Preservation of Vegetables by Salting and Brining

Maud E. Stitt

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Preservation of Vegetables by Salting and Brining

Compiled by Maud E. Stitt—Extension Nutritionist

Salting and brining are simple inexpensive food preservation methods which may be used by South Dakota homemakers in conserving their surplus garden vegetables. Although the final product may not be as desirable as that resulting from canning or freezing, the method is most useful when a shortage of materials and labor exists.

How to Secure Best Results With Salted and Brined Products

1. Choose good quality, fresh vegetables.
2. Handle quickly and carefully.
3. Clean and scald all utensils well before using.
4. Use only pure salt, without added ingredients.
5. Choose methods best suited for vegetable to be preserved.
6. Weigh vegetable and salt accurately.
7. Blanch vegetables according to directions.
8. Keep surface scum removed from brine.
9. Keep vegetable below surface of the brine.
10. Store at 70 to 75 degrees.
Dry Salting With Fermentation

This method is best for vegetables which have a high water content and contain enough sugar to develop active acid fermentation through bacterial action.

1. Prepare vegetable according to directions on chart.
2. Pack into clean jars, crocks, kegs or barrels, distributing the salt evenly.
3. Place several layers of cheese cloth over top of container. Cover with plate or wood top.
4. Weight cover heavily, so brine reaches cover in 24 hours.
5. Store at 70 to 75 degrees for two or three weeks or until fermentation stops.
6. Remove scum every other day by carefully lifting cloth with scum clinging to it. Wash the cloth, cover and weight and replace.
7. After fermentation is completed, pack vegetable tightly into clean glass jars, fill with brine leaving ½ inch headspace. One ounce salt, two ounces vinegar, and one quart water may be made into brine to fill jars if there is not enough brine. Process in boiling water bath 25 minutes for pints and 30 minutes for quarts.
8. To prepare for table use, cook the same as for fresh vegetables.

Dry Salting Without Fermentation

Vegetables such as corn, peas, and beans are best preserved through the use of large amounts of salt or 15 percent by weight. The preserving action is due to the salt alone as harmful bacteria are unable to grow in such highly concentrated salt solutions.

1. Prepare vegetable according to directions.
2. Pack weighed vegetable and salt, distributing salt evenly.
3. Cover with clean cloth, plate or wooden top—weight with paraffined bricks or stone.
4. Make additional brine if necessary by dissolving 1½ pounds salt to one gallon water. Brine should be two to three inches over the top cover.
5. After bubbling ceases, repack into smaller containers for long storage. Add brine to the top of jar. Seal tightly. Do not heat.
6. When using the vegetable, remove salt by soaking 8 to 12 hours in fresh water. The product may be used in soups without desalting.
Brining—Weak Brine
(5% Solution and Vinegar)

Brining is used for whole vegetables and those low in water content. The use of vinegar with weak brine helps insure desirable fermentation, thereby avoiding spoilage.

1. Prepare vegetable according to directions in chart.
2. Pack into clean containers. If wood containers are used, paraffin the inside.
3. Cover with clean cloth, plate and weight.
4. Cover with brine and vinegar until weighted cover is completely covered. One half as much brine as vegetables will be needed or 5 gallons brine to 10 gallons packed vegetable.
5. Store at 70 to 75 degrees. Remove scum every other day as for dry salting with fermentation.
6. After fermentation stops, repack into jars, cover with brine and process by boiling water bath.
7. To prepare for table, rinse in cold water, cover with fresh water and cook.

Brining
(Strong Brine or 15% Solution)

1. Prepare vegetable according to directions in chart.
2. Weigh vegetable and pack firmly into clean containers.
3. Cover with cloth, plate and weight.
4. Add brine to two or three inches over cover. One half as much brine as vegetables will be needed.
5. Maintain brine strength by adding salt, placing it in center of plate or cover of container. Use 1 1/2 pounds salt to 10 pounds vegetable.
6. Store at 70 to 75 degrees, keeping brine level above the cover by adding brine as needed.
7. Keep brine free from surface growth.
8. For long storage, repack into small container after bubbling stops.
9. Remove peas and lima beans from pod before repacking.
10. Fill jars with brine. Seal tightly.
11. To prepare for table use, soak 8 to 12 hours. Cover with fresh water and cook.
**DIRECTIONS FOR SALTING AND BRINING**

All these vegetables should be stored at 70 to 75 degrees.

<table>
<thead>
<tr>
<th>Method</th>
<th>Vegetable</th>
<th>Selection and Preparation</th>
<th>Salt, Vegetable and Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dry-salt with fermentation</strong> using small amount of salt, 2½ to 5% by weight</td>
<td>Cabbage and Head Lettuce</td>
<td>Select fresh quality products. Trim outside leaves, remove cores and quarter. Shred with cutter or sharp knife.</td>
<td>10 lbs. cabbage 4 oz. pure salt</td>
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<td></td>
<td>Rutabagas and Turnips</td>
<td>Select fresh, sound vegetables, trim tops, wash and shread.</td>
<td>10 lbs. vegetable 4 oz. pure salt</td>
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<td>Green Beans</td>
<td>Select fresh, tender product. Wash thoroughly. Snip ends, break into 1 in. pieces. Steam 5 min. Cool quickly.</td>
<td>10 lbs. beans 8 oz. pure salt 8 oz. vinegar</td>
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<tr>
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<td>Beets</td>
<td>Trim tops and wash sound, fresh beets, Slice.</td>
<td>10 lbs. sliced beets 8 oz. pure salt 8 oz. vinegar</td>
</tr>
<tr>
<td><strong>Dry-salt without fermentation</strong>; large amount of salt, 15% by weight</td>
<td>Corn</td>
<td>Select fresh, tender corn. Husk, remove silks, boil 10 min.; cut from cob.</td>
<td>10 lbs. corn 1½ lbs. pure salt</td>
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<tr>
<td></td>
<td>Beans, Green</td>
<td>Fresh, tender beans. Wash, snip ends, break into 1 in. pieces. Steam 5 min. Cool quickly.</td>
<td>10 lbs. green beans 1½ lbs. pure salt</td>
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<td>Lima Peas</td>
<td>Select fresh, good quality beans. Shell. Steam 5 min. Cool quickly.</td>
<td>10 lbs. lima beans 1½ lbs. pure salt</td>
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<td>Carrots</td>
<td>Fresh, tender, sound carrots. Remove tops, wash thoroughly, pack whole.</td>
<td>½ lb. salt, 1 gal. water, 8 oz. or ½ pt. vinegar. Cover packed vegetable with solution.</td>
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<tr>
<td><strong>Brining</strong> (weak brine) 5% solution</td>
<td>Cauliflower</td>
<td>Fresh, tender, mature product. Prepare as for table use.</td>
<td>(Same as for carrots)</td>
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<tr>
<td></td>
<td>Green Beans</td>
<td>Select a good canning variety. Snip ends; use whole or in pieces. Steam 5 min. Cool quickly.</td>
<td>(Same as for carrots)</td>
</tr>
<tr>
<td></td>
<td>Beets</td>
<td>Trim tops, wash young tender beets thoroughly, pack whole.</td>
<td>(Same as for carrots)</td>
</tr>
<tr>
<td></td>
<td>Green Tomatoes</td>
<td>Select firm, good quality. Wash thoroughly. Pack whole.</td>
<td>(Same as for carrots)</td>
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<td>Greens--Kale, Mustard, Turnip, Beet Greens</td>
<td>Select young, tender, good quality greens. Wash thoroughly to remove sand. Pack entire leaf.</td>
<td>(Same as for carrots)</td>
</tr>
<tr>
<td><strong>Brining</strong> (strong brine) 15% solution</td>
<td>Corn on the cob</td>
<td>Fresh, tender. Husked and silked. Boil 10 min.; pack on cob.</td>
<td>1½ lbs. salt and 1 gal. water. Cover packed vegetable with solution. Maintain brine strength by adding 1½ lbs. salt to 10 lbs. packed vegetable,</td>
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<tr>
<td></td>
<td>Beans, Lima in pod Peas in pod</td>
<td>Select young, tender product. Wash (Same as for corn) and pack in the pod.</td>
<td>(Same as for corn)</td>
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<td></td>
<td>Beans, green</td>
<td>Select good canning variety, young and tender. Wash, steam 5 min., cool quickly. Pack uncut into containers.</td>
<td>(Same as for corn)</td>
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<td>Carrots</td>
<td>Fresh, tender sound. Remove tops, wash. Pack whole.</td>
<td>(Same as for corn)</td>
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<td>Cauliflower, whole</td>
<td>Trim firm, tender heads. Wash thoroughly. Pack heads whole.</td>
<td>(Same as for corn)</td>
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<td>Onions</td>
<td>Firm, good quality silver skin type. Prepare for table use. Pack whole.</td>
<td>(Same as for corn)</td>
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<td>Peppers</td>
<td>Sound, good quality. Wash, cut in half. Remove seeds and core.</td>
<td>(Same as for corn)</td>
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</tbody>
</table>

Information based on experimental work of Federal and State Experiment Stations.