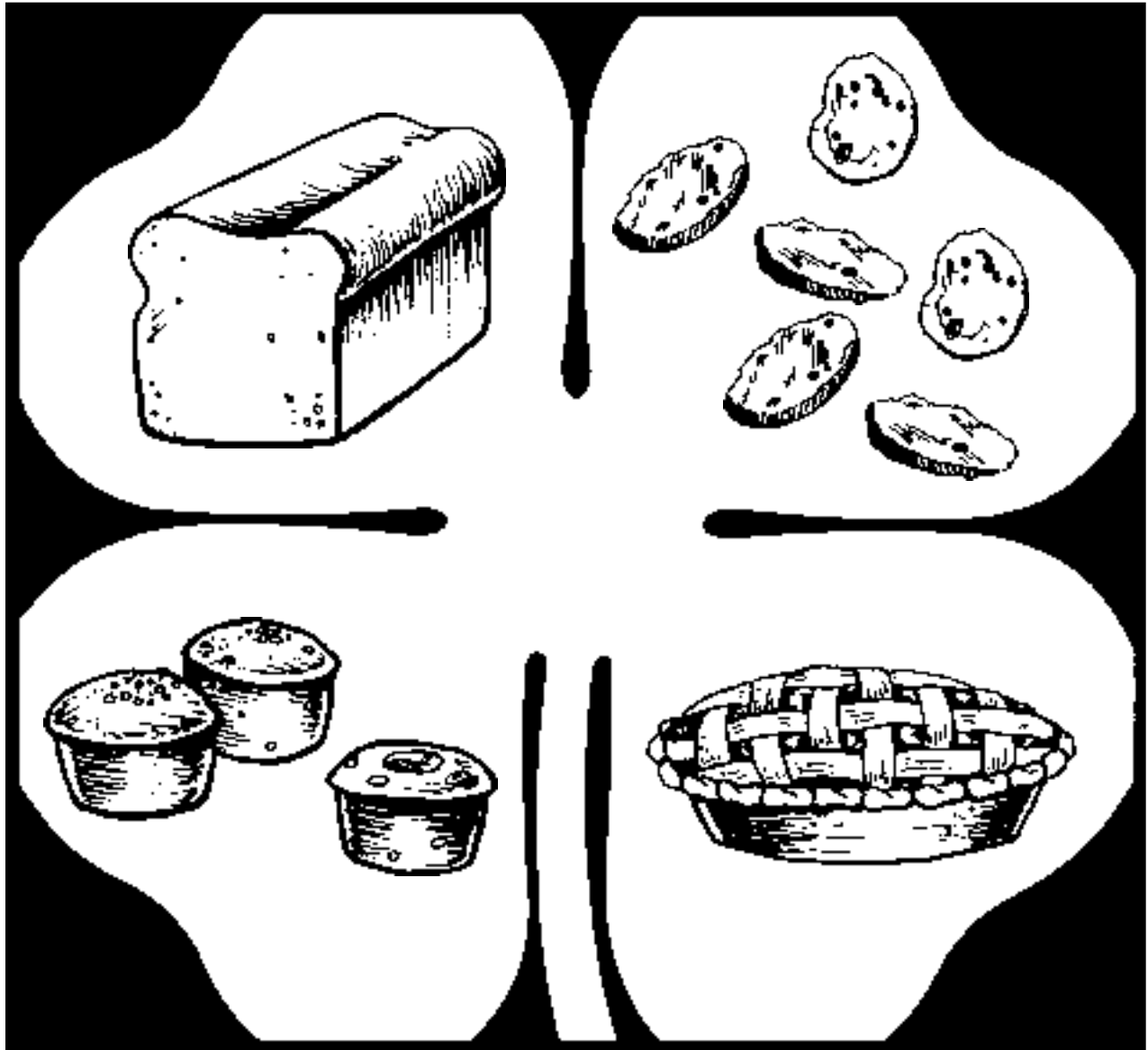


4-H SUPPLEMENTAL MATERIAL



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 |
| SPLIT CRUST Oven too hot at beginning Loaf too large for pan | TOUGH Too much flour Poor kneading methods | Too slow oven Underbaked Milk not scalded sufficiently Bread wrapped when still warm |
| TOP CRUST WRINKLED Cooled too quickly or in a draft Rising period too short | HEAVY, COMPACT 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

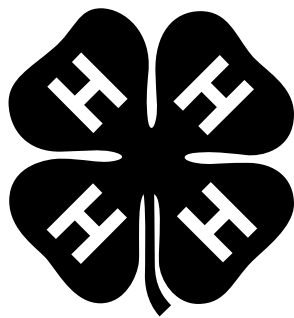
DRY, HARD
 Too much flour
 Too little liquid
 Overbaking

CRUMBLY
 Too much fat
 Too much sugar

SUGAR CRYSTALS ON TOP
 Too much sugar for quantity of flour

OFF FLAVOR
 Inaccurate measuring of salt
 Rancid fat

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