Keeping it Safe – GAPs

‘Manuals and Audits’

6th National Small Farm Conference

Richard H. Molinar, Farm Advisor

September 18, 2012
How much should I do?

1. Use common sense – the good old days
2. Make a **written** food safety plan for your farm
3. Do a self-audit (Self-Certification)
4. Become certified by a 3\textsuperscript{rd}-party
Yes, there really are shoeboxes with receipts
1. The Good Old Days
“common sense”

- Grandfather's Farm
- The Man Behind the Plow
- The Jack Benny Show, originally broadcast Jan. 11, 1953

1982 The Commodore 64 computer introduced, 64 kB RAM + 20 kB ROM

1989 Berlin Wall came down
2. GAPs Manuals

Many templates available

http://onfarmfoodsafty.org
http://ucanr.org/sites/Small_Farms_and_Specialty_Crop/
http://cms.oregon.gov/ODA/ADMD/Pages/gap_ghp.aspx
http://www.uvm.edu/~susagctr/gapresources.html
http://intranet.primuslabs.com/igap/default.asp

Univ California
Univ Vermont
Oregon Dept Agriculture
Primus Labs

Use the templates, don’t start from scratch.
Some buyers still don’t require anything for LOCAL sales……..BUT... times are changing
3. Self- Audit

8 hrs – 2 days

2-3 hours
~ Self-Audit ~
Still accepted by some BIG buyers
A checklist, signed by the Farmer
possibly include water test, worker training

Check boxes

☐ 2. Traceability: Each container leaving the farm has our name, address, crop, and quantity.

☐ 3. Health and Hygiene- for employees and visitors. All employees are trained in and must follow good hygiene practices.

• Self-Certification:
  • I certify that, at XXX FRESH PRODUCE, we comply with all of the Good Agricultural Practices (GAPs) checked off in this document; I review this material annually with my employees; and I have records of worker training.

______________________________  ______________
Signed  date
Good Agricultural Practices (GAPs) Manual

FARM SAFETY MANUAL: ABC FARMS

STANDARD OPERATING PROCEDURES (SOP's)
Checked boxes indicate I have read documentation to support this ✓

Table of Contents

General Farm Description 2
Traceability 2
Worker Health and Hygiene 3
Illness and accident procedures 3
General sanitation 3
Chemicals and Pesticides 4

Farm Review
Water Assessment 4
Wildlife and Livestock 5
Manure and Biosolids 6
Land assessment and soil 6

Field Harvest and Packing
Worker sanitation 7
Equipment 7
Transportation 7
Forms

Map
Training
Visitor sign in

1
4. 3rd Party Audit
Companies and Agencies that will do 3rd Party Audits

- **US Dept of Agriculture** – contacts for various states
- **California Department of Food and Agriculture - Inspection and Compliance**
- **AIB International**
- **NFS Davis Fresh Technologies**
- **Primus Labs**
- **Scientific Certification Systems**
- **Silliker**
- **Global GAP**
- **ISO International Standards Org**

*This list is not all-inclusive*
Industry Food Safety Requirements

• Many buyers require a 3rd party food safety certification (CDFA-USDA, Primus Labs, NSF Agriculture)

• Cancelled policies or increased premiums for some farms that direct-market leafy greens
Kinds of Audits

• **GFSI – Global Food Safety Initiative**
  Cert ID  
  BRC (British Retail Consortium)  
  SQF (Safe Quality Foods)  
  GlobalG.A.P.  (formerly Euro Gap)  
  100 different certification bodies= NSF, Primus, SAI, SCS

• **Harmonized Audit**  (is not necessarily global)

• **GAP – GHP Audit**  (is not necessarily global)
Commodity-Specific GAPs and Food Safety Audit Checklists

- Melon
- Tomato
- Stone fruit
- Mushroom
- Lettuce & Leafy Greens
- Culinary Herbs
- Green Onions
- Sprouts
- Almond
- Citrus
- Strawberry
- Watermelon
- Blueberries
- Asparagus

Food Safety Program
Good Agricultural Practices: Growing the World’s Safest Strawberries

USDA 3rd Party Audit Verification Programs
Ken Petersen - Staff Assistant Agricultural Marketing Service
Fresh Products Branch
Good Agricultural Practices & Good Handling Program
ASQ - Certified Quality Auditor

California Strawberry Commission

FOOD SAFETY PROGRAM
Good Agricultural Practices: Growing the World’s Safest Strawberries
USDA Good Agricultural Practices
Good Handling Practices
Audit Verification Checklist

General Questions (All audits begin with and pass this portion)

Part 1 – Farm Review
Part 2 - Field Harvest and Field Packing Activities
Part 3 - House Packing Facility
Part 4 – Storage and Transportation
Part 6 – Wholesale Distribution Center/Warehouse
Part 7 – Preventive Food Defense Procedures
## Audit Results

**USDA-AMS website for audits**

<table>
<thead>
<tr>
<th></th>
<th>Address</th>
<th>Location</th>
<th>Type</th>
<th>Start Date</th>
<th>Products</th>
</tr>
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<tbody>
<tr>
<td>S &amp; H Farms</td>
<td>P. O. Box 650</td>
<td>Gonzales, CA</td>
<td>Tomato Food Safety Protocol Audit</td>
<td>August 24, 2012</td>
<td>Tomatoes</td>
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<tr>
<td>Sam's Farm</td>
<td>1624 E. Knight Ct.</td>
<td>Visalia, CA</td>
<td>USDA Good Agricultural Practices &amp; Good Handling Practices Audit</td>
<td>August 31, 2012</td>
<td>Beans, Cantaloups, Corn, Cucumbers, Eggplant, Peppers, Pumpkins, Squash, Strawberries, Tomatoes, Watermelons</td>
</tr>
<tr>
<td>Samuel Alvarez Farm Labor/ Paramount Citrus</td>
<td>P. O. Box 3246</td>
<td>Ventura, CA</td>
<td>USDA Good Agricultural Practices &amp; Good Handling Practices Audit</td>
<td>March 2, 2012</td>
<td>Lemons</td>
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**Sunnyside Packing Company**
http://www.primuslabs.com/psr/platino.aspx#
### Parts to a GAPs Manual

#### Farm Review
- Traceability
- Risk Assessment
- Worker Health, Hygiene
- Water Usage
- Sewage
- Animals
- Manure
- Soils
- Record Keeping, logs, map
  + farm walkabout

#### Field Harvest, Packing
- Field Sanitation & Hygiene
- Field Harvesting, Transportation
  + unannounced visits
Sam’s Farm
559-799-6934 (Pao)
1624 E. Knight Ct
Visalia, CA  93292

Good Agricultural Practices (GAPs)

<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>pg</th>
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<tbody>
<tr>
<td>General Conditions</td>
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<td>Farm Description</td>
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<tr>
<td>Traceability</td>
<td>2</td>
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<tr>
<td>Worker Health and Hygiene</td>
<td>2</td>
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<tr>
<td>Illness and accident procedures</td>
<td>3</td>
</tr>
<tr>
<td>General sanitation</td>
<td>3</td>
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<tr>
<td>Chemicals and Pesticides</td>
<td>4</td>
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<tr>
<td>Farm Review</td>
<td>-</td>
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<tr>
<td>Water Assessment</td>
<td>4</td>
</tr>
<tr>
<td>Wildlife and Livestock</td>
<td>5</td>
</tr>
<tr>
<td>Manure and Biosolids</td>
<td>5</td>
</tr>
<tr>
<td>Land assessment and soil</td>
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<tr>
<td>Field Harvest and Packing</td>
<td>-</td>
</tr>
<tr>
<td>Worker sanitation</td>
<td>6</td>
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<tr>
<td>Equipment</td>
<td>6</td>
</tr>
<tr>
<td>Transportation</td>
<td>7</td>
</tr>
</tbody>
</table>
Possible Future Requirements

- Schools
- Farmers Markets
- Donations to Food Banks
- Roadside stands, CSA’s
Where we are now...

These audit organizations, and others, are using or plan to use the Harmonized Standards for GAP audits.
USDA Good Agricultural Practices Good Handling Practices
Audit Verification Checklist

This program is intended to assess a participant’s efforts to minimize the risk of contamination of fresh fruits, vegetables, nuts and miscellaneous commodities by microbial pathogens based on the U.S. Food and Drug Administration’s “Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables,” and generally recognized good agricultural practices.

Firm Name: ____________________________________________
Contact Person: ____________________________________________
Audit Site(s): ____________________________________________
Main Address: ____________________________________________
City: __________________ State: __________ Zip: ____________
Telephone No: __________________ Fax: __________________
E-mail: ____________________________________________
Auditor(s): (list all auditors with the lead listed first) ____________

USDA or Fed-State Office performing audit:
Arrival Date: ____________ Time: ____________
Departure Date: ____________ Time: ____________
Travel Time: __________________ Code ____________
Person(s) Interviewed (use back of sheet if necessary to list all)}

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$92.00 per hour
Be organized – receipts, records, documents
Did the auditee participate in GAP & GHP training?
Yes[ ] No[ ]

Is there a map that accurately represents the farm operations?
Yes[ ] No[ ] N/A[ ]

Legal Description/GPS/Lat.-Long. of Location: __________________________

Are all crop production areas located on this audit site?
Yes[ ] No[ ] N/A[ ]

Total acres farmed (Owned, leased/rented, contracted, consigned):
_____________________

Does the company have more than one packing facility?
Yes[ ] No[ ] N/A[ ]

Is there a floor plan of the packing house facility(s) indicating flow of product, storage areas, cull areas, employee break rooms, restrooms, offices?
Yes[ ] No[ ] N/A[ ]

Is any product commingled prior to packing?
Yes[ ] No[ ]

Audit Scope: (Please check all scopes audited)
General Questions (All audits must begin with and pass this)

Part 1 – Farm Review............................................................................. [ ]
Part 2 - Field Harvest and Field Packing Activities............................... [ ]
Part 3 - House Packing Facility............................................................... [ ]
Part 4 – Storage and Transportation...................................................... [ ]
Part 5—(Not Used)-------------------------------------------------------- [ ]
Part 6 – Wholesale Distribution Center/Terminal Warehouse............... [ ]
Part 7 – Preventive Food Defense Procedures........................................ [ ]

Products:
________________________

Auditors’ Signature(s):

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Page 2

Part 1 farm review=usual
Sometimes part 2 depending on buyer
<table>
<thead>
<tr>
<th>Questions</th>
<th>Points</th>
<th>Yes</th>
<th>NO</th>
<th>N/A</th>
<th>Doc</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1 A documented food safety program that incorporates GAP and/or GHP has been implemented.</td>
<td></td>
<td></td>
<td></td>
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<td>D</td>
</tr>
<tr>
<td>P-2 The operation has designated someone to implement and manage an established food safety program.</td>
<td></td>
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<td></td>
<td>D</td>
</tr>
<tr>
<td>Traceability</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>G-1 A documented traceability program has been established.</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>G-2 The operation has performed a &quot;mock recall&quot; that was proven to be effective.</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>R</td>
</tr>
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</table>

### Worker Health & Hygiene

<table>
<thead>
<tr>
<th>Questions</th>
<th>Points</th>
<th>Yes</th>
<th>NO</th>
<th>N/A</th>
<th>Doc</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-3 Potable water is available to all workers.</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>R</td>
</tr>
<tr>
<td>G-4 All employees and all visitors to the location are required to follow proper sanitation and hygiene practices.</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>G-5 Training on proper sanitation and hygiene practices is provided to all staff.</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>G-6 Employees and visitors are following good hygiene/sanitation practices.</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-7 Employees who handle or package produce are washing their hands before beginning or returning to work.</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-8 Readily understandable signs are posted to instruct employees to wash their hands before beginning or returning to work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-9 All toilet/restroom/field sanitation facilities are clean. They are properly supplied with use towels, toilet paper, hand soap or a bacterial soap, and potable water for hand washing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-10 All toilet/restroom/field sanitation facilities are serviced and cleaned on a scheduled basis.</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>R</td>
</tr>
</tbody>
</table>

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Page 4
<table>
<thead>
<tr>
<th>Questions</th>
<th>Points</th>
<th>Yes</th>
<th>NO</th>
<th>N/A</th>
<th>Doc</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-11 Smoking and eating are confined to designated areas separate from</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>where product is handled.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>G-12 Workers with diarrheal disease or symptoms of other infectious</td>
<td>15</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>diseases are prohibited from handling fresh produce.</td>
<td></td>
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</tr>
<tr>
<td>G-13 There is a policy describing procedures which specify handling/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>disposition of produce or food contact surfaces that have come into</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contact with blood or other body fluids.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>G-14 Workers are instructed to seek prompt treatment with clean first</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aid supplies for cuts, abrasions and other injuries.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>G-15 Company personnel or contracted personnel that apply regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre-harvest and/or post harvest materials are licensed. Company personnel</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or contracted personnel applying non-regulated materials have been</td>
<td></td>
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</tr>
<tr>
<td>trained on its proper use.</td>
<td></td>
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</tr>
</tbody>
</table>

**COMMENTS:**

---

Need a blood policy in the manual
Need a first aid kit
Total Points earned for General Questions =

Total Possible = 180  
The total number of points possible for this section.

Subtract "N/A" = _____  
Enter the additive number of N/A points (+points) here.

Adjusted Total = _____  
Subtract the N/A points from the Total possible points

X .8 (80%)  
Multiply the Adjusted Total by .8 and show it as the Passing Score

Passing Score = _____  
☐ Pass  ☐ Fail  (please mark one)

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Page 6
Water is one of the most difficult to decide and discuss. You set the limit and that is what the auditor goes by – but it has to be reasonable. See handout.

Part 1 - Farm Review

Water Usage

(1-1) What is the source of irrigation water? (Pond, Stream, Well, Municipal, Other) Please specify:

(1-2) How are crops irrigated? (Flood, Drip, Sprinkler, Other) Please specify:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Points</th>
<th>Yes</th>
<th>NO</th>
<th>N/A</th>
<th>Doc</th>
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</thead>
<tbody>
<tr>
<td>A water quality assessment has been performed to determine the quality of</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>water used for irrigation purpose on the crop(s) being applied.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A water quality assessment has been performed to determine the quality of</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>water use for chemical application or fertigation method.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary, steps are taken to protect irrigation water from potential</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>direct and non-point source contamination.</td>
<td></td>
<td></td>
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<td></td>
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Sewage Treatment

<table>
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<th>NO</th>
<th>N/A</th>
<th>Doc</th>
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</thead>
<tbody>
<tr>
<td>The farm sewage treatment system/septic system is functioning properly and</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>there is no evidence of leaking or runoff.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is no municipal/commercial sewage treatment facility or waste</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>material landfill adjacent to the farm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Animals/Wildlife/Livestock

<table>
<thead>
<tr>
<th>Questions</th>
<th>Points</th>
<th>Yes</th>
<th>NO</th>
<th>N/A</th>
<th>Doc</th>
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</thead>
<tbody>
<tr>
<td>Crop production areas are not located near or adjacent to dairy, livestock,</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or fowl production facilities unless adequate barriers exist.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manure lagoons located near or adjacent to crop production areas are</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>maintained to prevent leaking/overflowing, or measures have been taken</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>to stop runoff from contaminating the crop production areas.</td>
<td></td>
<td></td>
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### Analytical Report for Microbiologica\ls

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<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Reporting Limit</th>
<th>Units</th>
<th>Dilution</th>
<th>Batch</th>
<th>Prepared</th>
<th>Analyzed</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td>Total Coliforms</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>MPN/100mL</td>
<td>1</td>
<td>T2G2714</td>
<td>07/27/12</td>
<td>07/28/12</td>
<td>SM9223B</td>
</tr>
<tr>
<td>E. Coli</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>MPN/100mL</td>
<td>1</td>
<td>T2G2714</td>
<td>07/27/12</td>
<td>07/28/12</td>
<td>SM9223B</td>
</tr>
</tbody>
</table>

**Date Sampled:** 7/27/12 12:35  **Sampled By:** [Name]  **Client:** [Client Name]  **Date Received:** 7/27/12 16:05

**Laboratory ID#:** 2G27024-01 (Drinking Water)
Previous Land Use? Write it down

What was the land used for previously
crop land, fallow? dairy, livestock, poultry farms?

What did you do to resolve possible problem
e.g., had the soil tested for bacteria

What you did to reduce the risk
e.g. dug a trench or put up a berm of soil
Horses adjacent to a farm

Make a trench or berm
Map of farm

• **Field map:**

• Map should include:
  • Crops
  • Roads
  • Wells and other water sources
  • Lakes, rivers, ponds, reservoirs
  • Ditches
  • Buildings, including semi-permanent portable toilets and break areas (designated areas)
  • Neighboring property features
Creating a map...

• Hand draw the map
• Download one from the internet (eg, Google maps, or Google earth)
• Contact your NRCS office for a map
• Re-use one previously submitted to Ag Commissioner
Know source of water
Know what is upstream
Know seasonal variation (does source change?)

Source: NRCS
Irrigation Source ?
Potential Fertilizer Contamination
Potential Fertilizer Contamination
How often should I test water?

If water source is:  
Closed source – well  
Then testing frequency is:  
Annually at beginning of season

canal, pond, river  
Every 3 months during season

Municipal water  
Keep records from district

What do water test results mean?

• Fecal coliform and generic E. coli are indicators, not pathogens

• No established standards for bacterial water quality for agricultural irrigation

• See handout and farm safety plan template for more information