



HONEY
COMBINES
DISTINCTIVE
FLAVOR WITH
HIGH FOOD
VALUE

for
Everyday use

- ON CEREALS, FRUITS,
AND HOT BREADS
- FOR SWEETENING
SAUCES, BEVERAGES
AND DESSERTS
- IN BREAD, CAKES AND
COOKIES . . . FOR
BETTER KEEPING

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UNIVERSITY OF MINNESOTA
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S. DEPARTMENT OF AGRICULTURE

Honey for Everyday Use

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☞ **HONEY = Water + Sugars + Other Factors** ☞

HONEY marketed in Minnesota contains 15 to 20 per cent water; 17 per cent, approximately one sixth by weight, is an average moisture content. Pure honey contains about 2 per cent of sucrose (ordinary sugar) but fruit sugar, also known as fructose or levulose, predominates, with dextrose or glucose a close second. Fructose is sweeter than ordinary sugar, while glucose is less sweet. Compared on a weight basis, pound for pound, honey is slightly sweeter than granulated sugar; but since honey is far more compact, cup for cup its sweetening power is much higher.

All sugars are easily digested and are quick sources of energy. Honey is no exception to this rule. Besides being a natural sweet, it contains valuable minerals, a variable amount of vitamins, and certain enzymes and acids.

Honey frequently has a mildly laxative effect, and because of its mineral content it contributes to the alkaline reserve of the body. These are two valuable properties in which granulated sugar is completely lacking. Some physicians recommend honey in preference to any other type of sugar in infant feeding, and, according to one investigator, there is better retention of calcium if honey has been included in the baby's formula (see *Journal of Pediatrics*, volume 19, page 485, October, 1941).

Crystals in Honey

Honey may granulate if kept at a low temperature, say 50° to 60° F. Some varieties granulate more readily than others, and give finer crystals. Granulation is a natural process and does not indicate poor quality. To liquefy granulated honey, heat it slowly over warm water.

Storing Honey

Because honey absorbs moisture it should be kept in a dry place tightly covered. A low temperature promotes granulation, but this does no harm. On the other hand, since honey keeps well at room temperature, there is usually no advantage in storing it under refrigeration.

Measuring Honey

Use accurate measuring tools. Fill a measure of the appropriate size, then level cleanly across the top with the sharp edge of a knife. Being very viscous, honey will "heap," giving an overfull measure, or "drag" when leveled, giving a scant measure, unless it is handled with care.

Replacing Sugar with Honey

On the basis of average sugar and water content, one cup of honey contains approximately $\frac{1}{4}$ cup (4 tablespoons) of water and the equivalent in weight of $1\frac{1}{2}$ cups sugar. Conversely, $\frac{2}{3}$ cup of honey less 3 tablespoons of other liquid will replace one cup of sugar.

HONEY FOR EVERYDAY USE

These substitutions do not give products identical with all-sugar products. Foods made with honey are usually somewhat sweeter, darker, and of slightly different texture. The acids and enzymes present may cause other variations.

Baked foods containing honey keep exceptionally moist and fresh and are usually better after standing. The honey flavor develops best if the product is stored tightly covered.

Breads and Rolls

When making yeast doughs in which the sugar content is low, honey may be substituted for the full amount of the sugar. If dark honey is used the bread may be somewhat darker, but will have excellent flavor and keeping qualities.

Honey Bread

(Straight Dough Method)

2 cups milk	2 tbsp. butter
2 cups water	1 cake yeast
5 tbsp. honey	¼ cup warm water
1 tbsp. salt	12 cups flour (about)

Scald milk, add water, honey, salt, and butter. Cool to lukewarm. Add the yeast which has been softened in ¼ cup lukewarm water. Add flour, mixing it in gradually. When the dough is stiff, turn onto a floured board and knead thoroughly. Place in a greased bowl. Cover and let rise in a warm place (80°-85° F.) until double in bulk. Punch down; let rise again. When again double in bulk divide into four portions. Round each to a smooth ball. Cover well and let rest for 10 to 15 minutes. Mold into loaves and place in pans. Let rise to double in bulk. Bake at 400°-425° for 40 to 45 minutes.

Sweet Yeast Dough

2 cakes yeast	¼ cup honey
¼ cup warm water	1 tsp. salt
1 cup milk	2 eggs, beaten
¼ cup butter	5 cups flour (about)
¼ cup sugar*	

* Or omit sugar and use ½ cup honey

Soften yeast in lukewarm water. Scald milk. Add butter, sugar, honey, and salt. Cool to lukewarm. Add flour to make a thick batter. Add yeast and eggs. Beat well. Add enough more flour to make a soft dough. Turn out on lightly floured board and knead until satiny, adding more flour if necessary. Place in greased bowl, cover, and let rise until double in bulk. When light, punch down. Shape into tea rings, rolls, or coffee cakes. Let rise until doubled in bulk. Bake in moderate oven (375° F.) 20 to 30 minutes, depending on size of portions.

Nut Bread

½ cup shortening	3 tsp. baking powder
½ cup sugar	1 tsp. salt
½ cup honey	¾ cup milk
1 egg	1 cup chopped nuts
3 cups sifted flour	

Cream together shortening and sugar. Add honey and mix thoroughly. Add egg, beating well. Sift together flour, baking powder, and salt. Add to creamed mixture alternately with milk. Add nuts. Bake in greased loaf pan in moderate oven (350° F.) 1¼ hours.

Cakes and Icings

When using honey to replace sugar in cakes and cookies, it is suggested that tested recipes, when available, be used. When converting other recipes, start with a small proportion of honey (perhaps ¼ cup), using sugar for the rest of the sweetening. This change can usually be made successfully with-

out any other change in ingredients. For a higher ratio of honey to sugar, see page 2, "Replacing sugar with honey."

Ukrainian Honey Cake

(Recipe may be cut in half)

1 cake yeast	1 tsp. baking powder
2 tbsp. warm water	1 tsp. cinnamon
4 eggs	1 tsp. cloves
½ cup butter	½ tsp. salt
2 cups honey	½ cup chopped nuts
4 cups sifted flour	

Dissolve yeast in water. Beat eggs; add softened butter. Heat honey to lukewarm and combine with eggs and yeast. Sift dry ingredients and add in small portions, beating thoroughly after each. Add nuts to last portion of flour.

Bake at 275° F. (very slow oven) in two well-greased bread pans for approximately 1 hour, 45 minutes. This cake may be kept several weeks.

Self-Frosting Orange Cake

½ cup butter	2 cups sifted flour
½ cup sugar	2 tsp. baking powder
¼ cup honey	¾ cup milk
2 eggs	½ cup nuts

Grated rind 1 orange

Cream the butter. Add sugar and honey gradually and cream well. Add unbeaten eggs, one at a time, beating thoroughly after each. Add orange rind. When very light add flour sifted with baking powder alternately with milk, starting and ending with flour. Line an 8- or 9-inch square cake pan with waxed paper. Put in the batter, sprinkle nuts over top, and bake at 350° F. for 30 to 35 minutes.

Topping

3 tbsp. orange juice Sugar (about ½ cup)

Mix these ingredients and spread over the cake as soon as baked. Return to oven at once, placing it under the broiler for about 2 minutes, or just long enough to "bubble" the topping slightly.

Fudge Cake with Honey-Nut Icing

4 squares (ounces) chocolate	1 tsp. vanilla
¾ cup milk	1 cup sugar
¼ tsp. soda	2 eggs, or 1 egg plus 2 yolks
½ cup honey	1¾ cups cake flour
½ cup butter	2 tsp. baking powder

Cut the chocolate small. Scald the milk and add the chocolate. Stir, add the soda, and cool thoroughly. When about lukewarm add the honey.

Cream the butter, add the vanilla and the sugar. Cream well. Add the eggs one at a time, and continue creaming after each is added.

Sift flour with baking powder and add alternately with the cold chocolate mixture, beginning and ending with a portion of flour.

Put into two 8- or 9-inch layer cake pans, the bottoms of which have been covered with waxed paper.

Bake at 350° F. for 30 to 40 minutes or until the surface springs back when tapped with the finger.

Cool 5 minutes, cut along edge of pan, invert, and remove waxed paper.

Honey-Nut Icing

(7-minute type)

2 egg whites	Pinch of salt
½ cup honey	1 tsp. vanilla
½ cup sugar	1 cup nuts (optional)

Combine egg whites, honey, sugar, and salt in top of double boiler. Cook over boiling water, beating with a rotary beater, until it loses its shiny appearance and forms a firm peak when beater is lifted. Add vanilla and nuts.

Spread with a swirling motion between the layers and over the top of the cake. It is suggested that frosting be omitted from the sides.

Note: Icings made with honey require much longer cooking and more beating than do all-sugar icings. A high-honey frosting remains soft indefinitely. In humid weather it attracts moisture.

Cookies

Soft Drop Cookies

¼ cup butter or lard	2 cups sifted flour
¼ cup sugar	1 tsp. baking powder
1 egg	½ tsp. soda
½ cup honey*	½ tsp. salt
½ tsp. vanilla	¼ tsp. nutmeg

* Or corn sirup, sorghum, or mild molasses

Cream the shortening, sugar, egg, honey, and vanilla, adding one ingredient at a time, and creaming well after each is added. Sift the dry ingredients, and mix with the creamed portion thoroughly but lightly. Shape a small portion in the bowl of a teaspoon, and drop on a baking sheet covered with waxed paper. Top with the following:

2 tbsp. sugar	Nut meats
½ tsp. cinnamon	

Press a nut meat into each cookie and sprinkle with the cinnamon-sugar mixture.

Bake at 350° F. about 12 minutes.

Chocolate Nut Brownies

¼ cup butter	1 tsp. vanilla
1 cup honey*	½ cup sifted flour
2 eggs	¼ tsp. baking powder
2 squares (ounces) chocolate	¼ tsp. soda
	1 cup chopped nuts

* Or ½ cup honey and ½ cup sugar

Cream the butter, add honey slowly and cream; add eggs one at a time, un-beaten, and cream again after each is added. Add chocolate (melted and cooled) and vanilla. Sift the flour, baking powder, and soda; add the nuts and blend with the butter mixture.

Spread thin in a rectangular pan lined with waxed paper. Bake at 325° F. 35 to 45 minutes, or until it springs back when tapped with the finger. Let it cool 5 minutes. Cut around the edges, invert, and remove waxed paper. Cut into serving portions. Store covered until used.

Honey-Carrot Cookies

2 cups flour	1 cup chopped raisins
2 tsp. baking powder	1 cup walnut meats
¼ tsp. soda	½ cup shortening
½ tsp. salt	1 cup honey
½ tsp. nutmeg	2 eggs
2 cups rolled oats	1 cup raw carrots

Sift flour, baking powder, soda, salt, and nutmeg. Add rolled oats, raisins, and nut meats.

Cream shortening, add honey slowly, and continue creaming. Add eggs un-beaten, one at a time, and beat well after each is added. Add grated carrots.

Combine the two mixtures. Drop by teaspoonfuls on a greased baking sheet, flatten with a floured fork, and bake at 350° F. for about 10 minutes.

Honey Nut Bars

1 cup sifted flour	½ cup nut meats
½ tsp. soda	¼ cup butter
¼ tsp. salt	½ cup honey
1 tsp. mixed spice*	1 tbsp. water
½ cup raisins	1 egg

* Cinnamon, ginger, mace, or cloves

Sift the flour, soda, salt, and spices, and add the raisins and nuts. Cream the butter, add the honey, water, and egg, and cream well after each ingredient is added until the mixture is light and fluffy. Mix in the dry ingredients lightly.

Cover the bottom of an 8- or 9-inch rectangular pan with waxed paper. Put in the batter and bake at 325° F. for 35 to 40 minutes or until it springs back when tapped with the finger.

When taken from the oven spread with the following:

Topping

½ cup confectioners' sugar	1 tsp. grated orange rind
1 tbsp. cream	Pinch of salt

Blend and spread. Cut into squares or bars when cool.

Desserts

Baked Rice Pudding

¼ cup raw rice ⅓ cup honey
1 quart milk 1 tsp. vanilla
½ tsp. salt

Combine all the ingredients except the honey and the vanilla. Bake in a slow oven, 300° F., for 2 to 3 hours, stirring frequently while baking. Remove from the oven, cool slightly, and stir in the honey and vanilla. Serve hot or cold, with or without cream.

Honey-Butter

¼ cup butter ¼ to ½ cup honey

Cream butter; add honey slowly, creaming it into the butter until a smooth mixture is obtained. This may be kept on hand in the refrigerator.

Honey Caramel Sundae Sauce

½ cup honey Pinch of salt
½ to 1 cup heavy
cream

Heat honey slowly until it turns a golden brown. Add cream and continue to cook for 2 or 3 minutes or until blended. Serve hot over ice cream.

Chocolate-Marshmallow Sauce

1 square (ounce)
chocolate (more
may be used) ¼ tsp. vanilla
8 marshmallows
¼ cup honey 4 drops oil of cin-
namon (optional)
¼ cup cream

Combine chocolate and honey. Heat slowly to melt chocolate. When well blended add cream and cook for 5 minutes over low heat or over hot water, stirring constantly. Add vanilla, marshmallows cut small, and oil of cinnamon if desired. (Oil of peppermint or cloves may be used.) Stir to melt the marshmallows, and serve hot over ice cream.

Prune-Custard Dessert

Cooked Prunes: Wash prunes and cover with water. Let stand several hours or overnight. Bring to a boil and cook slowly until tender.

Cut prunes, remove pit, and put several halves in individual serving dishes. Cover with soft custard and chill.

Soft Custard

2 eggs or 4 yolks 2 cups milk (scalded)
¼ tsp. salt ½ tsp. vanilla
3 tbsp. honey

Beat the eggs. Add the remaining ingredients except vanilla and cook over hot, but not boiling, water until it thickens slightly or coats a spoon. Do not overcook. Cool and add vanilla.

Baked Custard: Double the ingredients, combine, and put into custard cups or jelly glasses. Set these in a pan of water and bake at 325° to 350° F. about 30 minutes, or until firm.

Carrot Pudding

½ cup shredded ½ cup raisins
raw potatoes ⅓ cup honey
1 tsp. salt 1 cup sifted flour
½ cup shredded ½ tsp. soda
raw carrot 1 tsp. cinnamon
½ cup suet, finely
chopped

Sprinkle potatoes with salt as soon as shredded. Add carrot, suet, raisins, and honey. Sift flour, soda, and cinnamon. Add to other ingredients.

Put in a well-buttered 1-pound coffee can, cover, and steam for 2 hours.

Serve hot with hard sauce, whipped cream, or lemon sauce.

Lemon Sauce

2 eggs (or 4 yolks) 6 tbsp. water
⅓ cup honey Pinch of salt
¼ cup butter ½ tsp. grated rind
3 tbsp. lemon juice

Combine all ingredients and cook over hot (not boiling) water, stirring constantly, until thick.

Pie Fillings

Apple Pie Filling

1 quart apples, sliced thin	¼ tsp. salt
3 tbsp. flour	⅔ cup honey
2 tbsp. sugar	⅓ cup cream (optional)

Combine all ingredients. Put in pastry-lined pan, moisten edges, and cover with top pastry slashed to permit escape of steam. Seal edges and bake at 425° F. for 10 minutes, then reduce heat to 350° and continue baking until done.

Lemon Pie Filling

⅓ cup flour	1 cup water
⅔ cup honey	Pinch of salt
¼ cup lemon juice	1 tbsp. butter
½ tsp. grated rind	3 egg yolks

Combine flour with honey and blend until smooth. Add other ingredients except egg yolks. Cook over low direct heat, stirring constantly, until heated through. Cook over hot water for 10 minutes. Meanwhile beat yolks, add a small amount of filling to yolks, stir, and return all to double boiler. Continue cooking 1 minute to cook the eggs. Cool thoroughly and place in baked pie shell. Cover with the following meringue:

Honey Meringue

3 egg whites	2 tbsp. honey
3 tbsp. confectioners' sugar	

Beat the egg whites, add the sugar by the tablespoonful, beating well. Add honey and continue to beat until the meringue holds a peak. Spread on pie, having it cover the filling clear to edge. Let it remain rough on top. Bake at 325° F. for 15 to 20 minutes or until golden brown. Serve as soon after baking as possible.

Rhubarb Custard Pie

3 cups cut rhubarb	½ cup honey
2 eggs, beaten	¼ tsp. salt
½ cup sugar	Sprinkling of nutmeg

Combine all ingredients and put in a pastry-lined pie pan. Moisten the edge and cover with pastry which has been slashed to permit escape of steam.

Bake at 425° F. for 10 minutes, then reduce the heat to 350° and continue baking until done.

Honey Cream Pie

4 tbsp. butter	Pinch of salt
½ cup sifted flour	½ tsp. vanilla
1¼ cups milk	¼ cup honey
3 egg yolks	

Melt the butter and blend in the flour until evenly distributed. Add the milk very slowly, stirring to prevent lumping. Cook over low direct heat until the sauce is smooth and very thick. Continue cooking over hot water for 10 minutes. Meanwhile beat the egg yolks, add a small amount of the cooked filling, stir well, and return to the double boiler. Continue cooking for 1 to 2 minutes, or until the yolks are cooked. Add the salt. When about lukewarm add the vanilla and the honey. Cool thoroughly and transfer to the baked pie shell when ready to top with meringue.

Chocolate pie: To the above filling add 1 square of melted chocolate after removal from heat.

Raisin, nut, or cocoanut pie: Add these ingredients as desired, using dry cocoanut to prevent thinning.

Note:

Honey causes milk to curdle if the two are boiled together. Since flour-thickened mixtures require much cooking, the honey is added after the product is cooked and partly cooled.

Miscellaneous

Pickled Watermelon Rind

Watermelon rind—Trim away pink and green surfaces and cut in serving portions. Cover with water to which 1 teaspoonful salt to a quart has been added, and simmer until tender (about 30 minutes). Do not overcook. Drain and measure.

For each quart of cooked rind make the following sirup:

$\frac{3}{8}$ cup vinegar	10 drops oil of cin-
$\frac{1}{8}$ cup honey	namon and cloves
	$\frac{1}{8}$ cup water

Combine and boil and pour over the cooked rind. Return to heat and boil gently for 15 minutes. Let stand in the sirup over night.

In the morning add $\frac{1}{3}$ cup honey and bring to a boil. Let stand overnight.

The following day reheat in the sirup and seal hot in sterilized jars.

Casserole of Sweet Potatoes

6 sweet potatoes	$\frac{1}{2}$ cup honey
2 small oranges	$\frac{1}{2}$ cup orange juice
$\frac{1}{4}$ cup butter	$\frac{1}{4}$ cup bread crumbs

Place a layer of cooked, sliced potatoes in a buttered baking dish. Dot with butter and place a layer of sliced oranges (not peeled) on top. Repeat this arrangement of sweet potatoes and orange slices. Mix honey and orange juice and pour over all. Cover with buttered bread crumbs. Cover and bake about 30 minutes at 375° F. Remove cover the last 10 minutes to brown the crumbs.

Honey Barbecue Sauce

$\frac{1}{2}$ cup chopped onion	1 tbsp. Worcester-shire sauce
$\frac{1}{4}$ cup lemon juice	1 tsp. mustard
1 tbsp. vinegar	1 tsp. celery salt or celery seed
$\frac{1}{2}$ cup tomato pulp	$\frac{1}{4}$ cup honey

Brown the onion slowly in its own juice. Add remaining ingredients and bring to the boiling point. Spoon a small amount over the portions of meat which are to be barbecued. Place in oven and cook until done. This sauce keeps well in the refrigerator and can be used as needed. It goes well with pork chops, spareribs, veal, ham, or wieners.

Sour Cream Salad Dressing

2 tbsp. honey	$\frac{1}{2}$ tsp. paprika
2 tbsp. lemon juice	$\frac{1}{2}$ tsp. mustard
4 tbsp. sour cream	Few grains pepper
$\frac{1}{4}$ tsp. salt	

Combine all ingredients and beat until as thick as mayonnaise. Use with plain vegetable salad, molded salad, or fruit salad. Sweet cream may be substituted for the sour cream, if desired.

Waffle Spread

To 1 cup of honey add $\frac{1}{4}$ cup boiling water and stir until blended. Serve warm or cold with pancakes or waffles, or to sweeten fresh fruit.

Diluting the honey with water makes it go farther, and also gives a less concentrated sweet taste. The mixture should be made up in small amounts, however, as the diluted honey may have a tendency to ferment.

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