Pies & Pastry 2 – Faults

BAKING INDUSTRY RESEARCH TRUST

> INFORMATION SHEET

COMMON FAULTS IN PIE PASTRY IN NEW ZEALAND

FAULT	LIKELY CAUSES
Shrinkage	Flour too strong, protein too high (related to resting time). The dough Is under-mixed meaning that gluten is not extensible. Pastry thickness reduced too quickly. Insufficient or uneven rest between turns. Excess scrap used. Excessive baking. Dough fat level too high. Stretching top pastry when applied to pie bottom.
Blisters	Too many or not enough layers in top pastry. Flour too weak. Flour between layers at laminating stage. Filling too hot. Moisture (condensation) in oven. Too much steam (if used) in oven. Too much top heat in oven. Non uniform layers of pastry fat present in dough structure after lamination. Crystallisation of pastry fat following incorrect storage. Pastry fats incorrectly tempered (too cold for processing).
Cracking (bottom pastry)	Drying out of raw pastry. Too much scrap. Weak flour, excessive reducing agents. Under-baked. Dough too dry. Fat levels too low. Over-mixed pastry. Excessive flakiness Too many folds. Flour too weak. Oven too hot, causing excessive lift. Over-baking causing the surface layers to dry out too much. Fat levels too high in top pastry. Unevenly flaked as fat not evenly dispersed.
Sunken tops on pies	Insufficient filling to support top. Under-baked causing soft top. Baking temperature too low, allowing fat to melt slowly. Pastry too thin or too soft. Too many layers. Pastry stretched when placed over pie bottom. Excessive pie glaze. Streaky appearance Excessive and ‘dirty’ scrap. Broken dough surface due to excessive sheeting, weak dough. Too much water in dough. Colour not mixed in. Fat too hard and incorrectly blended. Drying out of pastry dough due to prolonged processing.
Lack of puff	Flour too weak. Oven too cold. Over-dusting forms a skin, leading to small cracks. Insufficient turns, fewer layers, as each layer remains thick the fat melts during baking and melts out.

Too many turns cause fat to roll into paste layers.
Pastry dough too soft.
Fat too hard – breaks the dough layers.
Fast reduction with sheeting breaks layers.
Hot filling causes the fat to melt before puffing can occur.
Pastry too thin or thick.
Fat levels too high or too low

REFERENCE

Abels Bakery Advisory Service. A guide to pastry making in New Zealand.
Murray B. An Introduction to puff pastry. William Angliss Baking Department Workshop.
Wilson AJ, Ross M, Waters IR 2005. Pie pastry faults manual. The New Zealand Institute for Crop & Food Research Limited.