

Lacto-Fermented Vegetables

A value-added option for the small farm



What is Lacto-Fermentation?

- Natural preservation method- 2,000+ years
- Anaerobic process
- Produces lactic acid, CO₂, alcohol, and acetic acid
- Lowers pH due to lactic acid bacteria (LAB)
- Microbes remain alive if not heated beyond 115° F
- Can be used with most vegetables and fruits

Health Benefits of Lacto-Fermented Vegetables

- Beneficial live cultures- enhancing intestinal flora
- Increases digestibility of vegetable
- Increases overall nutrients- B vitamins
- Preserves vitamin C for longer periods
- Adds unique flavors to product

Direct Marketing of Lacto-Fermented Products

Steps to Selling Lacto-Fermented Kraut, Dill Pickles

- Contact your local health department
- Understand the health code for your city, county
- If required, create the appropriate plan for production (HACCP plan- Hazard Analysis Critical Control Point)
- Ask for help from your health inspector in creating the HACCP plan
- HACCP plan would need to be submitted to Dept. of Health and Senior Services
- Commercial kitchen, sampling at the market

Making Sauerkraut

- Cut, core, and slice cabbage and slice/grate veggies (beets, carrots, fennel, garlic, etc.)
- For every 5 lbs of cabbage or vegetables, add 2 ½ TBS pure sea salt/canning salt
- Massage with hands or commercial mixer until moisture begins to flow



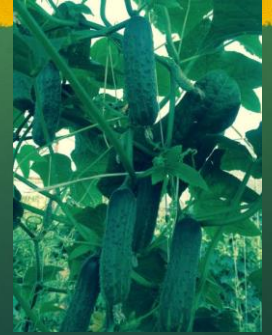
Making Sauerkraut

- Pack very tightly into container
- Set plate to hold kraut under brine and add weight and tea towel to cover
- Check daily and skim surface as needed
- Add brine as needed to keep water level above plate
- Ferment at 68°-72°F for 3-6 weeks
- Skim any mold or growth from top of brine before cleaning and removing plate
- Pack into sterilized jars, hand tighten, and refrigerate to slow fermentation



Lacto-Fermented Dill Pickles

- Use fresh pickling cucumbers only
- Select 3-5 inch cucumbers, store at 45°-55°F
- Remove/scrape blossom end
- Wash cukes in cold water



Lacto-Fermented Dill Pickles

- Make a salt brine with non-chlorinated water
- 3 TBS sea salt/canning salt per 1 quart water. Set aside.
- Gather dill, whole garlic cloves, and oak, grape, cherry, or horseradish leaves
- Layer cucumbers and other ingredients evenly in container
- Add brine to cover and place plate and weight on top leaving 2 inches of brine above plate
- Ferment at 65°-70°F for 6-14 days
- When finished store in refrigeration to slow fermentation



References

- [The Art of Fermentation](#) by Sandor Katz
- [Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods](#) by Sandor Katz
- Nancy Beyer- Quality Assurance and Recall Coordinator for the Bureau of Environmental Health Services, Missouri Department of Health and Senior Services; nancy.beyer@health.mo.gov; (573)751-6090
- Rachelle Kuster- Environmental Public Health Specialist for the Bureau of Environmental Health Services, Missouri Department of Health and Senior Services; Rachelle.Kuster@health.mo.gov; (573)751-6095