



# **Technologies & Methods to control Grain & Flour quality**

August 2015



# Grain issues for the African Millers

- Diversities of the Grains origins
- Consistency of the Grain used
- Knowledge of the new harvest qualities
- Sourcing on price
- Build up of the new blend
- Difficulties to visualize the protein quality just on a figure



# EUROGERM Method: Wheat knowledge

- A unique knowledge of the Wheats around the world
- Each year more than 2500 samples of wheat analysed
- World origin:
  - European wheats (France/Spain/Germany/Poland...)
  - Black sea wheats (Russia/Ukraine...)
  - American wheats (USA/Canada/Argentina...)
  - Australian wheats
  - African Wheats (Morocco/South Africa...)
- Each year our synthesis « Focus on world wheat »



# **EUROGERM Method: Chronotec**

- A tailor-made partnership with each mill:
  - Setting objectives according to the wheat origin
  - Analysing wheat samples regularly to follow the quality
  - Handling a series of bread making tests to evaluate the quality on the wheat and on the blend
- Formulation of the milling flour corrector
- Testing and upgrading our flour corrector with lab and bakery tests

# Chronotec: Our synthesis

ANALYSE CONSEIL

## CHRONOTEC® FLOUR BASIS

Sample EUROGERM : 81625  
Received : 20/07/2015  
Agent :  
Identification : Base Farine

Family : 2015

**CHRONOTEC RESULT**



ADDITIONAL ANALYSIS	
Flour	
Moisture (%)	13,4
Protein (%)	11,8
Hagberg (s.)	388
W	185
P/L	0,58
G	22,8
Ic	50
TA	
TD	

COMMENTS		NOTES / 10	COMPARISON	INDEXE CHRONOTEC
Absorption	65 % Spilling of dough skin			40 / 60
Kneading	Good form stability, Good suppleness, Slightly elastic, Sweating	8		
Shaping	Quite good form stability, Good suppleness, lightly sticky, lightly porosity	6,5		
Tolerance At Final Proof	Slightly low tolerance,	6,5		
Appearance Of Loaf	Correct aspect, Quite round, not much thrown blind, Unregular, Good colouring, lightly soft crust,	6		
Volume	1620 cm³ Medium	5		
Appearance Of Crumb	slightly grey, Good porosity, Pleasant smell	8		

NOTES CNERNA	
Dough	70 / 100
Loaf	55 / 100
Crumb	80 / 100
<b>Total</b>	<b>205 / 300</b>

CHRONOTEC RESULTS	SPECIFIC CORRECTION	EVALUATION
A synthesis and comments will soon be sent to you		Excellent - - - - - <input type="checkbox"/>
		Very Good - - - - - <input type="checkbox"/>
		Good - - - - - <input type="checkbox"/>
		Medium - - - - - <input type="checkbox"/>
		Poor - - - - - <input checked="" type="checkbox"/>
		Unusable - - - - - <input type="checkbox"/>

300  
280  
260  
240  
220  
200

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Work experience with a basic flour produced with a blend of poor wheat from black sea

# Chronotec: Physico-Analysis

## ADDITIONAL ANALYSIS

Flour

Moisture (%) 13,4

Protein (%) 11,8

Hagberg (s.) 388

W 185

P/L 0,58

G 22,8

Ic 50

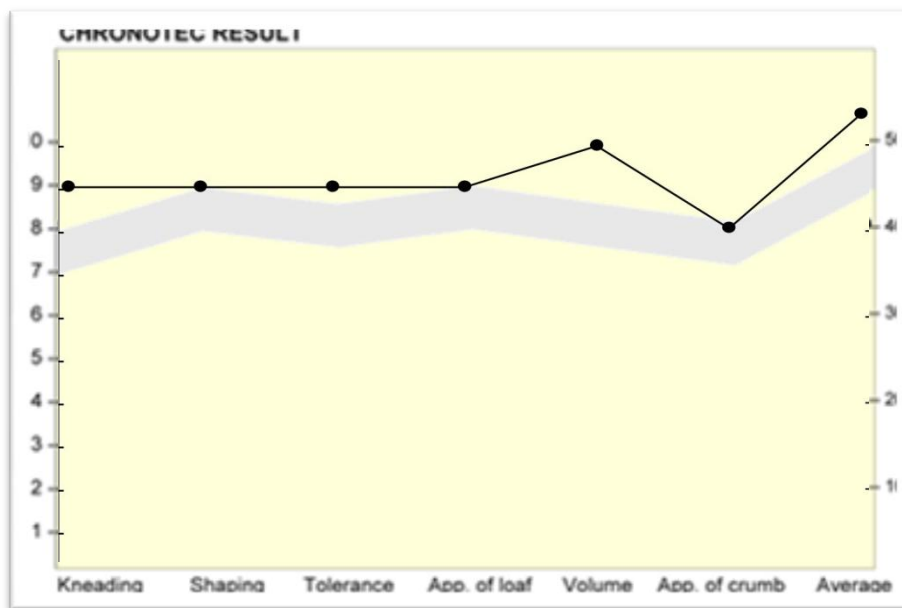
TA

TD

Other tests available:

- Farinograph
- Ash Contents
- Starch damaged
- Etc...

# Chronotec: Breadmaking evaluation



# Chronotec:

## Breadmaking comments

COMMENTS			NOTES / 10
Absorption	66 %	Good smoothing of the surface	
Kneading		Very good form stability, Good suppleness, , , ,	9
Shaping		Very good form stability, Good suppleness, , , , ,	9
Tolerance At Final Prooft		Very good tolerance, ,	9
Appearance Of Loaf		Excellent aspect, Round, well thrown blind , , , , Good colouring, Crusty crust .	9
Volume	2310 cm <sup>3</sup>	Excellent	10
Appearance Of Crumb		slightly grey , , Good porosity, , , Pleasant smell	8



# Chronotec: Final rating

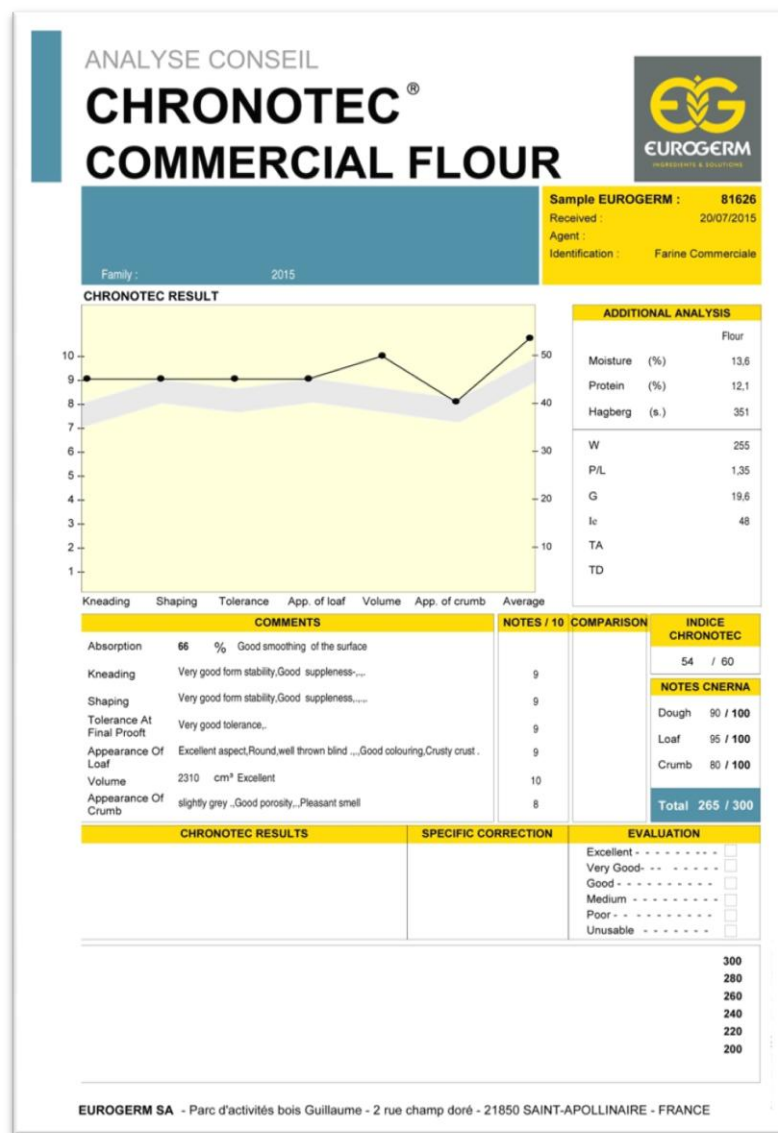
INDICE CHRONOTEC	
54 / 60	
NOTES CNERNA	
Dough	90 / 100
Loaf	95 / 100
Crumb	80 / 100
Total 265 / 300	



# EUROGERM Method: Formulation

- Design a specific corrector to balance the poor quality wheat with a formulation based upon:
  - Ascorbic acid
  - Cocktail of:
    - Alpha Amylase
    - Hemicellulase
    - Gluten
- The new formulation is tested again through the Chronotec method to be validated

# Chronotec: Final result





# Thank you for your attention

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