

Troubleshooting General Canning Problems

Best Practice for Canning:

- Use high-quality foods free of diseases and bruises.
- Use hot-pack method.
- Minimize foods' exposure to air once prepped.
- Adjust headspace as specified in recipes.
- Secure screw bands.
- Process and cool jars
- Store jars in cool, dark place and use within one year.



Problem: Cloudy liquid

Cause	Prevention
Starch in vegetables	Do not use over mature vegetables. If canning potatoes, use fresh boiling water to cover and not cooking liquid.
Minerals in water	Use soft water.
Additives in salts	Use pure refined salt, pickling or canning salt.
Spoilage	Prepare food as directed with tested recipe. Process by recommended method and for recommended time.

Problem: Loss of liquid during process

DO NOT: open to replace liquid

Cause	Prevention
Lowering pressure in canner suddenly, after processing period.	Do not force pressure down by <ul style="list-style-type: none"> • placing canner in a draft; • opening the vent too soon; • running cold water over canner. Allow pressure to drop to zero; wait 10 min. before opening after weight is removed from lid.
Fluctuating pressure during processing	Maintain a constant temperature throughout processing time.
Failure to work out air bubbles from jars before processing	Run plastic spatula or knife between food and jar before applying lids.
Imperfect seal	Use new flat lids for each jar. Make sure there are no flaws. Pretreat lids per manufacturer's directions. Use ring bands in good condition - no rust, dents, or bends. Wipe sealing surface of jar clean before applying lid.
Ring bands not tight enough	Apply fingertip-tight over flat lid, but do not over tighten.
Jars not covered with water in boiling water canner	Cover jars with 1 to 2 inches of water throughout processing period.
Starchy foods absorbed liquid	Make sure dried beans are completely rehydrated prior to canning. Use hot pack for other starchy foods.
Food packed too tightly in jars cause boil over during processing	Leave the appropriate headspace.

Problem: Product dark at top of jar

Cause	Prevention
Air left in jars permits oxidation	Remove air bubbles before sealing jars. Use recommended headspace.
Insufficient amount of liquid or syrup to cover all food in jar	Cover product completely with water or syrup.
Food not processed after filling jars and applying lids	Process recommended length of time.

This information was adapted from the National Center for Home Food Preservation and University of Georgia. For more information and recipes, go to nchfp.uga.edu

For more information, contact Benjamin Chapman
Benjamin_Chapman@ncsu.edu



Problem: Sediment in jars

Cause	Prevention
Starch in vegetables	Select products at desirable maturity stage.
Minerals in water	Use soft water.
Additives in salts	Use pure refined salt, pickling or canning salt.
Yellow sediment in green vegetables or onions	None (natural occurrence)
White crystals in spinach	None (natural occurrence)
Spoilage	Follow recipe by preparing food and processing as directed.

Problem: Imperfect seal

Discard food unless trouble was found within a few hours

Cause	Prevention
Chips or cracks in jar sealing surface	Examine carefully before applying lid. Run finger around jar mouth.
Failure to properly prepare flat lids	Follow manufacturer's directions.
Particles left on mouth of jar	Use to remove any seeds, seasonings, etc. before applying lids
Using bad ring bands	Use ring bands in good condition - no rust, no dents, no bends.
Ring bands not applies to correct tightness	Apply fingertip-tight over flat lid. Do not over tighten.
Inverting jars after processing or lifting jars by top while hot	Use jar lifter for removing jars from canner, placing below ring band. Leave jars in upright position.
Fat on jar rim	Trim fat from meats. Add no extra fat. Wipe jar rim well.



Problem: Spoilage

Cause	Prevention
Poor selection of fruits and vegetables	Select product of suitable variety and at proper stage of maturity. Can immediately after harvest if possible.
Incorrect processing temperature used	Follow proper process for product. Pressure can low acid vegetables and meats. Boiling water can most fruits, pickles, sweet spreads.
Incorrect process time	Follow research-based recommendations for canning foods. Follow directions for operation of canners and timing of processes. Do not overfill jars.
Incorrect pressure	Dial gauges should be checked every year for accuracy. Follow directions for operation of canners.
Imperfect seal on jar	Check jars and lids for defects before using. Wipe jar rim before closing. Do not overfill jars.

Problem: Undesirable color change

Cause	Prevention
Contact with minerals such as iron, zinc or copper in cooking utensils or water	Avoid by using carefully selected cooking utensils. Use soft water.
Overprocessing	Follow directions for processing times and operation of canners.
Immature or overmature product	Select fruits and vegetables at optimum stage of maturity.
Exposure to light	Store canned foods in a dark place.
May be a distinct spoilage	Process by recommended method and for recommended time.
Natural and harmless substances in fruits and vegetables (pink or blue color in apples, cauliflower, peaches, or pears)	None

Problem: Floating, especially with fruits

Cause	Prevention
Fruit is lighter than sugar syrups	Use firm, ripe fruit. Heat before packing. Use light to medium syrup; not heavy syrup.
Air trapped in food pieces	Use hot packs.
Improper packing	Pack fruit closely but without crushing it. Release trapped air bubbles. Re-adjust liquid level before applying lids. Make sure liquid covers food pieces completely.