

**BASICS**

# TROUBLESHOOTING

FOLLOW THESE STEPS FOR SAFE AND DELICIOUS CANNING RESULTS.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
<b>FRUITS AND VEGETABLES</b>		
Fruit floats in jar	Fruit is lighter than the syrup or isn't packed tightly.	Use firm, ripe fruit, which is heavier. Next time use a hot-pack method, which makes fruit heavier as it absorbs more liquid. Use a light to medium syrup. Pack fruit as firmly as you can without crushing.
Food at top of jar gets dark over time while in the jar	The food came in contact with air.	Use hot-pack method, which slightly breaks down food and ensures it will sink lower and pack better into jar. Use a thin plastic spatula or other flexible, long tool around the sides when packing food to remove air bubbles. Make sure food is completely covered with liquid when packing and always process for the recommended time in a current, reliable recipe.
Fruit gets darker	The food was not processed long enough or at a high enough temperature to inactivate.	Follow a current, reliable recipe. Start timing boiling-water canned goods only when water reaches a rolling boil, not before.
White sediment forms in the bottom of a jar of vegetables	This could simply be starch from the food or minerals in the water used. However, if the liquid is murky or the food is soft, it could be bacterial spoilage. Do not eat. A white sediment is typical for fermented foods and the food is safe to eat.	There is no way to inactivate starches in foods. Mineral deposits from water can be avoided by using soft water. Bacterial spoilage occurs when food isn't processed correctly or long enough.
Apples, pears, and peaches take on a purple to red color	A natural chemical change has occurred during the heating process.	None. The change is harmless.
Black spots form on the underside of the metal lid	Natural compounds in some foods make a brown or black deposit on the inside of the lid.	None. The deposits are harmless as long as there is no gray (which indicates mold) and there is no unpleasant or odd smell.
<b>CONDIMENTS</b>		
Foods become black, brown, or gray in jar	Natural substances in the foods may be reacting with metal kitchen tools or hard water.	Use soft water for canning foods. Use nonmetallic, nonreactive pans, bowls, and utensils. If there is any sign of spoilage or an odd or unpleasant odor, discard.
Loss of liquid during processing	Too much air in the jar before or processing wasn't done correctly.	Add the correct amount of liquid, as directed, during raw-pack recipes and measure headspace carefully. Or use a hot-pack method, which ensures less air in jar. Always slide a thin spatula around the sides of the filled jar before putting on the lid to get out air bubbles. Make sure boiling-water process jars are covered with 1 to 2 inches of water at all times during processing. Keep pressure consistent during pressure canning.

PICKLES		
<b>Soft or slippery pickles</b>	Enzymes, which soften pickles, were not inactivated or the brine and heat didn't work in preserving pickles properly.	Always cut off blossom ends of cucumbers because enzymes are concentrated there. Make sure brine is prepared correctly (measure carefully) and use pure, refined, or pickling salt. Remove scum that forms during the brining process. Cover pickles completely with liquid during any fermentation times and when processing in jars. Process all pickles in a boiling-water canner, not a pressure canner.
<b>Pickles shrivel in jar</b>	Cucumbers did not properly absorb brine.	Precisely measure salt, sugar, and vinegar and mix well before adding to cucumbers. Prick whole cucumbers before canning. Never use waxed cucumbers (you can tell by scraping your nail along the peel).
<b>Pickles darken or discolor in the jar</b>	Minerals or metals reacted with the brine or spices were too fine or left in.	Use soft water when making brine. Use nonmetallic, nonreactive pans, bowls, and utensils when making pickles. Use whole spices, rather than ground, and remove them as the recipe directs.
<b>White sediment forms in bottom of pickle jar</b>	Yeasts have developed on the surface and settled or additives in salt have settled. (If there is any sign of spoilage or odd smell, discard.)	The yeasts are harmless, as is the sediment if the amount of sediment is small. Use canning or pickling salt, which is specially formulated to be free of additives that can cloud or mar brine.
JAMS, JELLIES, AND PRESERVES		
<b>Contains crystals</b>	The amount of sugar or cooking time may have been off or the method was wrong.	Measure sugar and other ingredients precisely. Cook traditional jams the specified time. Cooking too little doesn't allow sugar to dissolve; cooking too long results in too much evaporation. If sugar crystals stick to side of pan during cooking, carefully wipe them off before filling jars.
<b>Too soft or runny</b>	Pectin, which interacts with natural and added sugar and acid, was not allowed to develop properly.	Measure sugar, pectin, and other ingredients precisely. Do not double recipes for jams and jellies. Fruit may have been overripe with too much natural sugar. The preserves may not have been boiled long enough at a rolling boil.
<b>Contains bubbles</b>	Spoilage or trapped air.	If bubbles are moving when the jar is still, the preserve has spoiled and should be discarded. If the bubbles are not moving when the jar is still, it was not ladled quickly enough into the jar. Also, pour the jam to the side of the jar, rather than directly into the center of the jar, to prevent bubbles.
<b>Mold occurs during storage</b>	Too much headspace or improper processing.	Never use a wax seal with preserves. This outdated method encourages spoilage. Process in a boiling-water canner instead. Leave a ¼-inch headspace with preserves. Measure carefully. Process for the time specified in a current, reliable recipe.
DRYING		
<b>Food darkens unattractively</b>	Drying naturally changes the color of many foods. However, exposure to air before drying can cause unnecessary darkening.	Treat foods that darken when exposed to air, such as apples and peaches, with an ascorbic acid color keeper or equal parts lemon juice and water before drying. Soak foods for 10 minutes, then drain well.
<b>Dried food molds during storage</b>	Food was not dried enough or was stored improperly.	Follow dehydrator directions exactly to ensure food is dried thoroughly. Store in airtight containers in a cool, dry place. Store oven-dried foods, which don't dry as well, in the freezer.
FREEZING		
<b>Crystals form on foods or foods have a grayish or brownish, leathery appearance.</b>	Food wasn't frozen properly or has been kept too long and developed freezer burn.	Freezer-burned food is safe to eat, but flavor or texture may be off. Prevent freezer burn by packaging food as airtight as possible. If a freezer gets above 0°F, freezer burn may occur. Keep food only as long as the recipe specifies and keep no food longer than 1 year.
<b>Rice, pasta, and potatoes in soups or other dishes are mushy after thawing.</b>	Starchy foods do not freeze well.	Choose recipes that do not contain starchy foods. Or prepare and freeze soup without the starchy food. After reheating the soup, add and cook the starchy food.