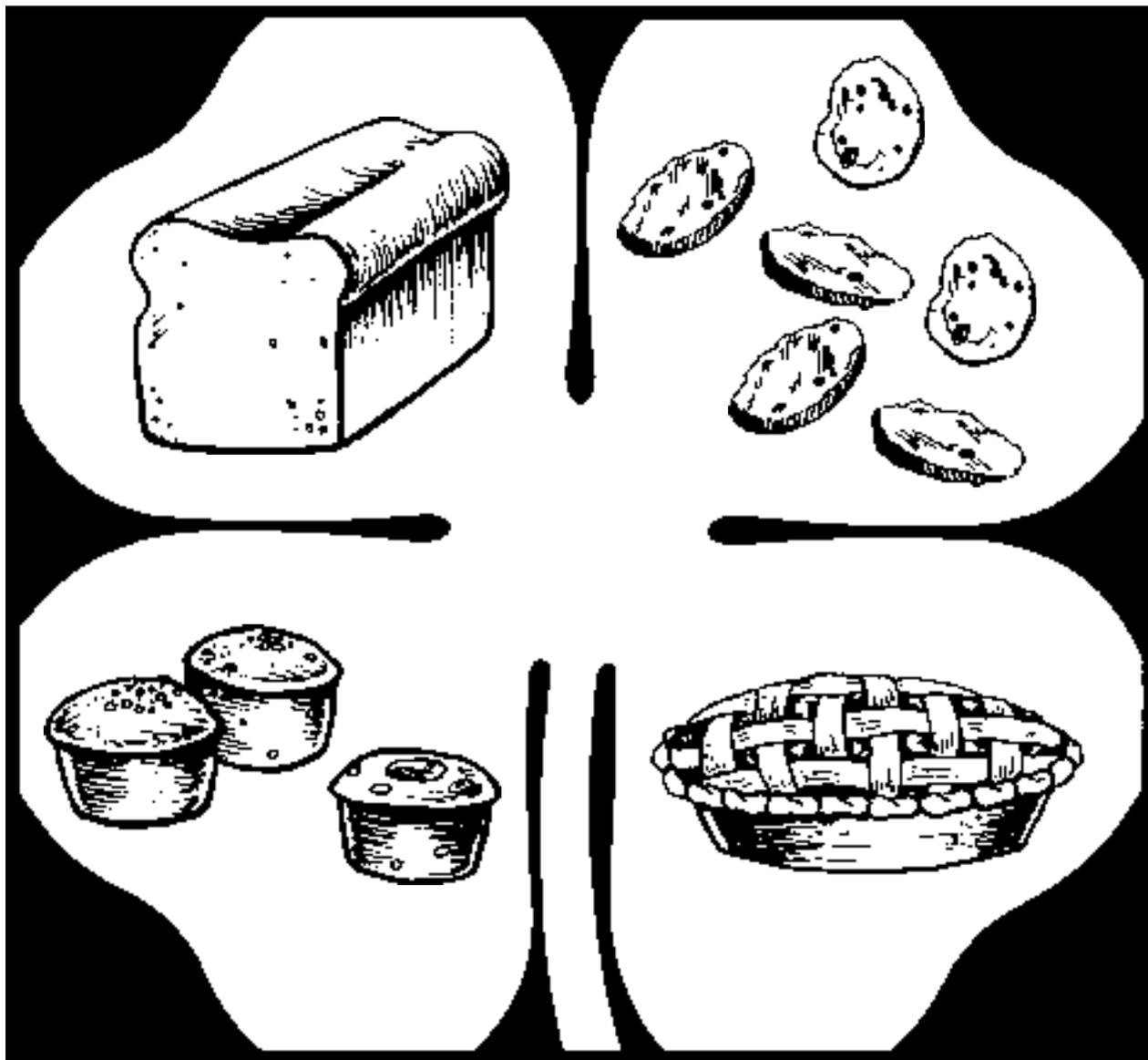


4-H SUPPLEMENTAL MATERIAL



JUDGING BAKED PRODUCTS

Judging Baked Products

Sandra Garl Brown

Quality baked products must look and taste good. Recognizing excellence and knowing what went wrong are important in judging baked products.

Baked products are evaluated on characteristics of appearance, texture, and flavor.

APPEARANCE refers to the size, shape, color, and condition of the outside surface and interior color.

TEXTURE refers to product structure. This is the size of gas holes, thickness of cell walls, and crumb texture.

FLAVOR is product taste and aroma.

Common procedures, though, can result in problems in any baked product:

DARK EXTERIOR Overbaked; oven temperature too hot; poor circulation of heat.

DARK BOTTOM Dark pan used (absorbs heat quicker); poor heat circulation; product placed too low in the oven.

PEAKED TOP Inaccurate measuring (too much flour); too much batter in pan; overmixing.

TUNNELS Overmixing.

TOUGH/COARSE TEXTURE Overmixing/overkneading; too much flour.

OFF FLAVOR Rancid fat; improper ingredients or measuring; ingredient missing.

MICROWAVE BAKING

Even though alterations in recipes and baking procedures are made when baking in the microwave, the color and texture of the product will be different from that baked in a conventional oven. The differences affect the quality.

Here are some common differences.

COLOR Pale all over unless product uses whole wheat or chocolate.

TEXTURE No crust formation; doughy and sticky on the outside; coarse texture; often tough due to overbaking.

SURFACE Not level—may have high and low spots

The author was formerly Extension Family Living Agent/Chair in Cowlitz/Wahkiakum counties.

The following charts tell what to look for in various baked goods, and how to correct problems that might occur. These standards are designed for products made with refined grains. Breads made with whole grain flours will be heavier and coarser. The color will also be darker. This is acceptable.

QUALITY STANDARDS

APPEARANCE	TEXTURE	FLAVOR
Muffins		
TOP Cauliflower-like, rough and pebbled Thin; slightly rounded	GAS HOLES Medium and evenly distributed	Bland to slightly sweet
EXTERIOR Golden brown Uniform size and shape	CELL WALLS Tender Medium	
INTERIOR Distinctive of ingredients		
Biscuits		
TOP Pale golden brown; flat and slightly rough	GAS HOLES Small	Bland, mild, and delicate
EXTERIOR Sides straight	CELL WALLS Thin Crisp outer crust Thin crust on top and bottom	
INTERIOR Creamy white	Slightly moist crumb Interior should peel in thin sheets	
Quick Breads		
TOP Rough with a slight sheen; may have a shallow length-wise crack	GAS HOLES Medium and evenly distributed	Delicate and mild, distinctive of ingredients
EXTERIOR Straight sides Even browning distinctive of variety	CELL WALLS Medium Thin crust	
INTERIOR Distinctive of variety	INTERIOR Moist and tender	
Yeast Bread		
TOP Golden brown Evenly round and smooth Crust 1/8" thick	GAS HOLES Small to medium and evenly distributed	Sweet, nutty; slight yeast aroma
EXTERIOR Sides pale brown Even "shred"	CELL WALLS Thin	
INTERIOR Creamy white or distinctive of ingredients Light in weight in proportion to size	TOP Crisp and tender INTERIOR Moist and resilient	

APPEARANCE	TEXTURE	FLAVOR
Pies		
<p>CRUST Delicate brown Rough surface with small blisters 1/8 to 1/4" thick</p>	<p>FLAKINESS Medium; layers are evident Very tender</p>	<p>Bland, distinctive of fat used</p>
<p>FRUIT FILLING Fruit intact; as placed in pie Filling retained in pie At least 3/4" high</p>	<p>OVERALL TEXTURE Tender and soft Juice smooth and thick like a soft pudding</p>	<p>Distinctive of fruit used; mild spice flavor</p>
Shortened Cakes		
<p>TOP CRUST Slightly rounded near center</p>	<p>GAS HOLES Small and evenly distributed</p>	<p>Sweet, mild flavor; a butter flavor may emerge if butter used</p>
<p>EXTERIOR Pale to golden brown Light in weight in proportion to size</p>	<p>CELL WALLS Very thin</p>	
<p>INTERIOR Color distinctive of ingredients used</p>	<p>CRUMB Very smooth, slightly moist; "velvety"</p>	
<p>DEVIL'S FOOD Interior mahogany red</p>	<p>DEVIL'S FOOD CRUMB Slightly coarse and dry</p>	<p>DEVIL'S FOOD Slightly sweet and flavor of chocolate</p>
Angel Cake		
<p>TOP Slightly rounded</p>	<p>AIR CELLS Vary in size; small to medium</p>	<p>Slightly sweet; vanilla or almond flavor apparent</p>
<p>EXTERIOR Golden to medium brown Rough and slightly cracked</p>	<p>CELL WALLS Very thin</p>	
<p>INTERIOR Very white unless other distinctive ingredient used</p>	<p>CRUMB Tender, "melt in mouth"</p>	
Sponge Cake		
<p>TOP CRUST Slightly rounded</p>	<p>AIR CELLS Fairly small; uniformly distributed</p>	<p>Delicate lemon flavor when lemon flavor used; slight egg flavor de- tected if lemon not used; slightly sweet taste</p>
<p>EXTERIOR Light golden brown Rough and slightly cracked</p>	<p>CELL WALLS Fairly thin</p>	
<p>INTERIOR White to yellow unless other dis- tinctive ingredient used</p>	<p>CRUMB Tender</p>	
Cookies		
<p>TOP Rough; some rounded and smooth, depending on ingredients</p>	<p>DROP AND BAR Soft, chewy; interior tender</p>	<p>Sweet; mild, characteristic of ingredients</p>
	<p>REFRIGERATOR Crisp, crunchy</p>	
<p>EXTERIOR Uniform size and shape Delicate brown top and bottom; no flour streaks</p>	<p>ROLLED Crisp exterior with tender moist interior</p>	

PROBLEMS AND THEIR CAUSES

APPEARANCE	TEXTURE	FLAVOR
Muffins		
PEAKED TOP Inaccurate measuring Too much flour; too much batter in pan or too small pan Overmixing	TOUGH COARSE TEXTURE Overmixing Inaccurate measuring (too much flour)	OFF FLAVOR Inaccurate measuring Rancid fat
SMOOTH, DULL SURFACE Overmixing	TUNNELS Overmixing Batter too deep	
"WAXY CRUST" Too much egg Uneven mixing		
Biscuits		
UNEVEN SHAPE Careless portions Overmixing	TOUGH BREAD CRUMB Inaccurate measuring Too much flour	OFF FLAVOR Rancid fat
DARK BOTTOM Dark pan used for baking; poor heat circulation	COMPACT, TOUGH CRUMB Overmixing	BITTER Excess or undissolved baking soda
BROWN FLECKS Undermixed Undissolved baking soda on top	THICK CRUST Oven too cool	
LOW VOLUME Not enough leavening Too much shortening Too much mixing	HEAVY Too little leavening Too much mixing Too much flour Lack of shortening Too much liquid	
	NOT FLAKY Too little shortening Too much/little mixing of shortening with flour	
Quick Breads		
PEAKED TOP Inaccurate measuring Too much flour Too much batter in pan or too small pan Overmixing	HEAVY, COMPACT TEXTURE Underbaked Inaccurate measuring	OFF FLAVOR Rancid fat Inaccurate measuring Stale ingredients
SMOOTH, DULL SURFACE Overmixing	STICKY, SUGARY SURFACE Inaccurate measuring Improper cooling	
DEEP CRACKS Baked too rapidly Oven not preheated	COARSE, TOUGH TEXTURE Overmixing Inaccurate measuring	
	TUNNELS Overmixing Batter too deep	
Yeast Breads		
MISSHAPEN LOAF Inaccurate measuring (too much/little flour)	COARSE Insufficient kneading Over-risen	OFF FLAVORS Old yeast Dough over-risen

APPEARANCE**TEXTURE****FLAVOR****Yeast Breads (cont.)**

Over-risen before baking
Oven too hot
No salt

Oven too cool
Too much flour

Too warm a temperature during rising

Too slow oven

Underbaked

Milk not scalded sufficiently

Bread wrapped when still warm

SPLIT CRUST

Oven too hot at beginning
Loaf too large for pan

TOUGH

Too much flour
Poor kneading methods

HEAVY, COMPACT**TOP CRUST WRINKLED**

Cooled too quickly or in a draft
Rising period too short

Insufficient rising before baking

Poor yeast

Yeast killed

Wrong flour

STREAKED CRUST

Excess flour in kneading and shaping
Dough dried on top while rising
Excess greasing while rising

DOUGHY

Underbaked; allowed to "steam" in pans; should be removed from pan when taken from oven

LOW VOLUME

Temperature too low when dough is rising

Yeast killed

Not kneaded well to distribute yeast and develop gluten

LARGE AIR CELLS

Lack of salt to control growth of yeast

Lack of adequate kneading

Allowed to rise too long

Pies**SHRINKING**

Too much handling
Stretching pastry as put into pan
Storing dough in refrigerator too long
Too much water added to dough

GREASY

Too much shortening

OFF FLAVOR

Rancid fat

HARD

Inaccurate measuring
Too much water

STALE FLAVOR

Poor quality ingredients

COMPACT, DOUGHY

Underbaked
Too much liquid

SMOOTH

Overkneaded
Overmixed

RAW FLAVOR

Underbaked

Inaccurate measurements

TOUGH

Overhandled or rerolled
Too little fat
Too much water
Too much flour used to roll dough

CRUMBLY, TOO TENDER

Inaccurate measuring
Too much shortening
Used oil instead of shortening
Shortening cut in too fine

Shortened Cakes**UNEVEN**

Oven rack not level; batter spread unevenly; pan warped

COARSE GRAIN

Inaccurate measuring (too much leavening or sugar)
Undermixing
Insufficient creaming of fat and sugar

APPEARANCE**TEXTURE****FLAVOR****Shortened Cakes (cont.)**

PEAKED OR CRACKED TOP
 Inaccurate measuring; too much flour
 Too little liquid
 Batter overmixed
 Oven too hot at beginning

HEAVY
 Overmixed
 Underbaked

CAKE FELL
 Inaccurate measuring (too little flour; too much liquid, fat, sugar or leavening)
 Underbaked

UNEVEN BROWNING
 Ingredients not well blended; poor heat circulation

INTERIOR COLOR UNEVEN
 Ingredients not well blended

TUNNELS
 Overmixing
 Inaccurate measuring
 Too much flour

TOUGH
 Inaccurate measuring (too much egg; too little sugar or fat)
 Overmixing

HEAVY AND COMPACT
 Inaccurate measuring (too much fat or sugar)
 Underbaked
 Overmixed
 Oven temperature too high

CRUST STICKY
 Too much sugar

Angel and Sponge Cakes

LOW VOLUME
 Baked at too low temperature
 Too short cooking time
 Too little cream of tartar
 Egg whites not beaten to stiff peaks

COARSE
 Oven too hot
 Batter overmixed

Cookies

NOT UNIFORM SIZE
 Inaccurate measurements; poor portioning; uneven shaping

UNEVEN BROWNING
 Baking pan is dark
 Poor heat circulation

FLOUR STREAKED
 Undermixed
 Too much flour

DEEP CRACKS
 Overmixing
 Overbaking
 Too much flour

TOUGH
 Overmixing
 Too much flour
 Too little fat

DOUGHY
 Underbaked
 Too thick

DRY, HARD
 Too much flour
 Too little liquid
 Overbaking

CRUMBLY
 Too much fat
 Too much sugar

OFF FLAVOR
 Inaccurate measuring of salt
 Rancid fat

SUGAR CRYSTALS ON TOP
 Too much sugar for quantity of flour

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More boys and girls belong to 4-H than any other youth group.