



ARVALIS
Institut du végétal



French Wheat Quality 2015

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FranceAgriMer



Survey of the 2015 harvest : methodology

- ❑ Partnership between FranceAgriMer & ARVALIS

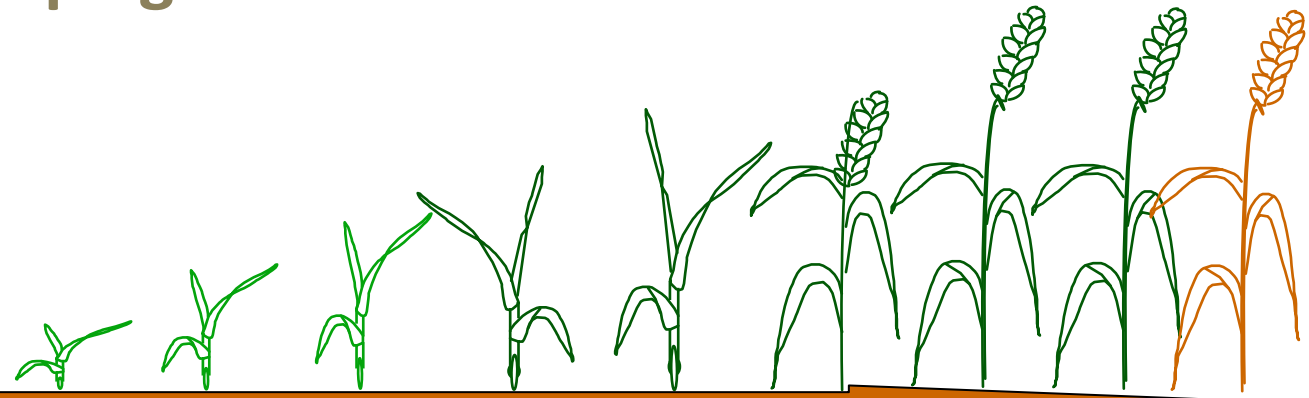
- ❑ Storage sites representative of the national harvest
 - 267 sites with 589 samples (except biscuit-making wheat)

- ❑ All samples taken by FranceAgriMer agents at input before drying and cleaning

- ❑ Laboratory analysis by FranceAgriMer and ARVALIS
 - accredited by COFRAC under the standard NF EN ISO 17025



Campaign Feedback 2014-2015



Sowing tillering Ear 1 cm 1 node 2 nodes Output last leaf swelling heading flowering filling



Autumn :
Mild temperatures
Moderate rains

→ rapid seedling emergence

Winter :
Mild temperatures
Late frost

→ Early tillering
→ 1 cm ear stage quite typical

Spring :
Alternating periods of rain and dry /windy periods. No late cold

→ Good nitrogen uptake
→ Moderate disease levels

Late spring/Early summer:
God sunshine but increasing drought from late June

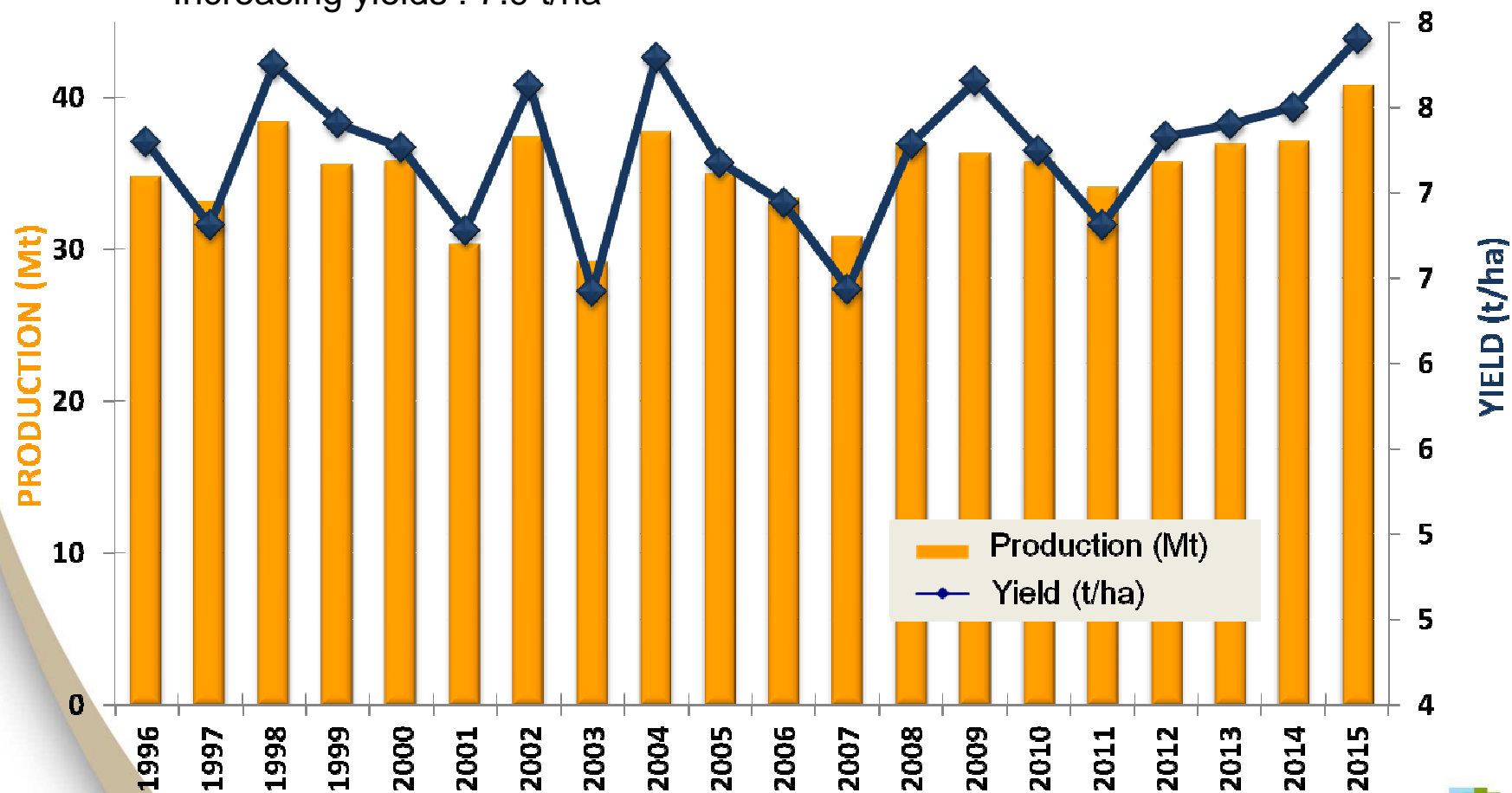
→ Late scalding (limited damage)
→ Dry soils
 → occasionally low mineralization and difficult absorption
→ Good TKW
→ Lowered protein levels

→ Protein content similar to 2014 but yields much higher in 2015
→ Physio-chemical characteristics (Hagberg, SW) from good to excellent



French offer still high : production of 40.7 million Tonnes

- Increased area cultivated : 5.2 Million Hectares
- Increasing yields : 7.9 t/ha

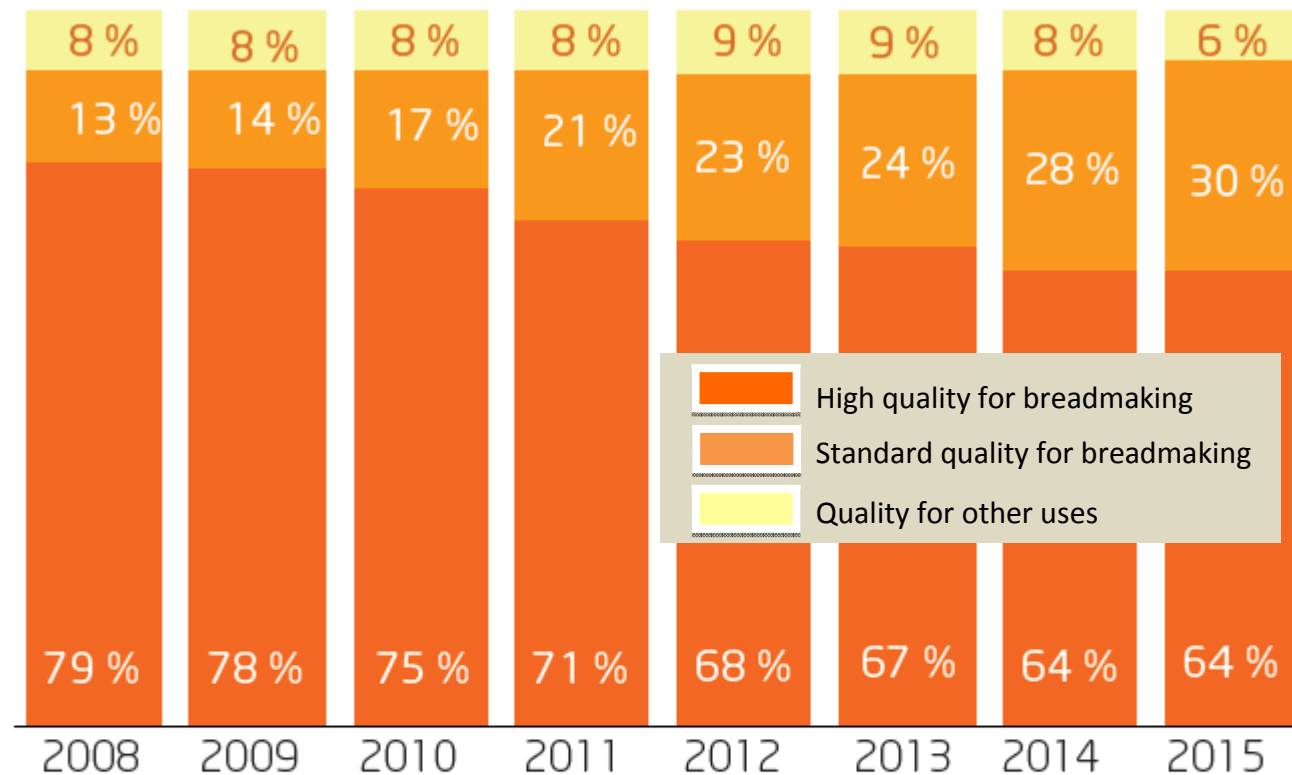




94% of total area sown with bread wheat

ARVALIS Classification of wheat

(as a percentage of total area)

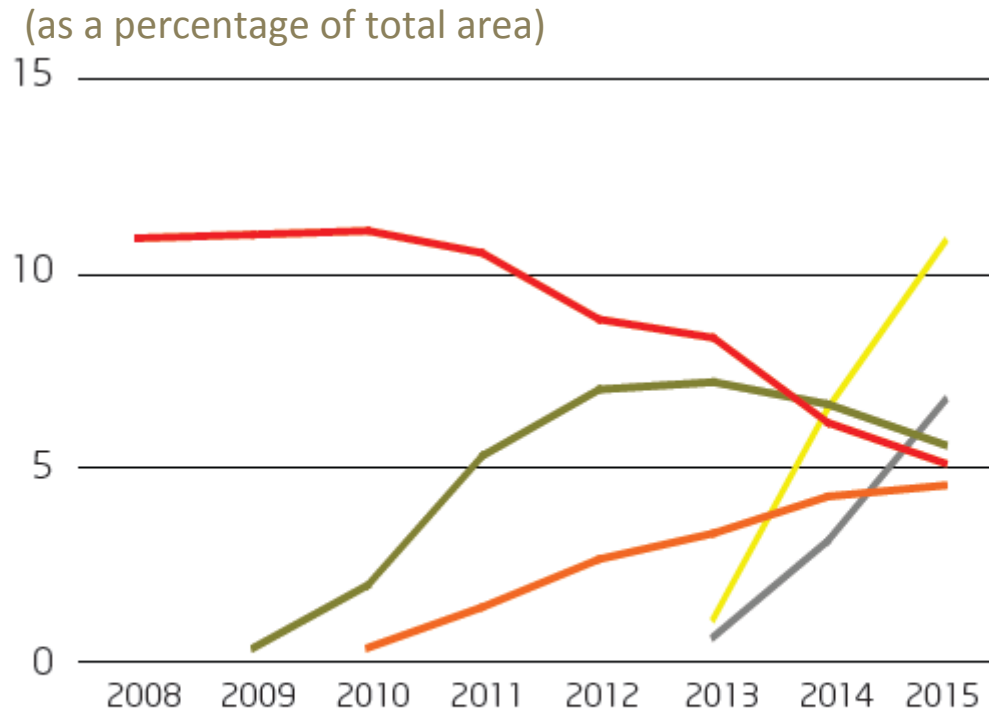


Source : FranceAgriMer / Enquête répartition variétale des céréales



The five main French varieties

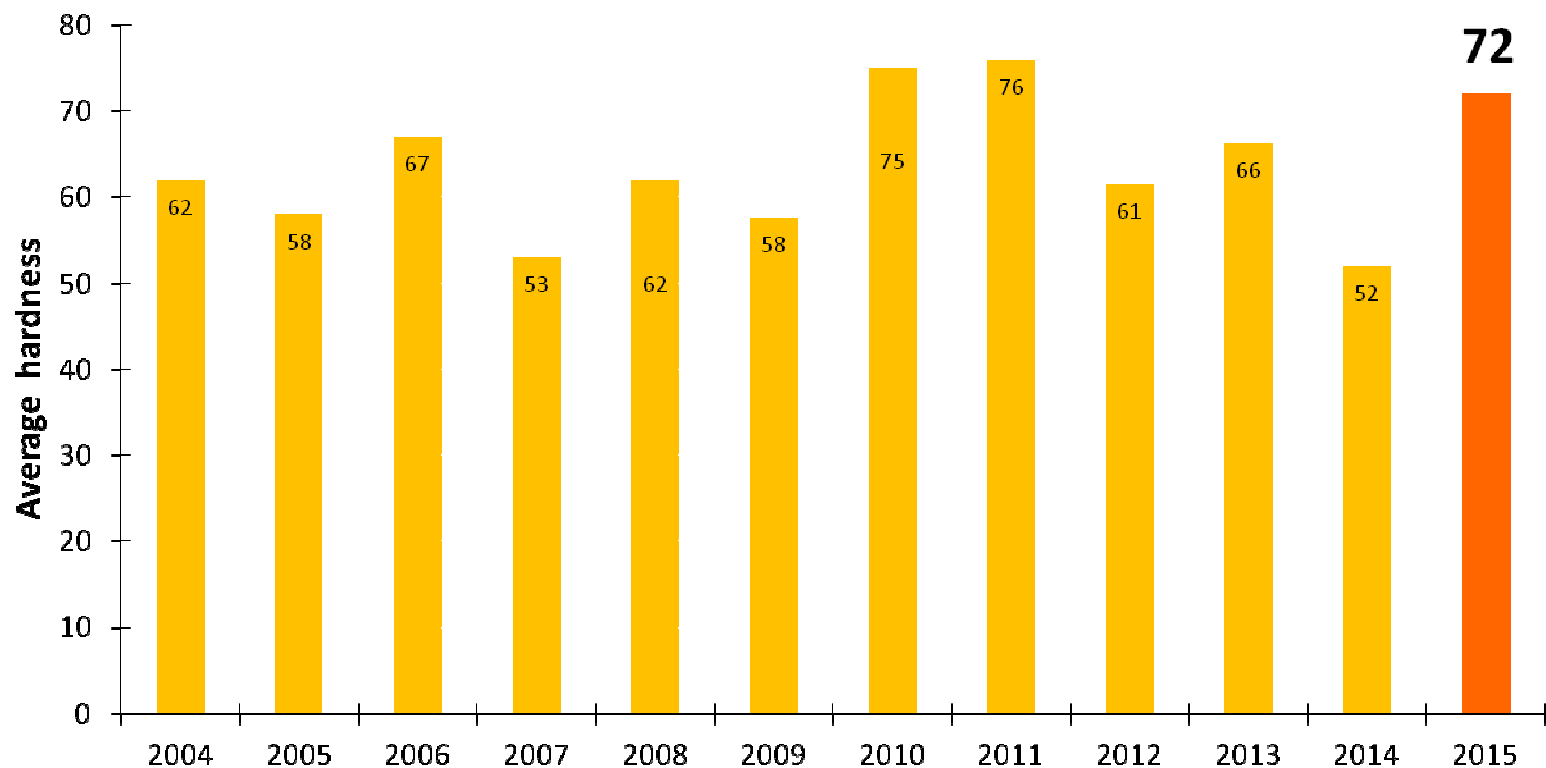
Rapid variety renewal



Source : FranceAgriMer / Enquête répartition variétale des céréales



Hardness : French wheat is Medium Hard



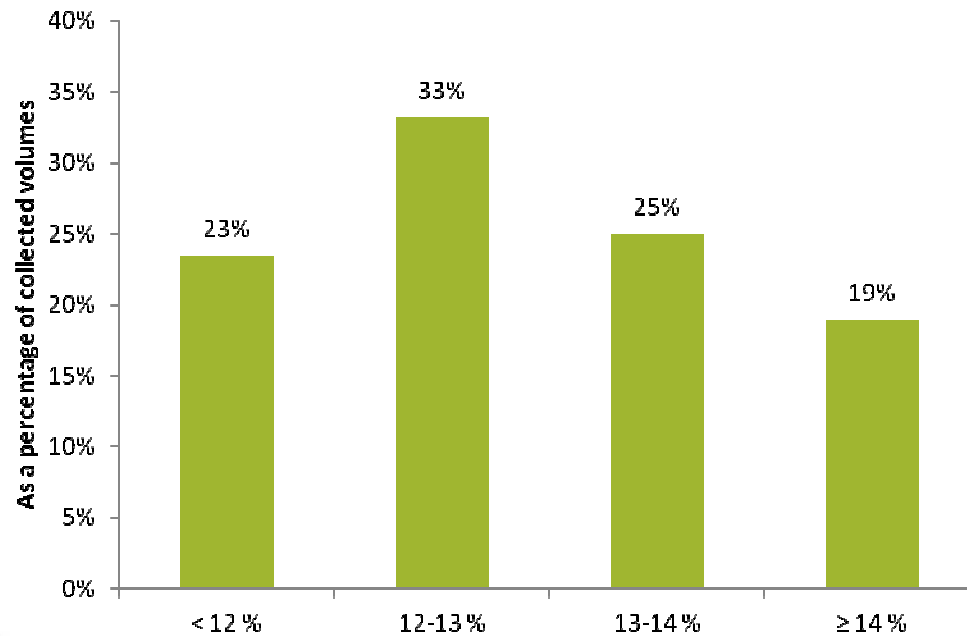
Source : FranceAgriMer / Enquête variétale au champ (jusqu'en 2012) puis Enquête qualité collecteurs



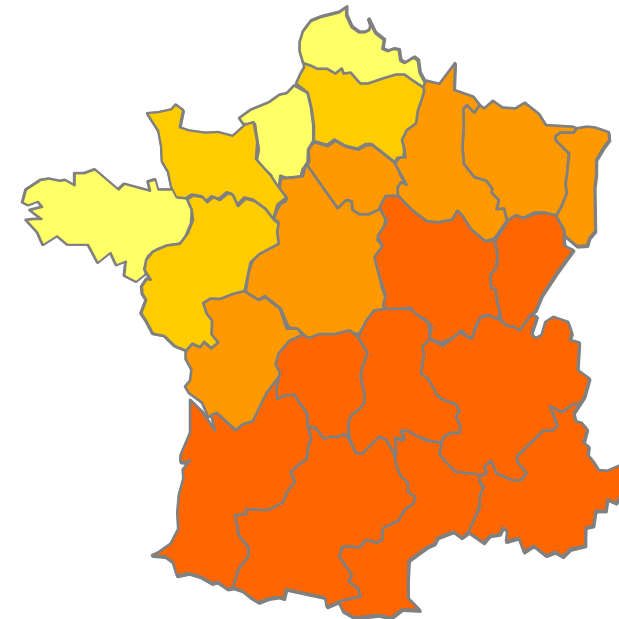
Moisture content on arrival at silos

12.8 % on average

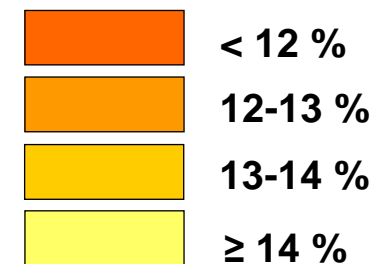
Regional averages 10.7 to 14.1 %



Source : FranceAgriMer / Enquête qualité collecteurs 2015



Regional averages

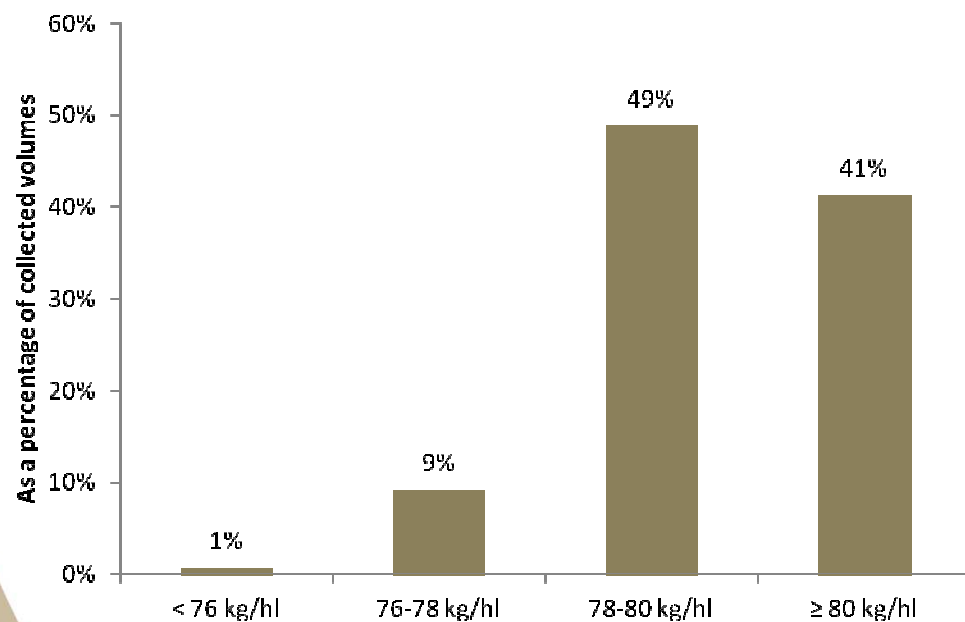




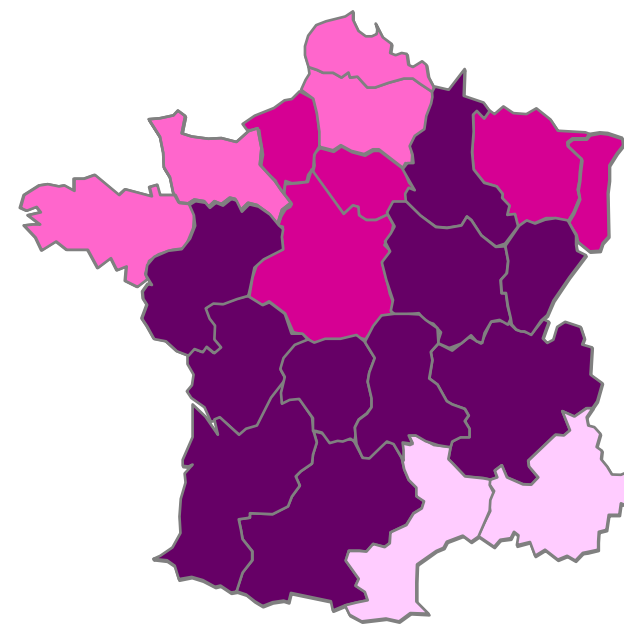
Specific weight on arrival at silos

79.6 kg/hl on average

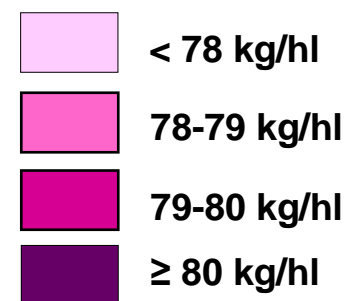
90 % of wheat > 78 kg/hl



Source : FranceAgriMer / Enquête qualité collecteurs 2015



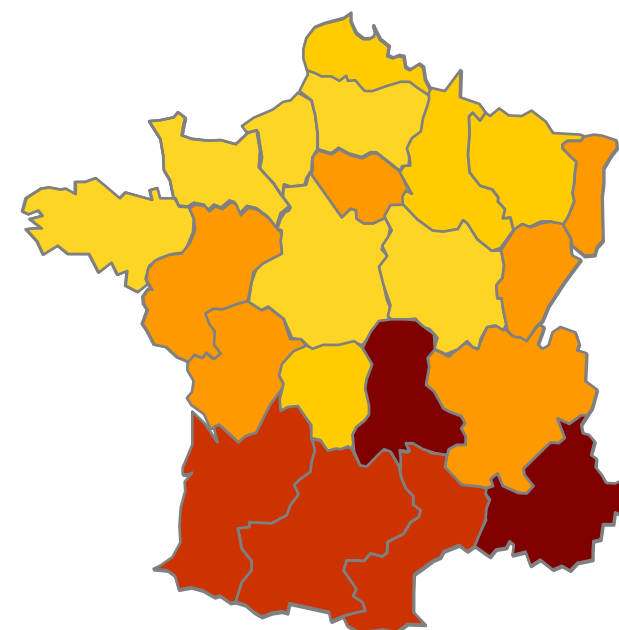
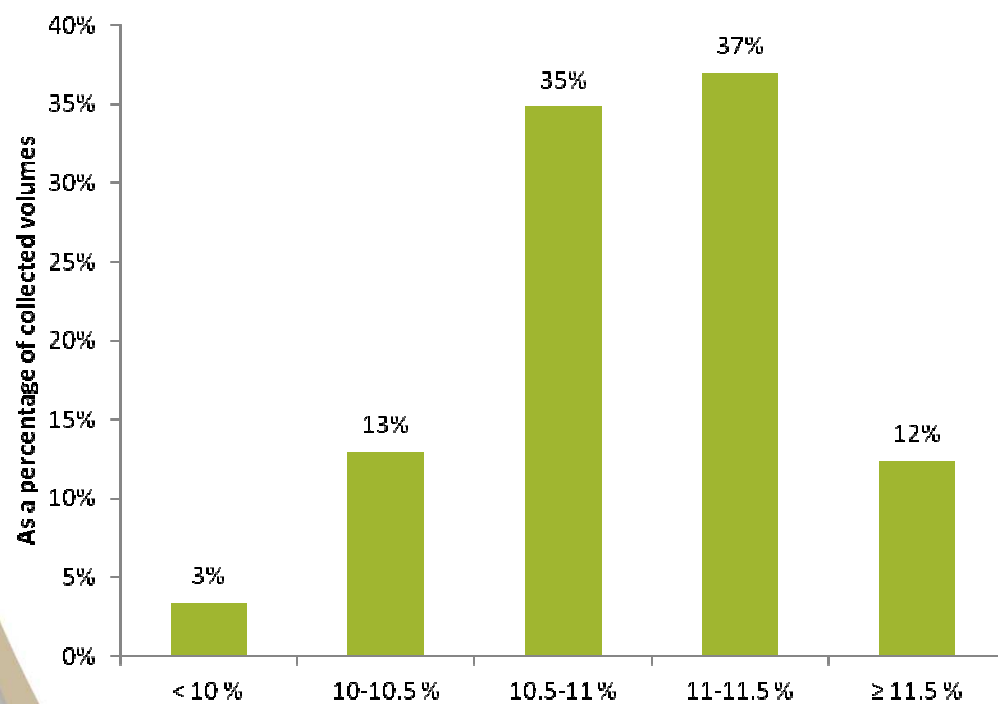
Regional averages



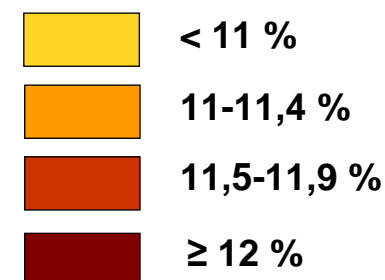


Protein content on arrival at silos

11.0 % on average



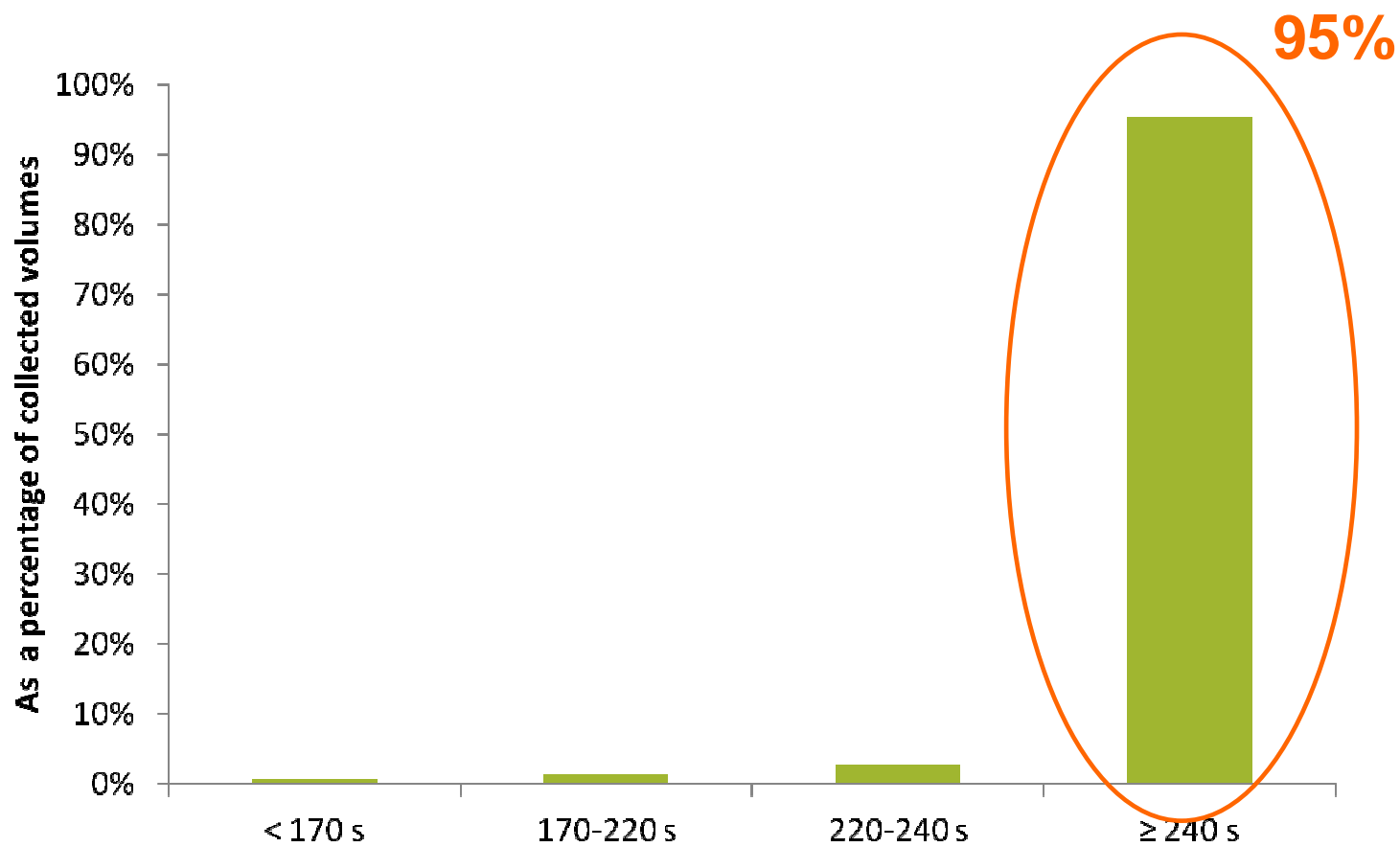
Regional averages



Source : FranceAgriMer / Enquête qualité collecteurs 2015



Hagberg Falling Number



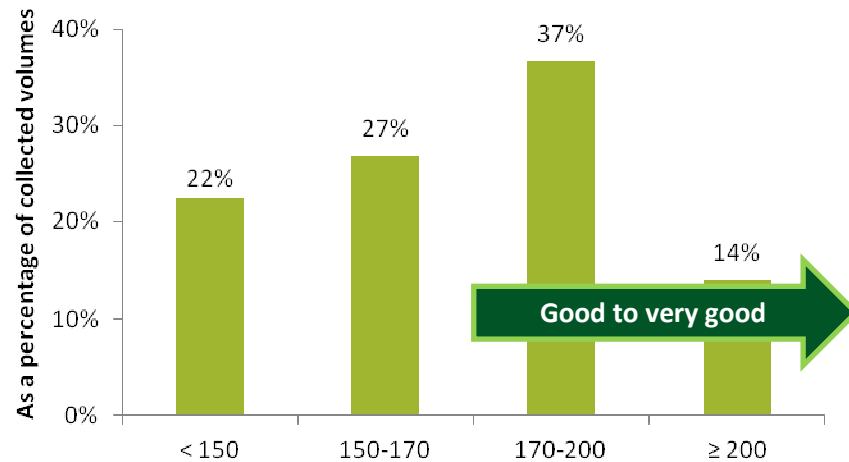
Source : FranceAgriMer / Enquête qualité collecteurs 2015



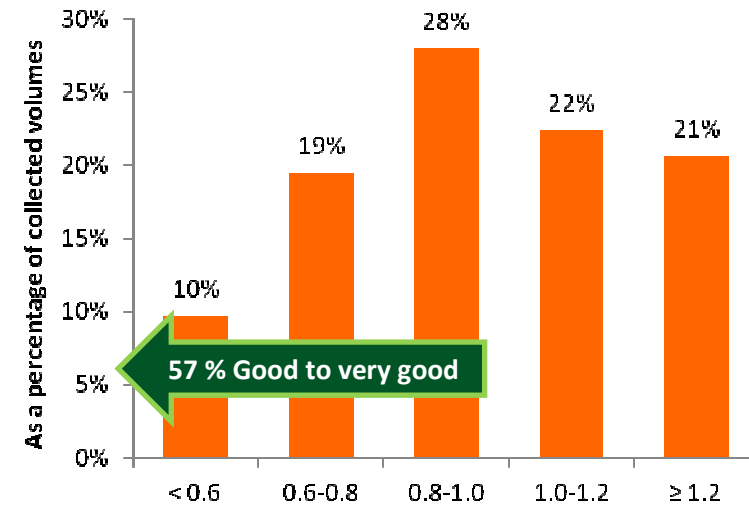
Baking strength (W and P/L)



- W higher than 2014 (average **173**)
- Suitable for many uses



- P/L **0.98** on average
- Suitable for different needs



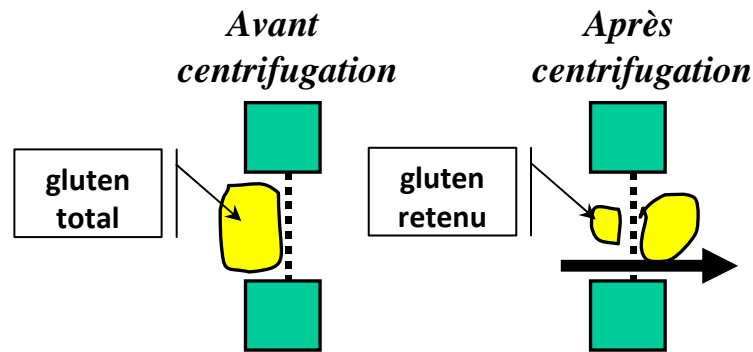
Source : FranceAgriMer / Enquête qualité collecteurs 2015



Gluten Index

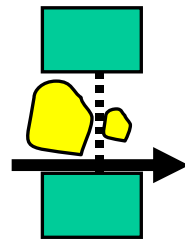
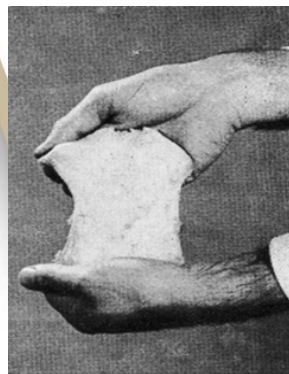


PRINCIPE du Gluten Index : mesure la proportion de gluten retenue sur une grille perforée après centrifugation

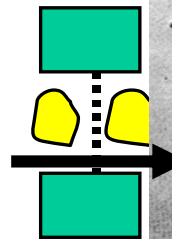
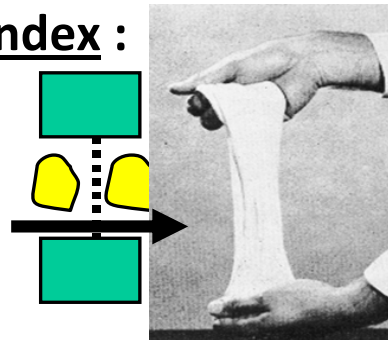


$$\text{Gluten Index} = \frac{\text{gluten retenu}}{\text{gluten total}} \%$$

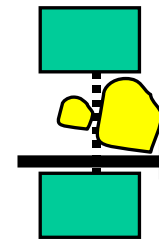
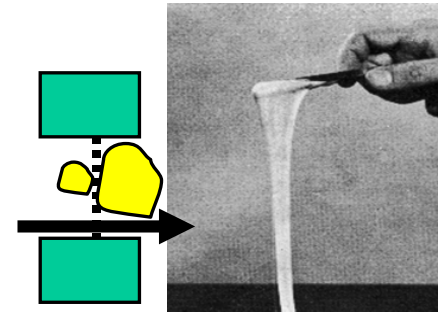
INTERPRETATION du Gluten Index :



GI proche de 100
Gluten élastique



GI entre 60 et 80
Gluten équilibré

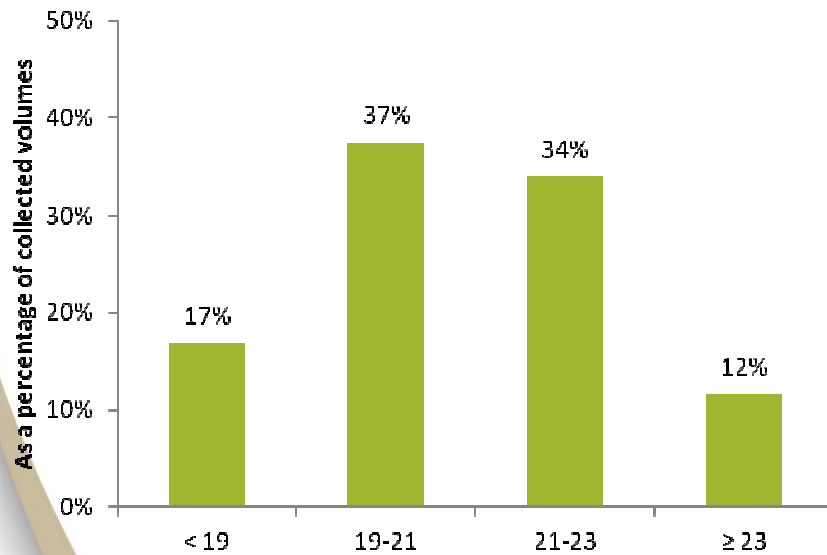


GI inférieur à 50
Gluten extensible



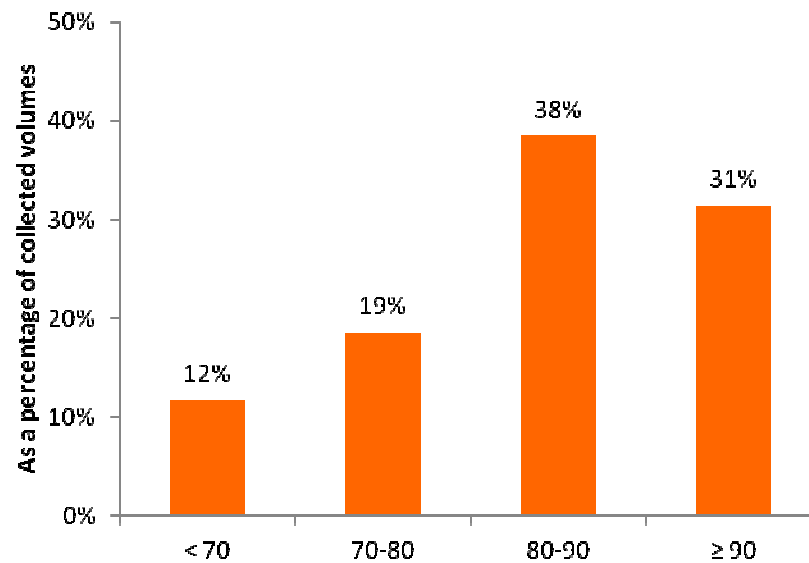
Wet gluten content

- Average **20.7 %**



Gluten Index

- Average **83**
- Good visco-elastic quality



Source : FranceAgriMer / ARVALIS - Institut du végétal / Enquête qualité collecteurs 2015



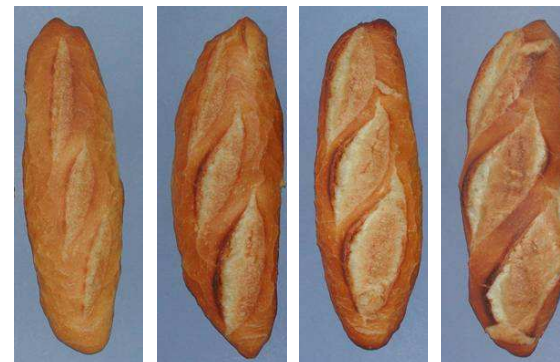
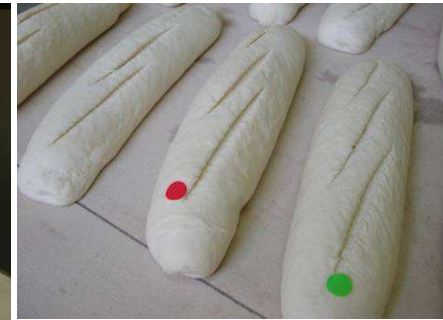
Breadmaking behaviour

Standardized test (NF V03 – 716)

	Insignifiant				Essentiel				x	-	/25
	1	4	7	10	7	4	1				
PETRISSAGE											
LISSAGE											
COLLANT DE LA PÂTE											
CONSISTANCE											
EXTENSIBILITE											
ELASTICITE											
RELACHEMENT											
POINTAGE											
DETENTE: RELACHEMENT											
FACONNAGE											
ALLONGEMENT											
DECHIREMENT											
ELASTICITE											
COLLANT DE LA PÂTE											
APPRET											
ACTIVITE FERMENTAIRE											
PATE: DECHIREMENT											
MISE AU FOUR											
COLLANT DE LA PÂTE											
TENUE DE LA PÂTE											
CARACTERISTIQUES DU PAIN											
SECTION											
COULEUR											
EPAISSEUR											
CROUSTILLANT											
COUPS DE LAME											
DEVELOPPEMENT											
REGULARITE											
DECHIREMENT											
VOLUME											
VOLUME MOYEN											
MASSE MOYENNE											
CARACTERISTIQUES DE LA MIE											
COULEUR											
TEXTURE											
SOUPLESSE											
ELASTICITE											
COLLANT											
ALVEOLAGE											
REGULARITE											
EPAISSEUR											
ODEUR											

Note pâte / 100
 Note pain / 100
 Note mie / 100
 Note totale / 300

NB: La grille doit être remplie avec la lettre 'x'. Ne mettre qu'une seule croix par ligne.

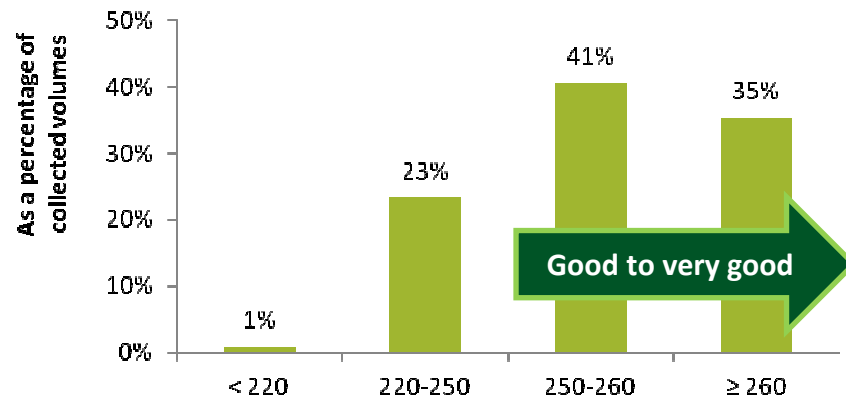




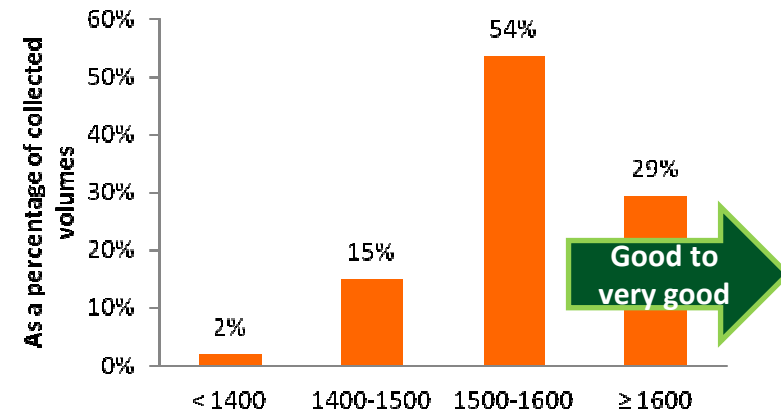
French breadmaking behaviour

Overall scores “good” to “very good” in more than 76% of tests

Breadmaking value (/300)



Volume (cm³)



Source : FranceAgriMer / ARVALIS - Institut du végétal / Enquête qualité collecteurs 2015



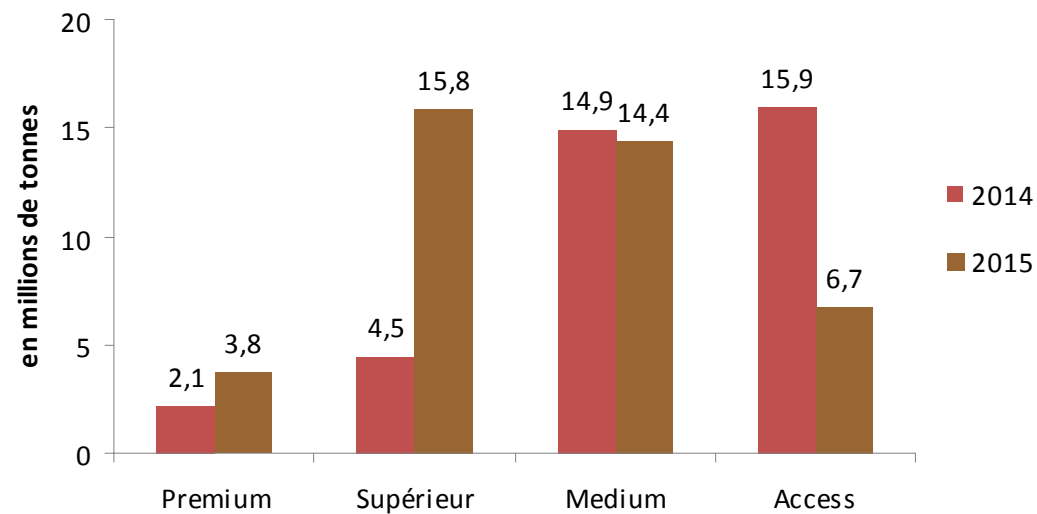
The most noteworthy points:

- Satisfactory hydration of the dough
- Good shaping of dough (Balanced)
- Good appearance of bread with well-developed blade
- Average volumes



Classification of wheat

Classes	Protein	W	Specific weight	Hagberg Falling Number	National distribution
Premium	≥ 11,5 %	≥ 170	≥ 77	≥ 240	9 %
Superior	≥ 11 %	N/A	≥ 76	≥ 220*	39 %
Medium	≥ 10,5 %	N/A	N/A	≥ 170*	35 %
Access	Specified in the contract	N/A	N/A	N/A	17 %





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Thank you for your attention