



# FOOD TECHNOLOGY FACT SHEET

Adding Value to OKLAHOMA

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## Fresh Produce Production Food Safety Plan Logs and Worksheets

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### The Oklahoma Cooperative Extension Service Bringing the University to You!

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; home economics; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of Cooperative Extension are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and based on factual information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

The following worksheets are intended to serve as templates to cover most of the documentation and record keeping that will occur as part of a typical fresh produce food safety program. Not every size and type of operation will need to use every sheet, but most operations will want to capture and record most of the information these sheets are designed to document. It is expected these sheets will serve as a foundation and inspiration for further customization. For example, some operations may find it beneficial to create separate log sheets to document the cleaning and sanitation of different types of equipment or different areas within a packing facility. Separate log sheets for different washing or sanitizing tanks may be useful as well. Don't be afraid to experiment to find out what works best for your operation.

Proper record keeping protocols:

- **Always fill in information in real time.** Never fill in information after the fact. When things are busy, it is always tempting to wait to record information after performing an inspection or a test. This is a good way to introduce errors into one's documentation and sends up a red flag to third-party auditors.
- **Never falsify information.** The temptation is obvious, but the fact is inspectors and auditors will almost certainly be much more concerned about falsified information or test results than about missing data.
- **If an error is made in entering information, do not erase or obscure it.** The proper protocol to correct a mistake is to put a single line through the erroneous entry, write in the correct information and initial the change. If for some reason the correction occurs some period of time after the information is originally entered, make a note of the time/date of the correction and the reason for the delayed correction on the page.

Remember: **Record it or regret it!**

***Acknowledgement:** These worksheets were adapted from documents originally developed by Robert B. Gravani, Ph.D., Elizabeth A. Bihn, M.S., and others at the Cornell University Department of Food Science.*

### A Note on Calibration of Your Thermometer<sup>1</sup> (See worksheet on page 11)

Melting point of ice method (requires a thermometer that may be calibrated by adjusting a movable back plate on which temperature gradations appear):

1. Place ice in a container and let it melt.
2. Stir to make sure the temperature in the ice/water mixture is uniform throughout the container.
3. When the ice is partially melted and the container is filled with a 50/50 ice and water solution, insert the thermometer and wait until the needle indicator stabilizes. The thermometer should be 32°F (0°C).
4. If the thermometer is not reading 32°F (0°C), it should be adjusted by holding the head of the thermometer firmly and using a small wrench to turn the calibration (hex) nut under the head until the indicator reads 32° (0°C).

An important item to remember as you are calibrating your thermometer using the melting point of ice method is to never add water to ice to create an ice/water mixture because this mixture will not stabilize at 32°F (0°C) for some time, but will instead be at higher temperatures. The calibration will be much more accurate if you allow ice to melt to create an ice/water mixture.

<sup>1</sup>*This thermometer calibration information is taken from "Food Store Sanitation," 1998, Sixth Edition, Gravani, Robert B., Rishoi, Don C., Cornell University Food Industry Management Distance Education Program, Lebhar-Friedman Books, Chain Store Publishing Corp.*

# Worker Training Log

Name of operation: \_\_\_\_\_ Date: \_\_\_\_\_

Trainer: \_\_\_\_\_ Training Time: \_\_\_\_\_

Location: \_\_\_\_\_

Subject of training session: \_\_\_\_\_

Training method:  Video  Lecture  Handout (Check all that apply)

(Please attach any written materials to this log with a staple):

Please see the food safety plan for overall Worker Training procedures.

	Employee Name (please print)	Employee Signature
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____

SI (METRIC) CONVERSION FACTORS									
Approximate Conversions to SI Units					Approximate Conversions from SI Units				
Symbol	When you know	Multiply by	To Find	Symbol	When you know	Multiply by	To Find	Symbol	
<b>LENGTH</b>									
in	inches	25.40	millimeters	mm	mm	millimeters	0.0394	inches	in
ft	feet	0.3048	meters	m	m	meters	3.281	feet	ft
yd	yards	0.9144	meters	m	m	meters	1.094	yards	yds
mi	miles	1.609	kilometers	km	km	kilometers	0.6214	miles	mi
<b>AREA</b>									
in <sup>2</sup>	square inches	645.2	square millimeters	mm <sup>2</sup>	mm <sup>2</sup>	square millimeters	0.00155	square inches	in <sup>2</sup>
ft <sup>2</sup>	square feet	0.0929	square meters	m <sup>2</sup>	m <sup>2</sup>	square meters	10.764	square feet	ft <sup>2</sup>
yd <sup>2</sup>	square yards	0.8361	square meters	m <sup>2</sup>	m <sup>2</sup>	square meters	1.196	square yards	yd <sup>2</sup>
ac	acres	0.4047	hectares	ha	ha	hectares	2.471	acres	ac
mi <sup>2</sup>	square miles	2.590	square kilometers	km <sup>2</sup>	km <sup>2</sup>	square kilometers	0.3861	square miles	mi <sup>2</sup>
<b>VOLUME</b>									
fl oz	fluid ounces	29.57	milliliters	mL	mL	milliliters	0.0338	fluid ounces	fl oz
gal	gallon	3.785	liters	L	L	liters	0.2642	gallon	gal
ft <sup>3</sup>	cubic feet	0.0283	cubic meters	m <sup>3</sup>	m <sup>3</sup>	cubic meters	35.315	cubic feet	ft <sup>3</sup>
yd <sup>3</sup>	cubic yards	0.7645	cubic meters	m <sup>3</sup>	m <sup>3</sup>	cubic meters	1.308	cubic yards	yd <sup>3</sup>
<b>MASS</b>									
oz	ounces	28.35	grams	g	g	grams	0.0353	ounces	oz
lb	pounds	0.4536	kilograms	kg	kg	kilograms	2.205	pounds	lb
T	short tons (2000 lb)	0.907	megagrams	Mg	Mg	megagrams	1.1023	short tons (2000 lb)	T
<b>TEMPERATURE (exact)</b>									
°F	degrees Fahrenheit	(°F-32) / 1.8	degrees Celsius	°C	°C	degrees Fahrenheit	9/5(°C)+32	degrees Celsius	°F
<b>FORCE and PRESSURE or STRESS</b>									
lbf	poundforce	4.448	Newtons	N	N	Newtons	0.2248	poundforce	lbf
lbf/in <sup>2</sup>	poundforce per square inch	6.895	kilopascals	kPa	kPa	kilopascals	0.1450	poundforce per square inch	lbf/in <sup>2</sup>

*This table was adapted from Knott's Handbook for Vegetable Growers, 4th Edition, John Wiley & Sons, New York, NY, 1997.*





## Produce Tracing Log

**Name of operation:**

**Date:**

Please see the food safety plan for overall traceback procedures.

Harvest date	Crop	Field Location	Harvester Name / ID	Packing date	Packer Name / ID	Shipping date	Shipper	Customer	Initials

**Reviewed by:**

**Title:**

**Date:**

## Field Harvest / Processing / Packing Cleaning Log

**Name of operation:**

Please see the food safety plan for overall cleaning procedures and time intervals.

Date	Time	Cleaning List (check each)					Initials	
		Knives and Personal equipment	Harvest Machinery	Harvest Bins	Field Trailers	Field Tractors		Field Storage Area Inspected

**Reviewed by:**

**Title:**

**Date:**



## First Aid Kit Monitoring log

**Name of operation:**

Please see the food safety plan for overall first aid kit monitoring.

Date	Location of First Aid Kit or #	Checked & Stocked	If restocked, list added items here (band aids, ointment, etc)	Initials

**Reviewed By:**

**Title:**

**Date:**

## Washing / Cooling / Sanitizing Water Treatment Log

**Name of operation:**

Please see the food safety plan for overall water treatment procedures and testing time intervals.

Date	Time	Water pH Level	Type of Chemical Used	Tested Strength of Solution	Amount of Sanitizer Added	Type of Produce Being Run	Initials

**Reviewed by:**

**Title:**

**Date:**





## Truck Checklist

**Name of operation:**

Please see the food safety plan for overall truck checking procedures.

Date	Trucking Company	Truck clean (Y / N)	If no, state the problem (off odor, debris, etc.)	Corrective Action	Truck temp at Loading	Temp data logger in load ( Y / N)	Initials

**Reviewed By:**

**Title:**

**Date:**

## Pest / Rodent Control Log

**Name of operation:**

Please see the food safety plan for overall Pest/Rodent control procedures.

Company Used* or self	Date of Service or action taken	Type of Pest	Type of Control**	Location of Traps	Traps Checked (date)	Disposal means	Initials

\* If using a company for service, attach report or receipt of service for each of their visits.

\*\* List type of control methods used such as exclusion, traps, poison, repellants, etc.

**Reviewed by:**

**Title:**

**Date:**

## Animal Control Log

**Name of operation:**

Please see the food safety plan for overall animal/wildlife control procedures.

Date	Company / Agency Used* or self	Animal Concern (species)	Type of Control**	Action Taken	Initials

\* If using a company for service, attach report or receipt of service for each of their visits.

\*\* List type of control methods used such as exclusion, traps, poison, repellants, etc.

**Reviewed by:**

**Title:**

**Date:**

## Cooler Temperature Log

**Name of operation:**

**Cooler number:**

**Thermometer number:**

Please see the food safety plan for overall temperature control procedures and thermometer calibration instructions

Date	Thermometer calibrated date	Recorded temperature		Corrective actions taken (if necessary):	Result of corrective actions and date accomplished	Initials
		AM	PM			

**Reviewed by:**

**Title:**

**Date:**