

4-H Food Preservation

Leader Guide

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The **4-H Food Preservation project** gives 4-H members the opportunity to express creativity, practice decision-making, and learn skills that will be useful throughout their lives. As a 4-H Food Preservation project leader, you set the stage to help members:

- Learn principles of safe food preservation
- Practice food preservation techniques in canning, freezing, and drying
- Use preserved food creatively in meals and snacks
- Share what they learn in meaningful ways

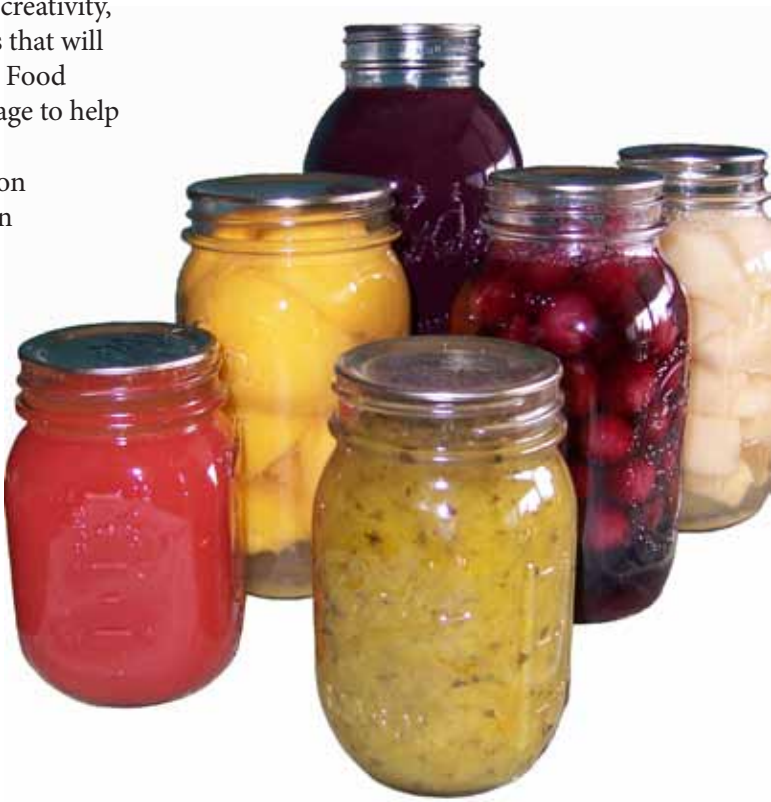
The project has three levels: Beginning, Expanding, and Advanced. Each level builds upon skills learned previously.

Members of any age who are just beginning the project should start with the Beginning Level. Members are encouraged to repeat techniques until they learn the skills. They may spend as many as 3 years in each level

to fully explore the skills and options before moving on. Learning activities in each level are outlined on pages 4–5.

The role of parents

Members at all levels need to practice techniques at club meetings. Many learning experiences take place at home as well. For some activities, safety is an important consideration, as members are working with heavy jars and canners, hot liquids, and a variety of equipment. Therefore, it is important that parents understand their role as supervisors of food preservation activities. Be sure parents receive the member handouts that discuss expectations of them and goals of the project.



Invite parents to the first meeting, if possible, and talk about the goals of the project; what members will be doing; and the number, length, time, and place of project meetings. Parents might also help with transportation to and from meetings or help with a tour or field trip.

Resource materials

Important: be sure to use the most current instructions from a reliable source when preserving foods.

- Many materials are available from your local Oregon State University Extension Service office. Most of these are in the Family Food Educator notebook.
- You can find the *USDA Complete Guide to Home Canning* on the web.
- You can buy the *Ball Blue Book of Preserving*, (Ball Corporation, Muncie, Indiana) where preserving supplies are sold. Be sure to use one that is copyright 2006 or later.
- You can find jam and jelly recipes on pectin product inserts and web sites. However, be sure to seal the jars following USDA recommendations for boiling water canning.
- More specific 4-H Food Preservation Project resources are listed for each level on the [OSU Extension 4-H web site](#) under Home Economics projects. General references on being a club leader and organizing a club can be found on the same web site under Volunteers.

In all cases, use the most current recommendations.

Club meetings

Sample meeting outlines for one project year for Beginning and Expanding Levels are included in this guide (pages 5–8). (Advanced Level members will want to individualize their learning experiences with the help of their parents and project leaders.)

Teaching techniques

As a 4-H leader, you are a teacher. If you use a variety of teaching techniques, you can stimulate and maintain interest in the project. Some of these techniques are listed here.

Demonstrations

A demonstration is **showing by doing**. You or other adults will demonstrate techniques to club members, and members might be expected to share what they have learned by demonstrating techniques to others. Plan to ask every club member to give an informal “mini-demonstration” to the club showing a skill they have learned. Doing this also gives each member an opportunity to practice speaking in front of a group.

Supervised practice sessions

Subject matter can be taught most effectively by having members practice techniques that the leader has demonstrated. To reinforce their learning, it is important for members to see and sample products soon after completing the preservation process.

Since the preservation process is often too long to complete during a meeting, you might need to examine and evaluate some products at the next meeting. You might occasionally find it worthwhile to preserve a product ahead of time. That way, a finished product can be seen and sampled by members as they preserve the same product. This immediate feedback helps keep the members’ interest.

Field trips

Field trips can be enjoyable learning experiences. Possibilities include visits to:

- Stores or stands that sell fresh produce
- Stores that sell equipment for preserving food
- Facilities that package or process fruits, vegetables, or meats

Experiments

Experiments help members explore the whys and hows of food preservation, such as:

- How does the packing method affect the color of frozen food?
- Why is light-colored fruit treated before drying?
- What effects does blanching have on the color, texture, and flavor of frozen vegetables?

Some examples of experiments are on pages 8–9.

Other

There may be other learning opportunities available in your area, such as:

- Foods and nutrition participation days
- Food preservation judging or meal contests
- Educational displays
- Special community activities

Check with your local OSU Extension Service office about possibilities.

Ways to share

Encourage club members to share their skills with others and show what they have learned. Member materials include suggestions for each of the three project levels. They may include:

- Giving presentations at project meetings, shopping areas, service clubs, farmer's markets, and outdoor cookery or backpacking group meetings
- Making displays for store windows, libraries, and schools
- Preparing meals or snacks for families and friends, using preserved foods
- Making a preserved foods gift package for someone
- Becoming a junior or teen leader or otherwise helping younger members learn food preservation techniques
- Participating in fairs or contests, such as:
 - An individual educational display
 - A club educational exhibit
 - A presentation
 - A foods contest
 - An individual exhibit

Help members check exhibit requirements in the fair premium books as they plan their exhibits or other participation. You'll find more information on preparing presentations and displays on the OSU Extension 4-H web site under **Communications**.

Topics to share through presentations and displays can be based on any of the skills or information a club member is learning. Topic examples include the following:

Beginning level

- Choosing containers for freezing
- Using canned or frozen fruits in recipes
- Selecting fruit to preserve

- Selecting and using a boiling water canner
- Selecting pectin for jam
- Important information on a label
- Making fruit leather

Expanding level

- Pretreating fruit for drying
- Reconstituting and using dried fruit
- Selecting and using a pressure canner
- Steps in making juice
- Selecting pectin for jelly
- Pretreating vegetables for freezing
- Making quick pickles or relish

Advanced level

- Choosing a food preservation method for meat, poultry, or fish
- Pickling methods
- Preparing a meal for one or two using preserved foods
- Planning a backpacking meal of dried foods
- Preparing and freezing a convenience food
- Preparing a quick meal using preserved foods
- Storage and shelf life of preserved foods
- Comparing the costs, quality, and flavor of home canned foods with store-bought foods

Evaluation

Young people often measure progress in terms of success. They feel satisfaction when they can see improvement or progress in their work. Family and friends are a source of evaluation and feedback when club members serve preserved foods at meals or snack time. Fair exhibits offer a member an opportunity to be evaluated by a qualified judge.

Self-evaluation is perhaps the most effective, because it measures self-development. You can help members informally evaluate their own accomplishments by asking them to ask themselves:

- What did I learn?
- How did I share what I learned with others?
- What shall I plan to do or learn next?

Feeling good about accomplishments can often be a better indicator of success than a blue ribbon.

An overview

Beginning Level

Skills to learn

- Making cooked and uncooked jam
- Canning fruit and tomatoes using a boiling water canner
- Freezing fruit
- Drying fruit leather
- Using preserved foods in recipes
- Selecting and using food preservation equipment
- Labeling preserved food correctly
- Keeping food safe to eat

Suggested activities to do at home

Choose at least two each year:

- Can jars of fruit and/or tomatoes. Try different berries and other kinds of fruits.
- Freeze containers of fruit. Try different berries and fruit.
- Prepare jam with added pectin, uncooked and/or cooked.
- Make fruit leather. Try different kinds of fruit or combinations.
- Prepare a dish from a recipe using preserved tomatoes.

Exhibits (optional)

Possible exhibit choices are detailed in the class descriptions of the county and state fair books. All exhibits must be accompanied by complete information and instructions/recipe for the product on the [4-H Food Preservation Exhibit Explanation card](#). Label products as described in the books.

Choose from:

- Canned fruit or berries
- Canned tomatoes (using boiling water canner)
- Fruit leather
- Cooked jam using commercial pectin
- Cooked jelly using commercially available juice and pectin
- Gift pack of preserved foods

Expanding Level

Skills to learn

- Making juice from fruits or tomatoes
- Making fruit jelly with commercial pectin
- Canning syrups
- Canning fruit pie fillings
- Canning vegetables or tomatoes using a pressure canner
- Making quick (non-fermented) pickles and relishes
- Freezing vegetables
- Drying fruits, vegetables, and herbs
- Using preserved foods in meals
- Developing a family food preservation plan
- Evaluating preserved foods

Suggested activities to do at home

Choose two or more each year:

- Make juice from fruit or tomatoes. Try different kinds of fruits.
- Make syrup from fruit juice you have extracted.
- Make jelly using commercial pectin. Try different kinds of juice.
- Can fruit pie fillings.
- Can vegetables or tomatoes using a pressure canner. Try different kinds of vegetables.
- Freeze vegetables. Try different kinds of vegetables.
- Make quick pickles from fruit or vegetables.
- Make one or more types of relish.
- Dry fruit, vegetables, or herbs. Try a variety of sizes of cut pieces depending on how you plan to use them.
- Make a family food preservation plan.
- Serve three or more preserved foods.
- Continue to label your products clearly and fully.
- Use the standards to evaluate your preserved foods for quality and safety.

Exhibits (optional)

Possible exhibit choices are detailed in the class descriptions of the county and state fair books. All exhibits must be accompanied by complete information and instructions/recipe for the product

on the [4-H Food Preservation Exhibit Explanation card](#). Label products as described in the books.

Choose from:

- Cooked jelly
- Dried fruit
- Dried vegetables
- Dried herbs
- Canned vegetables or tomatoes
- Canned pie filling
- Canned syrup or juice
- Quick pickles
- Relish
- Gift pack of preserved foods

Advanced Level

Skills to learn

- Making fermented pickles or sauerkraut
- Canning meat, poultry, and fish
- Canning a concentrated tomato product (tomato sauce or ketchup)
- Canning salsa
- Making jelly or jam without added commercial pectin
- Canning vegetable-meat combinations
- Freezing meat, poultry, and fish
- Making and freezing prepared foods
- Drying meat or poultry jerky
- Drying herbs and making a seasoning combination
- Using preserved foods in meals
- Developing a family food preservation plan
- Evaluating preserved foods

Suggested activities to do at home

Choose at least three each year:

- Can a concentrated tomato product such as tomato sauce or ketchup.
- Can meat, fish, or poultry. Try several different kinds.
- Can a combination dish that might make the basis for an easy meal.
- Make and preserve salsa by canning.
- Make jelly or jam without added commercial pectin.
- Make fermented pickles or sauerkraut.
- Freeze meat, poultry, or fish.

- Make and freeze casseroles or other dishes to make your own convenience foods.
- Dry meat or poultry jerky.
- Dry herbs and make a seasoning combination.
- Make a food preservation plan. Note the shelf life of the different products.
- Serve three or more preserved foods in meals.
- Use standards to evaluate your preserved foods for quality and safety.
- Continue to label your products clearly and fully.

Exhibits (optional)

Possible exhibit choices are detailed in the class descriptions of the county and state fair books. All exhibits must be accompanied by complete information and instructions/recipe for the product on the [4-H Food Preservation Exhibit Explanation card](#). Label products as described in the books.

Choose from:

- Canned meat, fish, or poultry
- Canned tomato sauce or ketchup
- Canned combination dish
- Canned salsa
- Dried meat or poultry jerky
- Dried herb seasoning combination
- Fermented (brined) pickles or sauerkraut
- Cooked jelly or jam without added commercial pectin
- Gift package of preserved foods

Meeting outlines

The meeting outlines on the following pages are examples. They suggest discussion topics, learning activities, and references. Adapt and modify them to fit your club members' needs and interests, available resources, and your own creative efforts. You may wish to have more than seven meetings. You can plan winter activities in addition to those for the summer food preservation season.

Members who are enrolled in a level for more than 1 year can repeat activities with a variety of products or modify them by adding new topics, learning games, or ways of sharing.

Beginning Level

Meeting 1

Before Meeting 1, make one batch of freezer jam for tasting.

Discussion

- Overview of the food preservation project: goals, activities, ways to share
- History of Food Preservation (see page 8)
- Ways food is preserved
- Kitchen safety
- Steps in making freezer jam

Activities

- Make a berry freezer jam (store until Meeting 2)
- Fix biscuits or toast and serve with the jam you made before the meeting.

References

4-H Food Preservation Beginning Level,
4-H 93310

Ways Food is Preserved, SP 50-493
Uncooked Freezer Jams, SP 50-763

Meeting 2

Discussion

- Evaluating freezer jam (from Meeting 1)
- Selecting fruit to preserve
- Choosing containers for freezing
- Steps in freezing
- Labeling frozen foods

Activities

- Freezing fruit experiment (see page 8) (Store frozen fruit until Meeting 5)

References

Labeling Preserved Foods, 4-H 93313
Freezing Fruits and Vegetables, PNW 214

Meeting 3

Discussion

- Choosing equipment for canning fruit (jars, lids, boiling water canner)
- Using a boiling water canner
- Steps in canning fruit
- Labeling canned foods

Activities

- Practice using a boiling water canner
- Can a fruit

References

Canning Equipment, SP 50-495
Labeling Preserved Foods, 4-H 93313
Canning Fruits, PNW 199

Meeting 4

Before Meeting 4, make a batch of fruit leather for tasting.

Discussion

- Evaluating canned fruit (from Meeting 3) (see page 11)
- Role of fruit in the diet (nutrients provided and amounts needed)
- Using canned fruit in recipes
- Steps in making fruit leather

Activities

- Prepare fruit leather

References

Making Dried Fruit Leather, FS 232
Canning Fruits, PNW 199
Canned Fruits and Tomatoes: Problems and Solutions, SP 50-743

Meeting 5

Discussion

- Evaluating fruit leather (from Meeting 4) (see page 10)
- Preparing tomatoes for canning
- Talk about ways to share (see page 3)

Activities

- Can tomatoes (using a boiling water canner)
- Thaw frozen fruit (from Meeting 2 experiment) and compare the batches

References

Making Dried Fruit Leather, FS 232
Canning Fruits, PNW 199
Canning Tomatoes and Tomato Products, PNW 300

Meeting 6

Discussion

- Evaluating canned tomatoes (from Meeting 5) (see page 11)
- Continue discussion of ways to share what you have learned
- Using tomatoes in recipes

Activities

- Prepare recipes using canned tomatoes and/or canned fruit

References

Any cookbook
Using Preserved Foods Safely, SP 50-494

Meeting 7

Sharing what has been learned.

Additional meetings or years

Topics to be explored at this level include:

- Cooked jams with various pectin types, including low sugar options
- A variety of fruits and berries for canning and/or freezing
- A variety of fruit or fruit combinations for fruit leather

Additional specific resources are listed on the OSU Extension 4-H web site.

Expanding Level

Meeting 1

Discussion

- Overview of the food preservation project for the Expanding Level
- Ingredients necessary for gel formation
- Steps in making jelly using canned, bottled, or frozen juice

Activities

- Make jelly with liquid and/or powdered pectin

References

Directions and recipes from pectin inserts

- MyPyramid guidelines
- 4-H Food Preservation Expanding Level, 4-H 93320
- Making Jellies, Jams and Fruit Spreads, SP 50-764

Meeting 2

Discussion

- Evaluating jelly (from Meeting 1) (see page 10)
- Pretreating fruit for drying
- Steps in drying fruit

Activities

- Pretreat fruit for drying experiment (see page 9) (Store dried fruit until Meeting 3.)

References

- Jams and Jellies: Problems and Solutions, SP 50-746
- Drying Fruits and Vegetables, PNW 397

Meeting 3

Discussion

- Evaluating dried fruit (from Meeting 2) (see page 11)
- Using dried and reconstituted fruits in meals
- Preventing botulism
- Care and use of pressure canners

Activities

- Practice using pressure canners

References

- Drying Fruits and Vegetables, PNW 397
- Enjoying Home Dried Fruits and Vegetables, SP 50-587
- You Can Prevent Foodborne Illness, PNW 250
- Using Preserved Foods Safely, SP 50-494
- Using and Caring for your Pressure Canner, PNW 421

Meeting 4

Discussion

- Selecting vegetables to preserve
- Review steps in canning
- Role of vegetables in the diet (nutrients provided and amounts needed)
- Making a food preservation plan

Activities

- Can a vegetable or tomatoes (using a pressure canner)
- Make a family food preservation plan

References

- Canning Vegetables, PNW 172
- Canning Tomatoes and Tomato Products, PNW 300

Meeting 5

Discussion

- Evaluating canned vegetables (from Meeting 4) (see page 12)
- Blanching vegetables for freezing (and drying)
- What to do when your home freezer stops
- Discuss ways of sharing

Activities

- Prepare a vegetable for freezing
- Blanch vegetables for freezing experiment (see page 9) (Store frozen vegetables until Meeting 6.)

References

- Canned Vegetables: Problems and Solutions, SP 50-742
- Freezing Fruits and Vegetables, PNW 214
- You Can Prevent Foodborne Illness, PNW 250
- If Your Home Freezer Stops, SP 50-470

Meeting 6

Discussion

- Evaluating frozen vegetables
- Using frozen vegetables in meals
- Steps in making quick pickles

Activities

- Compare batches of frozen vegetables (from Meeting 5)
- Make quick pickles

References

Pickling Vegetables, PNW 355
Analyzing Pickle Recipes, SP 50-464
Pickle Fact Sheet, SP 50-466

Meeting 7

Discussion

- Evaluating pickles (from Meeting 6) (see page 13)

Activities

- Sharing What Has Been Learned — A meal, presentation, etc.

References

Pickles & Relishes: Problems & Solutions,
SP 50-744

History of food preservation

Humans did not preserve food centuries ago. As a result, primitive humans had a very scant diet when fresh food was hard to find.

Then, one day, humans started to store seeds, grains, and nuts in caves—the earliest steps toward food preservation! Soon they discovered that meat could be kept for some time by hanging it outside to freeze in the winter or by placing it in a cold spot in a cave. Later, they found that they could dry meat by placing thin strips in the sun. Eventually, smoked meat and salted meat were added to man’s store of preserved foods.

Many centuries passed before humans started to use more sophisticated methods of food preservation. We can thank the great French General Napoleon Bonaparte for popularizing the use of canned foods. When his troops were suffering from a poor quality diet in the 1790s, he offered a reward to anyone who could invent a good method of food preservation.

The award was won by Nicholas Appert, a French candymaker. Appert packed heated food into glass bottles which he then sealed with corks.

He placed the bottles in a kettle of water and gradually heated them for varying lengths of time (depending on the kind of food being preserved). This was the foundation for our modern canning procedure.

By 1924, more and more people began to use mechanical refrigerators. This paved the way for frozen foods. Clarence Birdseye is given credit for developing quick freezing processes and for promoting the use of home freezers.

Throughout history, food preservation techniques have guaranteed humans a supply of nutritious food throughout the year.

Experiments

Packing light-colored fruit for freezing (Beginning Level)

Purpose: To evaluate the effect of packing method on the color of frozen fruit

Reference: Freezing Fruits and Vegetables, PNW 214

Prepare 2 pounds of a light-colored fruit (apples, peaches, or pears) for freezing. Divide the fruit into three batches and pack each batch a different way, as follows:

1. Syrup pack
(Add ascorbic acid or a commercial anti-browning mixture.)
2. Dry sugar pack
(Add ascorbic acid or a commercial anti-browning mixture.)
3. Dry pack (no sugar)
(Do not add ascorbic acid.)

Pack into separate freezer containers; seal, label, and freeze.

After 3 to 4 weeks, thaw and compare the color of the batches. Is the color light (like the original color), slightly brown, or very brown? Is there a difference in the sweetness?

Color of product

Syrup pack _____
Dry sugar pack _____
Dry pack _____

Discussion questions

- Are there differences in the color? Why?
- Are any of the batches too brown to serve?
- How could you use fruits packed in syrup?
- Fruits packed in sugar?

Science “Why”

Enzymes cause light-colored fruits to turn brown when they are exposed to the air. Fruits that have been treated with an anti-browning compound (such as ascorbic acid) hold their color better.

Personal preference will determine whether untreated fruit (i.e., no anti-browning compound) is too brown to serve.

Fruits packed in syrup could be served as a dessert. Fruits packed in sugar might be used for a pie.

Blanching vegetables for freezing (Expanding Level)

Purpose: To evaluate the effect of blanching on the color, texture, and flavor of frozen vegetables.

Reference: [Freezing Fruits and Vegetables, PNW 214](#)

Prepare 1 pound of Chinese or other edible-pod peas for freezing. (The experimental results are more clear-cut when this vegetable is used.) Wash the peas; remove stems, blossom ends, and strings; leave whole.

Divide the peas into two batches. Blanch one batch 2½ to 3 minutes; cool immediately. Do not blanch the second batch.

Pack into separate freezer containers; seal, label, and freeze.

After 1 to 2 weeks, thaw, cook, and compare the color, texture, and flavor.

Is the color natural or off-color? Is the flavor typical or “hay-like?” Are the peas tough or tender?

	Color	Flavor	Texture
Blanched	_____	_____	_____
Unblanched	_____	_____	_____

Discussion question

- Were there differences in the color, flavor and texture? Why?
- Science “Why”**
- Vegetables are blanched before freezing to stop the action of enzymes that cause changes in the color, texture, and flavor. Vegetables that are

not blanched before freezing often turn off-color, become tough, and develop a “hay-like” flavor.

Pretreating light-colored fruit for drying (Expanding Level)

Purpose: To evaluate the effects of pretreating on the color of dried fruit.

Reference: [Drying Fruits and Vegetables, PNW 397](#)

Prepare 2 to 3 pounds of a light-colored fruit (apples, peaches, pears) for drying.

Divide the fruit into several batches. Leave one batch untreated. Pretreat each of the other batches a different way. Choose among:

- Ascorbic acid dip
- Citric acid dip
- Salt dip
- Syrup blanching

Label each batch and dry as directed.

After drying, compare the results. Is the color light (like the original color), slightly brown, or very brown? (Members might also reconstitute the fruit and compare the flavor and texture.)

Type of pretreatment	Color of product
Example: <u>no pretreatment</u>	_____

Discussion questions

- Which method was the most effective way to prevent browning? The least effective?
- Is it always necessary to pretreat light-colored fruit before drying?

Science “Why”

Enzymes cause light-colored fruits to turn brown when exposed to air. Pretreating by dipping or blanching before drying helps prevent browning.

The method that you choose to prevent browning will depend on the fruit you are drying, the ingredients you have available, and your own personal preferences. If you don’t mind brown dried fruit, you may decide not to pretreat your light-colored fruit at all.

Evaluating Preserved Foods

Evaluating jam and jelly

See *Jams and Jellies: Problems and Solutions*,
SP 50-746

Judging score cards

Jam Check Sheet, 512-01

Juice, Jelly and Syrup Check Sheet, 512-02

Appearance

Jam

Evenly crushed or small pieces of fruit, natural color.

Fruit tender, no excessive seeds or rough skins.

Jelly

Color as nearly like the natural color as possible.

Clear and translucent; free from sediment and cloudiness.

Consistency

Jam

Soft enough to spread.

Jelly

Firm enough to hold shape yet tender and quivery.

Holds sharp edge when cut.

Container

Jam

Clean standard jar, properly labeled.

Vacuum sealed with a two-piece metal lid.

Free from cracks, rust, or other damage.

Sealing with lids by processing in a boiling water canner is required for exhibit.

Jelly

Clean standard jar, properly labeled.

Vacuum sealed with two-piece metal lid.

Free from cracks, rust, or other damage.

Sealing with lids by processing in a boiling water canner is required for exhibit.

Flavor

Characteristic of fruit(s) used; free from scorched or burned taste

Common problems/probable reasons

See *Jams and Jellies: Problems and Solutions*,
SP 50-746

Cloudy

Juice not well-strained or jelly not well-skimmed

Poured too slowly or from too great a distance
above glass

Allowed to cool before pouring in glasses

Jelly set too fast, usually because of unripe fruit

Soft

Too much juice

Too little sugar

Mixture not acidic enough

Cooking too large an amount at one time

Too little cooking

Stiff

Too much pectin

Overcooking

Crystals (jelly)

Too much sugar

Cooking too little, too slowly, or too long

Crystals on top may be caused by evaporation

Weeping (jelly)

Too much acid

Storage place too warm or temperature
fluctuation

Fermented, moldy (jelly)

Too little sugar

Too little cooking

Improper sterilization of jars or poor seal

Evaluating fruit leather

Judging score cards

Dried Foods Check Sheet, 512-06

Appearance

Appropriate and even thickness

Color appropriate for product; not overly dark

Free from large seeds, most peelings, and large
pieces of fruit

Free from mold

Texture

Leathery and pliable

Not overly sticky, crisp, or brittle

Flavor

Characteristic of fruit(s) used; free from scorched or
burned taste

Evaluating dried fruits and vegetables

Judging score cards
[Dried Foods Check Sheet, 512-06](#)

Appearance

Color appropriate for product and uniform; not overly dark; no signs of mold
Pieces are neatly cut, uniform in size and suitable for later use; free from cores and objectionable seeds or peel

Texture

Fruits
Leathery and pliable. Not overly sticky or brittle
Vegetables
Hard, brittle; dry enough to rattle

Flavor/Odor

Fruit
Similar to natural fruit; free from scorched or burned taste
Vegetables
Pleasant odor; after rehydrating should taste like fresh product

Common problems/probable reasons

Off color
Not properly pretreated
Drying at too high a temperature or too long
Too hard
Overdried
Too moist
Underdried

Evaluating meat jerky

Judging score cards
[Dried Foods Check Sheet, 512-06](#)

Appearance

Pieces thin and fairly uniform in thickness
Uniform color
All fat removed

Texture

Pieces uniformly dry; leathery but not brittle
Not hard or tough
Piece cracks but does not break when bent

Evaluating canned fruits

See [Canned Fruits and Tomatoes: Problems and Solutions, SP50-743](#)
Judging score cards
[Canned Fruit and Vegetable Check Sheet, 512-04](#)

Appearance

Fruit
Uniform in size, color, shape
Well-ripened, free from bruises or brown spots
Fresh, tender, firm
Clean-cut edges, shape well-preserved
Color as natural as possible
-No undue bleaching or darkening
-No artificial coloring
Free from mold, discoloration, or other indications of spoilage
Flavor characteristic of the fruit; not overpowered by sweetener

Liquid
Clear, bright
Free from sediment, cloudiness, and bubbles
Covers food in jar
Syrup of consistency suitable for product

Pack

A firm but not tight pack
Sufficient liquid to cover food
Fruit packed to ½ inch from top of jar
Liquid to within ½ inch from top of jar

Container

Clean standard jar
Vacuum sealed
Free from cracks, rust, or other damage
Properly labeled

Recommendations for specific fruits

Apples
Free of seeds and skin
Pared and quartered or canned as sauce
Not dark (caused by overcooking with too much sugar)
Apricots
Peeled or canned with skin left on
Not floating
Peaches
Halves packed upside down in overlapping layers
Fruit free of fuzz or skin
Pears
Pared and cut into even pieces or halves
Fruit white and firm, but tender

Rhubarb

Skin left on to give better shape and color

Common problems/probable reasons

Fruit soft and mushy

- Overripe fruit
- Overcooking

Fruit looks hard

- Underripe fruit

Product is floating

- Syrup too heavy
- Fruit overripe
- Pack too loose
- Fruit processed too long or at too high a temperature

Evaluating canned vegetables

See **Canned Vegetables: Problems and Solutions, SP 50-742**

Judging score cards

Canned Fruit and Vegetable Check Sheet, 512-04

Appearance

Vegetables

- Prime stage of maturity, tender and firm; not tough or old, woody, or mushy
- Uniform in size and shape
- Natural, clear, bright color (not unduly bleached or darkened; no artificial coloring)
- Not overcooked; shape well-preserved
- Free from indications of spoilage

Liquid

- Clear
- Free from cloudiness, bubbles, or extraneous material

Pack

- A firm but not tight pack
- Pieces well arranged to use the space to advantage
- Vegetables packed to ½ inch from top of jar (except corn, peas, and shelled beans which should be ¾ inch from top)
- Sufficient liquid to cover food and make a loose pack of greens, corn, shelled peas, and beans
- Liquid on all packs to within ½ inch from top of jar

Container

- Clean, standard jar
- Vacuum sealed
- Free from cracks, rust or other damage
- Properly labeled

Recommendations for specific vegetables

Beans

- Beans in pods not over ½ inch in diameter
- Few, if any, free beans

Beets

- Peeled, all traces of skin removed, stem end and root cut off
- A deep, even red color

Carrots

- Only young carrots used
- Scraped or pared well; smooth surface with no skin

Corn

- Distinct kernel in fairly clear liquid preferred
- Pack full, but not too dense
- Corn free from silk or pieces of cob

Greens

- Heavy stems removed
- Thoroughly washed; no dirt or grit showing in jar
- Pack full but not too tight
- Color reasonably bright green

Peas

- Clear liquid

Tomatoes

- Cut and whole tomatoes not combined
- Strained tomato juice, instead of water, preferable liquid
- A bright red color
- Free from cores and skin; seeds may show

Common problem/probable reasons

Cloudy liquid

- Starch from overripe vegetables
- Spoilage
- Minerals in hard water

Evaluating canned meats

See **Canned Meat, Poultry and Fish: Problems and Solutions, SP 50-741**

Judging score cards

Canned Meat and Fish Check Sheet, 512-05

Appearance

Meat

- Firm, normal color, free of gristle and excess fat
- Cut across grain into uniform, attractive pieces
- Moist, not overcooked

Liquid

- Gels when cold
- Preferably covers meat

Clear with little sediment (meat canned raw-pack will have more sediment than a precooked pack)
Layer of fat at top not more than ½ to 1 inch

Pack

Pieces of uniform size, appropriate to serve
Packed to within ½ to 1 inch from top of jar
Full pack, but not too tight to prevent good heat penetration in processing
Liquid preferably covers meat

Container

Clean, standard jar
Vacuum sealed
Free from cracks, rust or other damage
Properly labeled

Common problem/probable reason

Fat layer too thick
Failure to remove enough fat

Evaluating pickles

See **Pickles and Relishes: Problems and Solutions, SP 50-744**

Judging score cards
Pickles and Relishes Check Sheet, 512-03

Appearance

Fruit or cucumber
Uniform in size, color, and shape
Plump, not shriveled or soft
Natural color characteristic of the kind of pickle
No artificial color

Liquid
Clear

Pack
Full without crowding
Sufficient liquid to cover food
Liquid to ½ inch from top of jar

Container
Clean, standard jar
Vacuum sealed
Free from cracks, rusts, or other damage
Properly labeled

Common problems/probable reasons

Shriveling
Too strong brining solution
Soft or slippery
Brine or vinegar too weak
Pickles not kept covered with liquid
Scum not removed daily during brining
Jars not sealed airtight
Pickles stored in warm area

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