



How to Adapt Cookie Dough for 3-D Projects: A Series of Controlled Recipe Tests
Key Video Graphics
(Displayed in Order of Appearance in the Video)

KEY RECIPE-RELATED VARIABLES THAT IMPACT DOUGH SPREADING

- FLOUR-TO-FAT RATIO
(HIGHER = LESS SPREADING)
- AMOUNT OF LEAVENING
(LESS = LESS SPREADING)
- TYPE OF FAT (SHORTENING =
LESS SPREADING THAN
UNCHILLED BUTTER)
- USE OF EGG (LEADS TO A
MORE PLIABLE, RESILIENT
DOUGH THAT'S EASIER TO
HANDLE AND ROLL)



KEY PROCESS-RELATED VARIABLES THAT IMPACT DOUGH SPREADING

- DOUGH THICKNESS
(THINNER = LESS SPREADING)
- CHILLING DOUGH AFTER
ROLLING/BEFORE BAKING
(CHILLING = LESS SPREADING
IF PRIMARY FAT IN DOUGH
IS BUTTER)



RECIPE-RELATED VARIABLES FOR GINGERBREAD CONTROL

- FLOUR-TO-FAT RATIO
(ALREADY HIGH AT 3.4,
BY WEIGHT)
- AMOUNT OF LEAVENING
(1 1/2 TSP. BAKING SODA TO
5 CUPS ALL-PURPOSE FLOUR)
- TYPE OF FAT (100% VEGETABLE
SHORTENING, AKA CRISCO)
- USE OF EGG (1 PER 5 CUPS
ALL-PURPOSE FLOUR)



ADAPTING GINGERBREAD FOR 3-D PROJECTS: CONCLUSIONS

- RELUCTANT TO INCREASE ALREADY HIGH FLOUR-TO-FAT RATIO (3.4, BY WEIGHT) DUE TO POSSIBLE TOUGHENING OF DOUGH AND/OR MAKING IT HARDER TO ROLL AND SHAPE
- DECREASING FLOUR AND SUBSTITUTING BUTTER FOR SHORTENING BOTH LEAD TO UNACCEPTABLE CRACKING OF CURVED COOKIES
- CUTTING LEAVENING IN HALF REDUCES CRACKING A LOT, BUT DOUGH TEXTURE IS HEAVIER



ADAPTING GINGERBREAD FOR 3-D PROJECTS: CONCLUSIONS

- EGG IS ESSENTIAL TO MAINTAINING AN EASY-TO-ROLL (AND SHAPE) DOUGH
- FREEZING (FOR 15 MINUTES) AFTER ROLLING CAN REDUCE CRACKING, BUT RESULTS ARE VARIABLE
- YES! ROLLING DOUGH THINNER (TO $\frac{1}{8}$ INCH) VIRTUALLY ELIMINATES CRACKS ON CURVED COOKIES, WITHOUT IMPACTING DOUGH TEXTURE OR HANDLING



FOUR MORE KEY PROCESSES TO MINIMIZE MISSHAPING

- ROLL AND CUT DIRECTLY ON SILICONE MAT
- USE SILICONE MAT VERSUS PARCHMENT PAPER (LATTER BUCKLES MORE IN OVEN)
- USE ROLLING PIN WITH GUIDES OR OTHER FORM OF ROLLING GUIDES (ESPECIALLY FOR COOKIES VIEWED FROM SIDE)
- MINIMIZE CREAMING OF FLOUR AND FAT (TO AVOID DOMED COOKIES)



RECIPE-RELATED VARIABLES FOR SUGAR COOKIE CONTROL

- FLOUR-TO-FAT RATIO
(LOW AT 1.8, BY WEIGHT)
- AMOUNT OF LEAVENING
(RELATIVELY LESS THAN
GINGERBREAD AT 1 1/2 TSP.
BAKING POWDER TO 2 CUPS
ALL-PURPOSE FLOUR, WHICH
IS EQUIVALENT TO ~ 1 TSP.
BAKING SODA TO 5 CUPS
ALL-PURPOSE FLOUR)
- TYPE OF FAT (BOTH; 3
OUNCES BUTTER TO 2
OUNCES SHORTENING)
- USE OF EGG (1 PER 2 CUPS
ALL-PURPOSE FLOUR)



ADAPTING SUGAR COOKIE DOUGH FOR 3-D PROJECTS: CONCLUSIONS

- LOW FLOUR-TO-FAT RATIO (1.8, BY WEIGHT) IN CONTROL LEADS TO DISASTROUS SPREADING AND CRACKING OF CURVED COOKIES
- ROLLING DOUGH THINNER (TO 1/8 INCH) AND REDUCING LEAVENING BY HALF ARE NOT ENOUGH TO ENSURE CRACK-FREE CURVED COOKIES
- BLINDLY INCREASING FLOUR-TO-FAT RATIO TO MATCH ANOTHER ADAPTED RECIPE'S RATIO CAN LEAD TO UNDESIRABLE RESULTS, I.E., HARD-TO-ROLL DOUGH (IT'S BEST TO GRADUALLY INCREASE FLOUR-TO-FAT RATIO IN CONTROLLED TESTS)



ADAPTING SUGAR COOKIE DOUGH FOR 3-D PROJECTS: CONCLUSIONS

- INCREASING FLOUR ABOUT 20% (TO A 2.0 TO 2.1 FLOUR-TO-FAT RATIO) AND ROLLING DOUGH THINNER (1/8 INCH) LEADS TO CRACK-FREE CURVED COOKIES, WHILE STILL MAINTAINING AN EASY-TO-ROLL DOUGH AND PALATABLE TEXTURE



TOP TIPS FOR ADAPTING COOKIE DOUGH FOR 3-D PROJECTS

- REMEMBER: ANY DOUGH CAN BE ADAPTED FOR 3-D WORK
- BUT, CONTROLLED TESTING IS REQUIRED - AND KNOWING WHICH RECIPE- AND PROCESS-RELATED VARIABLES MOST IMPACT DOUGH SPREADING
- CHANGE ONE VARIABLE PER TEST TO BEST UNDERSTAND ITS IMPACT
- START BY ROLLING THE DOUGH THINNER (ABOUT 1/8 INCH), TO AVOID ALTERING THE DOUGH'S HANDLING, TASTE, AND/OR TEXTURE



TOP TIPS FOR ADAPTING COOKIE DOUGH FOR 3-D PROJECTS

- IF THE PRIMARY FAT IN YOUR DOUGH IS BUTTER, BE SURE IT'S WELL CHILLED
- IF THAT DOESN'T WORK, THEN CONSIDER ALTERING RECIPE VARIABLES (IN ADDITION TO ROLLING DOUGH THINNER)
- REDUCE LEAVENING TO START, TO AVOID CHANGING DOUGH HANDLING
- AND, IF THAT DOESN'T WORK, ADD FLOUR GRADUALLY UNTIL CURVED COOKIES BAKE CRACK-FREE

