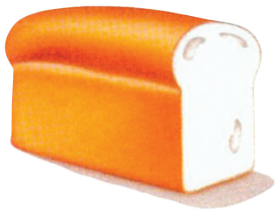


# Bread Troubleshooting Guide



## Holes in Bread

### Possible Causes



#### Old Dough

Follow proper fermentation time.

#### Improper Mixing

Overmixing weakens the dough and undermixing underdevelops the dough; each causes poor gas retention. Mix to proper dough development.

#### Lack of Moisture in Proofer

Dough forms a crust, trapping gas. Adjust proofer to proper humidity.

#### Improper Moulding

Set moulder properly to expel most of the gas.

#### Moulder Rollers in Poor Condition

Trapped gas in dough causes holes. Check and repair moulders for dents, scores or holes.

#### Humidity Too High in Proofer

A tough crust is formed while baking, creating small holes underneath crust.

#### Proofer Temperature Too High

Dough ferments too quickly, contributing to holes. Adjust to proper proofer temperature.

#### Overproofing

Large cells are created. Check proofing time.

#### Excess Dusting Flour

Flour won't dispense properly, becoming trapped and creating holes. Minimize dusting flour.

#### Excess Divider Oil

Oil ends up in dough's interior and cells can't support it, causing holes. Minimize divider oil.

#### Insufficient Intermediate Proof

Results in coarse cell structure with holes. Provide proper rest time after dividing and before moulding.

#### Dough Too Stiff

Dough won't achieve proper cell structure, resulting in holes. Follow formula water level.

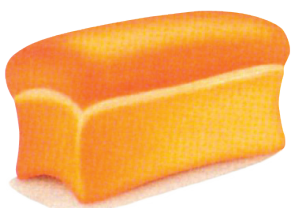
#### Cool Oven

Dough will rise too much in oven before yeast is killed, causing holes.

#### Rough Handling at/in Oven

Cell structure will collapse and not fully recover. Handle with care.

## Hollow Bottom



#### Overmixing

Overmixing weakens the dough, causing poor gas retention. Mix to proper dough development.

#### Moisture in Bottom of Pans

Dry pans thoroughly before use.

#### Use of Hot Pans

Pans should be at room temperature.

#### Proofer Humidity Too High

Too much steam will make dough flow, causing lack of gas retention. Adjust to proper humidity.

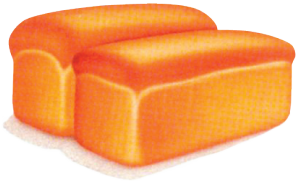
#### Underscaling

Bread will not have enough body. Cell structure will be open, allowing heat to penetrate further than normal. Use proper amount of dough for pan size.

## Bread Troubleshooting Guide

### Lack of Volume

#### Possible Causes



##### Insufficient Yeast

Causes lack of dough maturity. Follow recommended yeast levels.

##### Old Dough

Follow proper fermentation time.

##### Insufficient Intermediate Proof

Dough will lack maturity. Provide proper rest time after mixing and before moulding.

##### Underproofing

Bread will not have proper volume due to dense crumb. Allow for proper proofing time.

##### Improper Mixing

Overmixing weakens the dough and undermixing underdevelops the dough; each causes poor gas retention. Mix to proper dough development.

##### Oven Too Hot

This kills yeast too quickly, causing crust to form prematurely.

##### Rough Handling at/in Oven

Product will fall and not fully recover. Handle with care.

##### Dough Temperature Too Hot/Cold

Hot dough will age too quickly and become weak. Cold dough will not mature properly. Follow proper dough temperature.

##### Dough Too Soft/Stiff

A soft dough requires longer mixing, causing lack of gas retention. A stiff dough won't allow for proper expansion. Follow formula water level.

##### Frozen, Old or Hot Yeast

Stressed yeast causes poor gas production. Keep compressed yeast refrigerated and check freshness. Instant yeast has a shelf life of 1 year without refrigeration, as long as vacuum is not broken.

##### Use of Hot/Cold Pans

Both will slow proofing down. Pans should be at room temperature.

##### Lack of Moisture in Proofer

There should be enough humidity in proofer to prevent skinning of dough.

##### Proofer Too Hot

High temperature will kill some of the yeast, weakening the dough. Adjust to proper temperature.

##### Proofer Humidity Too High

Too much steam will make dough flow, causing lack of gas retention. Adjust to proper humidity.

##### Overproofing

Product collapses when overproofed. Check proofing time.

### Too Much Volume



##### Overproofing

Creates large cells. Check proofing time.

##### Cool Oven

Dough will rise too much in the oven before yeast is killed. Check oven temperature.

##### Improper Moulding

Set moulder properly to expel most of the gas.

##### Overscaling

Scale proper dough weight for size of pan used.

### Moulder Rejects



##### Improper Moulding

Set moulder properly to expel most of the gas.

##### Old Dough

Follow proper fermentation time.

##### Sticky Dough

Check water level and mixing time.

##### Dough Too Stiff

Dough won't achieve proper cell structure. Follow formula water level.

##### Dirty Moulder

Clean for optimal use.

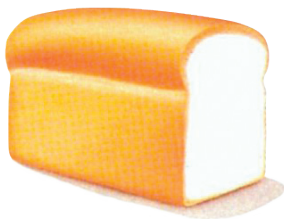
##### Improper Feeding of Moulder

Readjust feeding to correct.

## Bread Troubleshooting Guide

### Crust Too Thick

#### Possible Causes



##### Cool Oven

Heat will penetrate into crumb further than normal. Check oven temperature.

##### Lack of Moisture in Proofer

There should be enough humidity in proofer to prevent skinning of dough.

##### Overbaking

Check oven temperature and baking time.

##### Underscaling

Bread will not have enough body. Cell structure will be open, allowing heat to penetrate further than normal. Use proper amount of dough for pan size.

### Excess Shredding / Capping



##### Dough Too Stiff

Prevents proper expansion, resulting in loaf breaking at the seam (the weakest point). Follow formula water level.

##### Young Dough

A tight cell structure has a tendency to shred. Allow for proper fermentation time.

##### Underproofing

Proper volume has not been achieved, causing quick rise in oven. Check oven temperature.

##### Improper Panning

Dough must be placed in pan seam-side-down.

### Poorly Shaped Loaf



##### Improper Moulding

Set moulder properly to expel most of the gas.

##### Improper Panning

Dough must be placed in pan seam-side-down.

##### Rough Handling

Cell structure will collapse and not fully recover. Handle with care.

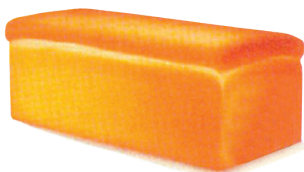
##### Overscaling

Scale proper dough weight for size of pan used.

##### Overproofing

Product collapses when overproofed. Check proofing time.

### Flat Top / Sharp Corners



##### Overmixing

Overmixing weakens the dough, causing poor gas retention. Mix to proper dough development.

##### Very Soft Dough

Causes poor gas retention. Follow formula water level.

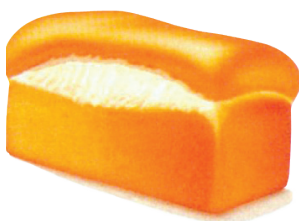
##### Proofer Humidity Too High

Too much steam will make dough flow, causing lack of gas retention. Adjust to proper humidity.

##### Young Dough

Dough will not retain all gas produced. Allow for proper fermentation time.

### Loaf Bursts on the Side



##### Overmixing

Overmixing weakens the dough, causing poor gas retention. Mix to proper dough development.

##### Improper Moulding

Set moulder properly to expel most of the gas.

##### Underproofing

Proper volume has not been achieved, causing quick rise in oven. Allow for proper proofing time.

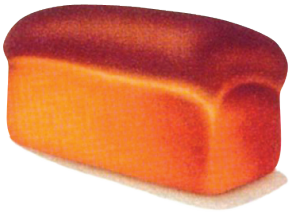
##### Oven Too Hot

Premature crust formation can cause loaf to burst. Check oven temperature.

## Bread Troubleshooting Guide

### Crust Too Dark

#### Possible Causes



##### Oven Too Hot

Follow proper oven temperature.

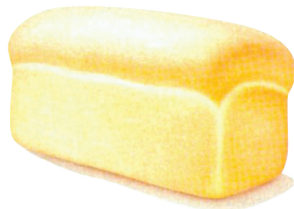
##### Overbaking

Check oven temperature and baking time.

##### Too Much Sugar

Minimize sugar in formula.

### Crust Too Pale



##### Old Dough

Sugars are consumed by yeast, resulting in almost no browning. Follow proper fermentation time.

##### Cool Oven

Prevents proper browning. Check oven temperature.

##### Underbaking

Check oven temperature and baking time.

### Bread Caves In



##### Underbaking

Check oven temperature and baking time.

##### Pans Too Close Together

Space pans properly.

##### Pans Greased Too Heavily

Use grease sparingly.

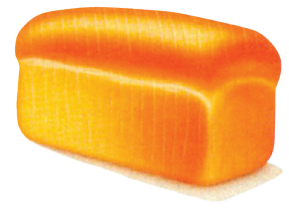
##### Old Dough

Follow proper fermentation time.

##### Overproofing

Product collapses when overproofed. Check proofing time.

### Irregular Slices



##### Underbaking

Check oven temperature and baking time.

##### Bread Too Warm for Slicing

Internal temperature of loaf should reach 95°F/35°C or less.

##### Slicer Blades Dull/Guides Not Set Properly

Check and maintain equipment for proper use.

### Blisters on Crust



##### Young Dough

Dough won't retain all gas produced. Some escaping gas gets trapped at surface, forming blisters. Allow for proper fermentation time.

##### Improper Mixing

Overmixing weakens the dough and undermixing underdevelops the dough; each causes poor gas retention. Mix to proper dough development.

##### Proofer Humidity Too High

A tough crust is formed while baking, creating small holes underneath the crust.

##### Rough Handling at/in Oven

Product will fall and not fully recover. Handle with care.

##### Improper Moulding

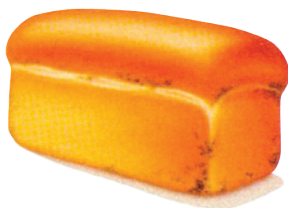
Set moulder properly to expel most of the gas.

##### Very Soft Dough

Causes poor gas retention. Follow formula water level.

## Bread Troubleshooting Guide

### Moldy Bread



#### Possible Causes

##### Bread Wrapped Too Hot

Causes condensation to form. Internal temperature of loaf should reach 95°F/35°C, which usually takes 2–3 hours at room temperature.

##### Product Contact with Unsanitary Equipment

Clean areas in contact with finished product and wash down with food grade sanitizer.

##### Contaminated Wrappers

Keep unused packaging stored in a sealed, clean environment.

##### Racks/Tools Contaminated with Mold

Clean contaminated areas and wash down with food grade sanitizer.

##### Bread Exposed to Dust

Keep work and display environments clean.

### Poor Flavor

##### Old Dough

Causes acids to be produced, changing the flavor. Follow proper fermentation time.

##### Improper Mixing

An undermixed dough has a raw dough flavor. Follow proper mixing directions.

##### Underbaking

Proper crust formation will not occur, resulting in a raw dough of yeasty flavor. Check oven temperature and baking time.

##### Improper Storage of Flour

Store flour away from highly odorous products such as soap or solvents.

##### Overproofing

Causes excessive acid development. Check proofing time.

##### Product Contact with Unsanitary Equipment

Clean areas in contact with finished product and wash down with food grade sanitizer.

##### Careless Lubricating of Equipment

Maintain equipment with cleanliness and precision.

##### Baked Products Stale

Know the shelf life of the finished product.

##### Baked Products Moldy

Dispose of product and sanitize preparation and display areas with food grade sanitizer.

### Poor Keeping Qualities

##### Old Dough

Open grain allows moisture to escape. Follow proper fermentation time.

##### Improper Mixing

A properly developed dough contributes to good cell structure, which retains moisture. Follow proper mixing directions.

##### High Dough Temperature

Temperature should be between 75°–82°F/24°–28°C to reduce staling.

##### Underscaling

Causes grain to open, resulting in increased moisture loss. Use proper amount of dough for pan size.

##### Improper Amount of Shortening

Check recipe for proper amount.

##### Proofer Too Hot

Causes product to develop a coarse texture. Check proofer temperature.

##### Cool Oven

Slows down crust formation, resulting in high moisture loss. Check oven temperature.

##### Overbaking

Creates excessive moisture loss. Check oven temperature and baking time.

##### Bread Wrapped Too Hot/Cool

If wrapped too hot, condensation forms; if too cool, bread will begin to stale. Internal temperature of loaf should reach 95°F/35°C, which usually takes 2–3 hours at room temperature.

Get more tips at [progressivebaker.com](http://progressivebaker.com)

The situations identified above apply to most bread varieties and types. Please use your discretion when identifying a concern that may apply to your products. ©2011 Cargill, Incorporated. All rights reserved.