CANDY MAKING

SWEETS FOR

THE

SWEET TOOTH!
For more information regarding the Candy Making project in Stephenson County, contact the Stephenson County Extension office at 815-235-4125

The Stephenson County “Candy Making – Sweets for the Sweet Tooth!” 4-H project manual was coordinated by Bev Haselhorst, Educational Programs Coordinator and Foods Superintendent. Credit is given to various University of Illinois Publications. In addition, portions of the following counties’ Candy Making manuals were used:

- Bureau County
- Grundy County
- Kendall County
- LaSalle County

Written January 2000

S:Kim/Candy Manual.doc
Mmmmmm...
Let’s Make Candies

“Candy Can Be More Than Calories”

Everyone likes a tasty treat to satisfy their “sweet tooth”, and most often it will be a food containing a large proportion of sugar.

Candy is the most concentrated sweet food, but it doesn’t have to provide only “empty”, non-nutritious calories. Many candies that you can make very easily contain ingredients that provide protein, calcium, and other nutrients. Candy should not be a major source of nutrients, as you would have to eat too much of it, but it can be a useful supplement if nutritious recipes are chosen. Watch for such ingredients as peanut butter, oatmeal, nuts, milk, gelatin, and fruit.

CANDIES

Candies are usually divided into two basic classes: crystalline and non-crystalline. We will also be using three additional classes of candy and candy treats. They are uncooked candies, cereal candies, and microwave candies.

Uncooked & Semi-cooked ................. Candies that are uncooked or semi-cooked.

Cereal ....................................... Candies that include cereal in the recipe.

Crystalline or creamy...................... Candies that have a distinct crystalline structure such as fondants, fudges, penuche, divinity.

Non-crystalline or amorphous .......... Caramels, peanut brittle, butterscotch, hard candy, lollipops, marshmallows, gum drops.

Microwave ................................. Candies that fall in one of the above classes, but are also prepared using a microwave oven.

The type of candy made is determined by the ingredients used, the degree of cooking, and the manipulation after cooking.
EQUIPMENT

No equipment is necessary other than that usually found in the kitchen. Candy-making however, can become even easier by using certain special equipment, most of which can be obtained at reasonable cost. Equipment generally needed for candy-making is as follows:

1. Candy thermometer (Fahrenheit)
2. Marble slab, approximately 2’ x 2’ x 1” (optional)
3. Electric mixer or beater
4. Standard measuring cups and measuring spoons
5. Heavy saucepans with straight sides (deep saucepans are desirable because liquid evaporates to fast in shallow pans).
6. Double boiler
7. Bowls of various size
8. Wooden spoons with long handles
9. Spatulas, at least one broad spatula with steel blade that does not bend easily.
10. Knives for cutting candy and chopping nuts
11. Food grinder and grater
12. Various size pans and baking sheets
13. Airtight containers for storing candy

Note – Along with the above equipment you will need waxed paper, aluminum foil and plastic wrap.

Note – A porcelain table, shallow pan, or large platter can be used instead of the marble slab, although the marble is better.

Most of the necessary equipment is readily available. We do not, however, recommend a large investment in equipment unless one intends to make candy commercially.

Major Ingredients

Quality ingredients are important in candy-making. Sugar or some substance high in sugar is the basis of all common candies. Syrup is the supporting player to sugar in candy-making. Give syrups credit for the creamy smoothness of fudge, divinity and penuche.

Here’s how sugar and syrup work together: it’s natural for sugar, combined with a liquid like milk or water, to be grainy or sugary after cooking. Sugar is sucrose, which dries out and re-crystallizes. Corn syrup, on the other hand, is an invert sugar. Instead of drying out, candies that contain sufficient amount of invert sugars absorb moisture from the air and do not re-crystallize. Also during cooking they invert some of the sucrose. What corn syrup does is help prevent the formation of large sugar crystals.
Other food substances, such as lemon juice, cream of tartar and vinegar also keep candy from becoming sugary, but they’re not as dependable as corn syrup.

Other ingredients such as butter or margarine, cream, canned milk, flavorings and extracts, chocolate, nuts, fruits, marshmallows and marshmallow crème, and gelatin alter the flavor and may also alter the texture.

**Table of Weights and Measures**

- 1 lb. granulated sugar = 2 cups
- 1 pint granulated sugar = 2 cups
- 3 teaspoons granulated sugar = 1 tablespoon

**Tips On Making Perfect Candy**

1. Choose a heavy cooking pan large enough to let sugar syrup boil freely.
2. Prevent formation of sugar crystals. If recipe calls for butter, use it to grease sides of pan before adding other ingredients. Stir sugar thoroughly before placing the mixture over heat. During cooling do not stir or agitate unless recipes calls for stirring.
3. Measure ingredients accurately using standard measuring cups and spoons.
4. Watch candy closely.
5. Test candy carefully. A dependable candy thermometer takes the guess-work out of testing. To get an accurate reading be sure candy is bubbling all around the bulb, and bulb is not resting against metal pan. Use cold water if you don’t have thermometer. Drop a small amount of candy from spoon into very cold water in a cup. Be sure to remove candy from heat as you test. Use clean spoon for each test. See chart.
6. Be patient about cooling. Don’t beat the candy before it has cooled to 110° F. or when the saucepan feels lukewarm.
7. Beat steadily, not furiously. If possible, have a second person to help beat.
8. When it rains or humidity is high, cook a degree or so higher than recipe calls for.
# Table of Temperatures and Tests in Sugar Cookery

<table>
<thead>
<tr>
<th>Product or Use</th>
<th>Temperature</th>
<th>Stage Conclusion</th>
<th>Behavior Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syrup</td>
<td>230 - 234° F</td>
<td>Thread</td>
<td>Spins 2” thread when dropped.</td>
</tr>
<tr>
<td>Frosting</td>
<td>236 – 238° F</td>
<td>Thread</td>
<td></td>
</tr>
<tr>
<td>Fondant, Fudge, Penuche</td>
<td>234 – 240° F</td>
<td>Soft Ball</td>
<td>Syrup when dropped into cold water forms soft ball that flattens.</td>
</tr>
<tr>
<td>Caramels</td>
<td>244 – 248° F</td>
<td>Firm Ball</td>
<td>Syrup when dropped into cold water will form firm ball, which doesn’t flatten.</td>
</tr>
<tr>
<td>Divinity</td>
<td>250 – 265° F</td>
<td>Hard Ball</td>
<td>Syrup dropped into cold water forms a hard ball that is plastic, yet holds its shape.</td>
</tr>
<tr>
<td>Marsh, Toffee, Popcorn balls, Butterscotch Taffy</td>
<td>270 – 290° F</td>
<td>Soft Crack</td>
<td>Syrup dropped into cold water separates into threads that are hard but not brittle.</td>
</tr>
<tr>
<td>Brittle, Glace</td>
<td>300 – 310° F</td>
<td>Hard Crack</td>
<td>Syrup dropped into cold water separates into hard threads and is brittle (cracking sound).</td>
</tr>
<tr>
<td>Barley Sugar</td>
<td>320 – 338° F</td>
<td>Clear Liquid</td>
<td>Sugar liquefies.</td>
</tr>
<tr>
<td>Caramelized Sugar</td>
<td>310 – 338° F</td>
<td>Brown Sugar</td>
<td>Sugar turns dark golden but will blacken at 350° F.</td>
</tr>
</tbody>
</table>
**Uncooked, Semi-Cooked and Cereal Candies**

Confectioner’s sugar can be used as the main ingredient to make uncooked candies similar to fondant and fudge. The sugar is combined with table fat and ingredients such as corn syrup, concentrated milk products, cream, water, fruit juice, melted chocolate, coconut, peanut butter, chopped nuts or other foods and a variety of flavorings. Cereal is often used as another main ingredient.

Recipes for candies that might be called semi-cooked are also available. Granulated sugar, table fat and evaporated milk can be boiled for a definite period such as four to six minutes and then poured over cold ingredients such as cereal, chocolate, marshmallow crème, and nuts. Such methods may be more convenient, especially for beginners than traditional candy recipes.

**Crystalline Candies**

Many of the finest crystalline candies can be made at home inexpensively. There are many possible variations of the three basic crystalline sugar products:

- **Fondants** ............. made from sugar and water.
- **Fudges** ............... made from sugar, milk and usually butter, plus other flavoring ingredients.
- **Divinities** ............ made from sugar, water and egg whites.

To make any of the basic crystalline sugar products you will follow three main steps:

1. Dissolve sugar in liquid.
2. Concentrate the solution by boiling off part of the liquid.
3. Re-crystallize the sugar from the concentrated liquid.

The quality of the final candy is determined by the size of the new crystals formed in step 3. They should be small and numerous that they cannot be detected as the product is eaten. The candy should be smooth, creamy and velvety. Poor quality products are coarse, grainy, sugary or gritty.

You can control the size of sugar crystals if you understand some of the factors affecting crystal formation and observe a few simple precautions at each step. The sample principles apply when your goal is to prevent re-crystallization of dissolved sugar as in jellies and non-crystalline candies such as caramels, taffies, brittle’s, etc.
I. HOW CRYSTALS FORM

Crystals form when materials from a solution begin to collect on small particles called nuclei. When there are many small nuclei present the resulting crystals are numerous and small. Crystals build on large nuclei in preference to small nuclei. Even a few large nuclei, such as two to three grains of undissolved sugar can result in coarse crystals.

Crystals are smallest when crystallization is completed rapidly. Conditions should be controlled to assure rapid and complete crystallization in sugar products.

II. CONTROLLING SIZE AND NUMBER OF CRYSTALS

A. Step 1 – Dissolving Sugar

1. Ingredients
   A good tested recipe will have sugar, liquid and other ingredients in the best proportion for small crystal formation as well as for good flavor.

   **Sugar** (sucrose) and liquid are the two essential ingredients for crystalline sugar products. During cooking, some of the sucrose is changed to invert sugar which is a mixture of sucrose, glucose and fructose. The glucose and fructose sugars do not crystallize as easily as sucrose, and the crystals are small. These smaller crystals help ensure a smooth creamy product. If too much inversion takes place the product may be soft and sticky, or crystallization may be prevented.

   Ingredients other than sugar and liquid are used in recipes in relatively small amounts. Most of these other ingredients not only add distinctive flavor and texture to the products, but also help control crystal formation.

   Brown sugar, corn syrup, honey, molasses and maple syrup contain some invert sugar before cooking.

   Acids such as cream of tartar and vinegar help change sucrose to invert sugar.

   Brown sugar and sugar syrups contain small amounts of acid.

   Other ingredients control crystal growth by literally coating and getting between the small crystals. Fat in cream, butter and evaporated milk, dextrin’s in corn syrup, proteins in milk and egg white, chocolate, gelatin, pectin and air all interfere with crystal formation.
2. Complete solution of the sugar

Undissolved sugar crystals act as nuclei for large coarse crystals in candy. Complete solution of the sugar prevents this “seeding” process from occurring.

a. Fine sugar dissolves more readily than coarse sugar.
b. Constant stirring at the beginning of the cooking period help dissolve sugar before the solution begins to concentrate.
c. Placing a cover on the pan for the first two or three minutes of boiling traps the steam, which washes down any sugar crystals from the sides of the pan.
d. During the last stages of boiling, crystals may be washed from the sides of the pan with a damp cloth wrapped around a fork or with a wet pastry brush.

B. Step 2 – Concentrating the Solution

1. Right degree of concentration

Water boil at 212°F. When other substances are dissolved in water the boiling point is higher. As sugar syrup boils, water evaporates, the solution becomes more concentrated, and the temperature rises. The temperature of the solution is an important guide to the proper concentration. The temperature for most crystalline sugar products is between 230° and 240°F. For divinity fudge the temperature should be higher – 250° to 266°F.

The traditional cold water test for candy is also a good guide to the right concentration. Fondant, fudge and penuche are boiled to the soft ball stage: the syrup, when dropped into very cold water, forms a soft ball which flattens on removal from water. Divinity and other egg white products are cooked to the hard ball stage: the syrup, dropped into very cold water, forms a ball which is hard enough to hold its shape, yet plastic.

The exact temperature varies with the proportion of ingredients in the recipe and with the atmospheric pressure and humidity. Experienced cooks use both the temperature and the cold water test to be sure of the proper concentration.

2. Rate concentration

Boiling slowly to the proper concentration allows time for complete solution of sugar and for enough inversion of sucrose to occur. Boiling too slowly, however, may result in too much invert sugar.
C. Step 3 – Re-crystallizing the Sugar

1. Cooling

Fondant, fudge and penuche candies are cooled before beating. Cooling helps ensure the rapid formation of many small crystals.

a. A saturated solution is one in which the liquid has dissolved all the material it can hold at a given temperature. Concentrating sugar and liquid by boiling ensures a saturated solution. When the solution is cooled below the saturation temperature it is called supersaturated solution. When a saturated sugar solution is cooled it actually holds more sugar than it normally would at that temperature.
b. Crystallization can occur only from a supersaturated solution.
c. The greater the degree of supersaturation the faster the smaller and more numerous the crystals.

Egg white candies are not cooled before beating, but the same principles of supersaturation apply. Because the mixture is boiled to a higher temperature than other crystalline sugar products, supersaturation occurs at a higher temperature. In addition, the egg white and air beaten in, interfere with crystal growth.

2. Agitation

a. Beating

Constant beating is essential for rapid formation of small crystals.

Agitation or beating starts crystal formation from the supersaturated solution. Mixtures should be cooled undisturbed to prevent crystals from forming too soon. Once beating is begun it should be uninterrupted. If beating is stopped momentarily, crystallization continues, but existing crystals build up instead of new crystals being formed.

b. Kneading

Kneading after beating makes candies stay soft and creamy during storage.

When the mixture is too stiff for beating, agitation may be continued by kneading with the hands. Fondant, fudge and penuche will be creamier and smoother if kneaded.
During kneading, crystallization is continued from small amounts of solution trapped in the stiff mixture. If not kneaded, this trapped solution will continue to crystallize on existing crystals. The candy becomes harder and graininess during storage.

It is interesting to note that heat is formed as crystallization occurs. A sudden warming and softening may be noticed just as crystallization begins. Beating or kneading until the mixture is cool is a good indication that crystallization is complete.

**NON-CRYSTALLINE CANDIES**

After they have been cooked, candies in this group become firm without forming crystals. In contrast to the crystalline candies that have been discussed, the non-crystalline candies are sometimes said to be amorphous or without form. Most of them are not worked after they are cooked. Marshmallows and taffy are exceptions.

The principles are the same for non-crystalline candies as they are for crystalline products except that you must prevent re-crystallizing the sugar (Step 3 of Crystalline Candies.)

Recipes usually contain large amounts of ingredients that will interfere with crystal formation such as corn syrup, molasses, butter, cream, etc. The solution is also cooked to a higher temperature. It must be concentrated enough to be firm or hard when cooked.
**BARK CANDY**

Confectioners bark (also called Almond Bark, Summer Coating, or White Chocolate) may be purchased in many grocery stores, especially around Christmas. You may find it in three flavors or colors: white (almond), chocolate, or butterscotch. Candy stores may also have it in additional colors and flavors.

By itself the bark is candy. But it is usually used as a dipping material or as the main ingredient to make a variety of sweets. (You may wish to use other dipping material recipes.)

When using the bark you should be extremely careful. Cut it into small pieces and always melt in the top of a double boiler. There are very few things you may add to softened bark without losing its proper consistency. Peanut butter melted along with the bark usually is successful. You may add a few drops of coloring or flavoring. The beginner should not try adding milk or other ingredients.

You will find some recipes using bark. Following are some other hints and suggestions:

- To melted chocolate bark, add salted Spanish peanuts. Drop by teaspoon on wax paper or cookie sheet.
- Coconut or raisins may be substituted for peanuts.
- Drop small amount of melted chocolate bark on paper or cookie sheet. Add a miniature marshmallow. Drop more chocolate over marshmallow.
- Drop small amount of melted bark on paper or cookie sheet. Add pecan or walnut piece. Or sprinkle finely cut nuts.
- Drop small amount of melted bark on paper or cookie sheet. Crush several small peppermint candy canes. Sprinkle over top.
- To melted almond (white) bark, add almonds or other nuts. Spread entire amount with spatula on waxed paper or cookie sheet. When set break into pieces.
- Substitute crushed peppermint candy canes for nuts and follow same procedure.
- Experiment with any of the above materials or methods to suit your own taste.
RECIPE INDEX

1. Uncooked Candies
   Cream Cheese Mints ........................................ 14
   Peanut Butter Bonbons ..................................... 14
   No-Cook Fondant ............................................ 14

2. Semi-Cooked Candies
   Butterscotch Pecan Fudge .................................. 15
   Cream Cheese Fudge ....................................... 15
   Rocky Road Fudge ......................................... 15
   Candy Turtles ............................................... 16
   Chocolate Raisin Clusters .................................. 16
   Peanut Clusters ............................................. 16

3. Cereal Candy
   Chocolate Mousse Treats .................................... 17
   Noodle Candy .............................................. 17
   Chocolate Oatsies ......................................... 17
   Frosted Pretzels ........................................... 18
   Peanut Crunch ............................................... 18
   Scotch Treats ............................................... 18

4. Crystalline Candies
   Divinity ........................................................ 19
   Old Fashioned Chocolate Fudge ............................ 19
   Fondant ..................................................... 20

5. Non-crystalline Candies
   Peanut Brittle ............................................... 21
   Caramels .................................................... 21
   Toffee ........................................................ 22
   Hard Candy .................................................. 22

6. Microwave Candies
   Caramel Corn ............................................... 23
   Marshmallow Cream Fudge .................................. 23
   Candied Pretzels ............................................ 23
   Peanut Brittle ............................................... 24
   Toffee ........................................................ 24
   Caramels .................................................... 24
   Toffee Candy ................................................ 25
**UNCOOKED CANDIES**

**Cream Cheese Mints**

3 cups powdered sugar  
¼ to ½ teaspoon flavoring  
3 oz. Cream cheese (room temperature)  
Food color as desired

Sift powdered sugar. Cut cream cheese into powdered sugar until like pie crust. Knead in bowl with hand until it forms a ball. Divide mixture at this point to make smaller batches and variety of colors. Add flavoring (peppermint, butter, spearmint, almond, strawberry) and mix; then add color and mix. Using rubber molds by dipping molds into sugar and then pressing a small amount of mixture into molds, removing excess from sides and bottom. Turn over and pop out onto wax paper. Once the mold warms with use, it becomes easier.

**Peanut Butter Bonbons**

1 (12 oz.) jar peanut butter  
1 lb. powdered sugar  
½ lb. butter or margarine  
1 large (12 oz.) and 1 small (6oz.) package semi-sweet chocolate pieces  
1 oz. paraffin wax

Combine butter and peanut butter. Add powdered sugar. Shape into balls and refrigerate until set. Melt chocolate and paraffin in a double boiler. Dip balls into chocolate mixture, using a toothpick, and place on waxed paper. Refrigerate until set. Yields 6 - 7 dozen.

**No-Cook Fondant**

1/3 cup soft butter  
1 teaspoon vanilla  
1/3 cup light corn syrup  
3 ½ cups sifted powdered sugar  
½ teaspoon salt

Blend butter, syrup, salt and vanilla in a large mixing bowl. Add the sifted powdered sugar, all at once. Mix all together – first with a spoon then with hands. Knead and continue kneading until mixture is well blended and smooth. Flavor and shape may be varied to suit taste. **Variation:** Chocolate covered cherries. Take a small amount of mixture and cover a maraschino cherry. Cherry should be drained on paper towel to remove excess juice. Chill in refrigerator. Melt dipping chocolate and dip cherries with toothpick to hold them. Place on waxed paper to harden.
SEMI – COOKED CANDIES

Butterscotch Pecan Fudge

1 (3 oz.) package butterscotch pudding
1 cup sugar
1 tablespoon butter or margarine
½ cup evaporated milk
½ cup brown sugar
1 ½ cup chopped pecans
1 teaspoon vanilla


Cream Cheese Fudge

1 (3 oz.) package cream cheese, warmed to room temperature
1 tablespoon milk
2 cups unsifted confectioners sugar
2 squares Unsweetened chocolate
½ teaspoon vanilla
1/8 teaspoon salt
½ cup chopped nuts

Melt chocolate over hot water or over very low heat. Combine cheese and milk; beat until smooth. Gradually beat in sugar, then blend in melted chocolate. Stir in vanilla, salt and nuts. Press into a lightly greased 9” x 5” pan. Chill until firm. Cut into 24 pieces. Makes 1 pound of candy.

Rocky Road Fudge

¼ cup milk
12-oz. chocolate chips
2 cups miniature marshmallows
½ cup chopped nuts
dash salt

Butter an 8” x 8” x 2” pan. Heat milk and chocolate chips in saucepan over low heat until chips melt, stirring constantly. Remove from heat. Stir in marshmallows, nuts and salt. Spread the candy in buttered pan with spatula. Refrigerate 1 hour or until firm. Cut into 1-inch squares.
**SEMI – COOKED CANDIES (CONT.)**

**Candy Turtles**

½ lb. soft caramels (about 25)
2 tablespoon heavy cream
1-1/4 cup pecan halves
4 - 1 oz. squares semi-sweet chocolate

Melt caramels with cream in double boiler over hot water. Let cool about 10 minutes. Arrange pecans in groups of three on lightly greased baking sheet. Spoon melted caramel over nuts, leaving tips showing. Let stand for at least 30 minutes. Melt chocolate in a double boiler over hot water. Remove from water and stir until smooth. Cool; spread over caramel of turtles. Do not cover nut tips. Makes about 24 turtles.

**Chocolate Raisin Clusters**

1 (6 oz.) package chocolate chips
¼ cup light corn syrup
1 ½ teaspoon vanilla
2 tablespoons confectioners sugar
2 cups seedless raisins


**Peanut Clusters**

6 oz. chocolate chips
2/3 cup sweetened condensed milk
1 teaspoon vanilla
1 ½ cup salted Spanish peanuts

Melt chocolate pieces in a double boiler over hot water; remove from heat. Add milk, vanilla, and peanuts, mix. Drop by spoonfuls onto waxed paper. Cool until firm. Yield: 1 ½ dozen.
CEREAL CANDY

Chocolate Mousse Treats

6 Milk Chocolate Bars (1.55 oz each)
1 container (12 oz.) Frozen Whipped Topping, thawed
1 cup Vanilla Wafers, crushed

Melt chocolate bars in a saucepan over low heat. Cool for 10 minutes. Fold into the thawed whipped topping. Shape into 1” balls and roll in the crushed vanilla wafer crumbs. Refrigerate or freeze to keep.

Noodle Candy

1 6 oz. package chocolate chips
1 12 oz. package butterscotch chips
1 #2 can Chow Mein noodles
1 cup nuts (cashews preferably)

Melt the chocolate and butterscotch chips in a double boiler. When melted, stir in noodles and nuts. Drop by spoonfuls onto waxed paper placed on cookie sheet. Refrigerate at least 10–20 minutes.

Chocolate Oatsies

2 cups granulated sugar
½ cup milk
¼ cup butter or margarine
1/3 cup cocoa
3 cups quick-cooking rolled oats
½ cup peanut butter
1 teaspoon vanilla

Combine sugar, milk, butter and cocoa in 3-quart saucepan. Boil 1 minute. Remove from heat. Mix in rolled oats, peanut butter and vanilla. Press into greased 9” x 9” pan, or drop by spoonfuls on waxed paper. Cut when cool. Makes 36 pieces.
CEREAL CANDY (CONT.)

Frosted Pretzels

1 can (16 ½ oz.) vanilla frosting
30 pretzel twists

Heat the frosting in top of a double boiler over hot water until the frosting is liquid, stirring occasionally. Remove from heat, but keep the top of the double boiler over the hot water. Dip the pretzels into the frosting with your fingers or a fork one at a time. Then place them on waxed paper. Let dry 8 hours.

Peanut Crunch

2 lb. almond bark
2 tablespoons peanut butter
3 cups peanuts
3 cups Captain Crunch cereal (Peanut Butter flavor)

Melt bark and peanut butter in double boiler. Add peanuts and cereal. Stir to coat. Drop on wax paper.

Scotch Treats

1 6 oz. package butterscotch pieces
½ cup peanut butter
3 cups oven-toasted rice cereal

Melt butterscotch pieces and peanut butter over hot, not boiling water; stir until well blended. Remove from heat. Add cereal and stir until coated with butterscotch mixture. Drop by teaspoonfuls onto waxed paper or buttered baking sheets. Set in cool place to harden. May be spread in buttered 9” x 9” pan and cut into squares or bars when cooled. Yield: 6 dozen 1 inch confections.
CRYS{TALLINE CANDIES

Divinity

2 2/3 cups sugar  2 egg whites
2/3 cup light corn syrup  1 teaspoon vanilla
½ cup water*  2/3 cup broken nuts

Stir sugar, corn syrup and water over low heat until sugar is dissolved. Cook, without stirring, to 260°F on candy thermometer (or until small amount of mixture dropped into very cold water forms a hard ball).

In mixer bowl, beat egg whites until stiff peaks form. Continue beating while pouring hot syrup in a thin stream into egg whites. Add vanilla; beat until mixture holds its shape and becomes slightly dull. (Mixture may become too stiff for mixer.) Fold in nuts. Drop mixture from tip of buttered spoon onto waxed paper. About 4 dozen candies.

* Use 1 tablespoon less water on humid days.

Old-Fashioned Chocolate Fudge

2 cups sugar  ¼ teaspoon salt
2/3 cup milk  2 tablespoons butter or margarine
2 oz. unsweetened chocolate or 1 teaspoon vanilla
  1/3 cup cocoa  ½ cup coarsely chopped nuts
2 tablespoons corn syrup

Butter loaf pan, 9x5x3 inches. Combine sugar, milk, chocolate, corn syrup and salt in 2-quart saucepan. Cook over medium heat, stirring constantly, until chocolate is melted and sugar is dissolved. Cook, stirring occasionally, to 234°F on candy thermometer (or until small amount of mixture dropped into very cold water forms a soft ball which flattens when removed from water).

Remove from heat; add butter. Cool mixture to 120°F without stirring. (Bottom of pan will be luke-warm.) Add vanilla; beat vigorously and continuously 5 to 10 minutes with wooden spoon, until candy is thick and no longer glossy. (Mixture will hold its shape when dropped from spoon.) Quickly stir in nuts. Spread mixture evenly in buttered pan. Cool until form. Cut into squares.

Variations:
• Penuche: Substitute 1 cup brown sugar (packed) for 1 cup of the granulated sugar and omit chocolate.
• Pecan Roll: Do not butter pan; substitute 1 cup brown sugar (packed) for 1 cup of the granulated sugar and omit chocolate. Shape candy into 12-inch roll and roll in ½ cup finely chopped pecans. Wrap; chill until firm. Cut roll into ¼-inch slices.
**FONDANT**

2 cups sugar  
1/4 cups water  
2 tablespoons light corn syrup

Combine ingredients in saucepan, stir over low heat until sugar dissolves. Remove the spoon and don’t stir again. Cover the pan and boil three minutes.

Remove the cover, attach candy thermometer, boil rapidly and steadily. During the boiling, sugar crystals will appear on side of pan. Wipe them off.

Remove from heat when reaches 239°F. Remove the thermometer, pour fondant onto a platter, which has been rinsed with cold water. Do not scrape sides of pan for fear of introducing sugar crystals.

Cool until the surface will wrinkle when pressed lightly with finger and it feels slightly warm to the touch. Scrape the fondant from the edges of the platted toward the center, using a wooden spoon. Work with the spoon until the mixture becomes white and creamy, then knead with hands until smooth and free of lumps.

Place in glass bowl or jar; cover tightly and set aside to ripen for at least 24 hours. Fondant will keep 3-4 weeks, if it is not allowed to dry out. Ripened fondant may be kneaded, flavored and shaped with hands. It may also be melted and used for dipping or making cream mints.

- **Chocolate Fondant**
  To 1 lb. fondant add, while beating, 2-1-oz. squares of melted chocolate, and 1 teaspoon of vanilla extract, or equal parts of vanilla and almond extract.

- **Nut Patties**
  Shape the fondant into small balls and flatten them into oblongs. Press a half pecan or other nut on top.

- **Chocolate Drops**
  Mold fondant into small balls or cubes. Allow these to dry thoroughly (preferably overnight). Dip in sweet dipping chocolate. Invert on waxed paper to harden.

- **Fruit Fondant**
  To 1 lb. of unflavored fondant, knead chopped; raisins, dates, figs, candied fruit or equal parts of fruit and chopped nuts. Press in a cake pan about 1” thick an cut into bars. When dry, dip in melted chocolate or re-melted fondant.
NON-CRYSTALLINE CANDIES

Peanut Brittle

(The key to “brittleness” is “thinness.” To ensure this quality, be sure to spread the candy mixture carefully and thinly.)

1 ½ teaspoons soda
1 teaspoon water
1 teaspoon vanilla
1 pound shelled unroasted peanuts*

Butter 2 baking sheets, each 15 ½ x 12 inches; keep warm. Combine soda, 1- teaspoon water and the vanilla; set aside.

Combine sugar, 1 cup water and the corn syrup in large saucepan. Cook over medium heat, stirring occasionally, to 240°F on candy thermometer (or until small amount of syrup dropped into very cold water forms a soft ball which flattens when removed from water).

Stir in butter and peanuts. Cook, stirring constantly, to 300°F (or until small amount of mixture dropped into very cold water separates into threads which are hard and brittle). Watch carefully so mixture does not burn.

Immediately remove from heat; stir in soda mixture thoroughly. Pour half the candy mixture onto each warm baking sheet and quickly spread evenly about ¼ inch thick. Cool; break candy into pieces

*Carmels

2 cups sugar
2 cups white corn syrup
¼ lb. (1/2 cup) butter
2 cups cream
1 teaspoon vanilla
¼ teaspoon salt

On low heat, bring sugar, salt and syrup to boil stirring constantly, until thick. This step takes a long time, approximately 5-8 minutes. Add butter; let melt. Add cream slowly, stirring constantly. Cook rapidly (turn heat up to medium) until candy forms a firm ball in cold water (240°F.). Remove from heat and add vanilla. Pour into buttered pan, cool and cut.
NON-CRYSTALLINE CANDIES (CONT.)

Toffee

Crunchy toffee candy with a chocolate topping.

1 cup pecans, chopped
¾ cup brown sugar (packed)
½ cup butter or margarine
1 bar (4 ½ ounces) milk chocolate candy, broken into pieces, or
½ cup semisweet chocolate pieces

Butter square pan, 9x9x2 inches. Spread pecans in pan. Heat sugar and butter to boiling, stirring constantly. Boil over medium heat, stirring constantly, 7 minutes. Immediately spread mixture evenly over nuts in pan.

Sprinkle chocolate pieces over hot mixture; place baking sheet over pan so contained heat will melt chocolate. Spread melted chocolate over candy, sprinkle with additional chopped nuts to garnish, if desired. While hot, cut into 1 ½ inch squares. Chill until firm.

3 dozen candies.

Hard Candy

2 cups granulated sugar
½ cup water
1 cup light corn syrup
¼ to ½ teaspoon oil flavoring
food coloring

Combine sugar, corn syrup and water in 3 quart heavy saucepan. Mix thoroughly. Place on high heat, stir constantly until boiling. Place thermometer in mixture and continue boiling to 285° F. Reduce heat to medium and boil to 310° F. (hard-crack stage). Wipe sugar crystals, as they form, from sides of pan with wet pastry brush. Remove from heat; stir in flavoring and color. Pour into greased 9” square pan. Cool. Remove from pan; break into pieces.

To make lollipops: Pour syrup over one end of lollipop stick on oiled cookie sheets.

To make shaped candies: Pour syrup into oiled small muffin tins, oiled metal refrigerator ice cube tray or oiled cookies cutter (open on both ends) on an oiled cookie sheet. Remove candies from container when set, but still warm to prevent breaking. Yield: about 1 ¼ pounds.
MICROWAVE CANDIES

Microwave Caramel Corn

¼ cup light corn syrup  1 cup brown sugar
½ teaspoon salt  ½ teaspoon baking soda
½ cup butter or margarine  1 teaspoon vanilla
16 cups of unsalted popped corn

Place popped corn in a large brown paper grocery bag. Combine in a 8 cup microwave safe bowl the brown sugar, margarine, corn syrup and salt. Microwave on High 1-2 minutes or until mixture bubbles. Stir well. Boil for 3 minutes, stirring after each minute. Add soda and vanilla; stir well as mixture will foam up. Pour over popcorn in paper bag. Shake or stir well. Fold edges of bag down. Microwave on High for 1 minute. Shake or stir well. Microwave on High for another 30 seconds. Shake or stir well and pour onto 2 cookie sheets. Let cool. Can leave in clusters or break into loose pieces. Store in airtight container.

Microwave Marshmallow Cream Fudge

½ cup butter or margarine
2 cups sugar
1 (5 oz.) can evaporated milk (2/3 cup)
1 (12 oz.) package semi-sweet chocolate pieces
1 (7 to 10 oz.) jar marshmallow cream
1 teaspoon vanilla
1 cup nuts, chopped (optional)

Place butter in 9 x 9 x 2 inch dish. Heat in microwave on FULL POWER for 1 to 1 ½ minutes, or until melted. Blend in sugar and evaporated milk. Mix well. Cook in microwave on MEDIUM HIGH for 15 to 17 minutes, or until soft ball stage is reached. Stir mixture frequently during cooking time. Blend in chocolate morsels, marshmallow cream, vanilla and nuts. Stir until smooth. Chill until firm. Cut into 1-inch squares. Store in airtight container.

Microwave Candied Pretzels

Place one cube of almond bark in a 2 ½ cup bowl. Microwave one minute, then break bark into smaller pieces. Continue microwaving until bark is melted, stirring every 30-second. Using a spoon or fork, dip pretzel rings into bark on both sides. Place pretzels on waxed paper and let stand until dry. (Makes 6 to 8 rings.)
MICROWAVE CANDIES (CONT.)

Microwave Peanut Brittle

1 cup raw peanuts 1 teaspoon butter
1 cup sugar 1 teaspoon vanilla
1/8 teaspoon salt 1 teaspoon baking soda
1/2 cup light corn syrup

Stir together peanuts, sugar, syrup and salt in 1 1/2 quart casserole. Microwave on full power (High) 4 minutes. Stir. Microwave on full power (High) 4 minutes. Add butter and vanilla. Microwave on full power (High) 1 1/2 minutes. Add baking soda and gently stir until white and foamy. Pour onto lightly greased cookie sheet. Cool and break into pieces.

Microwave Toffee

1/2 cup sugar 1 tablespoon water
1/4 cup brown sugar 1 tablespoon light corn syrup
1/2 cup butter (do not use margarine) 1/2 cup chopped nuts
1/2 cup chocolate chips

Mix first five ingredients in 4 cup measuring cup. Microwave on full power (High) 2 minutes. Stir. Microwave on full power (High) 2 minutes. Stir. Microwave on full power (High) 3 minutes. Stir in nuts. Pour candy onto flexible cookie sheet. Sprinkle 1/2 cup chocolate chips over candy. Allow heat of candy to melt chips and then spread over candy. Cool. Break into bite-size pieces.

Easy Microwave Caramels

1 cup sweet butter 1/2 cup chopped walnuts (optional)
2 1/3 cups brown sugar, firmly packed 1 teaspoon vanilla
1 cup light corn syrup
14 oz. sweetened condensed milk
1/8 teaspoon salt

In 2 quart microwave-safe pitcher, combine butter, sugar, syrup, milk and salt. Microwave on High 3-4 minutes, stirring once after about 2 minutes. When butter is melted, stir well. Attach microwave candy thermometer. Microwave on High about 14 minutes or until mixture reaches 245° F. (firm-ball stage). No stirring is needed. Remove from microwave; stir in vanilla and walnuts. Allow to stand for 10 minutes, stirring well several times. Pour into buttered 13x9” pan (11x7x1-1/2” yields thicker candy). Refrigerate until cool. Invert pan. Carefully tap out whole block of candy; cut into squares. Wrap in wax paper and store in refrigerator. (Can also freeze)

Yield: about 2 3/4 pounds.
MICROWAVE CANDIES (CONT.)

Microwave Toffee Candy

1 cup chopped nuts
¾ cup brown sugar
1 stick butter (not margarine)
1 6 oz. package chocolate chips


To Melt Chocolate in the Microwave Oven:

Place 1 cup grated chocolate in microwave-safe bowl. (Melt no more than 1 cup grated chocolate at one time.) Cover with plastic wrap. Microwave on 50% power (medium) 2 ½ to 4 minutes until chocolate is shiny and soft. Pieces of chocolate will not lose their shape. Remove from microwave oven and stir until smooth.

HINTS! –

Start with minimum time given and continue at 15 second intervals as necessary. Overcooking chocolate in the microwave oven will result in hard crumbly product that cannot be used.

If using chocolate chips, use same technique but add 2 tablespoons of solid vegetable shortening (NOT BUTTER) to every cup of chips.
EXPERIMENTS

1. Make a batch of Old-Fashioned Chocolate Fudge. When candy has cooked to soft ball stage, pour onto 3 buttered heatproof plates, dividing as evenly as possible. Put 1 tablespoon butter on each plate. Beat one plate of candy immediately and continue until it has hardened. Allow the other two platefuls to cool undisturbed to 110 degrees (slightly warm to the touch). Beat a second plateful until it is almost hardened, then knead it with your hands for about five minutes. Taste a small bit of each fudge, judging for flavor and size of crystals. Write the results below.

2. Make a batch of candy using cereal as an ingredient. Put a small amount of the finished candy on an uncovered plate. Store in cupboard for five days (somewhere where it won’t accidentally be eaten.) Store the rest of the candy in tightly covered container. Which storage method is better? Write results below, judging crispness and flavor after 5 days.
Candy Evaluation

Uncooked, Semi-Cooked and Cereal Candy

Name of candy_____________________________________

Evaluate the candy as excellent, good, poor.

____________________ Appearance
____________________ Pleasing texture
____________________ Good flavor
____________________ Other

---

Crystalline

Name of candy ____________________________________

How long did the mixture boil? ______________________

Evaluate the candy as excellent, good, poor.

____________________ Smooth creamy texture
____________________ Good flavor
____________________ Firm body
____________________ Good color

---

Noncrystalline

Name of candy ____________________________________

How long did the mixture boil? ______________________

Evaluate the candy as excellent, good, poor.

____________________ Hard or brittle body
____________________ Clear texture
____________________ Good flavor
____________________ Good color