Making Jams, Jellies, & Fruit Preserves

Lunch & Learn

12 noon to 1 pm

June 16, 2014

UW Extension
Cooperative Extension

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  http://fyi.uwex.edu/safepreserving/webinars/

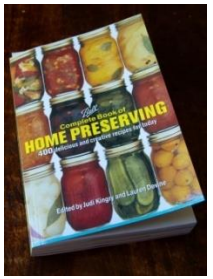
Making Jams, Jellies & Fruit Preserves

- Delicious fruits at the peak of ripeness? Time to make fruit spreads!
- Start with the right ingredients:
  - **Fruit** – fresh and (most often) fully ripe fruit; or try canned or frozen fruit
  - **Pectin** – a plant carbohydrate (fiber) that can form a gel
  - **Acid** – essential for gel formation and flavor
  - **Sugar** – aids in gel formation and is a preservative

Fruit can provide: fruit, pectin and acid all in one!

Resources for Today

- Making Jams, Jellies & Fruit Preserves (B2909; UWEX)
  - Excellent low-sugar recipes! http://fyi.uwex.edu/safepreserving/
- National Center for Home Food Preservation
  - How do I….Make Jam & Jelly www.uga.edu/nchfp
  - With and without added pectin, remaking product, solving problems, low- and no-sugar spreads.
- So Easy to Preserve www.setp.uga.edu
- *Ball* Complete Book of Home Preserving
  - www.freshpreserving.com (Ball website)



Fresh Preserving (*Ball* Canning)

www.freshpreserving.com

Try something new. Preserves are no longer just fruit-based spreads.

- Carrot Cake Jam
- Champagne Blush Jelly
- Fresh Herb Jelly
- Ginger Pear Preserves
- Kiwi Daiquiri Jam
- Mom's Apple Pie in a Jar
- Orange Chili Marmalade
- Strawberry Lemon Marmalade
- Strawberry Margarita Preserves, and more!

What's in a name?

- **Jam** –thick, smooth mixture of fruit and sugar
- **Fruit butter** - smooth, creamy spread made by slowly cooking fruit pulp and sugar
- **Preserve** – chunks of fruit suspended in a soft jelly
- **Conserve** – combination of fresh and dried fruits and nuts
- **Marmalade** – a suspension of fruit peel and pulp
- **Jelly** – clear juice suspended in a tender gel

Fruit

Fruit is usually used at the peak of ripeness

- Don't be tempted to use overly ripe or rotten fruit
- Under-ripe fruit **can** aid in gel formation

- Using canned fruit – use unsweetened fruit canned in juice, drain before using/measuring
- Using frozen fruit – use fruit frozen without sugar
- Proportions are critical when making jellied fruit products! Careful measuring is key.

Pectin

Pectin is a natural plant carbohydrate (fiber) that, when added to the right amount of sugar, acid, and fruit, allows a gel to form (usually on heating).

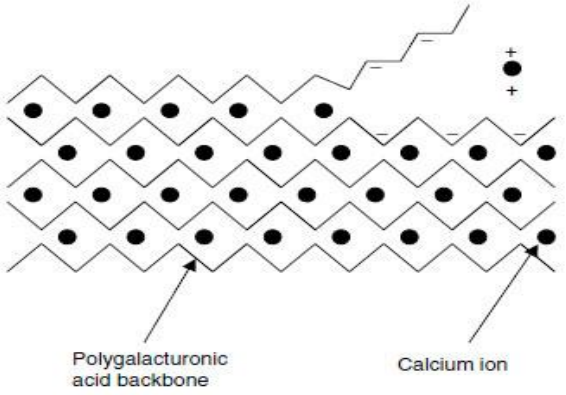
- Some fruits have enough natural pectin* to gel.
- Add pectin to other fruits to ensure a good gel, increase yield, speed the cooking process, and allow for the use of very-ripe fruit.
- Liquid and powdered pectin can not be used interchangeably. Use a recipe designed for the type of pectin you have.

*Fruits that don't necessarily need added pectin to gel:
sour apples and blackberries, crabapples, cranberries, currants, gooseberries, Concord grapes, lemons, loganberries, plums, quince

Types of Pectin

Pectin molecules bind a liquid into a solid by bonding together and forming a network that traps the liquid in interstices – the egg box structure.

- Regular sugar (high methoxyl) pectin –
  - sugar is necessary for molecules to bond together
- Low sugar (low methoxyl) pectin –
  - pectin is modified so not as much sugar is needed
  - Calcium is important



More About Pectin

- Regular pectin: gel forms at pH 3.4 or lower <u>if</u> sufficient sucrose (sugar) is present
- Low-sugar pectin: gel formation relies on the proper amount of sugar <u>and</u> calcium (Ca^{2+})
- No-sugar pectin: relies on Ca^{2+} for gel formation
  - Pomona pectin is available in some natural foods outlets
- Amount of pectin varies by fruit, by tissue within the fruit, and by maturity

Acid

- Acid is also necessary for pectin to form a gel. It allows the pectin molecules to come together and form the eggbox structure that will entrap liquid.
- Acid adds flavor!
- Some fruits provide the acid, e.g. crabapples and unripe berries.
- Acid is added in the form of bottled lemon juice.

Sugar

- Sugar imparts flavor, is essential for a gel formation with certain types of pectin, it adds texture and preserves color.
- Measure sugar carefully!
- Honey can be used to replace some of the sugar. For modifications see p. 7 of Making Jams, Jellies and Fruit Preserves
- Use Splenda or other sugar substitutes in recipes specifically designed for their use. Search www.splenda.com
  - cherry, raspberry, plum, peach, triple berry and more!

For Success…Boiling Water Canning

- The final ‘step for success’ when making jellied fruit products is canning
  - Helps form a seal
  - Destroys yeast and mold
  - Extends shelf life

- Use standard canning jars w/ 2-piece lids
- Fill sterilized ½ pint jars with hot fruit
- Process 5 min.- time begins once water boils

Other jar sizes or types are not recommended

A Word about Freezer Spreads

- Refrigerator/freezer spreads are the easiest way to begin – little cooking required and no boiling water canning
- May use other gelling agents, i.e. jello (gelatin)
- May use low-sugar or no-sugar pectin

➔Success is not guaranteed!

➔No-cook jams may be ‘grainy’

Substitutions

- Berry spreads can be made with a variety of fruits: strawberries, raspberries, blackberries
- Substitute peaches for nectarines; apples for pears; unsweetened canned or frozen fruit in place of fresh

Caution:

- Don’t add extra low-acid ingredients like chocolate, carrots, or hot peppers.
- Don’t substitute one type of pectin for another.
- Don’t substitute low-acid squashes for acid fruits in fruit butter, e.g. pumpkin butter

Challenges!

The right ingredients, used in the correct amounts, are critical for success!

- Spread too soft ➔ not enough pectin/sugar
- Spread too firm ➔ too much pectin/sugar
- Spread fails to set ➔ too large a batch, fruit too ripe, wrong type of pectin, spread cooked too long (or not long enough). See p. 15 of Making Jams, Jellies & Fruit Preserves for re-make instructions.
- Fruit floats ➔ fruit under-ripe, sugar content too high.
  - Hint: Allow jam to sit for 5 minutes before ladling into hot jars (and while you skim the foam)!

What's new?

- Ball FreshTECH Automatic Jam & Jelly Maker ($100)
  - All you have to do is cut up fruit and measure ingredients. The stirring and cooking are done for you in this electric appliance.
  - Waterbath canning not included, but **still necessary**.

What's new?

- Soft spreads made with ClearJel (not pectin)
  - Recipes: http://fyi.uwex.edu/safepreserving/recipes/
  - Use this technique for preparing large batches, especially of low-sugar spread.
  - But the end result is softer, more like pie filling.
- Try a steam juicer for clear juice for jelly.
  - Hint: Use the pulp to make apple,

  Pear, cherry, or blueberry butter.

A Fun Workshop Idea!

Which strawberry jam is best?

- Regular strawberry jam–
  - www.freshpreserving.com
- Low sugar strawberry jam –50% reduced
  - p.48 Making Jams, Jellies & Preserves (B2909)
- Very low sugar strawberry jam -75% reduced
  - "Using Clear Gel for Low Sugar Jam"
  - Clear gel is a modified corn starch, not pectin

Next …in our Lunchtime Learning series

June 30, 2014

12 noon – 1 pm

Drying Fruits and Vegetables at Home

Drying foods can be fun! Learn how to get started using this easy food preservation method.

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