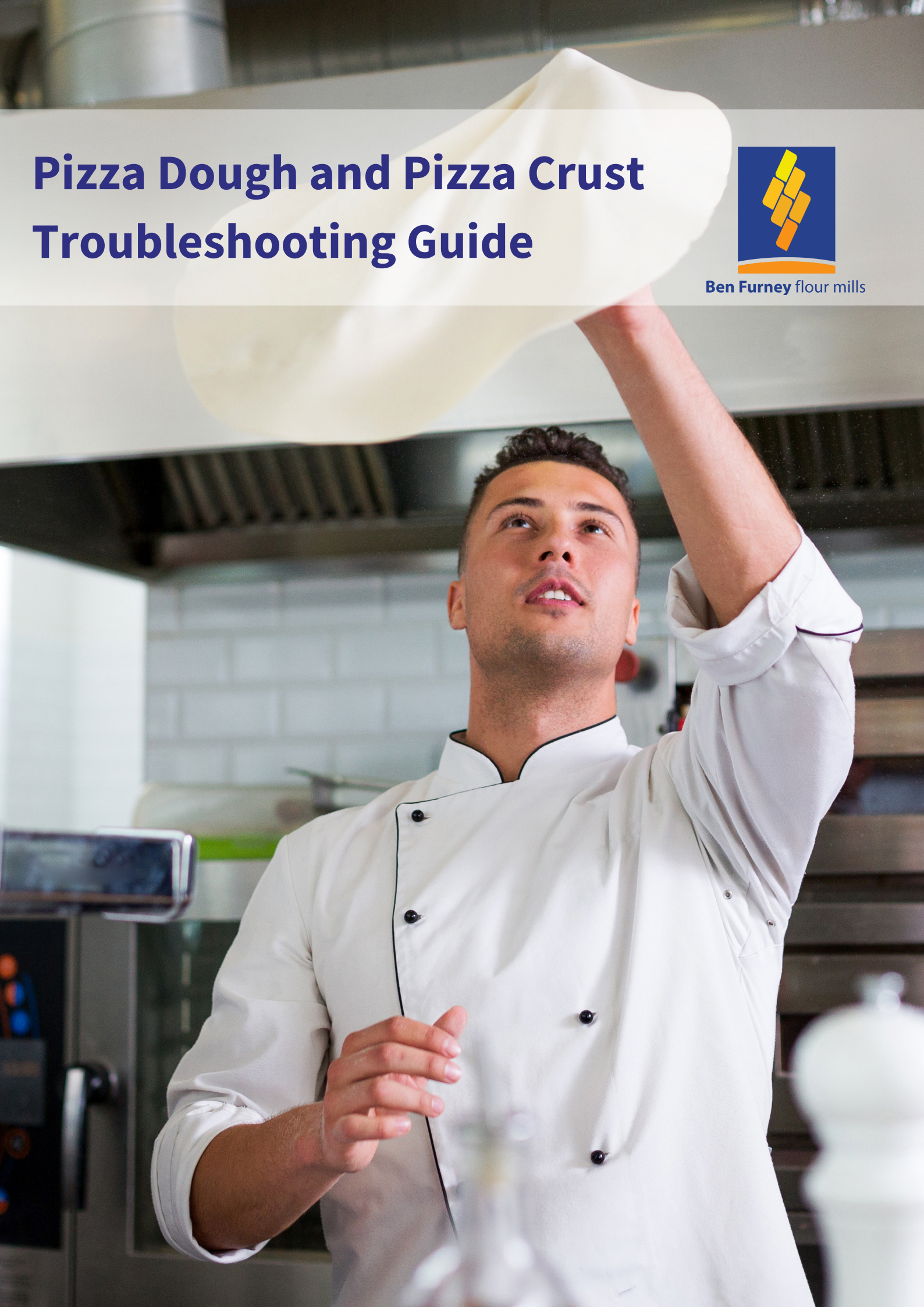


Pizza Dough and Pizza Crust Troubleshooting Guide



Ben Furney flour mills



How to Use This Trouble-shooting Guide

This guide describes 50 problems that can occur with pizza dough and pizza crust (see "Contents" list below). For each problem there's a description of possible *causes* and *remedies*, with the most likely causes listed first.

Each problem is listed as a heading. Under each heading is a description of possible causes and remedies for the problem. The most likely causes are listed first. In addition some sections contain a discussion to aid understanding.



Ben Furney flour mills

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1 Dough too stiff or too firm

(Also see a subsequent section on Dough Too Elastic or Springy)

POSSIBLE CAUSES

Too little water or too much flour

Dough (balls) too cold
Dough unrelaxed

Inadequate fermentation

Dough under-mixed

REMEDY

For subsequent batches, check recipe amounts and weigh ingredients carefully. If the problem is detected during mixing, add slightly more water and mix until just absorbed. (See Comment below.)

Warm dough (balls) to 10 to 15 degrees c before using.

If feasible, flatten the dough balls 2 to 3 minutes before stretching or screening.

Increase fermentation or rise. See subsequent section on Under-risen Dough Balls.

Mix (knead) slightly longer.

COMMENT: This problem is hard to correct for the current batch unless it's discovered in the early stages of mixing. It's also more difficult to remedy with a cutter-mixer than with a planetary mixer because a cutter-mixer is hard to re-start with dough in it. If the problem can't be corrected by adding water, re-mix small pieces of the stiff dough into batches of new dough. Don't exceed 25% re-mixed dough per batch. Add it on top of the flour. Increase the water portion of the new batches enough to compensate for the under-portion of water in the stiff dough. If that's too difficult to do, discard the stiff dough.

2 Dough too slack or too soft

(Also refer to a subsequent section on Dough Too Extensible or Spreadable)

POSSIBLE CAUSES

Too much water or too little flour

Dough (balls) too warm

Excessive fermentation

Dough over-mixed

REMEDY

For subsequent batches, check recipe amounts and weigh ingredients carefully. If the problem is detected immediately after mixing, add slightly more flour and keep mixing. If this can't be done, re-mix small pieces of the slack dough into batches of new dough. Try to add only 10 percent slack dough per batch, but up to 25 percent can work. Add it during the last minute of mixing. Decrease the water portion of the new batch enough to compensate for the over-portion of water in the slack dough.

Refrigerate dough (balls) down to 5 degrees c before using.

Reduce fermentation or rise. See section on Over-risen Dough Balls.

If not severely over-mixed, mix small pieces into new dough (as described above). If dough is severely over-mixed, discard it. For subsequent batches, use a timer when mixing.

3 Dough balls not rising at all (unrisen or dead dough)

POSSIBLE CAUSES

No yeast

Old (dead) yeast

Yeast water too hot, so yeast died

REMEDY

Include yeast in subsequent batches.

Discard old (dead) yeast and use new yeast. Store yeast properly.

Keep yeast water temperature under 30 degrees C.

4 Under-risen dough balls, or dough balls rising too slowly

POSSIBLE CAUSES

Partially dead (old) yeast

Yeast improperly rehydrated

Not enough yeast

Dough too cold coming from mixer

Dough stored at too low of a temperature

Yeast rehydration water too cold

Inadequate fermentation time

REMEDY

Discard old yeast and use new yeast. Store yeast properly.

Rehydrate yeast in water of proper temperature.

Increase yeast portion. For subsequent batches, check recipe amounts and weigh ingredients carefully.

Increase dough water temperature so dough comes from mixer at a higher temperature.

Raise the temperature of the refrigerator (retarder) a few degrees but not over 5 degrees C. Or, if that's not possible, let the dough balls sit at room temperature or put them into a proofer before using.

Raise the rehydration water temperature to that specified by the manufacturer (see instructions on the yeast carton).

Make dough farther ahead of usage; allow more time for fermentation or rising.

5 Over-risen dough balls, or dough balls rising too quickly

POSSIBLE CAUSES

Too much yeast

Dough too warm coming from mixer

Dough stored at too high of a temperature

Dough mixed too far ahead; too much fermentation time

REMEDY

Reduce yeast portion. For subsequent batches, check recipe amounts and weigh ingredients carefully.

Decrease dough water temperature so dough comes from mixer at lower temperature.

Criss-cross trays of dough for 60 to 90 minutes when first put into refrigerator. Don't let dough sit (as long) at room temperature. Keep refrigerator temperature low.

Mix dough closer to when it will be used. Project sales and correlate dough ball production to projected usage.

COMMENT: In addition to the causes cited above, amount of rise can be affected by salt, sugar, acidity, water, and yeast nutrients in the dough, and also by the characteristics of the flour.



6 Dough balls joining together in the dough tray

POSSIBLE CAUSES

Over-risen dough

Poor dough ball placement

Too many balls in tray

REMEDY

Reduce amount of rise in the dough. See previous section on Over-risen Dough Balls.

When placing dough balls in the tray, position them so balls are the same distance apart — or 38 to 50mm.

Reduce number of dough balls per tray.

7 Dough has an odor of beer

POSSIBLE CAUSES

Severely over-fermented dough

REMEDY

Reduce amount of fermentation. See previous section on Over-risen Dough Balls.

COMMENT: Discard dough that smells like beer as it's severely over-fermented. Do not re-ball or re-mix it.

8 Dough balls collapsing (blown dough)

POSSIBLE CAUSES

Severely over-risen dough (too much fermentation)

Flour too weak

REMEDY

Reduce the amount of rise or fermentation. See previous section on Over-risen Dough Balls. In addition, many random factors can cause over-risen dough—things like a power outage, A/C outage, cooler malfunction, and leaving the cooler door open too long.

Use a stronger flour—one with higher quality or quantity of protein.

COMMENT: There's two attitudes toward using blown dough. Some say it should never be used but, instead, should be discarded. Other experts recommend re-using it if it's new dough (i.e., less than 24 hours old). They suggest re-balling it if it can be used within 12 hours. If it's between 24 to 48 hours old, they suggest mixing it in with a new batch. Try to add only 10 percent blown dough per batch, but some say up to 50 percent can be mixed with new dough. Add it during the last minute of mixing. If it's over 48 hours old it should probably be discarded. If it smells like beer it should definitely be discarded.



9 Dough (crust) not rising in the oven, even though the dough balls were proofed

POSSIBLE CAUSES

Severely over-risen dough (too much fermentation)

REMEDY

Reduce amount of rise or fermentation. See previous section on Over-risen Dough Balls.

10 Crust forming on dough balls

POSSIBLE CAUSES

Dough balls exposed too long to open air

REMEDY

1. Cover dough balls with a tray, cover, plastic wrap or plastic bag.
2. Shorten the time that the trays of dough are criss-crossed in the refrigerator (max. 60 to 90 minutes).
3. Keep balls covered when warming up.
4. Brush dough balls with oil (however, if dough is kept tightly covered with a tray or pan, oil brushing isn't needed).

Floured too far ahead

Flour dough balls no more than 2 to 3 minutes before rolling or stretching.

COMMENT: Slight drying or crusting of a dough ball doesn't harm crust quality. However, a dough ball with heavy crusting—the kind that makes a “turtle shell” crust—should be discarded. Do not try to hide thick crusting by rolling it into the centre of the dough ball.

11 Panned dough collapsing when sauced

POSSIBLE CAUSES

Excessive rise or fermentation

REMEDY

Reduce the amount of rise. See previous section on Over-risen Dough Balls.

Too much pressure from sauce spoon

Reduce the amount of downward pressure when applying the sauce.



12 Dough too elastic or springy (shrinks excessively after stretching)

(Also see a previous section on Dough Too Stiff)

POSSIBLE CAUSES

Flour's protein level is too high

Dough under-mixed

Dough unrelaxed

Too cold

Protein too strong

Inadequate fermentation

Too stiff

REMEDY

(1) Switch to a flour of 1 to 2 percent lower protein content, or (2) blend a lower protein flour with the current flour.

Mix dough longer (try 10 to 20 percent more time).

(1) Let dough relax for 30 minutes after mixing. (2) If feasible, flatten dough balls 2 to 3 minutes before final rolling or pressing.

Warm the dough (balls) to 16 to 21 degrees C before using.

If reducing the flour protein content is undesirable, (1) increase the oil or shortening level up to 4 to 5 percent of flour weight, or (2) use a dough relaxer —i.e: reducing agent – such as L-cysteine (see comment below)

Increase fermentation or rise. See previous section on Under-risen Dough Balls.

Increase amount of water in dough formula. See previous section on Dough Too Stiff.

COMMENT: There are several types of dough relaxers, each one affecting dough in a different way and at a different time. Check with the manufacturer(s) to find out which type is best suited for your production system

13 Dough too extensible or spreadable (thin spots occurring during screening)

(Also see a previous section on Dough Too Slack)

POSSIBLE CAUSES

Flour's protein level is too low

Dough over-mixed

Protein too weak

Dough too warm

Dough too slack

REMEDY

(1) Switch to a flour of 1 to 2 percent higher protein content, or (2) add vital wheat gluten to current flour.

Mix dough less (try 10 to 20 percent shorter time).

(1) Switch to a stronger (i.e., higher quality) flour, or (2) decrease the oil or shortening level, or (3) if it's being used, eliminate or reduce the dough relaxer.

Use dough of a colder temperature. Leave dough in the cooler until just before using.

Decrease amount of water in formula. See previous section on Dough Too Slack.

14 Dough sticking to rolling pin, table, or hands

POSSIBLE CAUSES

Inadequate amount of dusting flour or cornmeal used

Wrong flour used for dusting

Too much pressure used on first roll

Too much diastatic action in the dough

Dough too slack

REMEDY

(1) Sprinkle more flour or cornmeal onto the table and/or (2) dip the dough ball (both sides) into flour or cornmeal before rolling.

Use bread flour—not cake, pastry or all-purpose flour—for dusting the table. Finely ground semolina or corn meal works well, too (and eliminates flour dust settling around the store).

When using a rolling pin, too much downward pressure on the first roll can cause dough to stick to the table or pin. To eliminate the problem, apply less pressure on the first roll and increasingly greater pressure on subsequent rolls.

If diastatic malt is used in the dough formula, eliminate or reduce the amount, or switch to non-diastatic malt. (There are various types of malt. Consult with a manufacturer for details on what is best suited for your production requirements.)

Use stiffer dough. See previous section on Dough Too Slack.

COMMENT: Although not commonly done, some pizzerias use oil instead of flour when rolling dough. They apply a thin coating of oil to the table and/or dough ball before rolling or stretching.

15 Dough tearing in a dough press

(See previous section on Dough Too Elastic or Springy.)

16 Dough too large after rolling or stretching (won't fit pan or screen)

REMEDY: If this problem occurs frequently, use stiffer dough. For ways to make stiffer dough, see the previous sections on Dough Too Slack and Dough Too Extensible. If it only happens occasionally due to slight over-rolling or over-stretching, jiggle the dough (in the pan or on the screen) until it shrinks to the proper size. Avoid the habit of trimming off dough to make over-stretched dough fit the pan or screen.

17

Excessive flour sticking to rolled dough

POSSIBLE CAUSES

Wrong flour used for dusting

Improper flouring and stretching methods: (a) Dough balls floured too far ahead and/or (b) Rolled dough stacked together before panning and/or (c) Inadequate slapping to remove flour.

Too much diastatic action in the dough

Dough too slack

REMEDY

Use bread flour—not cake, pastry or all-purpose flour—for dusting the table and dough. Or switch to finely ground cornmeal or finely ground semolina.

Flour dough balls no more than 2 to 3 minutes ahead; don't stack up rolled dough too far ahead; slap or brush excess flour off of dough.

If diastatic malt is used in the dough formula, eliminate or reduce the amount, or switch to non-diastatic malt. (There are various types of malt. Consult with a manufacturer for details on what is best suited for your production requirements.)

Use stiffer dough. See previous section on Dough Too Slack.

COMMENT: Although not commonly done, some pizzerias use oil instead of flour when rolling dough. They apply a thin coating of oil to the table and/or dough ball before rolling or stretching.

18

Black spots on top of dough ball

POSSIBLE CAUSES

Oxidation of bran particles in old dough

REMEDY

In future batches, lower dough pH by adding an acidic ingredient to the formula, such as 60-120gms of vinegar per 12.5kg of flour. NOTE: Increasing the acidity of dough can inhibit crust browning, so it may be necessary to add non-fat dry milk or whey to increase browning. Increased acidity also inhibits fermentation, so it may be necessary to increase yeast level or dough temperature.

COMMENT: Although the spots look unsightly on a dough ball, in fact, they're harmless and disappear during baking. So they might best be ignored.

19

Bluish-black spots on underside of dough ball

POSSIBLE CAUSES

Undispersed yeast colonies in the dough

REMEDY

Rehydrate (dissolve) yeast completely before adding to the dough. Might also try a longer mixing time if using a planetary mixer.

COMMENT: Some experts suggest that these spots are caused by yeast colonies that don't completely disperse during mixing. Apparently the colonies die and release ammonia that discolors the dough.

20

Crust not brown enough all over

(Cheese and toppings bake to full doneness before crust turns brown)

POSSIBLE CAUSES

Inadequate amount of sugar in dough

Too much flour left on surface of dough

Excessive fermentation

Oven temperature too low

REMEDY

Add lactose—i.e., whey or non-fat dry milk—to dough formula. Use 3 to 6 percent of flour weight. Sucrose, or table sugar, can also be used but it increases fermentation, which can produce undesirable side effects—so whey or non-fat dry milk is preferred.

(1) Slap off all flour before laying dough onto pan, screen, or peel. (2) Keep pizza screens out of flour—i.e., don't lay them on a flour-covered table.

Reduce fermentation. See previous section on Over-risen Dough Balls.

Raise baking temperature and, possibly, reduce baking time.

21

Crust too brown all over

(Crust turns brown before the cheese and toppings are fully baked)

POSSIBLE CAUSES

Too much sugar in dough

Dough may be very young

REMEDY

Reduce the amount of whey, non-fat-dry milk, and/or sugar in dough formula.

Allow longer fermentation time prior to using.

22

Crust not brown enough on bottom

(Top of pizza bakes to full doneness before bottom of crust turns brown)

POSSIBLE CAUSES

Inadequate bottom heat in oven (or too much top heat)

Improper rotation of pizzas in a deck oven (i.e., always putting pizzas onto the same spot of the deck)

Pizzas too close together in an electric infrared conveyor oven

Using infrared-reflective aluminum pans in an infrared type oven (ex., CTX-type conveyor oven)

Too much flour left on bottom of dough

REMEDY

Adjust oven baffles, air fingers, and/or temperature controls so there's more bottom heat relative to top heat.

When baking with a deck oven, rotate pizzas through various spots on the deck, thereby allowing each spot maximum time to regain lost heat. If this doesn't solve the problem, it may be time to purchase additional ovens.

Allow at least a 5cm space between pizzas on the conveyor belt of an electric infrared oven.

(1) Have aluminum pans anodized. This increases their infrared heat absorption capacity. (2) Or use black steel pans instead of aluminum. NOTE: Contrary to popular belief, holes in a pan do not significantly reduce baking time or increase heat conductivity.

(1) Slap off all flour before laying dough onto pan, screen, or peel. If using flour on the peel, switch to finely ground cornmeal or semolina. (2) Keep pizza screens out of flour—i.e., don't lay them on a flour-covered table.

23

Crust too brown on bottom

(Bottom of crust turns brown before top of pizza is fully baked)

POSSIBLE CAUSES

Inadequate top heat in oven (or too much bottom heat)

Sloppy oven-tending methods (i.e., leaving deck oven doors open too much)

REMEDY

If using a deck oven, open the baffle to allow more top heat. If using a convection or impingement-type conveyor oven, refer to the oven manual and confirm that the finger arrangement is correct. If necessary, adjust oven baffles, air fingers, and/or temperature controls so that there's more top heat relative to bottom heat.

Keep oven door closed as much as possible—don't open the door and walk away from oven (i.e., never take your hand off the oven door while the door is open).

24

Crust not browning and has a tough texture

POSSIBLE CAUSES

Excessive fermentation

Oven temperature too low

REMEDY

Reduce fermentation. See previous section on Over-risen Dough Balls.

Raise baking temperature and, perhaps, reduce baking time.

25

Top edge of outer crust has a whitish color (but rest of pizza is done)

POSSIBLE CAUSES

Too much flour left on surface of dough

REMEDY

(1) Slap off all flour before laying dough onto pan, screen, or peel, and/or (2) brush outer edge of dough with oil prior to baking.

26

Crust browns on one side only or browns unevenly

POSSIBLE CAUSES

Placing pizza too close to side or back wall of a deck oven

Non-uniform heat in baking chamber (deck oven or convection conveyor oven)

REMEDY

(1) Keep pizzas at least 5cm from side or back wall of baking chamber. (2) Rotate pizzas 180 degrees half way through baking.

Adjust oven baffles, air fingers, and/or temperature controls so that heat is uniformly dispersed in baking chamber.

27

Crust edge is burnt (but rest of pizza is properly done)

POSSIBLE CAUSES

Outer edge rolled too thin

REMEDY

Make the outer edge thicker by: (1) Rolling dough to 3/4 final diameter, then hand-stretching it to final size; or (2) when rolling dough don't roll off the edge with the rolling pin (roll just up to the edge but not over it).

Outer edge too high in the pan

Don't extend the edge of the dough so high up the side of the pan.

28

Crust color uneven

POSSIBLE CAUSES

Uneven oven heat

REMEDY

FOR DECK OVENS AND INFRARED CONVEYOR OVENS: Keep pizzas at least 28mm from the side walls. See previous section on Crust Over-browns on One Side. FOR CONVECTION (i.e., IMPINGEMENT-TYPE) CONVEYOR OVENS: Clean the impinger fingers; make sure fingers and baffles are properly installed and fan is working properly.

Excess flour

(1) Remove excess flour from dough before assembling the pizza, and/or (2) brush outer edge of crust with oil before baking.

Re-working dough scraps into new dough during sheeting

Older dough browns less than new dough, so when pieces of old and new dough are rolled together they create a crust of uneven browning.

29

Large white pockets on bottom of pan pizza crust

POSSIBLE CAUSES

Air and steam build-up between dough and pan bottom

REMEDY

(1) When placing dough into pan, press out all air pockets between the dough and pan. (2) Use a pan with holes so air and steam build-up can escape during baking, thereby allowing the entire crust to come into contact with the pan bottom. NOTE: If a large amount of oil is used, holes cannot be used.

30

Crust fully baked but still has a white surface

See the previous section on Crust Not Brown Enough All Over.

31 Crust forms bubbles during baking

POSSIBLE CAUSES

Dough under-proofed (i.e., under-risen)

Dough over-proofed (i.e., over-risen)

High percentage of water in dough formula

REMEDY

Use more-risen dough for making pizza. See the previous section on Under-risen Dough Balls.

Use less-risen dough for making pizza. See the previous section on Over-risen Dough Balls.

Reduce the water portion in the dough formula by 2 to 4 percent of flour weight. This can help reduce the presence of super-large (pita-bread style) bubbles.

COMMENT: Most bubbling problems are caused by under-proofed dough. For top quality crust, the recommended way to reduce bubbling is use optimally proofed dough—neither under-risen nor over-risen. However sometimes that's not always possible. In emergency cases, when dough is under-proofed, perforate the rolled dough using a dough docker. However, docking has the effect of creating a very flat crust. So unless you desire a flat crust, docking should only be used as a last resort. Other methods of (possibly) reducing bubbles include (a) assembling the pizza with the soft bottom side of the dough facing up, and (b) using a slightly longer bake time and lower temperature. Because crust bubbling is a universal concern among pizzerias, the following special discussion is provided.

32 Crust fully baked but still has a white surface

POSSIBLE CAUSES

Under-risen dough (i.e., under-proofed)

REMEDY

Increase fermentation or rise. See previous section on Under-risen Dough Balls.



33

Crust grain is too open (large cells)

POSSIBLE CAUSES

Over-risen dough
(i.e., over-proofed)
Dough inadequately molded or
compressed after mixing

REMEDY

Reduce fermentation or rise. See previous section on Over-risen Dough Balls.
Flatten dough (balls) with a dough-roller or press, thereby dividing the large
air cells produced during mixing into smaller cells.

34

Streakiness or uneven grain in crust

POSSIBLE CAUSES

Re-working too much old scrap

REMEDY

When sheeting dough or pizza shells, use no more than 25 percent scrap. Re-
work scrap only once. Let rolled dough or pizza shell achieve full fermentation
before baking.

35

Crust edge has large burnt spots

POSSIBLE CAUSES

Large air cells in dough

REMEDY

Before stretching the dough, press the edge to flatten large air cells. Also, see
previous section on Crust Grain is too Open.

Dough over-risen

Use less-risen dough for making pizza. See the previous section on Over-risen
Dough Balls.

36

Crust bakes up flat (no oven spring)

POSSIBLE CAUSES

Under-risen dough (i.e., under-
proofed)

REMEDY

Increase the dough rise. See previous section on Under-risen Dough Balls. In
short, allow dough balls to rise (i.e., proof) more before rolling or stretching,
and/or allow rolled or pressed dough to rise in the pan or screen before
baking. If possible, avoid using a dough docker.

Over-risen dough
(i.e., over-proofed)

Decrease the dough rise. Over-risen dough collapses during baking. See the
previous section on Over-risen Dough Balls.

Unrisen (dead) dough

This problem is caused by (1) dead yeast, or (2) yeast killed in hot water, or (3)
yeast accidentally omitted from dough. See previous section on Unrisen
(dead) Dough.

37

Crust collapses (shrinks in height) immediately after pizza is taken from the oven

POSSIBLE CAUSES

Incomplete coagulation of flour protein (i.e., gluten)

REMEDY

Increase pizza bake-time by 1 to 2 minutes. If that results in over-browning of the crust, you may have to drop the baking temperature. Also, see the previous section on Crust Too Brown All Over.

38

Crust tough and leathery (especially after it cools down)

POSSIBLE CAUSES

Flour's protein content is too high

REMEDY

(1) Switch to a flour of lower protein content (maximum 12 percent), or (2) blend a lower protein flour with the current flour. Consider increasing the amount of oil or shortening in the formula up to 4 to 5 percent of flour weight.

39

Crust edge has large burnt spots

POSSIBLE CAUSES

Under-risen dough (i.e., under-proofed)

REMEDY

Increase the dough rise. See previous section on Under-risen Dough Balls. In short, allow dough balls to rise (i.e., proof) more before rolling or stretching, and/or allow rolled or pressed dough to rise in the pan or screen before baking. If possible, avoid using a dough docker.

Unrisen (dead) dough

This problem is caused by (1) dead yeast, or (2) yeast killed in hot water, or (3) yeast accidentally omitted from dough. See previous section on Unrisen (dead) Dough.

COMMENT: Flat, crackery crust is only a problem with those pizzerias desiring a risen, bready crust. Many establishments intentionally sell a pizza with flat, crackery crust—sometimes called “thin & crispy” or “thin & crackery.” This crust is typically made with a stiff, lean, lightly risen dough that’s flattened with a dough-roller or sheeter, and also sometimes perforated with a docker, as well.



40 Crust flat, dense, and tough

POSSIBLE CAUSES

Severely over-fermented dough

REMEDY

Reduce amount of fermentation. See previous section on Over-risen Dough Balls.

41 Crust lacks flavour

POSSIBLE CAUSES

Mis-measured or omitted an ingredient: ex., salt omitted
Inadequate fermentation

REMEDY

Measure all ingredients—no guessing allowed. Provide thorough staff training, written procedures and good measuring utensils.
Increase dough fermentation (or rise). See section on Under-risen Dough Balls.

Crust under-browned

Increase crust browning by increasing bake time and/or temperature.

COMMENT: More crust flavor can also be achieved by adding ingredients to the formula. For ideas to test, see the Flavorings & Colorings section of the Dough Ingredients chapter. Brushing the crust edge with a butter-flavored oil also adds flavor. Some pizzerias sprinkle grated Parmesan or similar cheese over the oiled crust. Some also mist the edge of the dough with water and add seeds (i.e., poppy seed, sesame seed) before baking.

42 Crust has peculiar flavour

POSSIBLE CAUSES

Poor ingredients: ex., rancid oil, spoiled non-fat dry milk solids, moldy yeast

REMEDY

Make sure fresh, quality products are used.

Wrong ingredients: ex., accidentally used salt for sugar

Make sure ingredients are clearly labeled.

Excessive flour on crust

When baked, surface flour imparts a bitter flavor to crust. Make sure excess flour is removed from surface of rolled dough. See previous section on Excessive Flour Sticks to Rolled Dough.

Mismeasured or omitted an ingredient

Measure all ingredients—no guessing allowed. Provide thorough staff training, written procedures and good measuring utensils.

Dirty pans; rancid oil in pans

Check pans and wash if needed.

43

Crust has doughy layer under the sauce (crust done on outside but raw inside)

POSSIBLE CAUSES

Bake time too short; oven temperature too high

Pizza too cold going into the oven

Sauce too watery; tomato product has excessive syneresis (water separation)

Sauce applied too soon

REMEDY

Lengthen bake time by 60 to 90 seconds and decrease oven temperature.

(1) Use warmer (i.e., 15 to 21 degrees C) dough, sauce, and cheese, and/or (2) “double-bake” the crust by warming (pre-heating) it in the oven before applying sauce, cheese, and toppings. This is sometimes done with very thick pan-style pizzas with extensive topping.

(1) Add less water to the sauce, and/or (2) use a thicker tomato product, and/or (3) use a higher quality tomato product.

Apply the sauce just before pizza is baked. (However, a thick, high-quality sauce can be applied 2 to 3 hours before baking without causing a doughy layer.)

44

Crust has gummy layer under the sauce

POSSIBLE CAUSES

Too much alpha-amylase; too much diastatic action in the dough

Extended fermentation of retarded dough (too old).

REMEDY

If diastatic malt is used in the dough formula, eliminate or reduce the amount, or switch to non-diastatic malt.

Reduce holding time of retarded dough.

45

Soggy crumb with grayish tint or translucent, gummy appearance

COMMENT: Gray, soggy crumb most frequently occurs in retarded dough that’s several days old. It’s a minor version of the same condition that causes gummy layer. In short, it’s “gummy crumb.” The remedy is the same as for gummy layer (described above).

46

Crust is uneven thickness (thick edge, thin middle)

POSSIBLE CAUSES

Spinning the dough

Improper rolling technique;
unequal pressure on handles

Dough too soft

REMEDY

Eliminate spinning. Use more rolling, pressing, hand-stretching or slapping to stretch the dough.

Put equal pressure on the rolling pin handles. In short, roll dough to uniform thickness.

Use a slightly stiffer dough that doesn't spread as easily.

47

Crust is soggy or floppy (slice flops over when picked up)

POSSIBLE CAUSES

Crust too thin

Flour's protein level is too low

Dough too slack

Incompletely baked (not fully done)

Excessive steaming in the box or on the tray

REMEDY

Increase the dough portion to create a thicker crust. Test a 20 to 30 percent increase for starters. This is the main remedy for floppy crust. If the crust is too thin, nothing else helps much.

(1) Switch to a flour of 1 to 2 percent higher protein content, or (2) add vital wheat gluten to current flour. In doing this, you may need to slightly increase the water portion and mixing time.

Use a stiffer dough. See previous section on Dough Too Slack.

Bake to full doneness. Increase the baking time and, possibly, lower baking temperature.

(1) Use a single-sided corrugated liner under the pizza in the box to help minimize crust steaming. (2) Possibly let pizza cool on a rack for 60 seconds before boxing or serving. (3) Consider putting a screen or trivet between the pizza and serving tray to vent the steam and prevent the crust from becoming water- and grease-soaked. (4) Deliver pizza to customer sooner.



48 When parbaking, crust separates like pita or pocket bread

POSSIBLE CAUSES

Unequal top vs. bottom heat

REMEDY

Adjust oven fingers, baffles, and/or temperature controls to achieve equal amount of top vs. bottom heat. On a pizza oven, this usually means reducing the bottom heat. If that can't be done, experiment with putting an extra pizza screen or two underneath the pan or crust.

Too high baking temperature

Lower the baking temperature and, possibly, lengthen the bake time.

Under-proofed dough

Proof dough to a higher rise. For thick, pan-style crust the rolled dough should be pan proofed to at least double in height. See previous Discussion on Crust Bubbling in this chapter. Also see previous section on Under-risen Dough Balls.

High percentage of water in dough formula

Reduce the water portion in the dough formula by 2 to 4 percent of flour weight. This can help reduce the presence of super-large (pita-bread style) bubbles.

49 Crust made from retarded dough has small blisters

REMEDY: This condition can be reduced by shortening the holding time of retarded dough. However, tiny blisters don't hurt anything—in fact, some people think they make the crust look better. So you're best off by not worrying about them.

50 Crust sticks to pan or screen

POSSIBLE CAUSES

Unseasoned pan or screen

REMEDY

Season new pans before using them. (See following discussion on How to Season Pans.) Thereafter, only wipe them out with clean cloth or paper towel and don't wash them. If the health department requires washing between uses, use mild detergent and brush. Do not soak them in caustic carbon-cutting chemical or scrub them with steel wool or nylon pad.

No oil in pan

Oil the pan before putting in the dough. With a seasoned pan, only a thin coating of oil is needed to eliminate sticking.