

ARVALIS  
Institut du végétal



# Qualità del grano francese 2015

**ARVALIS**  
Institut du végétal

  
FranceAgriMer



# Indagine sulla qualità del raccolto francese: metodologia

- ❑ Partnership tra FranceAgriMer e ARVALIS - Institut du végétal
- ❑ Siti rappresentativi dell'ammasso a livello nazionale (dimensione, situazione geografica, ...)
  - grano tenero: 267 siti e 589 campioni (escluso grano per biscottifici)
  - grano duro: 93 siti e 152 campioni
- ❑ Prelievi all'ingresso dei silos effettuati dagli operatori di FranceAgriMer prima dell'essiccazione ed eventuale mondatura
- ❑ Analisi realizzate dai laboratori di FranceAgriMer et ARVALIS – Institut du végétal, accreditati dal COFRAC ai sensi della normativa NF EN ISO 17025



# Feed-back sulla campagna 2014-2015



Semina      Accestimento      Spiga 1 cm      1 nodo      2 nodi      Uscita Rigonfiamento dell'ultima foglia      Spigatura      Fioritura      Riempimento



## Autunno:

- Temperature miti
- Piogge moderate
- Levate rapide

## Inverno:

- Temperature miti
- Arrivo tardivo delle gelate
  - Accestimento precoce
  - Stadio spiga 1 cm abbastanza simile alle mediane pluriennali

## Primavera:

- Episodi di pioggia in sequenza
- Periodi asciutti e ventilati
  - Buona valorizzazione degli apporti azotati nella maggior parte dei casi
- Nessun freddo tardivo
- Malattie moderate

## Riempimento e maturazione:

- Notevole irraggiamento
- Siccità crescente
- Caldo dal 25/06
- « Riscaldamento » tardivo
  - Danni limitati
- Terreni asciutti
  - Mineralizzazione talvolta scarsa e difficile assorbimento
- Buon PMG
- Diluizione delle proteine

- Contenuto proteico simile al 2014 con rese molto superiori
- Caratteristiche fisico-chimiche (TCH, PS) da buone a ottime

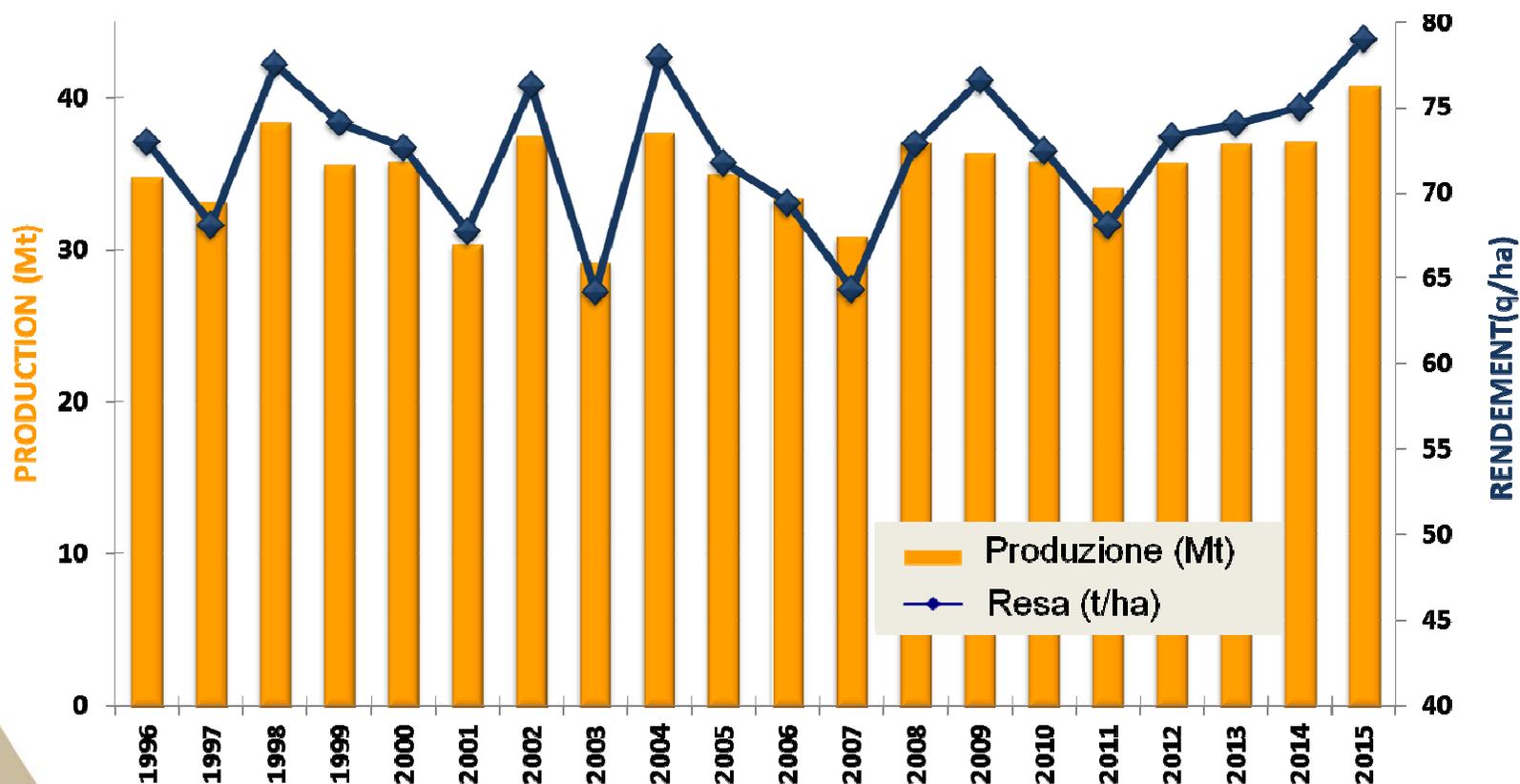
- 
- 1. Grano tenero**
  - 2. Grano duro**



## Un'offerta francese ancora abbondante: produzione di 40,7 Mt

A1

- Superfici in aumento: 5,2 Mha
- Rese molto alte: 79,0 q/ha



## Diapositive 6

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**A1**

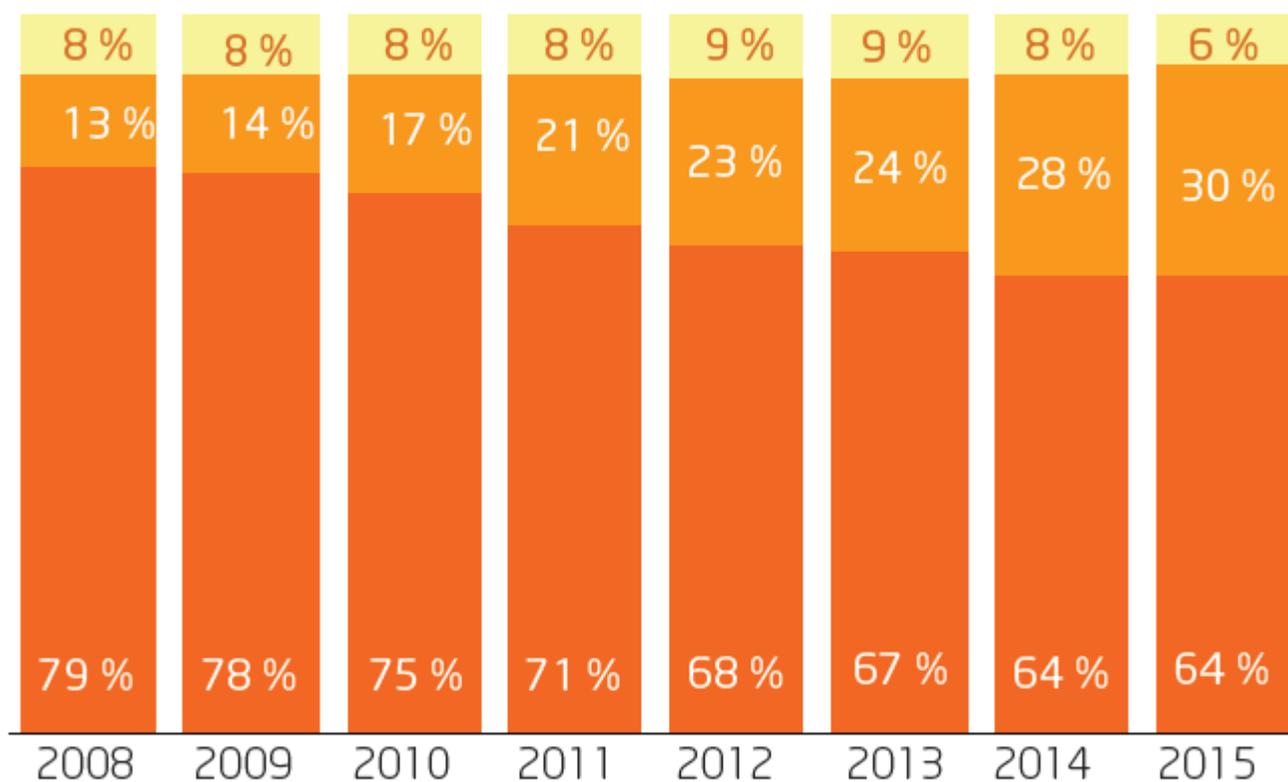
MAJ graph

Administrateur; 18/09/2015

# 94% delle superfici seminate a grano panificabile

Classification Arvalis des blés tendres  
(en pourcentage des surfaces nationales)

Avis Arvalis  
BAU  
BP  
BPS+BAF



Source : FranceAgriMer / Enquête répartition variétale des céréales

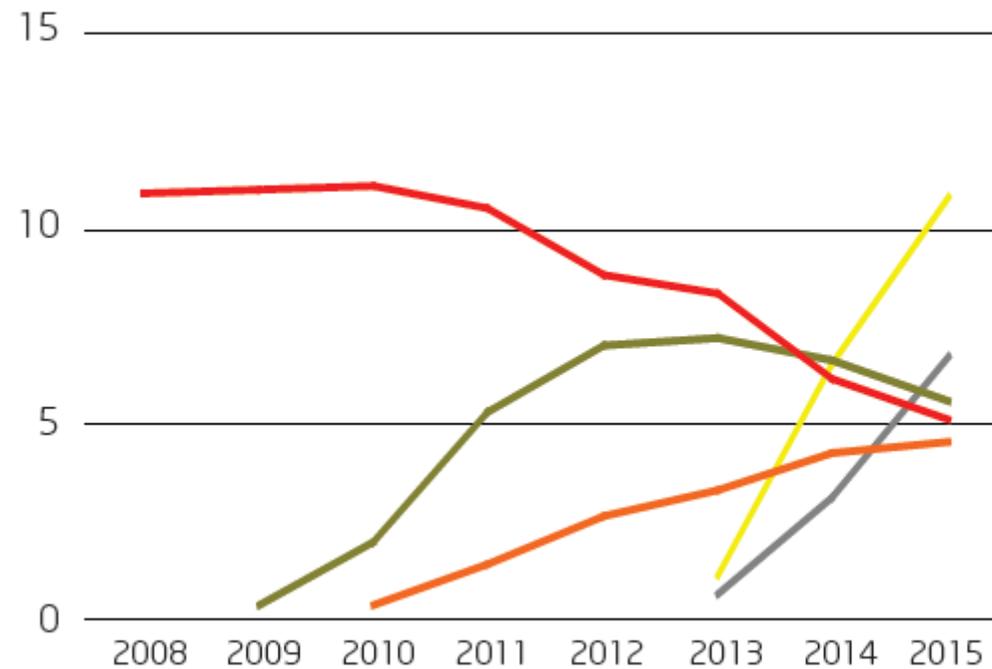


# Le prime cinque varietà francesi

## Rinnovo varietale molto rapido

Évolution des 5 premières variétés de blé tendre  
(en pourcentage des surfaces nationales)

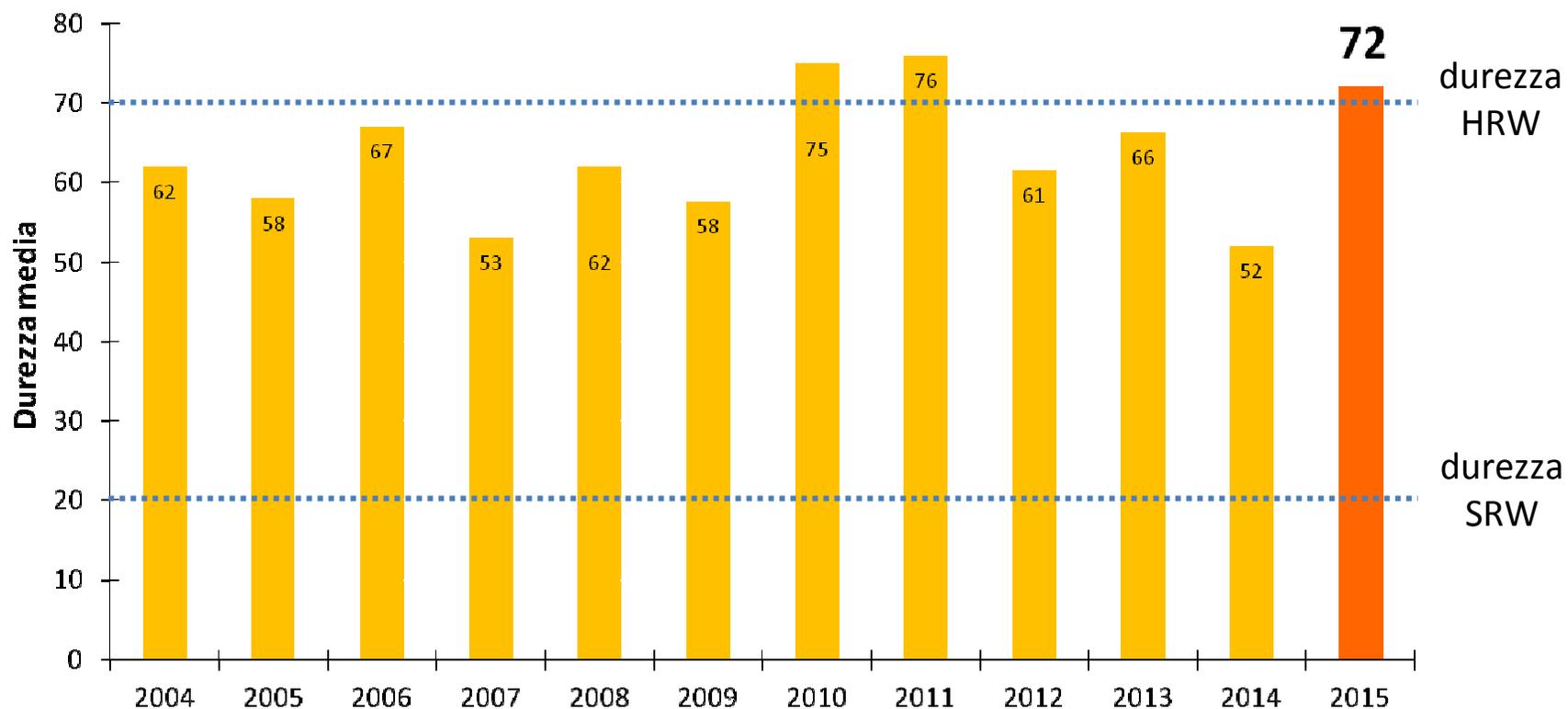
- Rusbisko
- Cellule
- Arezzo
- Apache
- Boregar



Source : FranceAgriMer / Enquête répartition variétale des céréales



## Durezza: i grani francesi sono Medium Hard



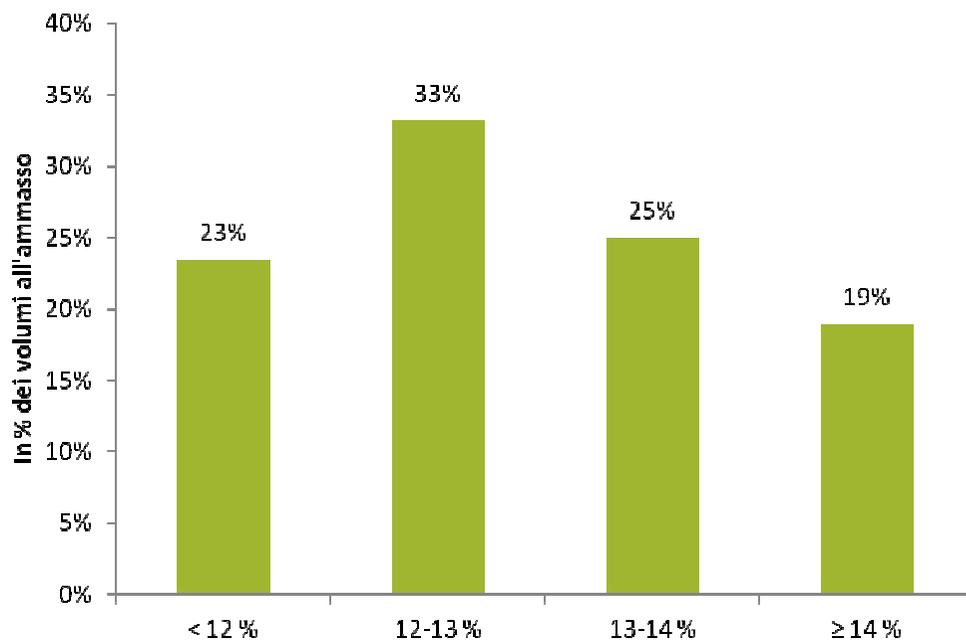
Fonte: FranceAgriMer / Indagine varietale sul campo (fino al 2012) quindi Indagine qualità ammassatori



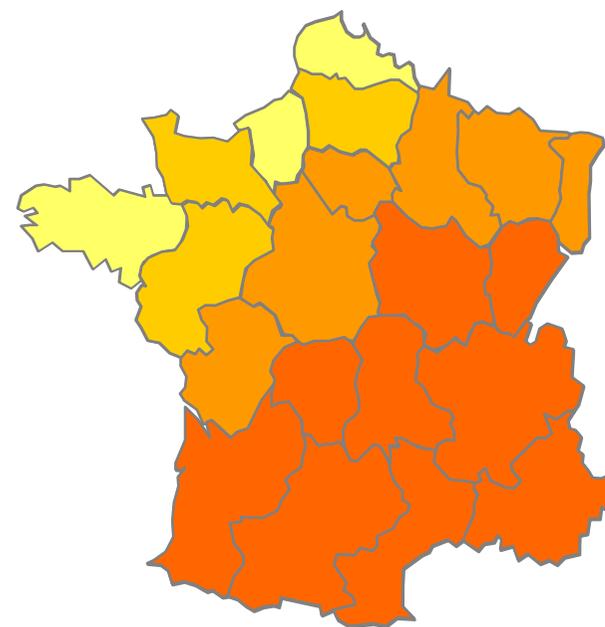
# Contenuto idrico all'ingresso dei silos per l'ammasso

**12,8 %** in media

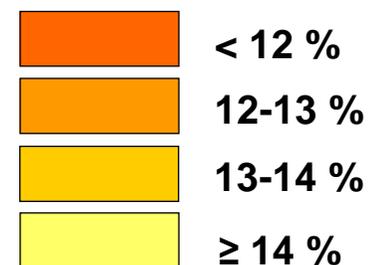
Medie regionali da 10,7 a 14,1 %



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



**Medie regionali**

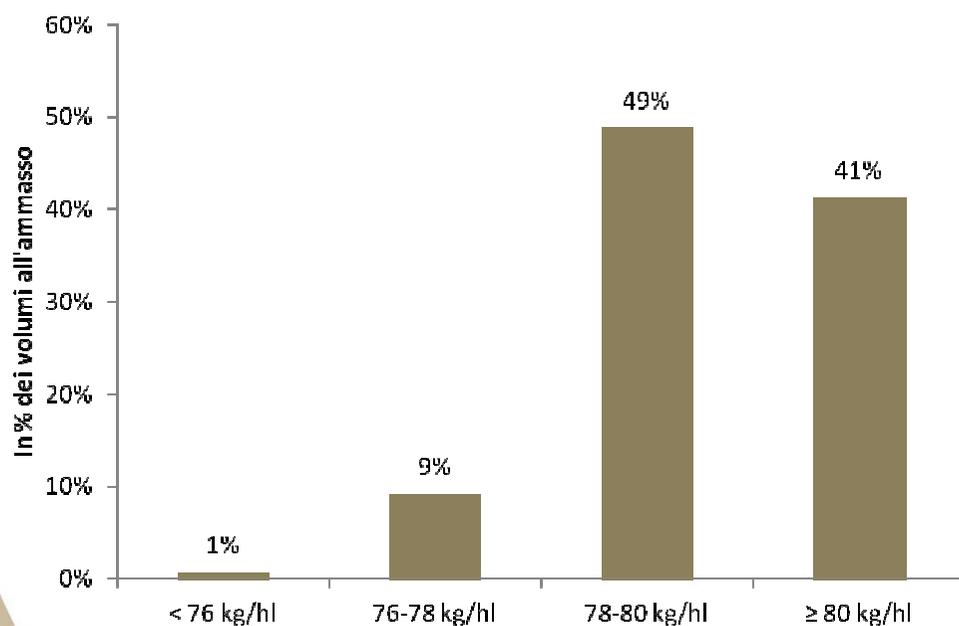




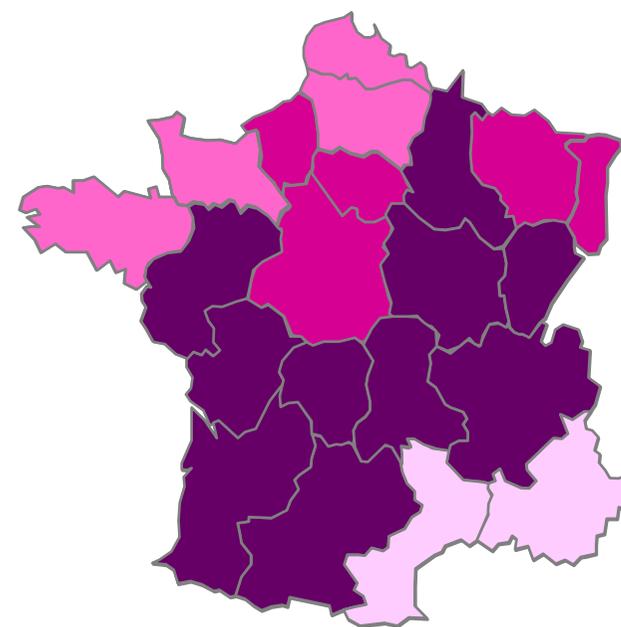
# Peso specifico all'ingresso dei silos per l'ammasso

**79,6 kg/hl** in media

90 % dei grani > 78 kg/hl



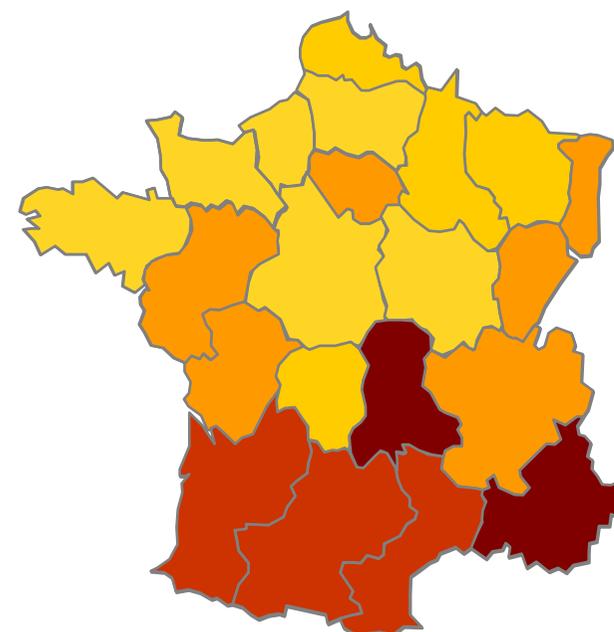
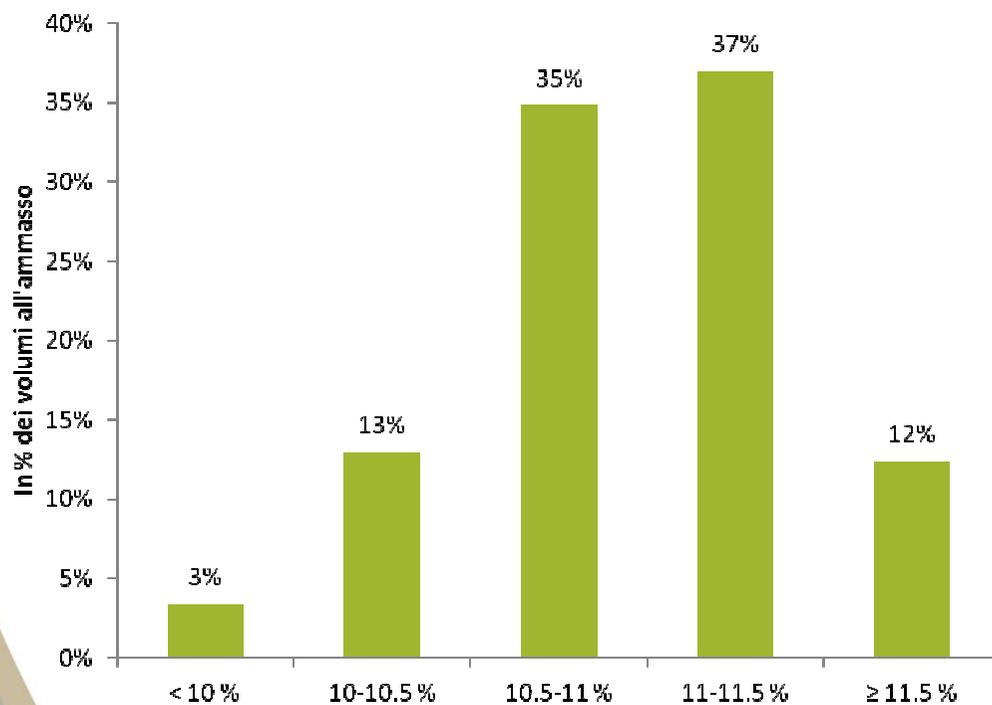
Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



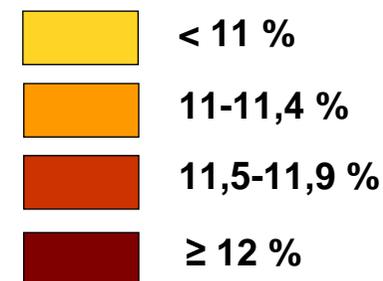


# Contenuto proteico all'ingresso dei silos per l'ammasso

**11,0 %** in media



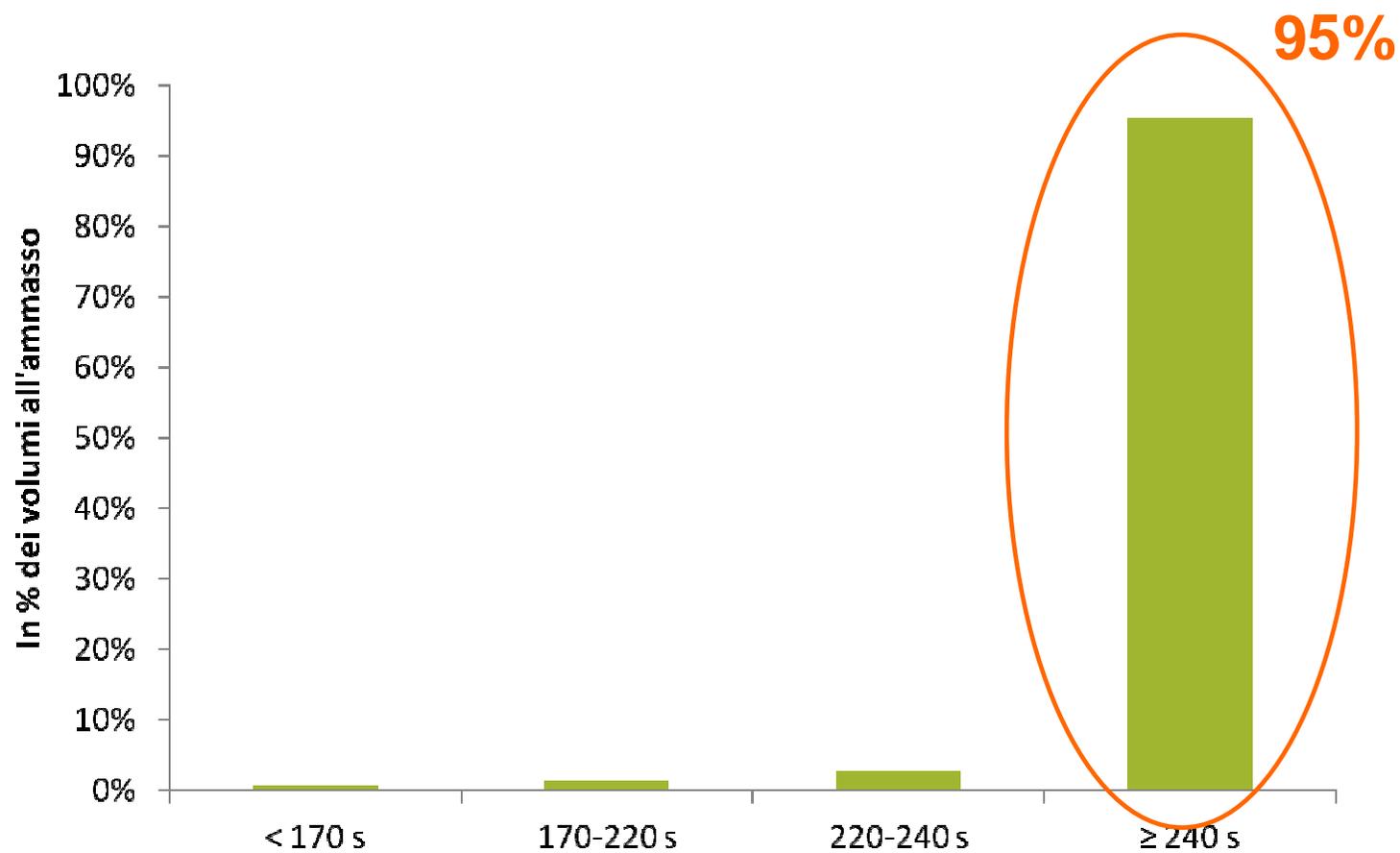
**Medie regionali**



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



## Indici di caduta di Hagberg (Falling Number)



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015

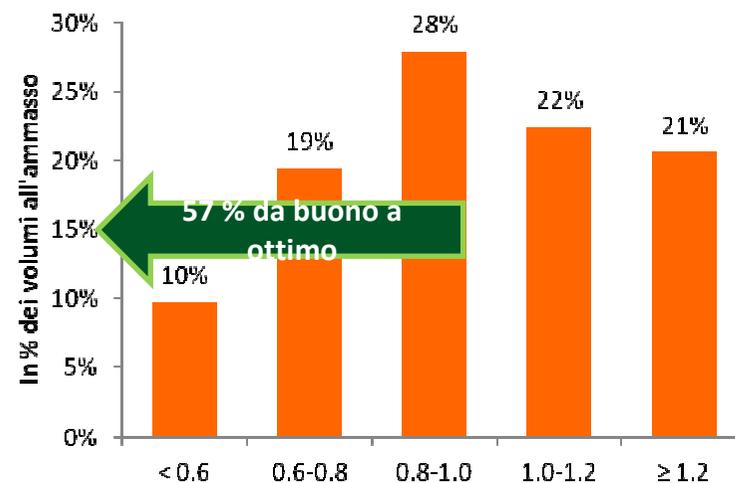
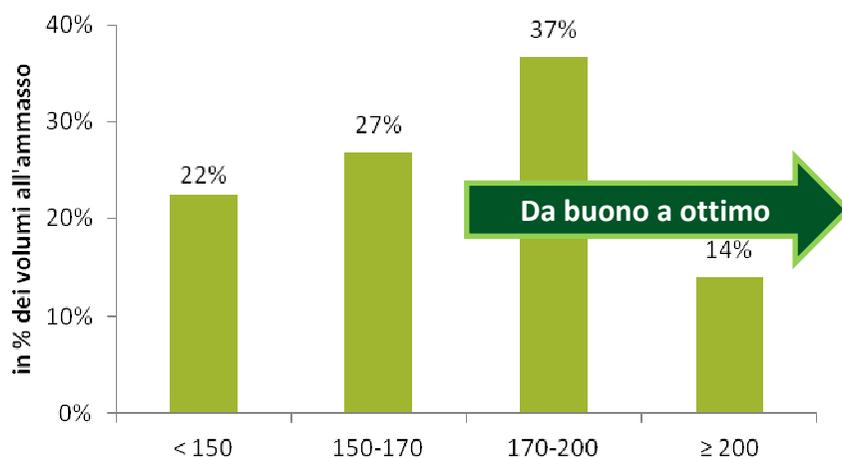


## Panificabilità W e P/L



- W superiore al 2014 (media **173**)
- Adatto per molti impieghi

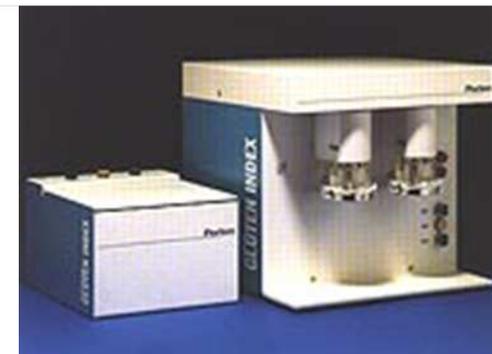
- P/L a **0.98** in media
- Adatto per diverse esigenze



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015

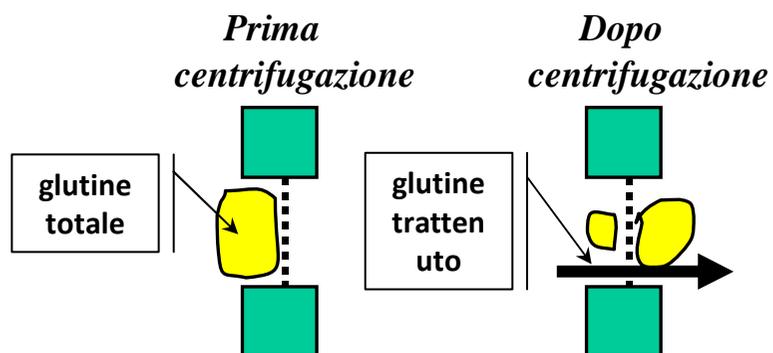


# Gluten Index



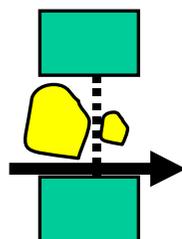
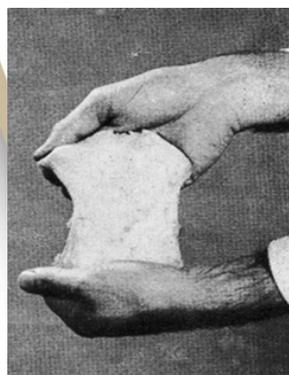
**PRINCIPIO del Gluten Index:** misura la proporzione di glutine trattenuta su una griglia forata dopo centrifugazione

de

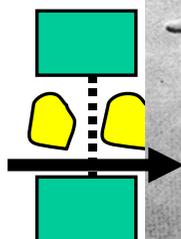
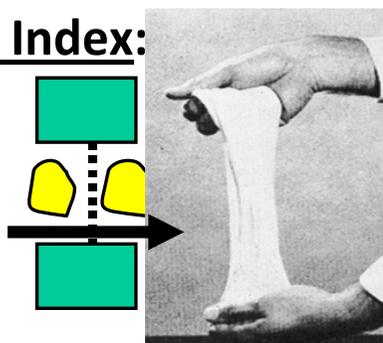


$$\text{Gluten Index} = \frac{\text{glutine trattenuto}}{\text{glutine totale}} \%$$

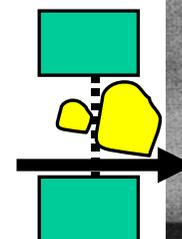
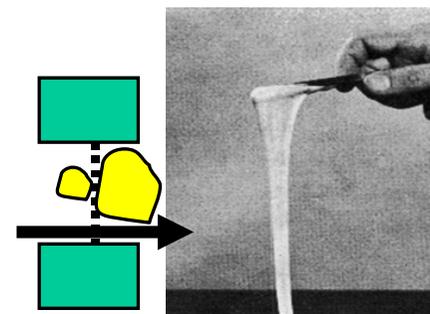
## INTERPRETAZIONE del Gluten Index:



GI vicino a 100  
Glutine elastico



GI tra 60 e 80  
Glutine equilibrato

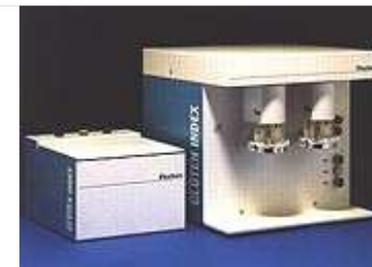
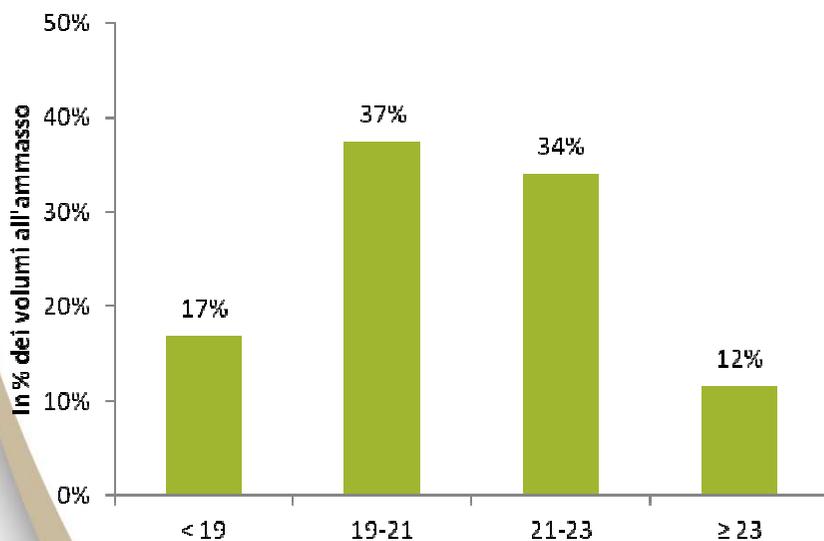


GI inferiore a 50  
Glutine estensibile



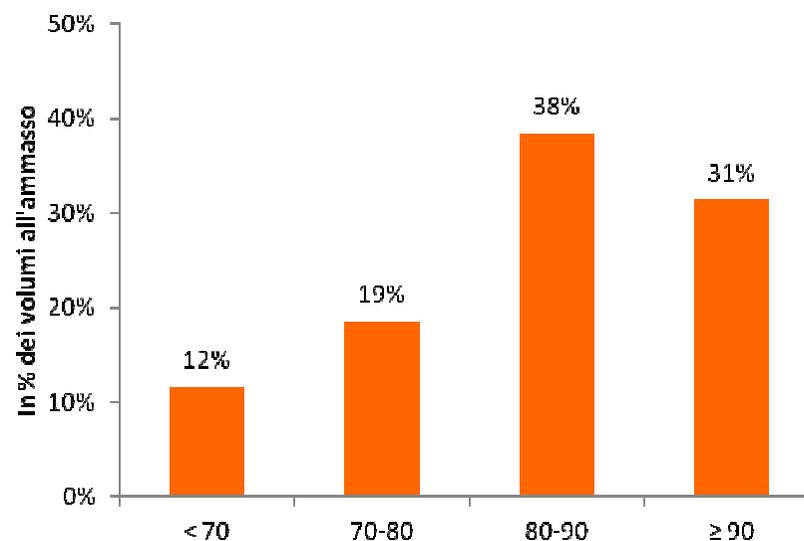
## Contenuto di glutine umido

- Media di **20.7 %**



## Gluten Index

- Media di **83**
- Buona qualità visco-elastica



Fonte: FranceAgriMer / ARVALIS - Institut du végétal / Indagine qualità ammassatori 2015



# Comportamento in panificazione – Test di panificazione standardizzato (NF V03 – 716)

	Insuffisant				Excell				Coeff	Score	
	1	4	7	10	7	4	1				
<b>PETRISSAGE</b>											
LISSAGE									× 0.5	-	
COLLANT DE LA PÂTE									× 0.5	-	
CONSISTANCE									× 0.5	-	
EXTENSIBILITE									× 0.5	-	
ELASTICITE									× 0.5	-	
RELACHEMENT									× 0.5	-	
<b>POINTAGE</b>											
DETENTE: RELACHEMENT									× 1	-	
<b>FACONNAGE</b>											
ALLONGEMENT									× 0.5	-	
DECHIREMENT									× 0.5	-	
ELASTICITE									× 0.5	-	
COLLANT DE LA PÂTE									× 1	-	
<b>APPRET</b>											
ACTIVITE FERMENTAIRE									× 0.5	-	
PATE: DECHIREMENT									× 0.5	-	
<b>MISE AU FOUR</b>											
COLLANT DE LA PÂTE									× 1	-	
TENUE DE LA PÂTE									× 2	-	
<b>CARACTERISTIQUES DU PAIN</b>											
SECTION									× 1	-	
COULEUR									× 2	-	
EPAISSEUR									× 0.5	-	
CROUSTILLANT									× 0.5	-	
<b>COUPS DE LAME</b>											
DEVELOPPEMENT									× 1	-	
REGULARITE									× 1	-	
DECHIREMENT									× 1	-	
<b>VOLUME</b>											
VOLUME MOYEN									× 1	-	
MASSE MOYENNE									× 1	-	
<b>CARACTERISTIQUES DE LA MIE</b>											
COULEUR									× 1	-	
TEXTURE									× 1	-	
SOUPLESSE									× 1	-	
ELASTICITE									× 1	-	
COLLANT									× 1	-	
<b>ALVEOLAGE</b>											
REGULARITE									× 1	-	
EPAISSEUR									× 1	-	
<b>ODEUR</b>											
									× 4	-	

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

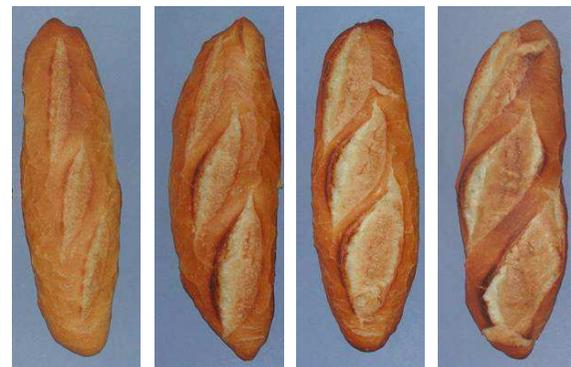
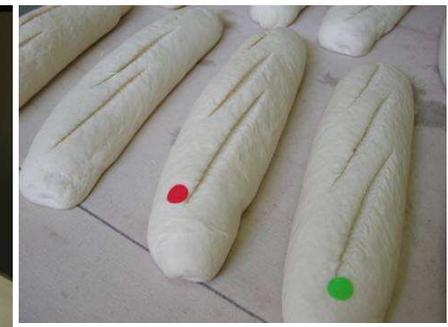
NOTES: #25, #100, #70, #100, #300, #100, #200, #300

**Score impasto / 100**

**Score pain / 100**

**Score mollica / 100**

**Score totale / 300**

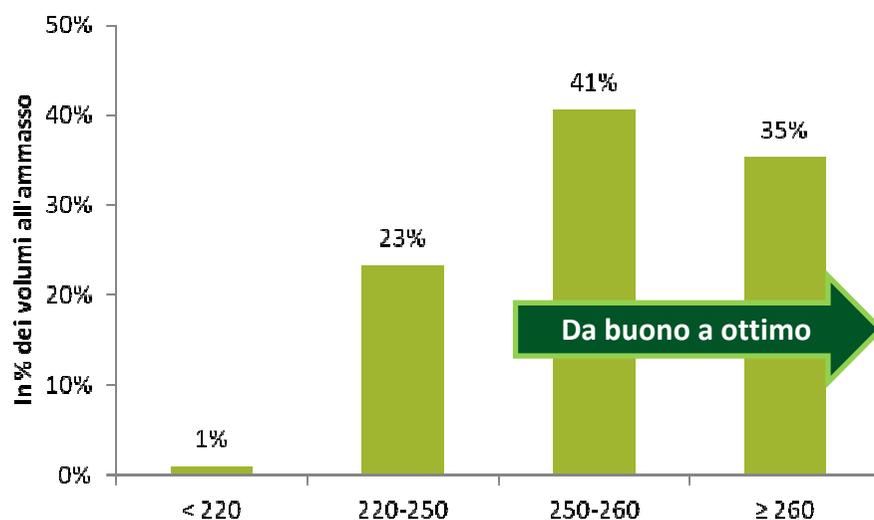




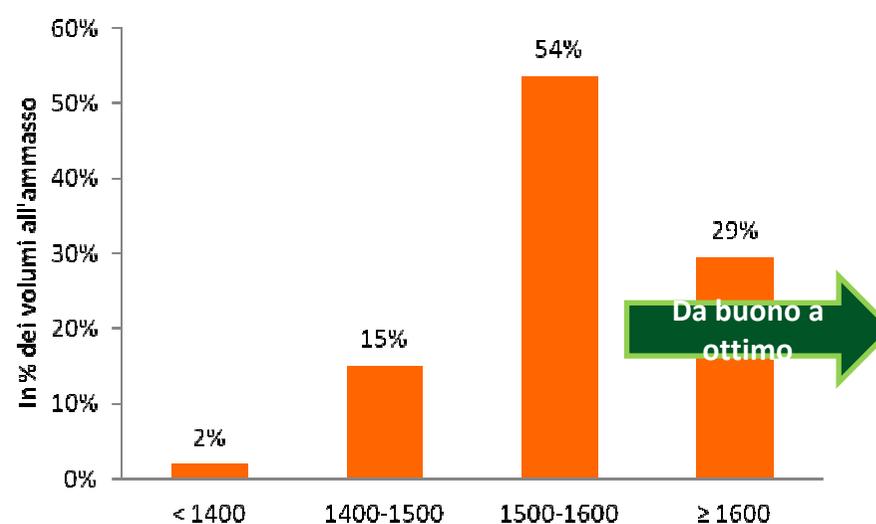
## Comportamento in panificazione francese

Punteggi complessivi da buoni a ottimi in oltre il 76 % dei test

### Panificabilità (/300)



### Volume (cm<sup>3</sup>)



Fonte: FranceAgriMer / ARVALIS - Institut du végétal / Indagine qualità ammassatori 2015



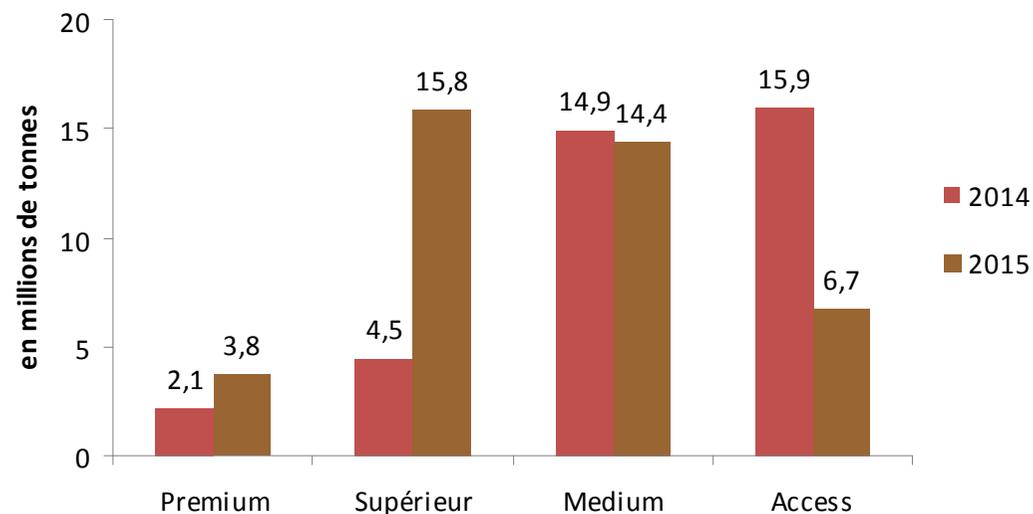
I punti maggiormente degni di nota:

- Idratazione degli impasti soddisfacente
- Impasti equilibrati alla formatura
- Aspetto gradevole del pane con colpi di lama ben sviluppati



# Classificazione dei grani 2015

Classi	Proteine	W	Peso specifico	Indice di caduta di Hagberg	Ripartizione nazionale
<b>Premium</b>	≥ 11,5 %	≥ 170	≥ 77	≥ 240	<b>9 %</b>
<b>Superior</b>	≥ 11 %	non specificato	≥ 76	≥ 220*	<b>39 %</b>
<b>Medium</b>	≥ 10,5 %	non specificato	non specificato	≥ 170*	<b>35 %</b>
<b>Access</b>	Specificato nel contratto	non specificato	non specificato	non specificato	<b>17 %</b>

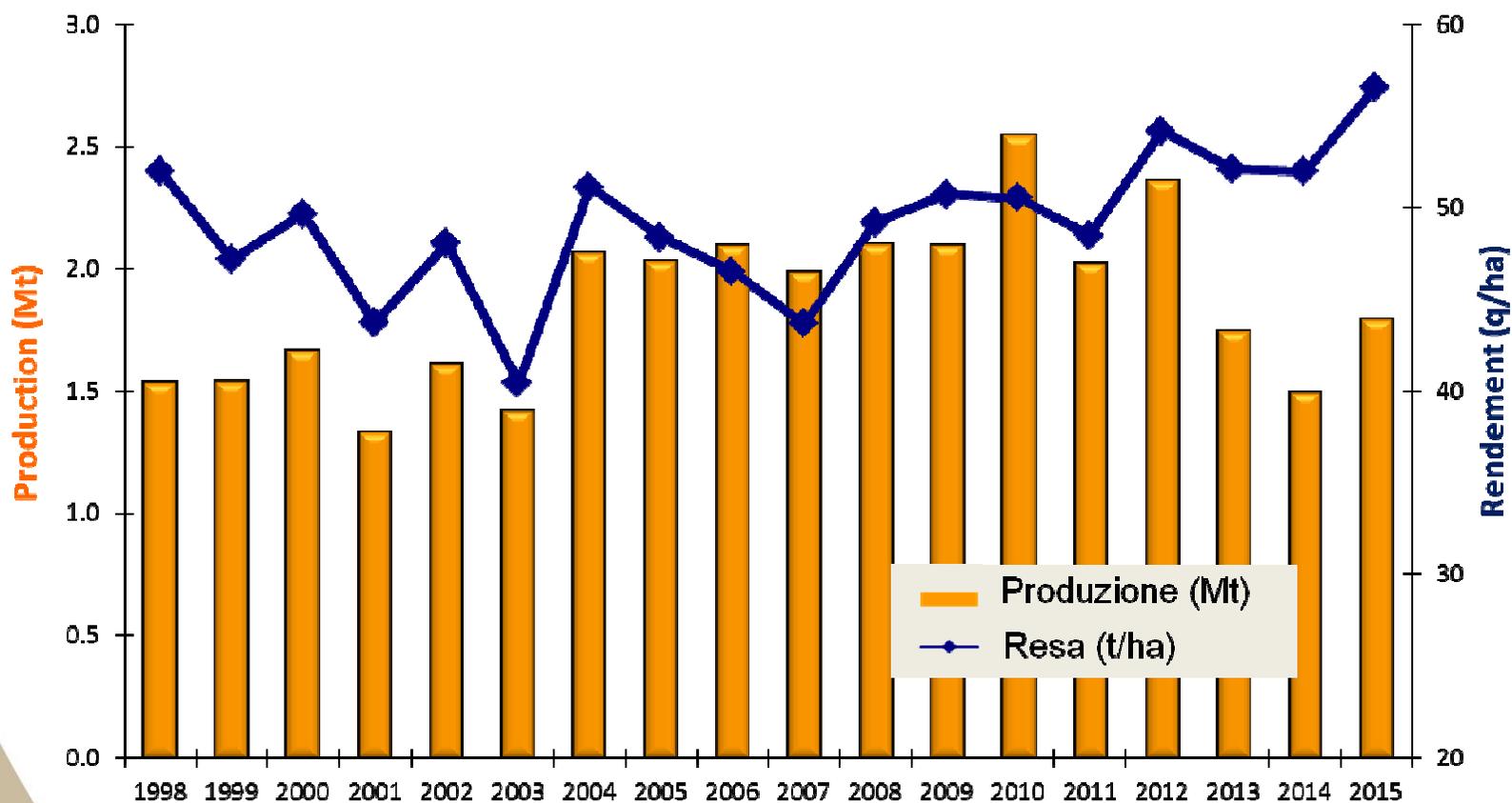


- 
- A photograph of a wheat field with a list of grain types overlaid in the center. The wheat stalks are golden-brown and have long awns. The background is a clear blue sky.
1. Grano tenero
  2. Grano duro



## Produzione in crescita a 1,8 Mt

- Incremento delle superfici: **+12 %**
- Crescita delle rese: **+ 9 %** a **56,6** q/ha





## Quattro aree di produzione di grano duro

*Stime  
produzione 2015*

**FRANCIA**  
**1,82 M di tonnellate**

**Ovest-  
Oceanico**  
**460 000**  
**tonnellate**

**Centro**  
**550 000**  
**tonnellate**

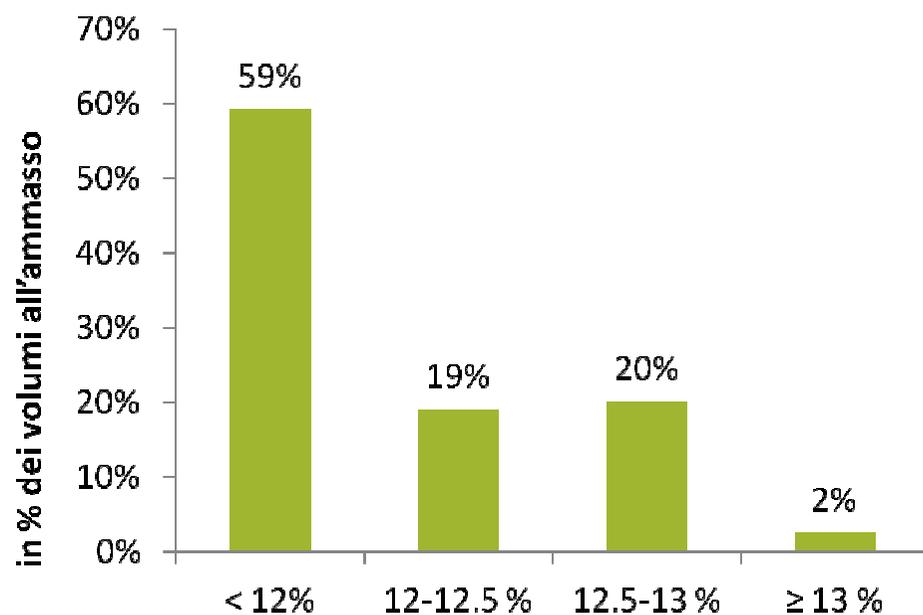
**Sud-Est**  
**280 000**  
**tonnellate**

**Sud-Ovest**  
**530 000**  
**tonnellate**

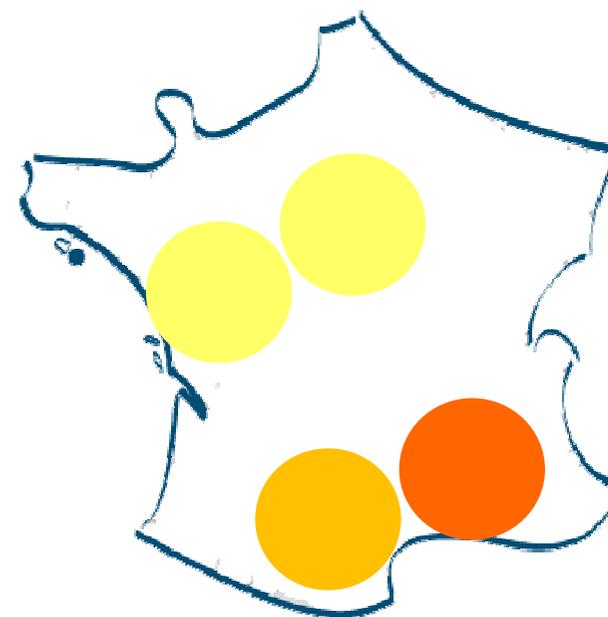
Stime Agreste  
22/09/2015

# Contenuto idrico all'ingresso dei silos per l'ammasso

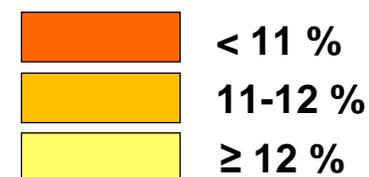
**11,7 %** in media



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



**Medie regionali**



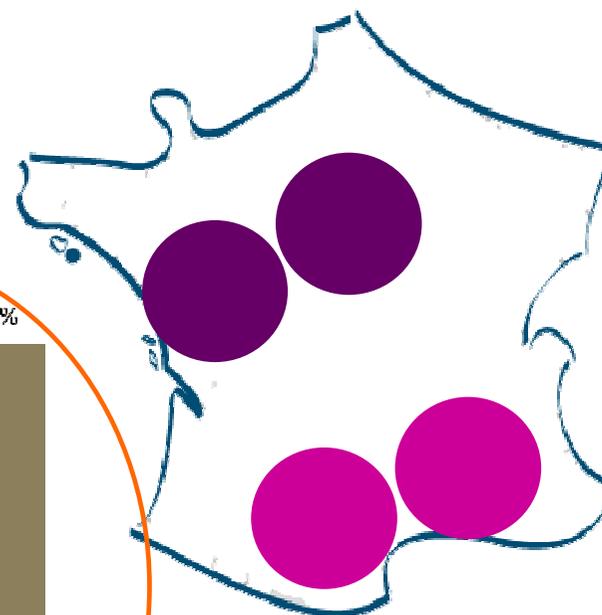
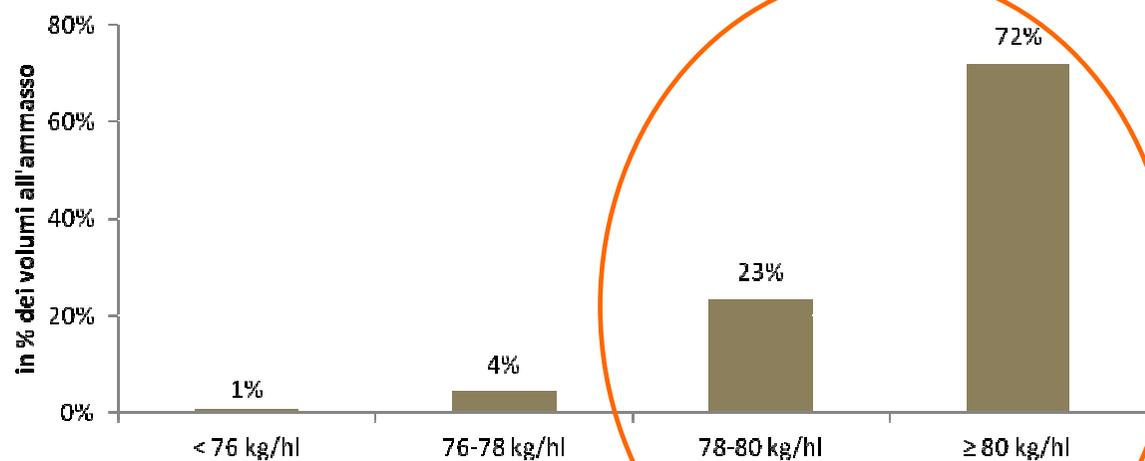


# Peso specifico all'ingresso dei silos per l'ammasso

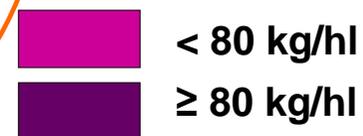
**80,3 kg/hl** in media

95 % dei grani  $\geq 78$  kg/hl

95 %



Medie regionali

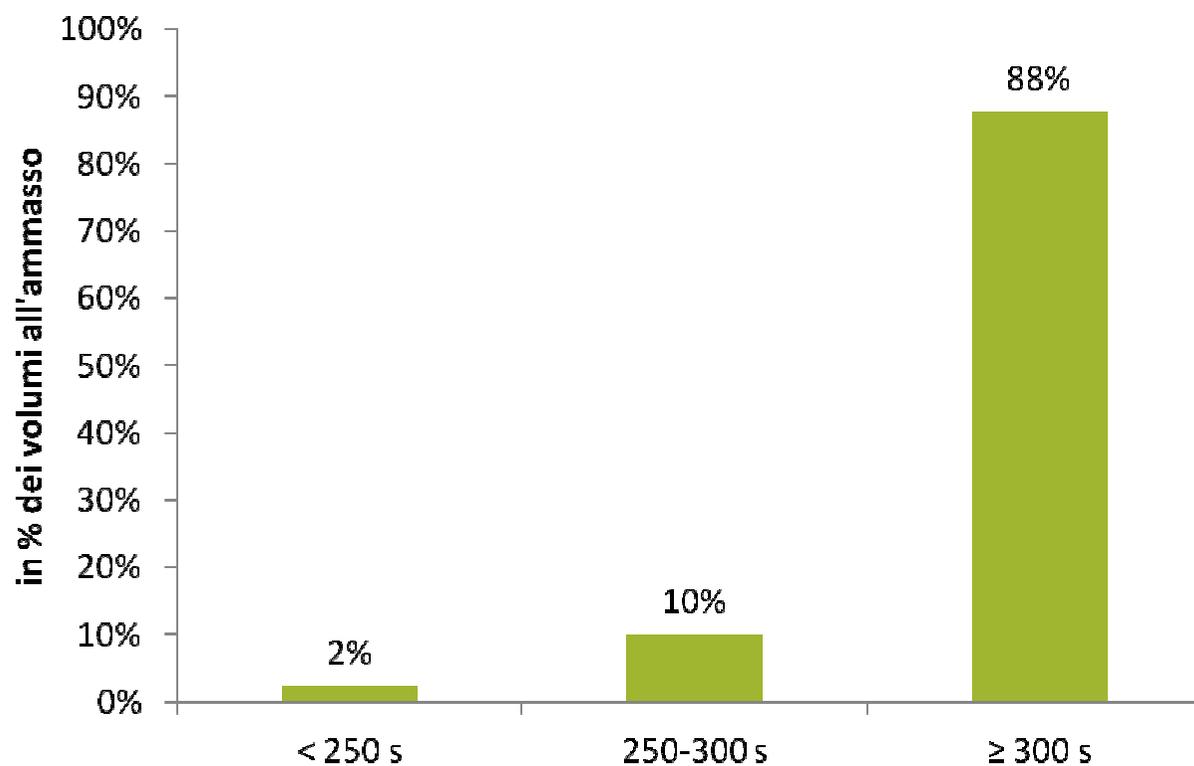


Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



## Indici di caduta di Hagberg

88 % dei grani sotto i 300 secondi



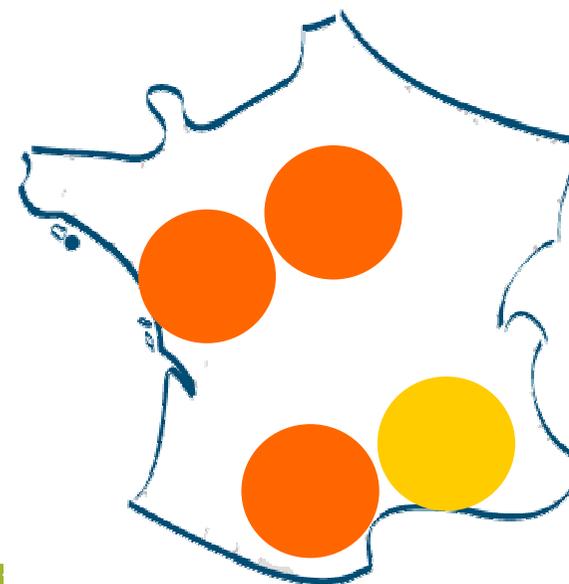
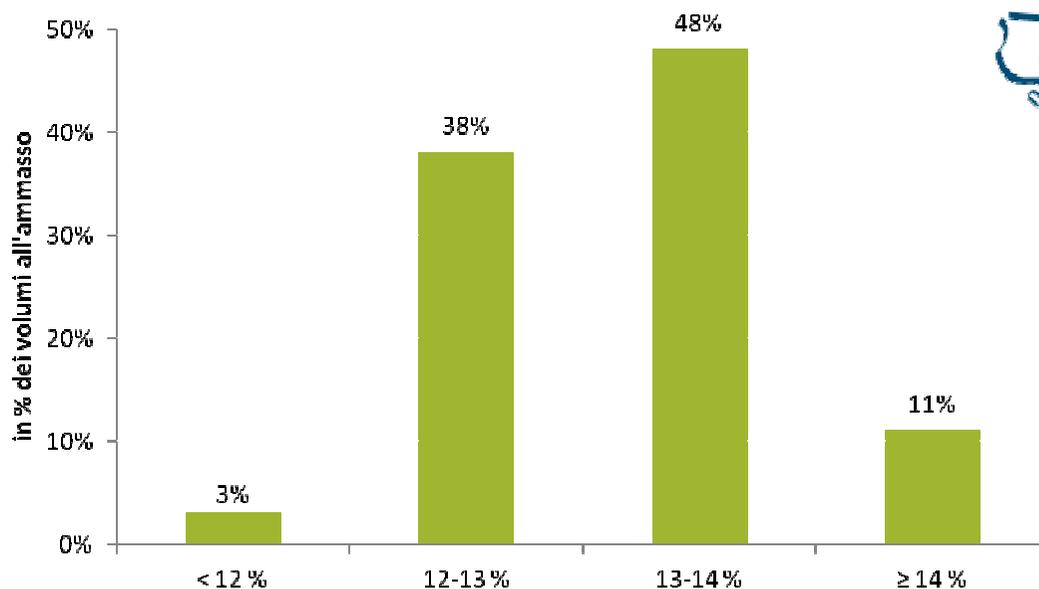
Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



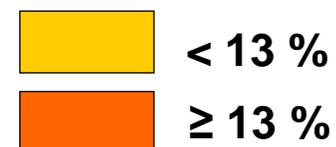
# Contenuto proteico all'ingresso dei silos per l'ammasso

**13,2 %** in media

59 % dei grani > 13 % in media



**Medie regionali**

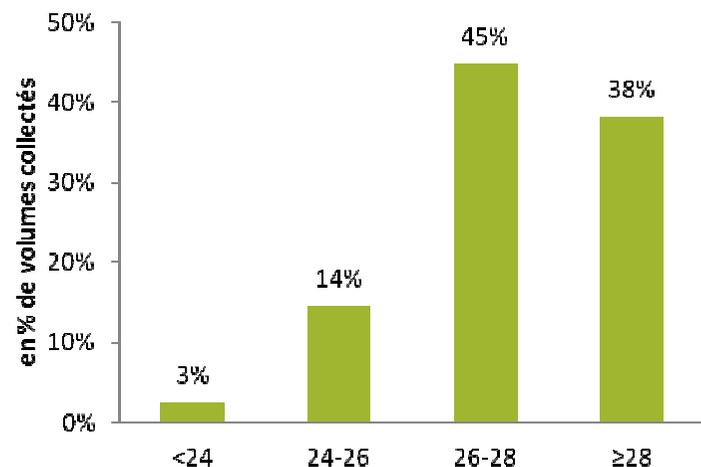


Fonte: FranceAgriMer / Indagine qualità ammassatori 2015

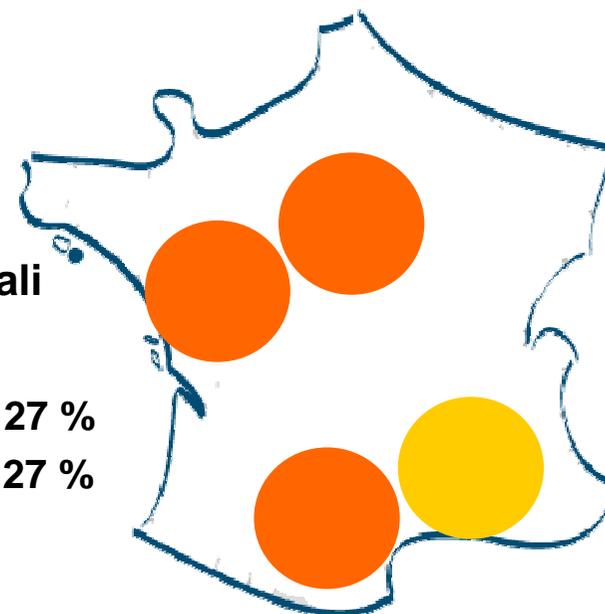
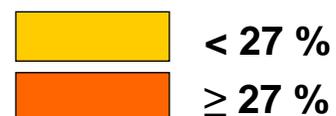


# Glutine umido, Gluten Index

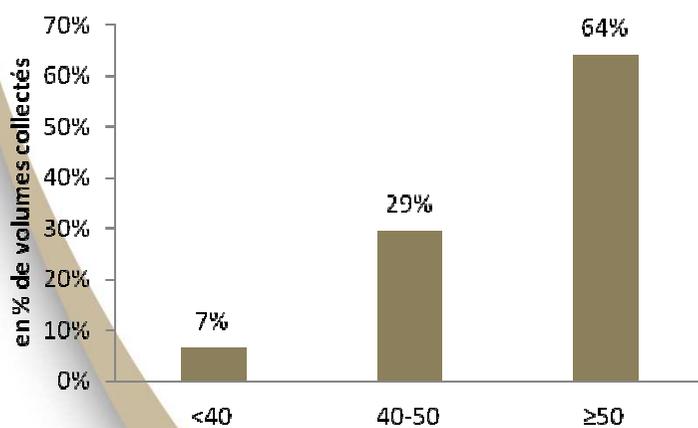
Glutine umido: **27.7** % in media



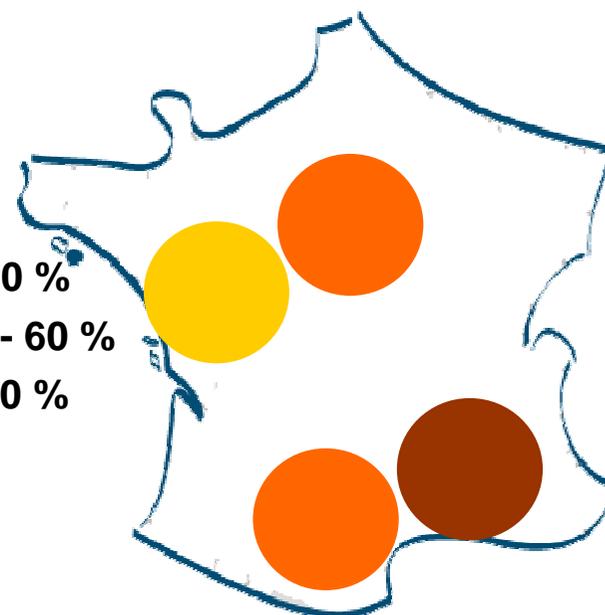
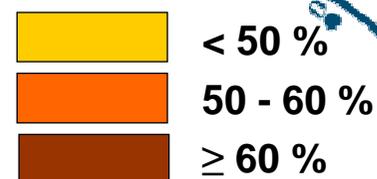
Medie regionali



Gluten index: **55** in media



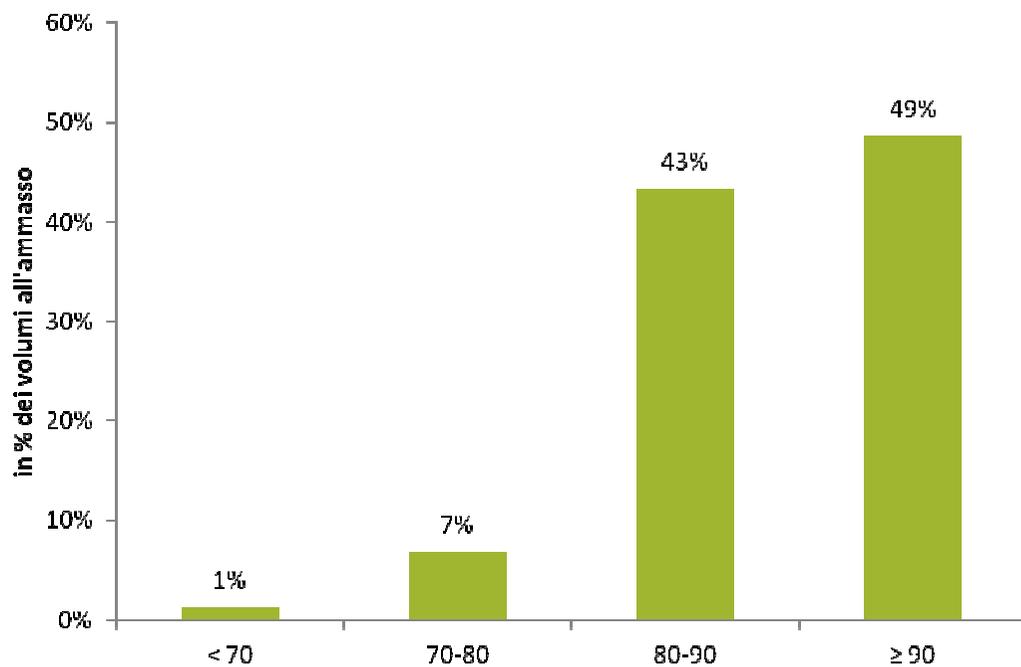
Medie regionali



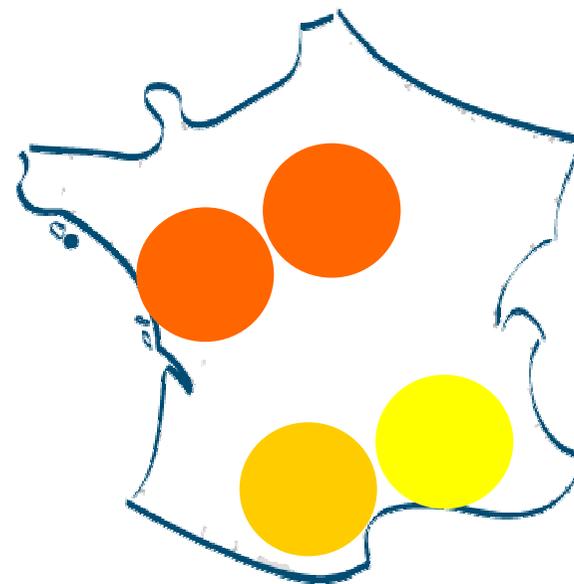


# Vitrosità

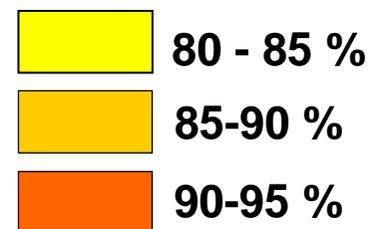
**89 %** in media



Fonte: FranceAgriMer / Indagine qualità ammassatori 2015



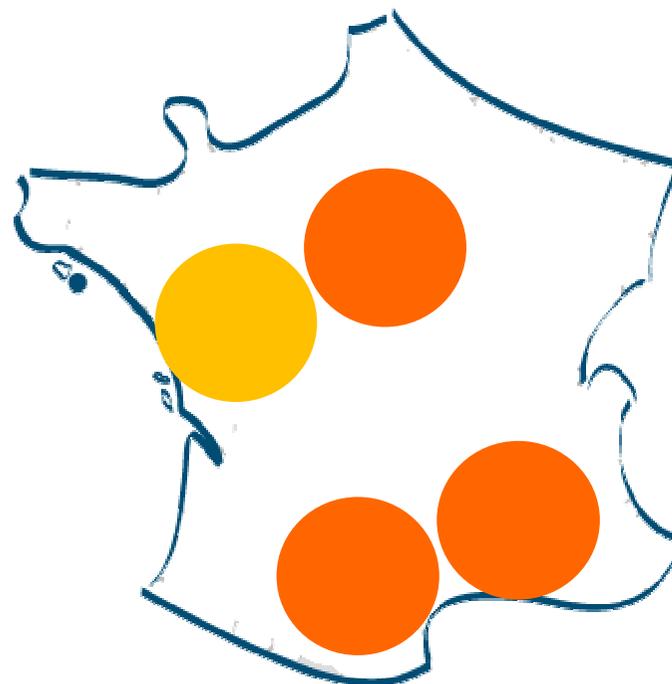
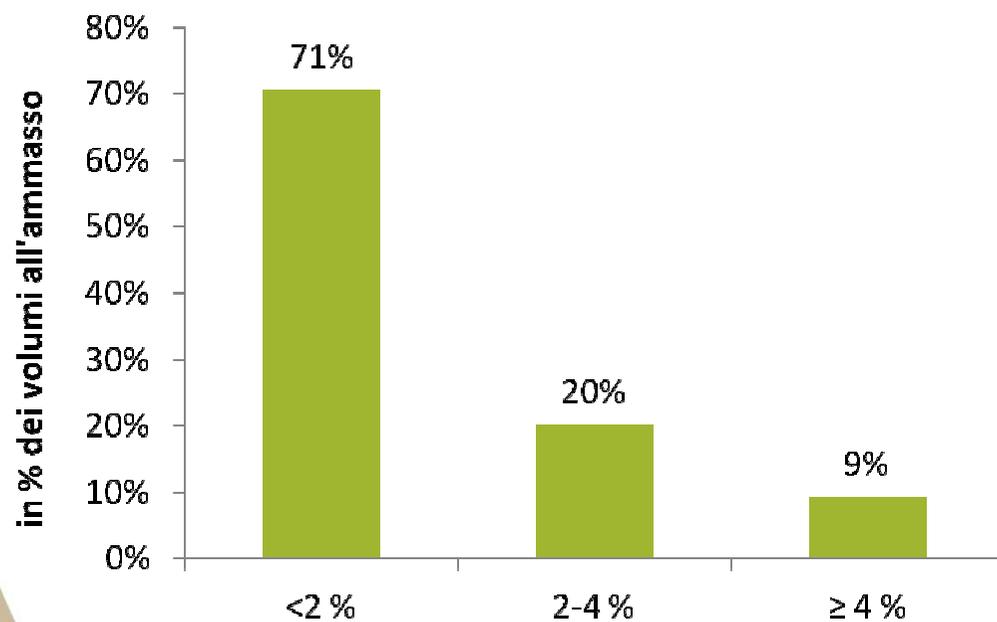
**Medie regionali**





# Volpatura

**1.5 %** in media



Medie regionali

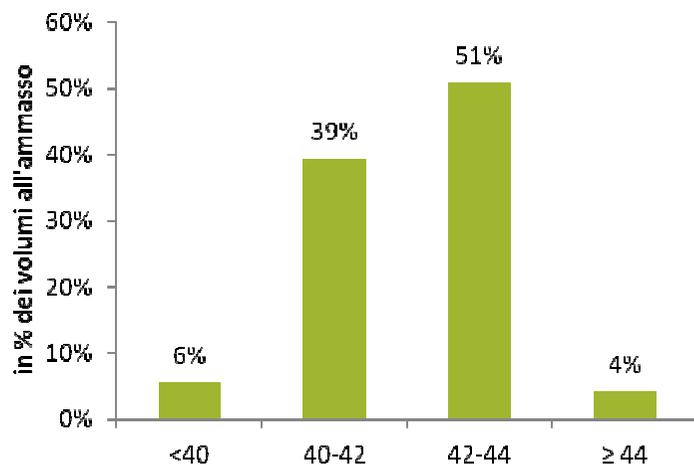


Fonte: FranceAgriMer / Indagine qualità ammassatori 2015

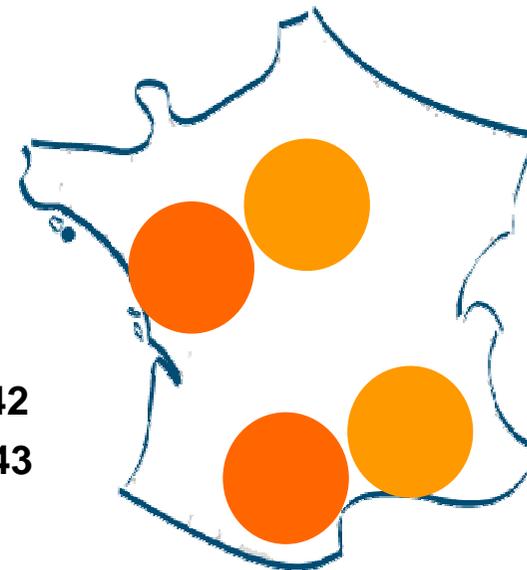
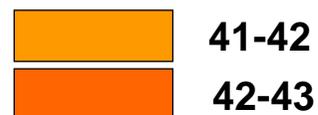


## Colore

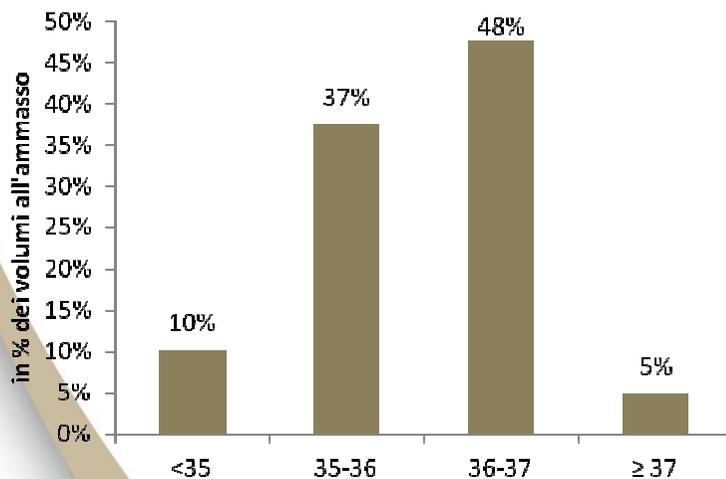
Indice di giallo: **41,8** in media



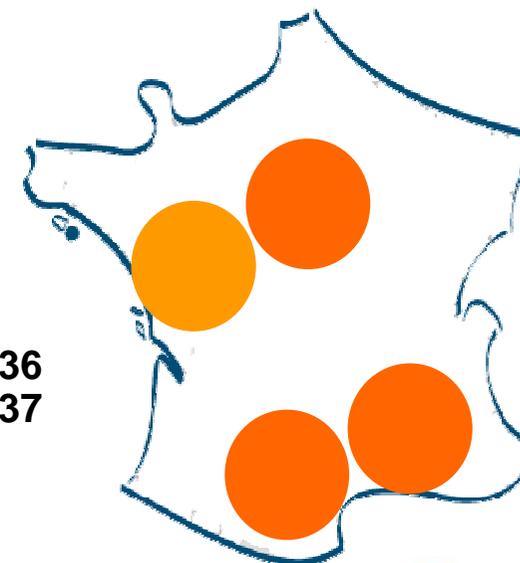
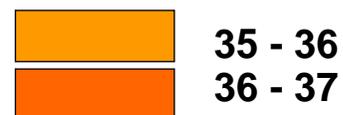
Medie regionali



Indice di bruno: **36** in media



Medie regionali





ARVALIS  
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Grazie dell'attenzione