

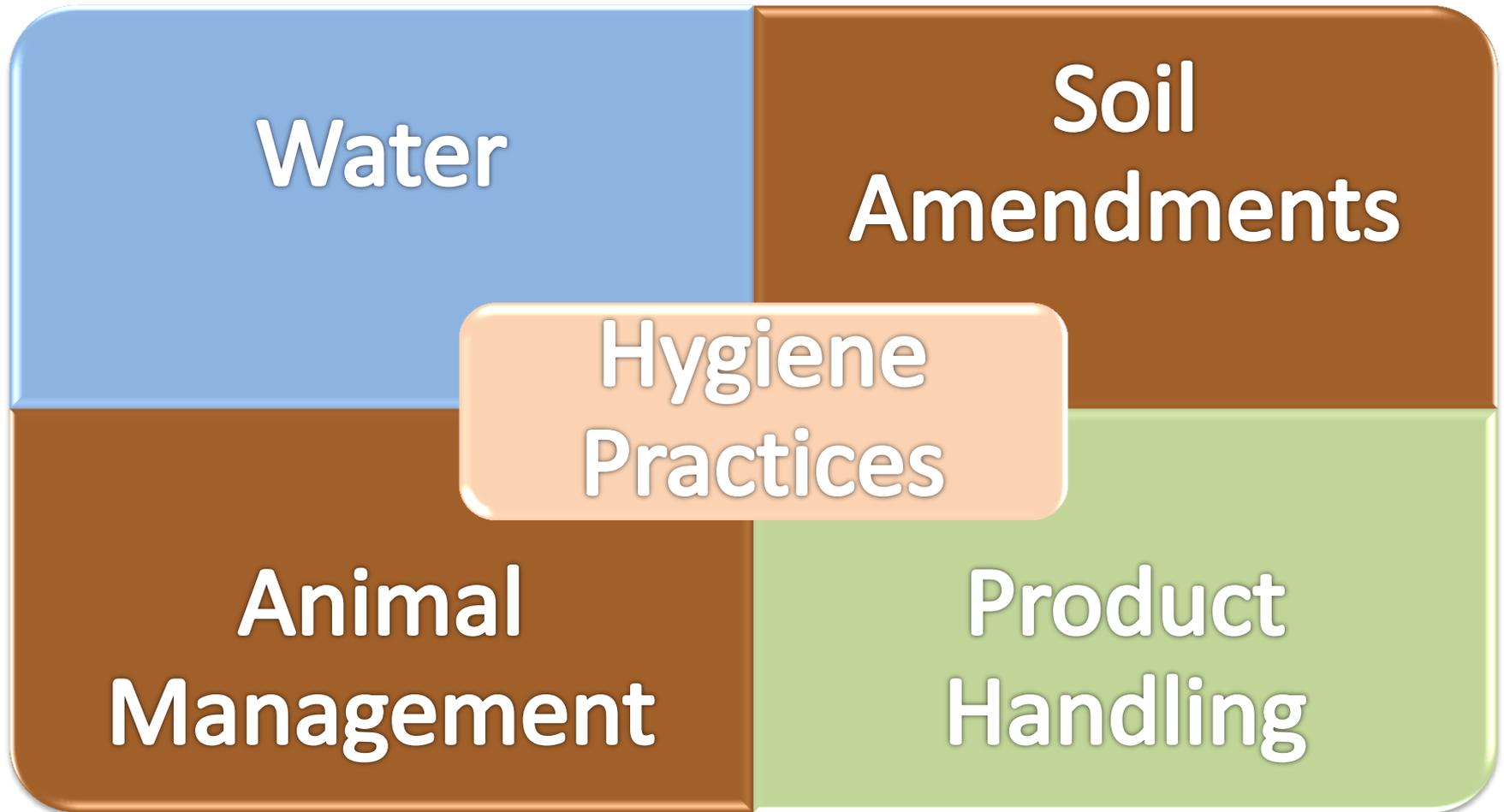
School Gardens 101

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Good Agricultural Practices (GAPs)



Production Water

- Monitor water sources & distribution systems
- Use irrigation method that reduces risk
- Test water for generic E. coli
- Keep records of water management actions & test results

Soil Amendments

- If raw manure is used it is added to soil at least
- 2 weeks prior to planting and 120 days prior to harvest

Animal Management

- Monitor for domestic & wild animals in fields
- Conduct field assessments prior to harvest
- Train employees
 - How to monitor for animal activity
 - Proper harvest procedures

Worker Hygiene

- Access to toilets & hand washing stations with running water, soap & paper towels

Worker Hygiene

- Food safety training
- Instructed not to work with produce if exhibit signs of infection (e.g., fever, diarrhea, etc.)

Product Handling

- Surfaces that contact produce can be easily cleaned & sanitized
- Product is packed in new or sanitized containers
- Transportation vehicles are clean
- Able to trace product, one step forward, one step back

FDA Proposed Produce Safety Regulations

- Food Safety Modernization Act (FSMA)
- Agricultural water
- Biological soil amendments
- Health and hygiene
- Domesticated and wild animals
- Equipment, tools and buildings

Resources

- FDA FSMA
- <http://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm>
- Produce Safety Alliance
- <http://producesafetyalliance.cornell.edu/psa>.
- National GAPs
- <http://www.gaps.cornell.edu/index.html>
- USDA GAPs
- <http://www.ams.usda.gov/gapghp>

Applying GAPs in your School Garden

School Garden Site Selection

- Location should be away from
 - Garbage
 - Utilities
 - Animals
 - Water runoff
 - Flooding
 - Septic systems

Soil for School Garden

- Determine soil history
 - Soil testing recommended for some areas
 - Consider purchasing commercial soil
 - Contact your county extension office for assistance
 - www.nifa.usda.gov/Extension/index.html

Protect School Garden from Animals

- Create reasonable barriers to keep wildlife/animals away from garden
- Fencing
- Electrified fencing
- Cages
- Nets

Materials for School Garden

- Use non-toxic, non-leaching material
 - Cedar, untreated pine or fir
 - Terra cotta pots
 - Concrete
 - Unused livestock water troughs (drill drain holes)
 - Burlap filled with straw
 - Straw bale gardens
- Avoid pressure-treated lumber (especially if made prior to 2004), tires, rail road ties, old bricks with paint, plywood, etc.

Plant Selection

- Select non-allergenic and non-toxic plants
- Known allergens should be avoided
- Contact local extension agent for assistance
- Minnesota Department of Agriculture
 - <https://www.mda.state.mn.us/plants/badplants/poisonplants.aspx>

Water for School Gardens

- Municipal water source is safe
- Test all non-municipal sources including ponds, rain barrels or cisterns
- Maintain water testing records
- Use food grade containers to transport water
- Use drip irrigation

Chemical and Fertilizer Use

- Avoid use of pesticides or herbicides
- Check with local cooperative extension agent for non-chemical pest reduction methods
- <http://www.ourwaterourworld.org>

Chemical and Fertilizer Use, cont.

- Use according to manufacturer's directions
- Store in secure location
- Restrict handling to adults only
- Maintain Safety Data Sheets (SDS)
- Follow OSHA requirements
- Store, label, and dispose of properly

Composting and Manure Use

- Avoid raw or composted manure
- Consider purchasing commercially prepared compost (ask for certificate of analysis)
- Store compost away from garden
- Protect compost from pests, especially rodents
- Compost should be in small, 2 inch pieces
- Source: <http://Growingsafergardens.com>

Composting and Manure Use, cont.

- Vermicompost
- Add only plant products to compost
- Fruit and vegetable trimmings may be used (collected before service)
- Do not use food discarded after meals (cafeteria waste)
- Locate compost away from potential contamination

Growing and Harvesting Produce

- Training for students, staff, and volunteers
- Liability coverage for garden staff
- Signed permission slip for all student gardeners

Growing and Harvesting Produce, cont.

- Wash hands and practice good personal hygiene
 - Prior to harvest
 - After handling compost
 - After using the restroom
- Create portable handwashing station
- Harvest garden regularly
- Use potable water for cleaning produce
- Source: <http://Growingsafergardens.com>

Water for School Gardens

- Provide single use, disposable gloves for harvesters if handwashing station is not available

Growing and Harvesting Produce, cont.

- Use acceptable harvest containers- cleaned and sanitized
- Clean harvesting tools before and after each gardening session

Using School Garden Produce in School Meals

- Check local regulations
- Work with school garden coordinator
 - Discuss best produce options
 - Discuss food safety

Using School Garden Produce in School Meals

- Receiving
 - Reject if unacceptable
 - Avoid using if noticeably contaminated
- Storing
- Traceability
- Liability coverage

Resources

- USDA Produce Safety Materials
 - <http://www.nfsmi.org/producesafety>
- Growing Safer Gardens
 - <http://growingsafergardens.com>
- Wisconsin Compost Resource Guide
 - <http://www.cias.wisc.edu/foodservtools/6-Educate-students/school-composting.pdf>
- Iowa State University School Garden Training
 - <http://www.safeproduce.cals.iastate.edu/elementary/>

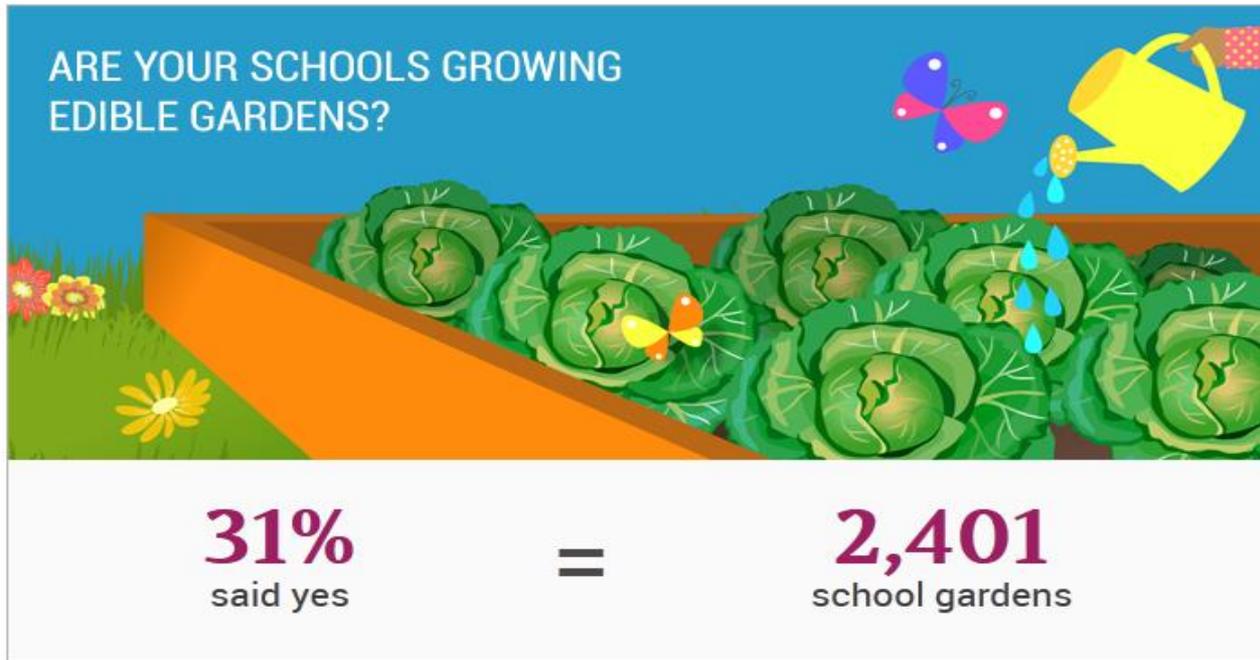
FARM TO SCHOOL & THE SCHOOL GARDEN

A Key Component of Farm to School

- Provides hands-on educational opportunities for children to learn more about where food comes from
- Can integrate into science, math, language arts, health & wellness... any subject area!
- Builds bridges between food service, classroom teachers, administrators, parents, community members

USDA Farm to School Census

School gardens are sprouting up across the country



In addition to buying local products and building school gardens, school districts are promoting locally produced foods at school in general (**42%**), holding taste tests/demos of locally produced foods (**38%**), and conducting student field trips to farms (**30%**). (See the details)

Starting a Garden Program

- Taking stock
- Getting buy-in
- Setting goals
- Seeking and securing funding
- Establishing a timeline

Plan for Summer Year Round Programming

- Opportunity to continue farm to school activity throughout summertime
- Important considerations:
 - Maintenance
 - Staffing
 - Training

Opportunities to Align with Summer Food Service Program (SFSP)

- School sponsors
 - integrate garden produce into summer meals
 - engaging garden-based enrichment
- Non-school sponsors
 - school garden field trips
 - school garden as a feeding site

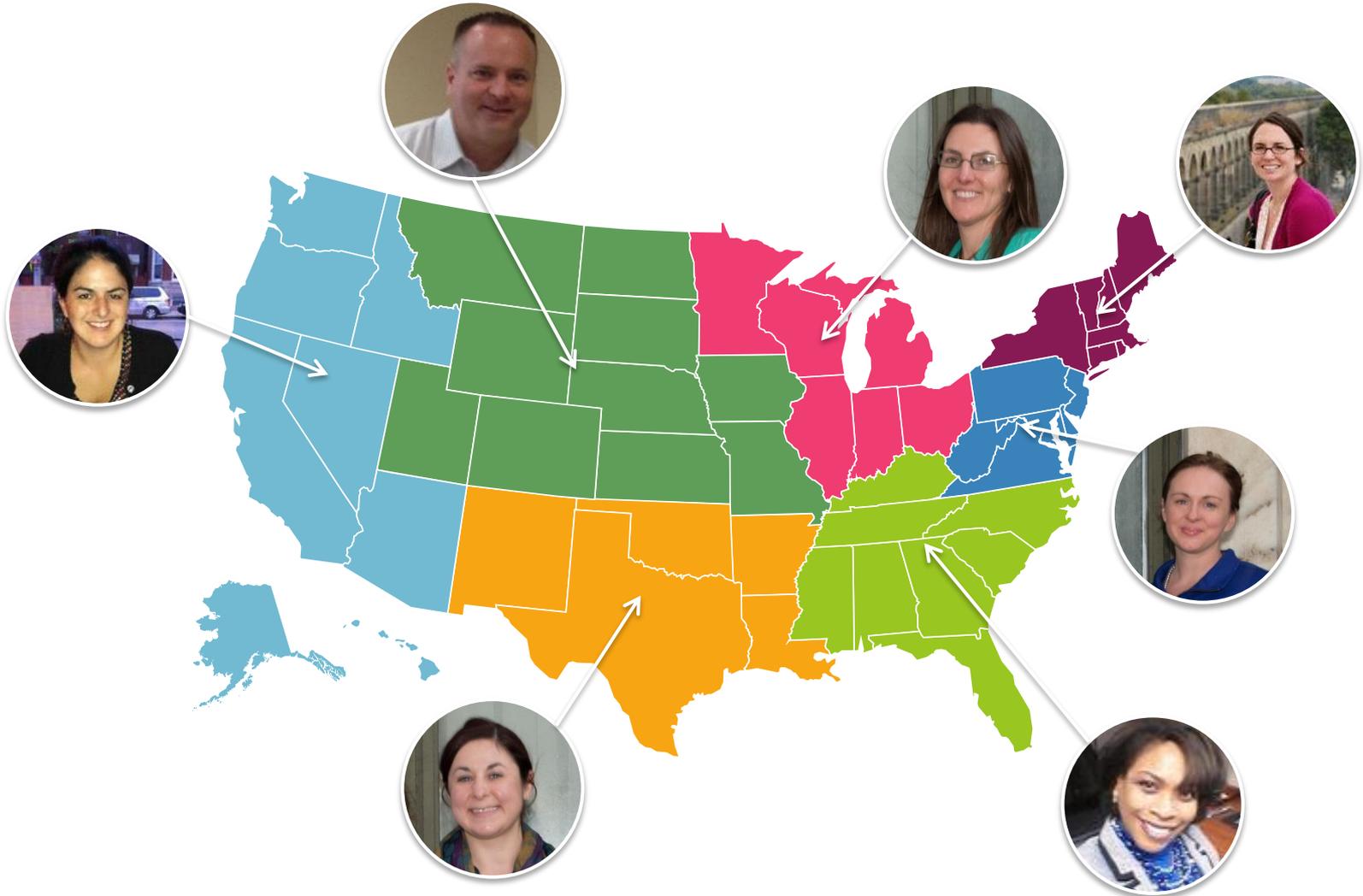
Resources

- School Garden Q&As: Memo SP 32-2009 - This FNS memo clarifies that funds from the nonprofit school food service account can be used to purchase seeds and other supplies for starting and maintaining school gardens.
- Webinar: Design Ideas for a Fun, Successful Instructional School Garden – LifeLab Director John Fisher discusses the importance of good garden design and demonstrates many garden design concepts with more than 100 photographs.
- A Step-by-Step School Garden Guide (Grow NYC) – A checklist for building community support, creating a shared vision, planning and designing the garden, securing materials and supplies, and keeping the garden growing.
- Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms (Center for Ecoliteracy) – A comprehensive, step-by-step guide to starting a school garden.

Resources

- USDA Farm to School Website
- <http://www.fns.usda.gov/farmentoschool>
 - Resources > School Gardens
 - Webinar recordings
- USDA Farm to School E-Letter
- <https://public.govdelivery.com/accounts/USFNS/subscribe/new>
 - Latest News
 - Grant Updates
 - Webinar Announcements

USDA Farm to School Regional Leads



Flexibilities

- Phased-in Breakfast implementation
- Option to offer a daily meat/meat Alternate at breakfast
- Allowed students to take just one-half cup of fruit or vegetables under OVS
- Removed the starchy vegetable limit
- Pushed out the second sodium target by an additional year
- Lifted the weekly maximums on grain and meat/meat alternates
- Allowed frozen fruit with added sugar
- Clarified allowable whole grain-rich corn products
- Provided two-year flexibility for schools that cannot obtain acceptable whole grain-rich pasta
- Provided Smart Snack exemption for grain-only entrees served at breakfast

Tools for Schools

- <http://www.fns.usda.gov/healthierschoolday>
- One-stop guide to nutrition standards for school meals and snacks:
 - Free nutrition materials, training, and recipes for school food service
 - Smarter Lunchroom strategies
 - Tips for offering more fruits, vegetables, and whole grain-rich foods
 - Grant opportunities
 - Best practices from other schools
 - Regulations and policies

We want your feedback!

- Keep sharing your best practices, challenges, and concerns
- Share best practices at <http://healthymeals.nal.usda.gov/best-practices>