IATP Sustainable Farm to Hospital Toolkit resource "Using Written Protocols to Guide Direct Procurement of Food from Sustainable Farmers, Producers."

4. FIND INTERESTED FARMERS/PRODUCERS

After completing steps one through three, it is time for the hospital to learn which local, sustainable farmers/producers sell the types of products the hospital is interested in buying. Fortunately, hospitals can choose from a variety of options.

Farmers markets/CSAs/auctions

Some hospital chefs met the farmers they buy from at a farmers' market; in some cases, the hospital hosted the farmers' market. Others hospitals have gone from being a workplace drop site for employees who purchased farm shares from a community supported agriculture (CSA) farm to buying produce and other products from the CSA farm for use in the hospital kitchen. Hospital food service employees have also met and purchased products sold by local, sustainable farmers/producers at auctions where area farmers/producers sell their produce, flowers, animals raised for meat and more.

Natural food stores

In addition, hospital food service employees can scan the names of farms on produce, dairy, meat, poultry, and seafood items for sale at food cooperatives and other natural food stores in their area to see which farmers/producers are selling enough volume to supply retailers. The department managers/buyers in each of these areas are also very knowledgeable about area farmers/producers, and are often willing to share their wisdom with others.

Online resources

Almost every organization behind the various third party eco-labels maintains a list of certified farmers/producers on their website. For instance, a Wisconsin hospital could find a nearby producer that sells American Grassfed certified products by going to the American Grassfed Association website, following the links to the list of certified producers, and scrolling down to the producers located in Wisconsin.

Many states, including every state in the north central SARE region, have one or more directories of farmer/producers that are interested in direct marketing their products through a variety of means including institutional sales, e.g., western Wisconsin's Farm Fresh Atlas™, www.wifarmfresh.org/FFA2012_web.pdf. In addition, some states, such as Minnesota, have created on-line resources just for matching interested farmers/producers to wholesale customers—Minnesota Grown Wholesale Database, www3.mda.state.mn.us/whlsale.

Other resources are searchable on a national level; two specifically focused on smaller-scale sustainable farms (GRACE Eat Well Guide, www.eatwellguide.org and Local Harvest, www.localharvest.org), two resources for finding regional food hubs, and the USDA Know Your Farmer, Know Your Food portal, www.usda.gov/wps/portal/usda/usdahome?navid=KNOWYOURFARMER. Hospitals in Minnesota and western Wisconsin should also check out the IATP Sustainable Farm-to-Hospital Toolkit resource "Iowa, Minnesota, and Western Wisconsin Sustainable Farmers/Producers Interested in Selling to Hospitals."

Hospitals are also encouraged to sign up for local listservs such as Minnesota's Sustag listserv or get on more traditional mailing lists to be kept informed of state or regional buyer-grower events.

For links to additional online resources, including websites for produce auctions, resources with farm-to-institution examples, and more see the "Finding sustainable farmers/producers" section of the IATP Sustainable Farm-to-Hospital Toolkit resource "Online Resources for Hospitals Interested in Connecting to Sustainable Farmers, Producers."

Buying from farmers at auctions, farmers markets

Hospitals should follow the same steps when buying products from farmers at farmers markets and auction as they would when reaching out to specific farmers/producers that they have heard about via word of mouth, buyer-grower events, websites, or on-line producer directories.

Food service employees can learn a lot from a morning or afternoon of informal conversations with farmers at farmers markets, such as what they produce, their growing or production methods, their interest in or experience in selling to institutions such as hospitals, experience with wholesale pricing, contact information, etc. Food service employees should also confirm that they are talking to a farmer or a member of the farms family or staff and not a reseller of produce or other food vendor, since farmers markets vary in who they allow to sell via the markets. Food service employees can also learn a lot from a field trip to an auction where produce and other farm products are sold at or below wholesale prices. Small quantities of products can be purchased at both types of venues to evaluate quality.

Keep in mind that product bought via farmers markets and auctions, typically need to be paid for at purchase and transported by the buyer, though some auctions may offer billing options and delivery, but at these venues, a hospital can also meet farmers/producers that are interested in establishing a more formal procurement relationship in which delivery and other details can be negotiated. Also, keep in mind that like hospitals and farmers, no two farmers markets or farm product auctions are alike and there is no such thing as a bad question.

Every week, DC Central Kitchen buys produce from the Menonite farmers auction near Harrisonburg, VA. The auction is a highly affordable source of high-quality local produce for our meals and catering operations. Photo courtesy of cc user DCCentralKitchen on Flickr.

For an introduction to produce auctions see "Produce Auctions; Iowa & National" at http://www.greatplains-growers.org/2013%20GPGC%20Presentations/OMalley,%20Patrick-%20Produce%20Auction.pdf, "Regional Wholesaling of Vegetables: Wholesale Produce Cooperative Auctions at http://agebb.missouri.edu/hort/auction/auctions.pdf, and Produce Auctions at http://www.ifmwi.org/auctions.aspx

5. INTERVIEW FARMERS/ PRODUCERS, VISIT FARMS

Unless there is only one potential supplier, interview a few to get a feel for the differences in the way they do business. Learn how they grow crops or raise animals, what their capacity is, their production and quality goals, and the other types of information needed to determine whether the farmer's capabilities and needs coincide with the hospital's needs and goals as outlined in the purchasing protocol mentioned above.

Initial telephone conversations are acceptable, but hospitals should always meet in person with a potential farm partner, before buying products. At a minimum, key food service staff should plan to visit the farm or operation, and the farmer/producer should visit the hospital kitchen and cafeteria and, if practicable, eat a meal with food service staff and share product samples.

When asked what could have worked better in their experience selling to a hospital, one farmer who responded to the IATP 2012 SARE project survey said,

> There needed to be more contact between the growers and the actual kitchen staff that worked with the product so that education and expectations on product could take place. Just selling through administration did not work. They, in most cases did not know exactly what they were ordering and kitchen staff became frustrated with the process.

It is good to have some specific questions in mind when first meeting with a farmer/producer and, if interviewing multiple potential suppliers, to have these questions in writing to assure some consistency. Be prepared to ask specific as well as open-ended questions. Begin with open-ended questions including:

- What are you most interested in selling to the hospital?
- Why are you interested in selling to the hospital?
- What other types of food do you produce?
- Can you describe the methods you use or do not use?

Why local farmers/producers want to sell to hospitals

- Increase access to healthy, locally grown food (91.3 percent)
- Educate others about the food system and where food comes from (82.6 percent)
- Build relationships within my community (78.3 percent)
- Helps diversify my markets (78.3 percent)
- New revenue source for my farm (69.6 percent)
- Fair, steady prices (56.5 percent)
- Reduce my farm's ecological footprint by selling to buyers close by (56.5 percent)
- Large volume orders (47.8 percent)
- Reliable customer (47.8 percent)
- Provides a market for surplus for variable quantities (47.8 percent)
- Provides a market for seconds (26.1 percent)

Based on results of IATP 2012 and 2013 SARE project surveys of local farmers and producers

Then move onto the specific questions. These questions should be guided by the hospital's draft purchasing protocol(s), but also include questions such as:

- What is the most our hospital can buy at one time?
- What is the least?
- When are your products available?
- How much do they cost?
- Do you deliver?

Also, be prepared to provide farmers/producers with basic information about what the hospital typically buys, how much is used on a weekly basis, etc. The hospital may settle on what can be bought right away, but plan to be patient in case it takes a while. One farmer who currently sells to hospitals remarked, "[S]imply determining the product(s) that fit best is always the challenge, and is magnified in the health care setting with cost, nutrition, and volume parameters to meet."

6. BE STRATEGIC WHEN CHOOSING TIMES TO MEET

In most north central region states, winter is often the best time to meet with produce growers to discuss options for increasing types and amounts of fruits, including berries, vegetables and herbs your hospital is interested in buying in the coming year or years. Many sustainable meat and poultry producers will also need several months to a year or more of lead time to adjust their production. Also, if more than one hospital from a system is interested, consider joint meetings with farmers/producers. If hospitals are located close together the staff may also be able to discuss synergies with farmers in product purchases, delivery times and days, and more.

7. MAINTAIN TWO-WAY COMMUNICATION

Following the above-listed steps should help to lay the foundation for good relationships, but all good relationships need maintenance. Just as food service employees meet regularly with distributor sales representatives and attend meetings to learn about new products and provide feedback, a hospital's food service director or other appropriate staff person, such as the executive chef, and the hospital's farm partners should meet regularly to share what is working well, what can be improved, and what changes, if any, they would like to make.

> The relationship between the farmers and the institution is so important," says one SARE project farmer. "There has to be complete comfort between the two so that concerns can be addressed before they become real problems.

8. OPTIMIZE QUALITY OF PRODUCTS FROM FIELD TO FORK

Optimize the delivery schedule so that fresh produce, in particular, goes from field to farm to plate as quickly as possible, especially if labeling the product as local on menus, salad bars, etc. and/or with the farm/producer's name. This is even more important if charging a higher price for the local product, because freshness and high quality is a key reason that consumers are willing to pay more for local produce. Work with farmers to assure that most produce

items are picked, stored, transported, and used or stored again at optimal temperatures in order to maximize maintenance of nutritional value. If purchasing sustainable meat and poultry items or produce you have never prepared before from farmers/producers, ask them to provide tips or even training to staff on how to successfully prepare the product for consumption. For instance, hospitals should learn the best ways to prepare very lean meats, such as bison or grass-fed beef.

9. BE PATIENT, CREATIVE AND OPEN TO CHANGE

A hospital may find sustainable producers or producer groups in the area that already have, as one SARE project producer put it "consistent and convenient systems in place to make the process manageable" for purchase of at least some types of products. However, this may not always be the case. It is best not to expect things to work perfectly at first, to expect some trial and error, but believe that with patience, open two-way communication, and experience, processes will become efficient and replicable.

Again, some sustainable producers have experience selling to institutions and other wholesale customers and have adapted or designed their operations to offer products in the cuts, pack sizes, forms (fresh, frozen, etc.) and volumes these businesses typically buy, but many others have not. These latter sustainable farmers/producers may never choose to go this super-streamlined route to institutional sales for any number of reasons, but many of the farmers/producers still produce products that creative and flexible food service staff can easily work into their menus. In some cases, these products can be used still by large and very large hospitals, for very specialized needs, such as serving maple syrup, honey, bacon, sausage, eggs, cream, and/or fresh berries, etc., for a monthly physicians' breakfast meeting or other special events with advance planning.

However, nearly 41 percent of all community hospitals and many VA hospitals in the north central region are very, very small—having fewer than 50 staffed beds each—and more than 62 percent of all hospitals in the north central region are very small—having fewer than 100 staffed beds each.[4] Many of these latter hospitals, have an average daily census that is much lower than 100, and employee numbers that are significantly lower than the bigger hospital in the region. For these smaller, and in many cases rural, hospitals, it should be much easier to incorporate the smaller volumes and types of products available from the smaller non-commercial and commercial farmers/producers who are interested in having their farm-fresh products served to hospital patients and staff.

10. SHARE LESSONS LEARNED

As hospital food service personnel gain experience in working with sustainable farmers/producers and using their products on a routine basis, it is important to share this experience with others.

This publication is part of the IATP Sustainable Farm to Hospital Toolkit—a product of the North Central Region Sustainable Agriculture Research and Education-funded project *Connecting Sustainable Farmers to Emerging Health Care Markets*.

Written by Marie Kulick, Earth Wise Communications

ENDNOTES

1 Managing Food Safety: A Manual for the Voluntary Use of HACCP Principles for Operators of Food Service and Retail Establishments. US FDA (2008) http://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006811.htm (accessed July 22,2013).

2 HACCP-Based Standard Operating Procedures (SOPs). National Food Service Management Institute and United States Department of Agriculture (2005), http://sop.nfsmi.org/HACCPBasedSOPs.php (accessed July 22, 2013).

3 HAACP-based SOPs: Receiving deliveries (Sample SOP), http://sop.nfsmi.org/HACCPBasedSOPs/ReceivingDeliveries.pdf (accessed July 22, 2013).

4 AHA Hospital Statistics 2013 Edition

Hospital Food Purchasing: A Primer for North Central Region Sustainable Farmers/Producers

There are 1,456 registered community hospitals (non-federal, short-term general and other special hospitals) and 37 VA hospitals/medical centers[1] in the north central region— Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.[2,3,4]

The Institute for Agriculture and Trade Policy (IATP) estimates that these hospitals spent nearly $1 billion on food and beverages in 2012. Many of these hospitals have expressed interest in buying sustainably produced food and beverages, but most are likely spending less than 10 percent of their current food budgets on these products and buying few if any of these items directly from sustainable farmers/producers located in nearby communities. Thus, north central region hospitals represent a large potential market for sustainable farmers/producers. See the IATP report Connecting Sustainable Farmers to Hospitals—A Farmer/Producer-Focused Report at www.iatp.org/farm-to-hospital.

Hospitals are urban or rural. Most VA hospitals/medical centers are in urban areas, and nationwide 60 percent of registered community hospitals are located in urban areas. However, in the north central region, slightly more than half of the community hospitals are in rural areas, and in some states there are far more community hospitals in rural areas than urban. See Table 1.1 for comparison of rural versus urban community hospitals in north central region states.

Table 1.1—Rural Versus Urban Community Hospitals in North Central Regions States[5] (ranked by percent rural)

State	Rural	Urban	Portion of community hospitals that are rural
Nebraska	70	16	81.4 percent
North Dakota	33	8	80.5 percent
South Dakota	42	11	79.2 percent
Kansas	99	33	75.0 percent
Iowa	84	34	71.2 percent
Minnesota	81	51	61.4 percent
Wisconsin	56	69	44.8 percent
Missouri	53	67	44.2 percent
Michigan	58	95	37.9 percent
Illinois	64	124	34.0 percent
Indiana	40	85	32.0 percent
Ohio	55	128	30.1 percent

This is important for sustainable farmers/producers to note, because urban hospitals tend to have much higher patient volumes than rural hospitals and consequently will serve more meals (patient and retail) and have higher volume needs. Urban hospitals typically have 100 staffed beds or more, while nearly half of all rural hospitals have 25 or fewer staffed beds.[6]

In 2011, nearly 62 percent of community hospitals and 27 percent of VA hospitals/medical centers in the north central region had 99 or fewer staffed beds.[7,8] Per IATP's research,

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these smaller hospitals typically spent $140,000-$400,000 on food and beverages, while hospitals with 100 or more staffed beds spent $600,000-$5 million. See Table 1.2 for a comparison of the demand represented by a small, rural hospital and a large, urban hospital.

Table 1.2—Comparison of Demand Represented by a Rural Hospital and an Urban Hospital

Geographic area	Rural	Urban
Number of Staff Beds	25	800
Average Daily Census	15	500
Number of Employees	300	6000
Product Type	**Volume purchased annually**	**Volume purchased annually**
Beef	1,411 lbs	43,683lbs
Chicken	2,922 lbs	51,575 lbs
Pork	717 lbs	22,858 lbs
Turkey	900 lbs	14,423 lbs
Seafood	838 lbs	8,804 lbs
Produce, fresh, whole	7,949 lbs	70,327 lbs
Produce, fresh, pre-processed	8,009 lbs	89,698 lbs
Produce, frozen	1,707 lbs	20,792 lbs
Fluid milk	1,100 lbs	22,150 lbs
Eggs	750 dozen shell; 1,100 lbs processed	4,814 dozen shell; 28,583 lbs liquid
Butter	721 lbs	2,945 lbs
Cheese	2,408 lbs	19,593 lbs

NOTE: The number of beds available for patient use usually indicates a hospital's size. The maximum number of beds a hospital can operate is its "licensed beds." Most hospitals beds are not full on a routine basis. Therefore, a hospital's "staffed bed" number—the number of licensed beds for which staff is on hand at any given time to attend to patients—is a better indicator of size. However, the number of staffed beds can also include routinely vacant beds, so the best size indicator of a hospital's size is a hospital's average daily census (ADC). A hospital's ADC may be much lower than staffed beds, and provides the most accurate count of the number of patients for which hospitals serve meals on a routine basis. Unfortunately, a hospital's ADC is not reported as publically or routinely as staffed beds.

Regardless of size, all hospitals are likely to prepare and serve food and beverages to patients staying in the hospital, and most make food and beverages available for purchase by staff, outpatients, and visitors via cafeterias and vending.[9] Many also cater on-site meetings and events.

Food service operations may vary considerably from one hospital to another. Some hospitals only prepare and serve a few hundred meals a day; others make thousands. Some hospitals prepare all meals onsite, others off-site at a centralized kitchen. These latter hospitals are usually part of a hospital system and not standalone. Some hospitals make almost every meal from scratch using raw, unprocessed ingredients; others use a considerable amount of readymade items they just heat and serve. Some manage food service in-house; others hire a company to do it for them. Finally, some hospitals give their food service managers and chefs considerable leeway to decide what to buy and from whom, but many provide almost no flexibility. These differences can affect whether and how sustainable farmers/producers sell products to hospitals in their community.

Meals served

Hospitals tend to serve three meals per day every day of the year to patients (in-house) and provide snacks as well. The availability of food through retail operations, such as cafeterias, will vary depending on the time of day. All of the hospitals with retail dining services that completed the latest Food Service Director survey serve lunch and almost all served breakfast.[10] Most hospitals also make dinner and snacks available via retail dining, but the fewer retail meals the hospitals served on average, the less likely they were to offer dinner and snacks. Note: Hospitals that serve 500 or more retail meals per day were more likely to serve additional late night meals.

Generally, the number of patients, employees, and visitors for a given hospitals will have the greatest influence on the number of meals served on average. A hospital with an ADC of 15 patients will serve approximately 45 patient meals per day while a hospital with an ADC of 800 will serve approximately 2,400 patient meals per day.[11] Similarly, a small hospital with 300 employees might serve 150 retail meals per day while a large hospital with 8,000 or more employees will serve thousands of retail meals per day.

In addition, the ratio of patient to retail meals served will vary from one hospital to another, with some hospitals serving more patient meals on average than non-patient

meals. However, per the latest Food Service Director survey, overall hospitals tend to serve fewer patient meals than non-patient meals—41 percent patient meals to 59 percent retail meals/transactions.[12]

Meal preparation

More often than not, all of these meals are prepared on-site, and through some combination of the use of purchased ingredients to make food from scratch and purchased food items that are ready to heat or serve. However, some health systems use a commissary model to prepare in-patient meals, preparing food at a central location, and delivering the food to hospital kitchens in bulk or pre-plated for service. More of these latter meals will be made from scratch. In recent years, many hospitals, especially larger hospitals that serve more patient meals and have higher annual food and beverage expenditures,[13] have switched to a hotel-style, room service model for patient meals, whereby patients can order from a many option menu and have meals delivered when they are hungry and available to eat them. Per FoodService Director, this amounts to about 40 percent of hospitals. The remaining 60 percent use a more limited menu and deliver meals and snacks at predetermined times.

Overall management

By some estimates, most hospitals still hire employees to manage and run their food service operations (self-op). The Association for Healthcare Foodservice (AHF) reports that "self-op facilities represent 80 [percent] of food and beverage purchases in the industry."[14] In addition, Food Service Director reports that 78 percent of hospital respondents to their 2013 survey manage food service in-house, 17 percent outsource management, and 5 percent have split management.[15]

In contrast, the latest Food Service Director Contractor census indicates that food service contractors are managing at least a portion of food service operations at 3,702 hospitals,[16] a number equal to 65 percent of the 5,724 registered hospitals in the U.S. However, little information was provided regarding the census methodology, so it is difficult to gauge the accuracy of this latter calculation.

Regardless, the percentage of self-op to contract food service seems to vary from place to place. For example, most of the hospitals in the Twin Cities metropolitan area have hired one of the top three food service contractors: Compass Group North America, Sodexo, Inc., and Aramark Corp.—to manage their food service operations, but many non-metro area Minnesota and western Wisconsin hospitals manage food service in-house.[17]

NOTE: Together Compass Group, Sodexo, and Aramark controlled 95 percent of the contracted hospital market in 2011.18 See Table 1.3 for a list of the top management companies that have hospital accounts.

Table 1.3—Top Management Companies with Hospital Accounts[19] (ranked by overall revenue, not hospital revenue)

Management company	Headquarters	Hospital portion of business	Area served (if known)
Compass Group North America	Charlotte, N.C.	26 %	International
Sodexo, Inc.	Gaithersburg, Md.	29 %	International
Aramark Corp.	Philadelphia, Pa.	18 %	International
Thompson Hospitality	Herndon, Va.	7 %	North America
Valley Services, Inc.	Jackson, Miss.	22 %	United States
Healthcare Services Group, Inc.	Huntingdon Valley, Pa.	1 %	47 states and Canada
AVI Food Systems, Inc.	Warren, Ohio	15 %	Ohio and contiguous states
Metz Culinary Management	Dallas, Pa.	8 %	Not listed
Unidine Corp.	Boston, Mass.	33 %	Across the United States
Treat America Food Services	Merriam, Kans.	10 %	Midwestern states
A'viands Food & Services Mgt.	Roseville, Minn.	3 %	Midwest, Southwest
Thomas Cuisine Management	Meridian, Idaho	81 %	Idaho, Mont., Ore., Wash.
Southern Food-service Management, Inc.	Birmingham, Ala.	2 %	Nationwide
Cura Hospitality	Orefield, Pa.	18 %	Pa., Del., N.Y.
Continental Dining & Refreshment Services	Sterling Heights, Mich.	6 %	Mich. (now part of Compass Group)
CL Swanson Corp.	Madison, Wis.	2 %	Midwest, MidSouth
HHA Services	St. Clair Shores, Mich.	77 %	Not listed
Prince Food Systems, Inc.	Houston, Tex.	70 %	Mainly in Tex. but also has sites in Ohio, La., Minn., and Tenn.

Table 1.3—Top Management Companies with Hospital Accounts[19] (ranked by overall revenue, not hospital revenue)

Management company	Headquarters	Hospital portion of business	Area served (if known)
Luby's Culinary Services	Houston, Tex.	85 %	Tex.
FAME Food Management, Inc.	Wakefield, Mass.	10 %	Nationwide
Nutrition Management Services Co.	Kimberton, Pa.	20 %	Not listed
Linton's Managed Services	East Norriton, Pa.	29 %	Pa., N.J., Md., Del., Fla.
Kosch Hospitality	Rochester, Mich.	5 %	Mich., Ohio

In addition, some hospitals manage patient food operations in-house and outsource management of retail operations. For instance, federal government employees run patient food service operations for most VA hospitals/medical centers, and Veterans Canteen Service, a contractor, manages most of the cafeterias and other retail operations.[20] Other health systems may use contractors to manage both patient and retail food service operations at all of their hospitals, and some only use contractors to manage these operations at a few of their facilities.

Hospitals also differ in how they use these contractors. For instance, a hired food service management company may only provide a few company managers who oversee a staff of hospital food service employees or the company may employ most or all food service personnel working at a particular facility—managers, supervisors, chefs, line cooks, servers, etc.

Contracts tend to last several years, and it is common for one major contractor to replace another when a contract ends. Contracts also tend to stipulate whether the management company can use its own suppliers or will be required to use hospital-designated suppliers.

As mentioned in IATP's *Connecting Sustainable Farmers to Hospitals: A Farmer/Producer-Focused Report*, some sustainable farmer/producers have had success selling to hospitals that have contract food service management, but others see food service contractors as a primary impediment to selling to hospitals. Some contractors prohibit the purchase of food directly from farmers, while others have a reputation for facilitating direct purchase of food from sustainable farmers/producers. In either case, it is important to know that food service contractors can affect the ability of sustainable farmers/producers to sell to hospitals in their community.

Furthermore, sustainable farmers/producers are likely to have greater success in selling to hospitals that operate their own food service operations, or at least a portion, typically patient food operations. This statement is based largely on anecdotal evidence and the author's experience from working with hospitals on this issue for nearly 10 years. However, per the Health Care Without Harm (HCWH) 2013 Healthy Food in Health Care (HFHC) survey, only 16.7 percent (2 of 12) of north central region hospital respondents who purchased food directly from farmers/producers in 2012 had contract food service, the remainder managed food service in-house.[21]

NOTE: Most of the hospitals that completed the HFHC survey have signed the HFHC Pledge, a voluntary commitment to increase purchases of sustainably produced food and to promote and source from sustainable producers, among other steps, and/or are participants in the Healthier Hospitals Initiative (HHI) Healthier Food Challenge, with at least a portion of these hospitals working to achieve percentage-based goals for local and/or sustainable food procurement. In addition, the following food service contractors have pledged to support the efforts of hospital clients that have signed the HFHC Pledge and work at the corporate level to support several HFHC measures:

- ARAMARK Healthcare
- Fresh & Natural Food Service Group
- HHA Services
- Integrated Support Solutions, Inc.
- Metz Culinary Management
- Morrison
- Unidine Corporation

For additional information on the HFHC Pledge for hospitals and the companion food service contractor pledge, see http://www.healthyfoodinhealthcare.org/pledge.php.

Food service staff

Regardless of whether hospital employees or contractor employees manage a hospital's food service operation, a hospital's food and nutrition department is usually divided into patient and non-patient/retail-related services. If patient and retail services are managed jointly, whether by

hospital employees or contractor employees, there is usually someone in a director position that oversees all food service operations. This lead staff person usually has a title similar to the following: director of food and nutrition, food service director, director of nutrition services, etc., and is often a registered dietitian (RD). If the person is also in charge of laundry or other services, their title may be director of hospitality services. In these settings, the food service director is ultimately responsible for all food and beverage purchasing decisions, even if delegated to another staff person, such as an assistant director or executive chef. The food service director usually reports to someone in upper level management, such as, a vice president of operations.

If management is separated—patient operations managed in-house and retail operations outsourced for instance—each operation will have a director that reports to an upper-level hospital manager, i.e., a patient food service manager and a retail food service manager. Whichever is the case, sustainable farmers/producers interested in selling to hospitals should seek to develop relationships with these directors and managers. Executive chefs can also be great allies for sustainable farmers/producers who wish to sell to hospitals in their community, but not all hospitals have them, especially smaller hospitals.

HOSPITAL FOOD PURCHASING

Source of ingredients/ prepared food items

Many hospitals commit themselves to purchasing a significant percentage of their annual food service-related items from their mainline distributor, generally 80 to 85 percent. US Foods, Sysco, Gordon Food Service, Food Services of America, and Reinhart Foodservice are some of the primary mainline distributors serving hospitals. In making these commitments, hospitals limit their ability to purchase from sources other than their mainline distributors.

Hospitals make these commitments via their relationships with one or more group purchasing organizations (GPO) that serve hospitals and other institutions nationwide— Amerinet , HealthTrust, MedAssets, Novation, Premier, and others. A GPO may contract with one or more distributors on behalf of their members or they may negotiate a contract between a hospital/health system member and one or more distributors. These distributor contracts are usually in place for a set period of years with options for extension. Despite the commitments, a hospital's food service staff usually has the ability to purchase items outside these relationships, if they want to do so and/or have C-Suite support for doing so. For instance, 75 percent the 2013 HFHC north central region survey respondents who purchased directly from farmers/producers in 2012 were each members of a GPO.[22]

NOTE: Eighty percent of north central region registered community hospitals are in a GPO.[23] In addition, FoodService Director reports in their 2011 Hospital Census Highlights that 82 percent of hospitals use a GPO for at least a portion of their food service purchases.[24] VHA serves as the GPO for VA medical centers.

Volume-based incentives

Hospitals typically receive volume-based discounts or rebates linked to purchase of certain brands of products in key product categories, such as chicken, coffee, and yogurt. These rebates are in addition to discounts based on the dollar value of their purchases through their mainline distributor. Thus, a hospital can risk serious increases in their annual food costs, if they do nothing to offset this change when they start buying a significant percentage of their annual food budget directly from sustainable farmers/producers.

Confidence/trust

Hospitals are more likely to prepare and serve meals to people with compromised immune systems, so it is important for hospital purchasers to feel confident that what they serve patients will not lead to further illness. Many hospital food service employees are likely to have Hazard Analysis and Critical Control Point (HACCP) training and use HACCP on a voluntary basis to reduce the risk of food borne illness. Like other food service establishments, hospitals are largely concerned with two issues when it comes to HAACP: (1) receiving food/ingredients at proper temperatures and getting perishable food into cold storage quickly and (2) receiving food/ingredients from approved sources—suppliers who comply with regulations applicable to the sale of their product. For more on HAACP and food service operations see *Managing Food Safety: A Manual for the Voluntary Use of HAACP Principles for Operators of Food Service and Retail Establishments*, http://www.fda.gov/downloads/Food/GuidanceRegulation/HACCP/UCM077957.pdf

ADDITIONAL IATP RESOURCES

More information on hospital food procurement, including detailed information on product types, volumes, etc. can be found in the body and appendices of the IATP report, *Connecting Sustainable Farmers to Hospitals—A Farmer/Producer-Focused Report*, www.iatp.org/farm-to-hospital.

This publication is part of the IATP Sustainable Farm to Hospital Toolkit—a product of the North Central Region Sustainable Agriculture Research and Education-funded project *Connecting Sustainable Farmers to Emerging Health Care Markets*.

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ENDNOTES

1. In addition to serving meals to patients, visitors, and personnel, VA medical centers may serve meals to residents in nursing, psychiatric, and drug and alcohol treatment facilities, as well as veterans in adult day care.

2. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 4: East North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 38-39.

3. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 6: West North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 42-43.

4. AHA Hospital Statistics 2013 Edition, Table 6 Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011.

5. AHA Hospital Statistics 2013 Edition, Table 6 Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011.

6. American Hospital Association. "The Opportunities and Challenges for Rural Hospitals in an Era of Health Reform," Trendwatch (April 2011), p.3. http://www.aha.org/research/reports/reports/tw/11apr-tw-rural.pdf (accessed October 13, 2013).

7. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 4: East North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 38-39.

8. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 6: West North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 42-43.

9. 2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare. FoodService Director. http://www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed September 11, 2013).

10. 2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare. FoodService Director. http://www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed September 11, 2013).

11. Hospitals will likely serve fewer than three meals per day per patient as many factors influence what patients can eat, when they can eat, and whether they can eat.

12. 2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare. FoodService Director. http://www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed September 11, 2013).

13. 2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare. FoodService Director. http://www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed September 11, 2013).

14. Building a Bright Future for Healthcare Foodservice. Association for Healthcare Foodservice, http://healthcarefoodservice.org/about-us (accessed September 26,2013).

15. 2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare. FoodService Director, http://www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed September 11, 2013).

16. Contractor Census 2012. FoodService Director, www.foodservicedirector.com/sites/default/files/2012_Contract_Census_Report_0.pdf (accessed 10/13/2013).

17. Based on author's experience.

18. Contractor Census 2012. FoodService Director, www.foodservicedirector.com/sites/default/files/2012_Contract_Census_Report_0.pdf (accessed 10/13/2013).

19. Mike Buzalka. FM's 2011 Top 50 Management Companies. Food Management (September 1,2011), http://food-management.com/business-amp-industry/fms-2011-top-50-management-companies (accessed October 28, 2013).

20. SPV-4Attachment A: VA Facility Data frm FY10, Solicitation #VA-797-11-RP-0176 issued October 19, 2011, https://www.fbo.gov/index?s=opportunity&mode=form&id=f905268c5976e9da8b154dce156a677c&tab=core&tabmode=list&= (accessed 10/30/2013).

21. As a founding Health Care Without Harm Healthy Food in Health Care partner and a lead organization in working with north central region hospitals, IATP was given access to and is able to report the north central region specific survey data in aggregate.

22. As a founding Health Care Without Harm Healthy Food in Health Care partner and a lead organization in working with north central region hospitals, IATP was given access to and is able to report the north central region specific survey data in aggregate.

23. AHA Hospital Statistics 2013 Edition, Table 6 Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011.

24. Non-Patient Service Drives Hospitals. FoodService Director. August 15, 2011.