

**NEW CROP 2024:
TECHNICAL REPORT**



WILDFARMED

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INTRODUCTION

Welcome to our New Crop Technical Report for flour. Our report is based on data from Wildfarmed new crop samples and covers both long-fermentation artisanal process and quick-fermentation baking without additives. We carried out trials with new harvest flour and the results are summarised below.

New harvest grain will begin to circulate in flour with julian code 24285, which you can find down the side of your bags.

2024 ANALYSIS

2024 GRAIN TOPLINE STATS

- PROTEIN CONTENT IS DOWN 0.2 - 0.3% ON LAST SEASON.
- HAGBERG IS HIGH.
- FLOUR DAMAGED STARCH LEVELS ARE UP ON LAST SEASON DUE TO INCREASED GRAIN HARDNESS. THIS HAS RESULTED IN FLOUR WATER ABSORPTION UP ON LAST SEASON BY AT LEAST 3%.
- GLUTEN STRENGTH IS SLIGHTLY LOWER THAN 2023 CROP.
- FLOUR COLOUR IS BRIGHTER THAN LAST SEASON.

2024 FLOUR

This 2024 crop wheat flour had a protein of 10.3%, water absorption of 57.0% (at 14% moisture), and moderate gluten strength. The test-baked bread was of good volume and quality.

Comparing this 2024 crop-milled flour with that of flour milled in July using 2023 crop grain, the protein content is slightly lower, the flour damaged starch is higher, increasing the flour water absorption at 14% moisture, and the gluten strength (resistance) is lower. These were all features seen with the new crop survey and changeover. The baking performance of both crop years was comparable, with only a subtle difference in the breadcrumb colour and the 2024 crop being brighter.

FLOUR ANALYSIS	2023	2024
MOISTURE %	12.7	13.7
PROTEIN % 'AS IS'	10.5	10.3
STARCH DAMAGE %	27	38
HAGBERG FN	N/A	346
TRISTIMULUS L*-B*	78.46	77.46
FARINOGRAM 600 LINE		
WATER ABSORPTION %	57.2	57.5
WATER ABSORPTION % AT 14% MOISTURE	54.9	57.0
STABILITY TIME (MIN)	5.8	4.4
TOLERANCE (BU)	50	90
EXTENSOGRAPH 45 MINS		
RESISTANCE (BU)	420	250
EXTENSIBILITY (CM)	16.1	15.5
R/E	2.6	1.6

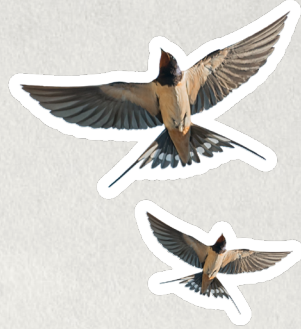
BAKING QUALITY KEY

POINT SUMMARY

WAYNE CADDY'S LONG FERMENTATION

Our resident test baker Wayne tested the T65, our Wildfarmed White Bread Flour, with flour from our 2023 and 2024 crops using the same recipe and processing parameters. The following conclusions were drawn:

- THE NEW CROP PERFORMED VERY WELL AND IMPROVED DOUGH STABILITY, PROVIDING BETTER ELASTICITY AND FERMENTATIVE CONTROL.
- TOTAL WATER ABSORPTION IS HIGHER FOR THE NEW CROP AND SHOWS AN INCREASE OF 2% TO 3% FOR WET OR SUPER-HYDRATED DOUGHS.
- THE OLD CROP RECIPE ALWAYS APPEARED UNDER STRESS AT AN ELEVATED LEVEL OF 74% TOTAL HYDRATION, COMPARED TO THE NEW CROP FLOUR, WHICH APPEARS STABLE.
- THE NEW CROP PERFORMED WELL. DEMONSTRATING STABILITY IN THE BULK FERMENTATION STAGE AND A SLIGHTLY HIGHER GASSING RATE AFTER 16 HOURS OF COLD BULK FERMENTATION.



Top line, there was a slight change in performance compared to the old crop, but for the better, improved hydration (2% to 3%) gluten elasticity and good fermentation powers.

NEW CROP COMMENTS

Crust - Deeper colour with typical caramel and darker "eye liner" on ear.

Crumb - Open crumb with irregular porous texture. Slightly tighter crumb than 2023 crop, with the potential to increase the hydration further to 75%.

Volume - Reasonable but very controlled and consistent. Very defined fine ear.

NEW CROP BAGUETTE



OLD CROP BAGUETTE



QUICK-FERMENTATION BREAD PROCESS

- THE DOUGHS FOR BAKING HAVE BEEN SLIGHTLY SOFT COMPARED TO LAST SEASON. THIS IS DUE TO HIGHER FLOUR WATER ABSORPTION LEVELS AND SLIGHTLY WEAKER GLUTEN QUALITIES.
- LOAF VOLUMES ARE DOWN SLIGHTLY FROM LAST SEASON WITH OVERALL BAKING QUALITY AS GOOD TO MODERATE.
- CRUMB STRUCTURES ARE FINE, AND BRIGHT, BUT SLIGHTLY SOFT AND LESS RESILIENT THAN LAST SEASON.

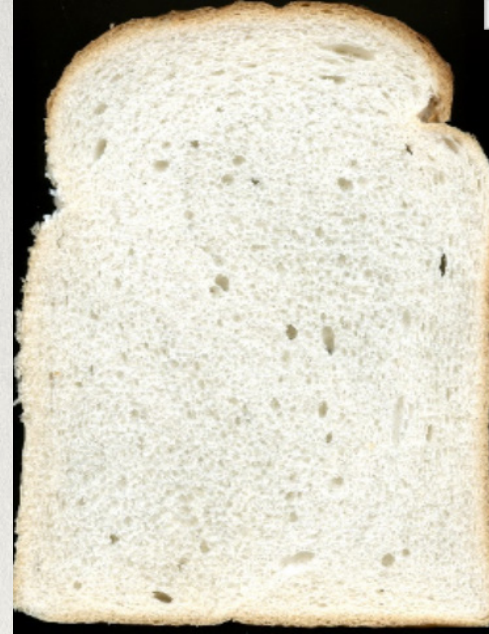
POSSIBLE PROCESS ADJUSTMENTS

- DOUGH MIXING TIMES AND ENERGY INPUT LEVELS MAY NEED TO BE ADJUSTED AS GLUTEN STRENGTH IS LOWER THAN LAST SEASON.
- WITH A HIGH HAGBERG FALLING NUMBER, THERE WILL BE LESS NATURAL CEREAL ALPHA-AMYLASE IN THE FLOUR AND THEREFORE, SOME RECIPES MAY BENEFIT FROM ENZYME ADDITIONS TO AID THE BAKING PROCESS.

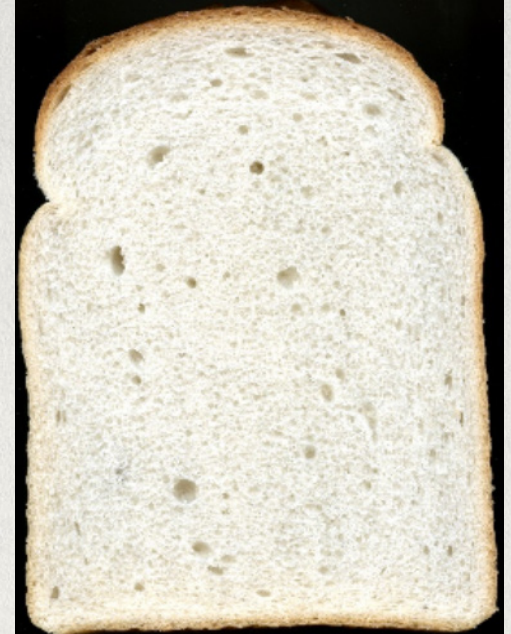
TEST BAKING (800G CBP SINGLE PIECE OPEN TOP)	2023	2024
LOAF VOLUME CM3	3960	3920
MINOLTA CRUMB COLOUR L*-B*	69.57	67.54
BEAD QUALITY	GOOD	GOOD



WILDFARMED BREAD FLOUR 2023 CROP WHEAT



WILDFARMED BREAD FLOUR 2024 CROP WHEAT



SOURDOUGH BAGUETTE RECIPE

Test bake using old and new crop T65 wildfarmed flour. Using an overnight cold bulk fermented 100% sourdough recipe at 74% hydration. Mixed and produced using identical process temperatures and parameters. Mixed on a Wilfa Probaker mixer. Baked in RM24 oven.

WHOLEMEAL LEVAIN RECIPE	RECIPE	BAKER %	LEVAIN BATCH
T150 WHOLEMEAL FLOUR	100	100.0	198
WATER	50	50.0	99
FIRM WHOLEMEAL STARTER	10	10.0	20
TOTAL	160		398

DOUGH RECIPE	RECIPE	BAKER %	DOUGH BATCH	1KG DOUGH
T65 FLOUR	900	100.0	1780	508
SALT	20	2.0	40	11
WATER 1	550	60.0	1088	311
MATURE LEVAIN	160	16.0	316	90
WATER 2	140	14.0	277	79
TOTAL	1770		3500	1000
TOTAL FLOUR	1000			

BATCH SIZE CALCULATOR

$$\frac{\text{YIELD} \times \text{SCALING WEIGHT}}{10} = \text{BATCH SIZE (G)}$$

10 350 3500

KEY INFORMATION

SCALING WEIGHT = 350G
 OVERNIGHT COLD BULK
 FERMOLYSE/DOUBLE HYDRATION
 DELAYED SALT

TOTAL HYDRATION = 74.0

METHOD

- MIX LEVAIN.** COMBINE FLOUR, WATER (18°C) AND STARTER. COVER AND BULK FERMENT FOR 12 TO 24 HOURS AT 18°C.
- FERMOLYSE.** COMBINE FLOURS, LEVAIN AND FIRST STAGE WATER AND MIX TOGETHER ON 20RPM SPEED FOR 4 MINUTES. REST FOR 20 MINUTES AT (AMBIENT).
- DOUGH MIX (6 MINS, 40 RPM) GRADUALLY ADDING WATER.** ADD SALT AND LAST WATER AT 6 MINUTES AND TURN TO 50RPM FOR 4 MINS AND 100 FOR 2 MINS.
- BULK FERMENTATION.** PLACE DOUGH IN LIGHTLY OILED TUB, NEATEN AND COVER. BULK FERMENT FOR 1 HOUR AT ROOM TEMPERATURE, OVERNIGHT AT 4°C FOR 18 HOURS.
- FOLDING.** DURING AMBIENT BULK FERMENTATION ADD 2 FOLDS AT 30 MINUTE INTERVALS.
- PRE-SHAPE AND BENCH REST SCALE.** EVENLY SHAPE INTO BATARD AND BENCH REST FOR 30 TO 60 MINUTES.
- FINAL SHAPING.** SHAPE INTO A BAGUETTE AND PLACE SMOOTH SIDE DOWN INTO A FLOUR DUSTED COUCHE
- FINAL PROVING.** PROVE FOR 45 MINUTES AT AMBIENT AND THEN A FURTHER 30 MINUTES AT 4°C.
- BAKING.** SINGLE SCORE WITH LAME AND BAKE IN A PRE-HEATED OVEN AT 270°C WITH 6 SECOND STEAM FOR A TOTAL OF 24 MINUTES. RELEASE DAMPER AT 16 MINUTES.



SUMMARY OF BAKED BAGUETTE

NEW CROP BAGUETTE



OLD CROP BAGUETTE



OLD CROP COMMENTS

Crust - Less colour in final bake, too pale, Good crumb.

Crumb - slightly more open and irregular due to softer feel to the dough.

Volume - Slightly higher volume. This was due to the baguette shrinking back, which is due to the dough being at saturation point with total hydration. Lacked control across range of baguettes. Some blind ears and less definition on the ear.

NEW CROP COMMENTS

Crust - deeper colour with typical caramel and darker "eye liner" on ear.

Crumb - Open crumb with irregular porous texture, could be more open, Dough could take a touch more hydration or take slightly longer prove time.

Volume - Reasonable but very controlled and consistent. Very defined fine ear. Produce a good standard for baguette.

SUMMARY

Testing both T65 old and new crop flours side by side using the same recipe and processing parameters has allowed me to form the following conclusion.

The new crop has performed very well and in my opinion has improved dough stability, providing better elasticity and fermentative control. Total hydration levels or water absorption are higher for the new crop and show an increase of 2% to 3% for wet or super hydrated doughs.

Typically the old crop recipe I use for baguette was at 72%, optimum level, however new crop was stable at 74% and could have taken a slight increase.

The old crop recipe, always appeared under stress at the elevated level of 74% in comparison to the new crop flour which appears stable.

New crop performed well, over old crop demonstrating stability in the bulk fermentation stage and a slightly higher gassing rate after 16 hours cold bulk.

Top line, there is a slight change in performance in comparison to old crop, but for the better, improved hydration (2% to 3%) gluten elasticity and good fermentation powers.



DOUGH SUMMARY



OLD CROP

Mixing

- Dough mixed and cleared the bowl.
- Development achieved.
- Tacky feel, Less strength.

Summary - Overall the dough was fair but felt weaker.

Bulk fermentation and folding

- Before the first fold the dough felt extremely soft but gained strength.
- Post fold, not as strong as new crop at this stage.
- Post bulk fermentation after 16 hours at 4°C was stable and doubled in volume, but less stability and volume than new crop.
- Possibly a lower hydration would result in improved stability.
- Also the bulk dough felt tackier in comparison.

Summary - Lower hydration properties leading to tacky dough with less stability, but also less fermentative than new crop.

Pre shape and bench rest

- Not as easy to pre shape and tacky feel to dough, gluten feels over optimum level of hydration. Condition, fair.

Final shaping

- Stickier dough, less elasticity, especially strength.
- Difficult to shape consistently.

Summary - Struggled with hydration level, weaker dough.

Final proving

- Less proving activity in timeframe

Summary - Slower yeast activity.

Baking

- Good volume over new crop, although very inconsistent, particularly shapes of baguette, plus ears not as pronounced as new crop.



NEW CROP

Mixing

- Dough mixed and cleared the bowl.
- Development achieved.
- Stronger dough.
- Not tacky, smooth.
- Improved elasticity feel to dough.

Summary - Overall the dough felt superior in comparison to old crop and had better overall stability.

Bulk fermentation and folding

- After 60 minutes of ambient fermentation the dough gained a good balanced fermentation, showing good signs of gassing.
- Responded well to folds and showed no signs of stress.
- Very good gluten elasticity
- Post bulk was very good and was slightly more than doubled in volume and appears to have good stability with the hydration at 74%.

Summary - Very good gluten stability with good balanced fermentation with good elasticity and gas retention.

Pre shape and bench rest

- Very good dough handling and stability made it very easy to pre shape.
- Condition, very good.
- Bench rested for 60 minutes, had good gassing and stability.

Summary - Long fermentation period holding up well. Very good results at the end of bench resting.



Final shaping

- Very good dough elasticity and very easy to final shape, capturing and retaining gas, smooth and even baguette, very good.

Summary - Very good dough consistency, handled high hydration.

Final proving

- Proved in recipes timeframe and all appears to be very stable and have good volume and gas retention.

Summary - Optimised yeast activity.

Baking

- Fair volume and well formed ear on baguette with good crust colour. Uniform appearance. Would expect a little more volume.
- Score held well and didn't collapse the baguette.



For any questions regarding the use and distribution of the new flour please contact your sales representative.

