#### College of Agricultural, Consumer and Environmental Sciences

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#### Preserving Green Chile Peppers: Freezing, Drying, Freeze Drying, and Canning Presented By NMSU Master Food Preservers

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#### WELCOME!

- Four-part green chile presentation by NMSU FCS Agents/Master Food Preservers.
- Participants are joining from around Arizona,
   California, New Mexico, and Texas.
- Please let us know if you have any questions by using the chat feature or raising your hand emoji.
- A recording along with the slides will be available on our county Extension websites at the end of October.



# Quick Review on Freezing

- After roasting, skins may be removed before freezing.
- Chile can remain whole or chopped.
- Cool chile to 70°F within 2 hours and below 40°F within 4 hours of roasting. Freezing should happen within 3 days.
- Air is not our friend use freezer bags, vacuum sealed bags, or freezer-safe containers no more than 2" deep.
- Keep frozen food at or below 0°F.
- LABEL.
- For best quality eat frozen chile within a year, just in time for the new season.



#### **FUN FACT Session 1 Winner**

Thank you for participating in our October 1<sup>st</sup> Session on Freezing Green Chile. We are delighted to announce our winner of the session:

# Sandy Gomez



Photo Source: The Chile Pepper Institute

Drying Chile: Sun Drying and Dehydrating





#### **BEFORE YOU START**

- Drying is one of the oldest methods of food preservation.
- When drying foods, the key is to remove moisture as quickly as possible at a temperature that does not seriously affect flavor, texture and color of the food.
- When choosing a chile for drying purposes, start with a mild to medium heat pod. The smaller the pods of chile, the higher the degree of pungency.
- Ensure chile is roasted and peeled before the drying process.
- Remember to freeze, cook, refrigerate, or dry your roasted chiles within 2 hours of roasting.
- Drying will take anywhere from 6-8 hours by dehydration and 2-3 days in direct sunlight.

<sup>\*</sup>depending on age of chile, moisture of chile, humidity, sun exposure/overcast



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# Food Safety Concerns for Drying Green Chile

- Always wash your hands thoroughly before and after handling chile.
- Use clean equipment and utensils.
- When drying if the temperature is too low in the beginning, microorganisms may survive and even grow before the food is adequately dried.
- Mold: mold can grow and spread quickly. Mold releases spores into the air even when it is dry.
- Listeria: disease-causing bacteria that can survive and grow in both low-moisture and dry food processing environments.
- Salmonella: this bacteria survives in dried foods and causes foodborne illnesses. Can contaminate food through raw ingredients.
- RAW FOOD- even packages you buy at the store now have a warning label that the green chile is raw.
   Roasting is <u>NOT</u> cooking.



#### PREPARING CHILE

- Chile has a tough outer skin, one reason to roast and peel chile.
- When preparing chile, practice food safety.
  - Oven Broiler: 450°F for 6-8 minutes or until skins are blistered.
  - Stove Top: Use cast iron on medium heat until skins are blistered.
  - Grilling: 450°F on a grate over the open flame until the skins are blistered.
  - For large quantities use commercial roasting
  - Remember to freeze, cook, refrigerate, or dry your roasted chiles within 2 hours of roasting.
  - Roasting is not considered cooking, to be cooked, chile needs to reach an internal temperature of 135°F.
- Remember to protect yourself when peeling the skin of the chiles by wearing gloves, washing hands, and not touching your eyes or skin. When changing tasks, you should change your gloves too.



(© David Gilder | Dreamstime.com)



# QUESTION OF THE DAY

The question of the day is brought to us from last week's webinar.

# DO ALL CHILE'S TURN THE VARIOUS SHADES OF COLORS?





#### **ANSWER**

If a green chile is allowed to remain on the vein, it will continue to ripen and eventually turn RED.

Due to the chlorophyllin, which gives us the green color, and the production of carotenoids, which are pigments responsible for the red hues in fruits and vegetables, you may find your chile turns different hues of orange and red.

If they are ornamental chile, they can turn yellow or brown. At the same time, Chilaca Chile can range from green to a dark chocolatey brown.





## Sun Drying

- Sun drying was used by Native Americans for preserving many fruits and vegetables and is still used today.
- Weather must be satisfactory for drying in the sun.
- As the weather is uncontrollable, sun-drying can be risky, and the process can take several days.
- Research shows that dehydrating chile results in a better color and texture than sun drying.



### Sun Drying Techniques

- 1. Select full-grown chile pods.
- 2. Wash, roast, and peel pods.
- 3. Slit the pod length-wise, while removing seeds and stem.
- 4. Spread chile pods in a single layer on racks or trays.
- 5. Cover trays with netting, screen, or glass to keep out dust and insects. Keep in mind that glass will increase the suns heat.
- 6. Tilt trays to face the sun and rotate during the drying process to ensure trays are always in direct sunlight.
- 7. While processing ensure you flip chiles occasionally.
- 8. Bring trays inside overnight. If you want to leave them outside, stack trays and cover with cloth to prevent chiles from getting wet by the morning dew.

9. The process will take 2-3 days in direct sunlight. Once completed, the chile should be

crisp, brittle, and medium-green in color.



## Dehydrating

- Research shows that dehydrating chile leaves a better color and texture than sun drying.
- The process takes hours rather than days.
- Remember Green Chile that has only been roasted and peeled is RAW FOOD.





## **Dehydrating Techniques**

- 1. Select full-grown chile pods.
- 2. Wash, roast, and peel pods.
- 3. Slit the pod length-wise, while removing seeds and stem.
- 4. Boil on low heat for 5 minutes and remove from heat.
- 5. Spread chiles in single layers on cheesecloth (optional) on racks or trays.
- 6. Dehydrate at 140°F.
- 7. The process will take 6-8 hours, or until chile is translucent







### Storage

- Air is not our friend!
- Store in zip-top air-tight bags or vacuumsealed bags
- Store out of direct sunlight.
- To protect from rodents and insects, it would be ideal to store bags in a tin or jar.
- Do not forget to label your preserves.
- For best quality, use within a year.





# How to Use Dried Green Chile

- 1. Grind the dry chile into powder and use it in seasoning mixes or on its own.
- 2. Ship packages to family and friends for half the cost.
- 3. Add to soup or stews.
- 4. Reconstitute and make delicious meals.









Photo Source: Food.com



Photo Source: Happy Simple Living



#### Reconstitution

- 1. Put the chiles in a bowl and cover with boiling water or broth. You can weigh them down using a plate to keep them submerged.
- 2. Stir occasionally to ensure even rehydration.
- 3. Soak for 15-30 minutes\*, or until chiles are soft. If you soak longer than 30 minutes, this can weaken the flavor.

\*Length of time various on the chile size.

\*\*Discard the soaking liquid, this may taste bitter.



# QUESTIONS?



#### THANK YOU!

Please take a few moments to complete our survey. There are two ways to take the survey:

Access the link:

https://acesnmsu.az1.qualtrics.com/jfe/form/SV\_9mcMQbYeV4PJkrk

Scan the QR code:





#### RESOURCES

University of Arizona. College of Agriculture and Life Science Extension Publications C221-1954 (2024).

http://hdl.handle.net/10150/312549

National Institution of Health (NIH) (2024). <a href="https://www.ncbi.nlm.nih.gov">https://www.ncbi.nlm.nih.gov</a>

New Mexico State University (2024). Chile Pepper Institute. <a href="https://cpi.nmsu.edu/">https://cpi.nmsu.edu/</a>

New Mexico State University Canning Green Chile Publication Guide E-308 (2015). https://pubs.nmsu.edu/ e/E308/

New Mexico State University Drying Foods Publication Guide E-322 (2016).

https://pubs.nmsu.edu/ e/E322/

